



# ANNUAL REPORT 2018

JSC KazMunayGas

# LIMITS AND RESTRICTIONS OF THE ANNUAL REPORT

The JSC National Company KazMunayGas (“KMG” or the “Company”) Annual Report for 2018 includes operating results for KMG and its subsidiaries and dependent organisations, hereafter referred to as the KazMunayGas Group of Companies (“Group”), except in specific cases, for which explanations have been provided in footnotes (notes). KMG is the Group’s parent company and for this Annual Report presents consolidated information on the operating and financial performance of the Group’s key assets. The subsidiaries covered by the Annual Report, and KMG’s equity interests are disclosed in the “Company Overview” section and notes to the financial statements for 2018.

The Annual Report has been drafted based on an analysis of operating data, consolidated financial statements in accordance with

IFRS and a number of recommendations from international GRI standards on the presentation of financial results and sustainable development achievements.

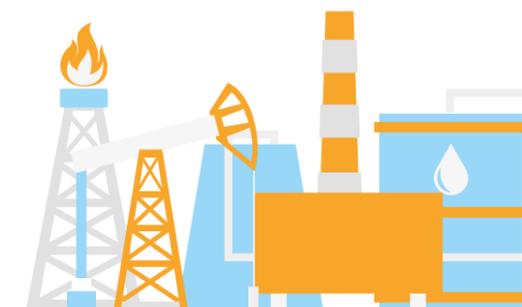
The KMG Annual Report specifies a correlation between the Company’s competitive environment, strategy, business model, operating model and risk management system and a clear corporate governance structure.

The Annual Report has been approved by the Board of Directors.

The Annual Report text may incorporate discrepancies in the calculation of shares, percentages and amounts when rounding off estimated figures. The information in the Annual Report may differ slightly from previously published data due to different calculation methods and approaches to the disclosure of information.

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# COMPANY OVERVIEW

# OVERVIEW OF KMG

JSC NC KazMunayGas is an upstream, midstream and downstream hydrocarbon operator representing state interests in the Kazakhstan oil and gas sector.

KMG is 90.42% and 9.58% owned by JSC Sovereign Wealth Fund Samruk-Kazyna ("Samruk-Kazyna" or the "Fund") and the National Bank of Kazakhstan, respectively.

Its upstream portfolio includes 23 jointly and individually managed projects, of which 14 are onshore and 9 - offshore. As a national company, KMG enjoys pre-emptive subsoil use rights in Kazakhstan with respect to strategic subsoil plots. By law, it is entitled to at least a 50% interest in new contracts to develop Kazakhstan's offshore deposits.

KMG's operating assets are mostly "mature" fields, while non-operating assets, represented by interests in the major oil and gas projects at Tengiz (20%), Kashagan (8.44%) and Karachaganak (10%), are all in the growth stage.

The KMG Group incorporates an oil service division made up of both separate legal entities as well as oil service structural divisions within production companies.

Oil transportation is a strategically important part of KMG operations from the perspective of access to sales markets. Diversified midstream infrastructure has been set up with good transit and export potential. The

majority of export oil is transported by the 67 mln tonnes capacity Tengiz-Novorossiysk (CPC pipeline); the 17.5 mln tonnes capacity Atyrau-Samara pipeline and the 20 mln tonne capacity Atasu-Alashankou pipeline.

KMG also exports oil through its overseas subsidiary KMG International NV (KMGI), which buys and sells oil, refines it and sells oil products in South-East Europe.

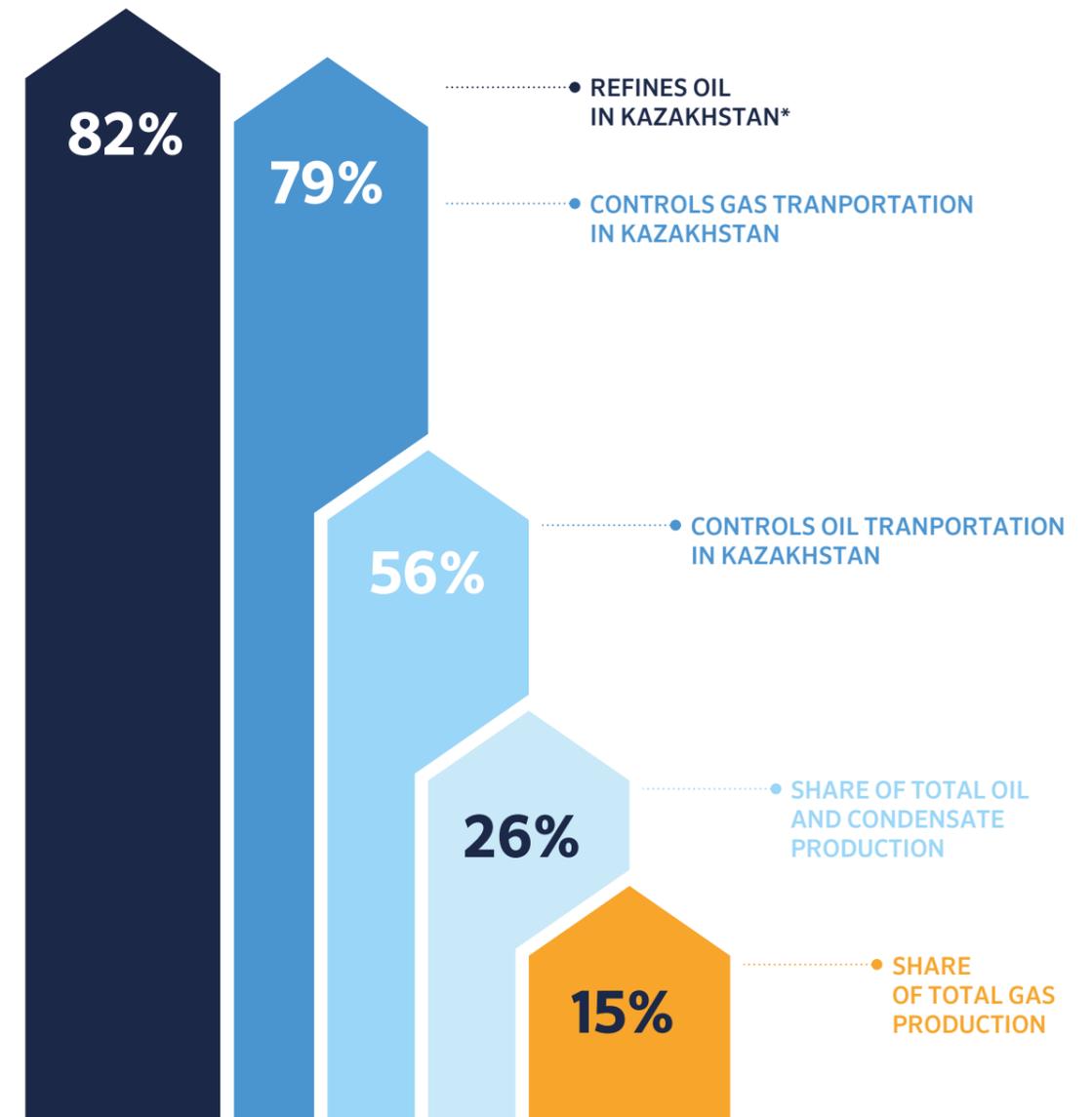
The Company uses its gas transportation system to export and supply gas domestically. In 2018, Kazakhstan reached an agreement to increase gas exports to China from 5 bcm to 10 bcm per year. At the same time, Kazakhstan acts as a transit country for Russian and Central Asian gas to China and Russia. Likewise, 2018 saw the start of transit supplies of Uzbekistan gas through Kazakhstan to Uzbekistan.

KMG is recognised as a downstream monopoly in Kazakhstan, recently modernising three oil refineries, enabling it produce approximately 16 mln tonnes of Euro-4 and Euro-5 standard oil products every year, which covers domestic demand.

The mission of the Company is to ensure maximum benefits for the stakeholders from the development of the national oil and gas sector.

KMG is striving to be a highly effective, vertically integrated national operating company that meets the highest safety and corporate governance standards.

## KMG'S SHARE IN OIL AND GAS INDUSTRY OF KAZAKHSTAN



**26.5** THOUS. KM

Overall length of KMG oil and gas pipelines

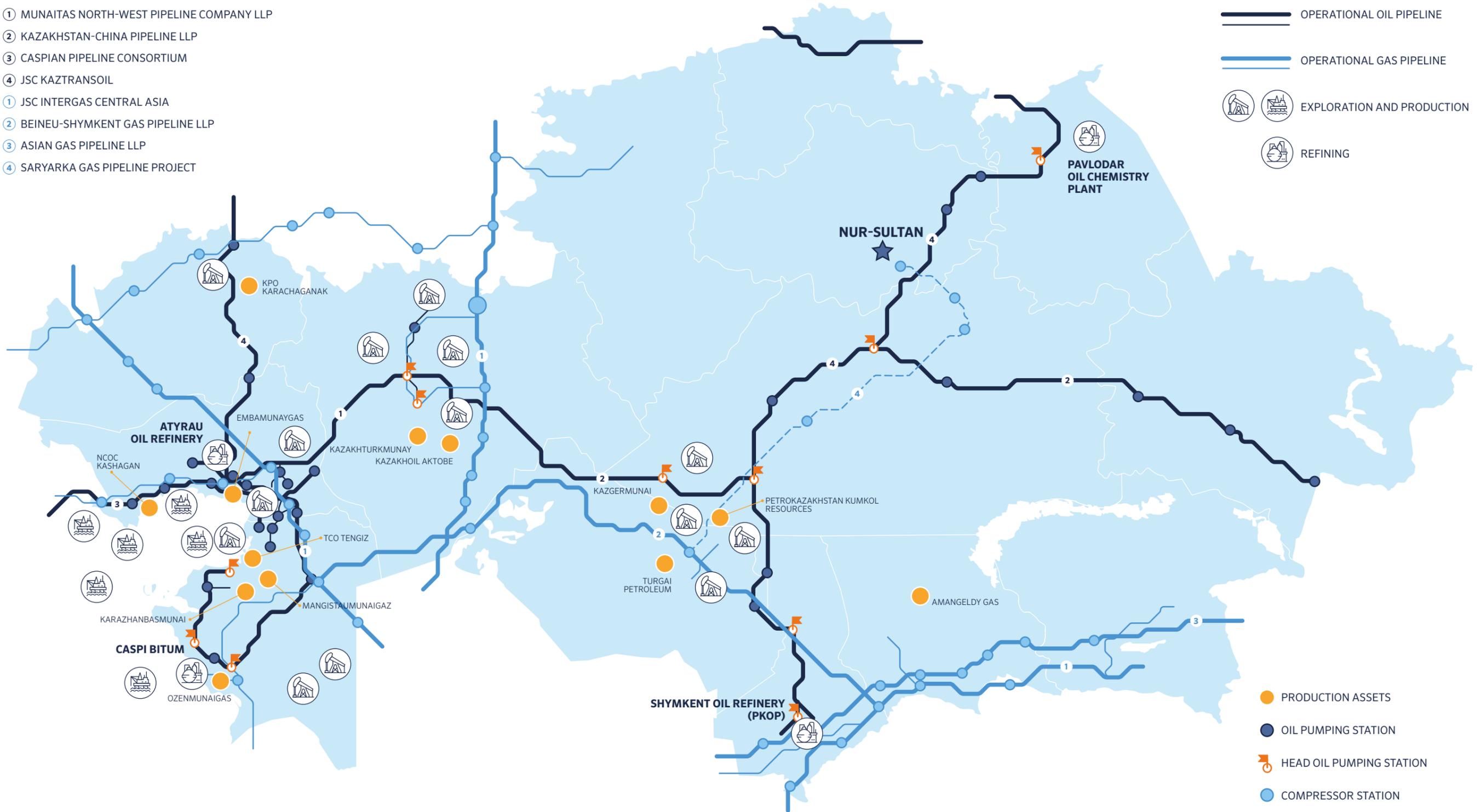
**23.6** MLN TONNES

Oil and gas condensate production output

\* 82% includes volumes of 100% of Atyrau refinery, 100% of Pavlodar refinery, 50% of Shymkent refinery (PKOP), 50% of Caspi Bitum

# GEOGRAPHY OF ASSETS

- ① MUNAITAS NORTH-WEST PIPELINE COMPANY LLP
- ② KAZAKHSTAN-CHINA PIPELINE LLP
- ③ CASPIAN PIPELINE CONSORTIUM
- ④ JSC KAZTRANSOIL
- ① JSC INTERGAS CENTRAL ASIA
- ② BEINEU-SHYMKENT GAS PIPELINE LLP
- ③ ASIAN GAS PIPELINE LLP
- ④ SARYARKA GAS PIPELINE PROJECT



- OPERATIONAL OIL PIPELINE
- OPERATIONAL GAS PIPELINE
- EXPLORATION AND PRODUCTION
- REFINING
- PRODUCTION ASSETS
- OIL PUMPING STATION
- HEAD OIL PUMPING STATION
- COMPRESSOR STATION

## OVERSEAS ASSETS

### KMG INTERNATIONAL

An integrated, diversified and competitive oil company operating internationally, in refining, naphtha technology, oil sales and oil products.

### PETROMIDIA REFINERY VEGA REFINERY

Our Petromidia and Vega Oil Refineries are located on the Black Sea coast and in the city of Ploiesti, Romania, in close proximity to the main sales markets.

### BATUMI OIL TERMINAL

OJSC Batumi Oil Terminal tranships oil and oil products, including loading, unloading and storage services.



## KEY EVENTS IN 2018

- GLOBAL DEPOSITARY RECEIPTS AND COMMON SHARES OF JSC KAZMUNAIGAS EXPLORATION PRODUCTION HAVE BEEN DELISTED FROM LONDON AND KAZAKHSTAN STOCK EXCHANGE **SINCE 10 MAY 2018**.
- **IN OCTOBER 2018**, KAZTRANS GAS AND PETROCHINA INTERNATIONAL ALASHANKOU COMPANY LIMITED SIGNED A FIVE-YEAR CONTRACT TO INCREASE KAZAKHSTAN GAS EXPORTS TO CHINA FROM 5 BCM TO 10 BCM PER YEAR **(MORE DETAILS ON PAGE 71)**.
- **IN MAY 2018**, KMG REDEEMED EUROBONDS WITH A TOTAL NOMINAL VALUE OF 3.1 BLN USD, WHICH HAD BEEN FINANCED BY A EUROBOND ISSUE OF 3.25 BLN USD, AHEAD OF SCHEDULE AND IN FULL.
- **IN OCTOBER 2018**, KMG TOOK OVER THE TRUSTEE MANAGEMENT OF 50% OF SAMRUK-KAZYNA COMMON SHARES IN JSC ASTANAGAS KMG TO MANAGE THE CONSTRUCTION OF THE SARYARKA GAS PIPELINE TO SUPPLY THE KAZAKHSTAN CAPITAL, CENTRAL AND NORTHERN REGIONS OF THE COUNTRY WITH GAS **(MORE DETAILS ON PAGE 73)**.
- MODERNISATION WORK AT THREE OIL REFINERIES HAS BEEN COMPLETED **(MORE DETAILS ON PAGE 89)**.
- **IN NOVEMBER 2018**, ALIK AIDARBAYEV WAS APPOINTED CHAIRMAN OF THE KMG MANAGEMENT BOARD **(MORE DETAILS ON PAGE 167)**.

## KEY GROWTH MILESTONES

**2002**  
KMG founded

**2005**  
Launch of the Atasu-Alashankou pipeline;

KMG became a participant of the Kashagan Project, having acquired an **8.33%** share from the existing participants.



**2006**  
IPO of KMG KazMunaiGas Exploration Production on LSE and KASE;

**50% stake of Kazgermunai purchased;**

**33% stake of Petrokazakhstan purchased.**

**2007**  
**75% stake of Rompetrol group N.V. purchased;**

**50% stake of Shymkent refinery purchased;**

**50% stake of CITIC Group (Karazhanbas oilfield) purchased.**

**2008**  
**Batumi oil terminal purchased**

KMG share interest in Kashagan project increased up to **16.81%** as the result of the PSA being revised.

**2009**  
**50% stake of MMG purchased;**

**Pavlodar refinery purchased;**

**Launch of the Asian gas pipeline;**

**25% stake of Rompetrol group N.V. purchased.**

**2011**  
**10% stake of KPO purchased**

**2013**  
KMG sold **8.33%** stake to CNPC and purchased **8.4%** stake from Conoco Philips in Kashagan project. Total KMG share in Kashagan project was **16.88%**.

Launch of the Beineu-Shymkent gas pipeline.



**2014**  
**50% stake of Kazakhturkmunay purchased (KMG increased its share up to 100%).**

**2015**  
KMG sold of **50%** stake in Kashagan B.V. to Samruk-Kazyna

**50% stake of CASPI BITUM purchased.**

**2016**  
Kashagan production resumed;

TCO Partners announced the Final Investment Decision on Future Growth Project - Wellhead Pressure Management Project.

**2017**  
KazMunayGas - Refining and Marketing merged with KMG;

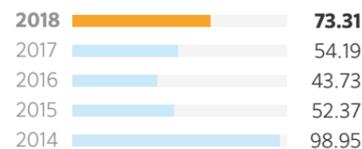
Capacity of CPC increased to **67 mt pa.**

**2018**  
KazMunaiGas Exploration Production delisted from LSE and KASE;  
  
KazMunaiGas Exploration Production merge with KMG.

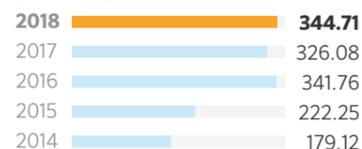
# KMG IN FIGURES

## MACRO

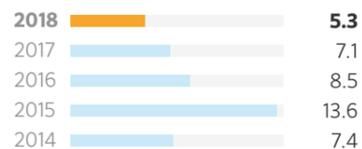
**BRENT, AVERAGE PRICE**  
(\$/BBL)



**AVERAGE EXCHANGE RATE**  
(USD/KZT)

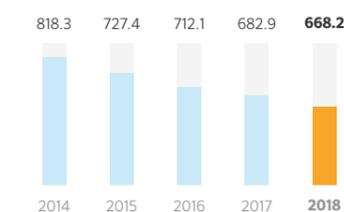


**INFLATION (%)**

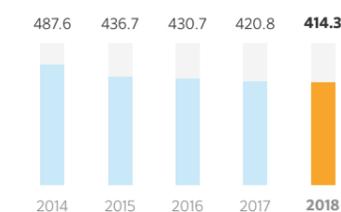


## OPERATING RESULTS

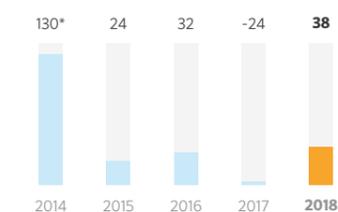
**OIL AND CONDENSATE RESERVES (ABC1) (MLN TONNES)**



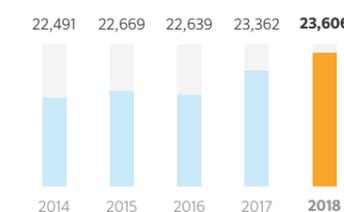
**NATURAL GAS RESERVES (ABC1) (BCM)**



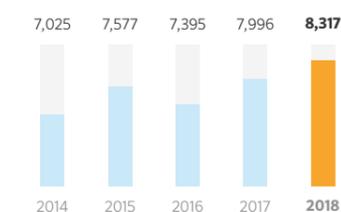
**RESERVE REPLENISHMENT RATIO (%)**



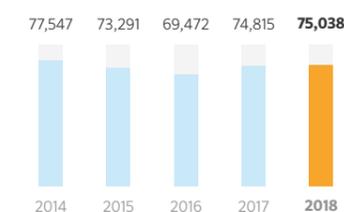
**OIL AND CONDENSATE PRODUCTION (THOUS. TONNES)**



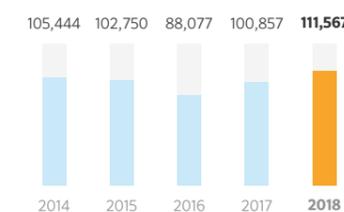
**NATURAL AND ASSOCIATED GAS PRODUCTION (MCM)**



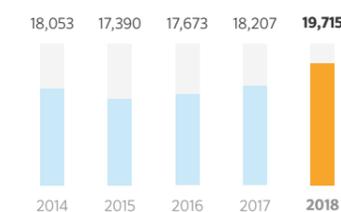
**OIL TRANSPORTATION (THOUS. TONNES)**



**GAS TRANSPORTATION (MCM)**



**OIL REFINING, INCLUSIVE OF THE OPERATING SHARE (THOUS. TONNES)**

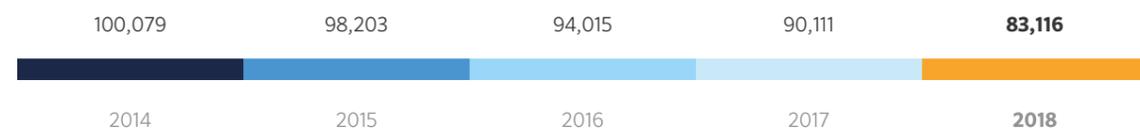


**19,715** THOUS. TONNES  
OF OIL REFINED, INCLUSIVE OF THE OPERATING INTEREST, IN 2018

**23,606** THOUS. TONNES  
OF OIL AND CONDENSATE PRODUCED IN 2018

## STAFF

**HEADCOUNT \*\***

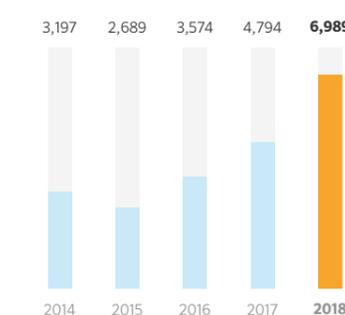


\* In 2014, according to the results of well research and the analysis of geological and physical data, the reserves of the main deposits of the Karachaganak field were recalculated and this led to an increase in the geological reserves of liquid hydrocarbons.

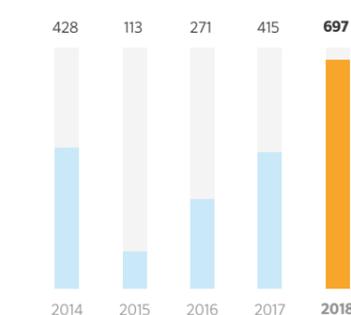
\*\* As of the end of 2018 for KMG Group.

## FINANCIAL RESULTS (BLN TENGE)

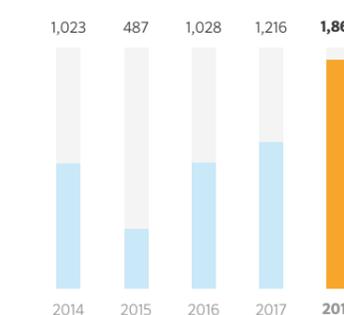
**REVENUE**



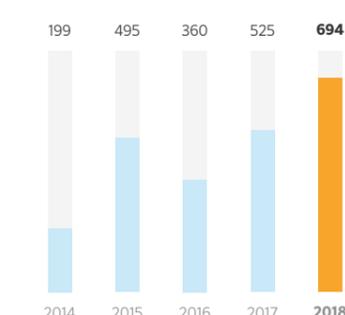
**SHARE IN THE PROFIT OF JOINT VENTURES AND ASSOCIATES, NET**



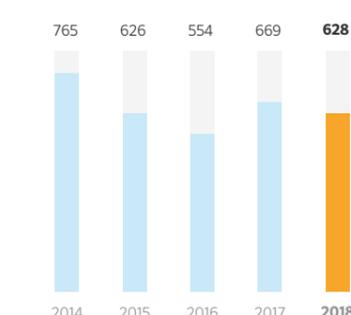
**EBITDA \***



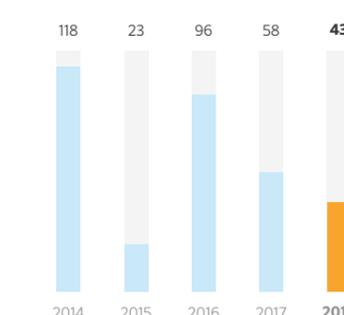
**NET PROFIT**



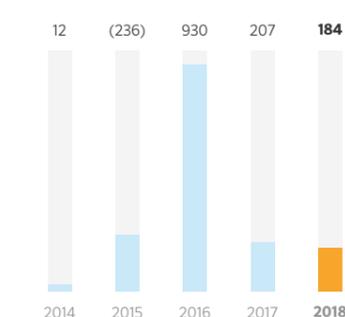
**CAPITAL EXPENDITURES**



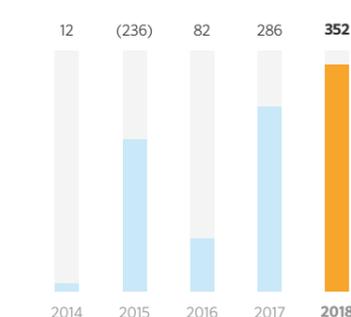
**DIVIDENDS PAID TO THE SHAREHOLDER**



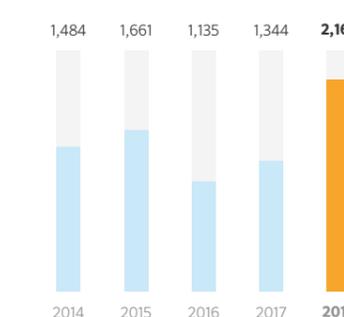
**FREE CASH FLOWS \*\***



**ADJUSTED FREE CASH FLOWS \*\*\***



**NET DEBT**



## HEALTH, SAFETY AND ENVIRONMENT

	Unit of measurement	2014	2015	2016	2017	2018
Lost time incident rate (LTIR)	1 mln man hours	0.57	0.56	0.49	0.42	0.32
Fatal accident rate (FAR)	100 mln man hours	3.26	2.17	4.5	3.25	0.65
Volume of flared gas per hydrocarbon unit produced	tonnes/1000 tonnes of hydrocarbons	9.51	11.98	12.00	11.00	6.00

\* KMG calculates EBITDA for any relevant period as "Revenue + Finance income - Cost of sales - General and Administrative expenses - Transportation and selling expenses + Depreciation, depletion, amortisation + Profit in share of joint ventures and associates"

\*\* KMG calculates FCF for any relevant period as "CFO - Capex (cash basis) + Dividends received from joint ventures and associates (cash basis)"

\*\*\* KMG calculates Adjusted FCF for any relevant period as "FCF - net effect of prepayments"

# MARKET TRENDS AND CHALLENGES

## KAZAKHSTAN ECONOMY AND OIL SECTOR

### GROSS DOMESTIC PRODUCT

**58.79** TRILLION TENGE

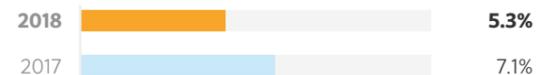
2018 GDP according to the production method

**+ 3.8 %** ↑  
COMPARED TO PREVIOUS YEAR

GDP growth is expected to reach 3.8%<sup>2</sup> in 2019 due to higher global oil prices, increased oil production, continued financial stimulation and improved economic variables with key trading partners.

### INFLATION

Inflation<sup>1</sup> in 2018 was 5.3%, compared to 7.1% in 2017. According to preliminary National Bank forecasts, stable oil and grain prices, lower expected inflation and weak disinflation pressure from domestic demand will result in inflation sitting within a 4-6% corridor 2019.



### OIL PRICES

**71.31** USD/BBL

Average Brent oil price in 2018<sup>2</sup>

**+ 31.1 %** ↑  
GROWTH OF PRICE COMPARED TO 2017

The average price for Brent oil grew 31.1% in 2018 to 71.06 USD per bbl. KMG budgeted for an oil price of 70 USD per bbl for 2019.

### USD/TENGE EXCHANGE RATES

**344.71**

TENGE/US\$

Average rate in 2018

**+ 18.61 T./5.7 %** ↑  
USD APPRECIATION AGAINST THE TENGE COMPARED TO 2017

**90.3** MLN TONNES

Oil production volume in Kazakhstan in 2018

### Global trends in the oil and gas sector

One of the main factors used to gauge global demand for oil is global economic growth, which according to the EIA, should remain positive until 2021. Global economic growth and rising populations all give rise to energy consumption growth. In the medium term, oil will remain an important source of energy, which is why no drop in demand is expected. Alongside the growth in demand for oil, there has also been an increase in supply, predominantly from non-OPEC countries.

The medium-term global forecast is for moderate growth in oil and gas upstream costs. By 2021, upstream capital investment in nominal terms will be 19% lower than in 2014 (571.86 bln USD)<sup>3</sup>. The trend towards lower capital investment into reserves additions may bring about a medium-term drop in oil production levels.

### Kazakhstan's position in the oil and gas sector

Kazakhstan has been producing oil since 1911 and has the second largest hydrocarbon reserves and production levels among the former Soviet republics after Russia.

In 2018, oil production in Kazakhstan grew 4.7% year-on-year to 90.3 mln tonnes, with Atyrau and Mangistau Oblasts responsible for the greatest share of that figure.

Kashagan (13.2 mln tonnes), Tengiz (28.6 mln tonnes) and Karachaganak (11 mln tonnes) were predominantly responsible for the growth in production in 2018 and accounted for 58% of Kazakhstan oil production.

Kazakhstan's oil production plan for 2019 is 88 mln tonnes, which is slightly lower than in previous years due to major repair work at Kashagan, Tengiz and Karachaganak. Production declines are also expected at Kyzylorda and Aktobe group fields due to development maturity and natural field depletion.

Gas production grew 4% in 2018 to 55.5 bcm. The plan for 2019 is 55 bcm.

### Samruk-Kazyna

JSC Sovereign Wealth Fund Samruk-Kazyna is owned by the Kazakhstan Government and was created in 2008 by presidential decree as a commercial structure (investment holding company).

The intention of KMG, which is the Fund's main asset, is to ensure maximum benefits for the Shareholder from its participation in the development of the national oil and gas sector.

In 2018-2022, the Fund expects that KMG will achieve its strategic performance goals and increase asset value, measurable using a set of strategic KPIs (more details on page 29).

### KMG ratings

Moody's — Baa3 (August 2017)  
S&P — BB (November 2018)  
Fitch — BBB- (March 2019)

<sup>1</sup> Statistics Committee of the Ministry of the National Economy

<sup>2</sup> Thompson Reuters

<sup>3</sup> Source: IHS Market, Global Upstream Spending: Market Analysis, 15 February 2017.

## Overview of major changes to Kazakhstan legislation: Subsoil Code and Tax Code

### **Code of the Republic of Kazakhstan On the Subsoil and Subsoil Use (regarding hydrocarbons)**

A new Code On the Subsoil and Subsoil Use ("Subsoil Code") was signed on 27 December 2017 together with the corresponding Law On the Introduction of Amendments and Additions to Certain Legislative Acts of the Republic of Kazakhstan on Subsoil Use Issues, and entered into force at the end of six months from its official publication (except for specific provisions).

In its attempts to attract exploration investment, the new Subsoil Code has simplified access to subsoil use both in the oil and gas sector and in the area of solid minerals. It moves economic burden from exploration to development and commercial exploitation.

### **Stimulation of private upstream investment**

The new Subsoil Code has simplified investor access to geological data (making it free of charge).

It has retained the tender (auction) contract system, which is far better way to protect investor interests than the license system. It has also simplified tender (auction) procedures, removing all existing contract reviews, with (model) contracts now signed by the authorities and tender winner almost immediately. The transition of subsoil use rights and related facilities has been simplified. Joint upstream contracts have been introduced, which guarantees investors discovering new deposits during exploration a return on capital during the production stage.

An additional benefit is the replacement of the old format of "working programmes", which transferred volatile project document forecasts to contracts, with programmes that establish contractual obligations for exploration period activities linked to minimum requirements already in place at the tender declaration stage.

The new Subsoil Code incorporates the specifics of subsoil geological surveys at super-deep levels according to the Eurasia project, such as exclusive rights to a geological survey site and the opportunity to drill appraisal wells.

For new contracts, the Subsoil Code removes all "non-tax" payments under the 2010 Law at the exploration stage (subsoil user commitments to finance the training of Kazakhstan employees; finance regional socio-economic development; finance scientific research and development work). The Subsoil Code's transitional provisions allow subsoil users with exploration contracts already in place to transition to the terms of the new Subsoil Code.

The special Subsoil Code provisions to stimulate exploration investment are supported by amendments to the Tax Code (more details are provided later).

### **Preservation of the balance of interests between subsoil users and the State**

A new term "complex hydrocarbon exploration projects" has been introduced to establish longer exploration periods.

The Subsoil Code introduces new fines for breaching procurement rules and major procurement (production sharing agreement) requirements. It has cleared up a number of issues around liability for subsoil users and contractors violating procurement rules under earlier contracts, including production sharing agreements.

The legislator has introduced new requirements for subsoil users to supply light hydrocarbons for domestic processing, and stick to timetables established by the authorities.

The State's position with respect to forcing subsoil users to manage the consequences of their operations has been strengthened.

Finally, the Subsoil Code has established core requirements for potential subsoil users, such as financial solvency and offshore experience.

### **Tax Code (key introduction regarding subsoil user taxation)**

In 2018, to stimulate exploration, the Tax Code introduced an amendment whereby subsoil users with both exploration and production contracts in place are entitled to compensate exploration costs incurred before 1 January 2018 against income from production contracts, deducting the group of depreciable assets created, but at no more than 25%, which should lead to a reduction in the tax burden during the exploration stage and an increase from the moment production starts.

All "non-tax" payments from the 2010 version of the Law On the Subsoil and Subsoil Use, such as obligations to finance employee training, regional socio-economic development and scientific research, have been removed from new contracts at the exploration stage.

Likewise, commercial discovery bonuses have been abolished from 2019 to avoid the so-called penalty for registering a positive exploration result.

An alternative tax has been introduced for subsoil users with offshore or super-deep deposit contracts. Basically, subsoil users who have concluded one of the above contracts are entitled to make a one-off and irreversible choice to pay the alternative tax instead of having to return historical costs, mineral resource production tax, rent tax on exports and excess profits tax.

The rate of mineral resources tax corresponding to declared total annual production under a subsoil use contract will apply to these contracts irrespective of the transfer of subsoil use rights.

To calculate corporate income tax on a contract territory, sales income is based on the selling price, which should be no lower than the cost of production. An exception is for oil export sales, if at the sales date the global oil price is lower than the cost of production. In that case, income is recognised as the actual selling price (previously no exception was made).

Gas sales income from 1 January 2018 is based on the selling price with no tie in to the officially approved price.

The Tax Code has also introduced a gradual excess profits tax.



# STRATEGY OVERVIEW

## LETTER FROM THE CHAIRMAN OF THE BOARD OF DIRECTORS



### DEAR SHAREHOLDERS, COLLEAGUES AND PARTNERS

2018 was a successful year, with good operational and financial performance. KMG achieved its goals for 2018 and it is in a secure position to continue its efforts to increase shareholder value. The company's position has been bolstered by the steady consolidation of its financial situation, as well as stable production from its own assets and projects in which it has a participatory interest. According to our business plan for 2019–2023, we intend to maintain production levels at our operating assets going forward, taking into account the natural decline, and expect to see growth at the Tengiz, Kashagan and Karachaganak oil fields.

It was a record year for Kazakhstan's oil and gas sector, which produced over 90 million tonnes of oil and more than 55 bcm of gas. Oil and gas assets in which KMG has shares made a significant contribution to the increased production levels.

Several important capital projects were completed in 2018, including oil refinery modernisation, increasing gas transportation capacity, the transformation of business processes, and IT system upgrades.

As a result of measures taken to restructure company debt, reduce costs and revise KMG's free cash flow profile, the Company improved its financial stability, as shown by its improved performance in Standard and Poor's November 2018 ratings from BB-/kzA to BB/kzA+, with a 'stable' outlook. Consequently, the company's stand-alone credit profile was raised from B to B+.

An important development for the company was its repurchase of both common and preferred shares in its subsidiary, KMG Exploration and Production, and the latter's full integration into the KMG group. This was a key part of KMG's transformation process, which is not simply a series of separate initiatives, but a programme of fundamental and far-reaching changes affecting all subsidiaries.

Under its new operating model, KazMunayGas is moving away from its role as a portfolio investor, controlling assets via boards of directors, and becoming more actively involved in the operational management of production assets. This will allow it to streamline management and adapt swiftly and appropriately to fast-changing market conditions.

Based on the results of an independent assessment carried out by PricewaterhouseCoopers in 2018, KMG's corporate governance rating was raised from B to BB. The Board of Directors continues to monitor corporate governance and is committed to improving it even further, making it a priority in KMG's new 10 Year Development

Strategy, which was approved by the Board of Directors in October 2018. Creating value, improving financial stability; improving the manageability of subsidiaries, affiliates and joint ventures; promoting corporate governance and sustainable development have all been given development priority status in the new Strategy going forward until 2028.

A key aspect of KMG's transformation is the increased focus on occupational health and safety. The Board and management want all of our employees and contractors to work in safety and to return home safely to their families at the end of the day. Gratifyingly, we are seeing positive results. This is due to improved culture, systems and processes and, most importantly, due to the efforts of individual people. On behalf on the Board, I would like to thank our employees for embracing this.

During the year, Mr Alik Aidarbayev was appointed as Chairman of the Management Board. He is responsible for overseeing a continued increase in productivity of the Company and making the best possible use of market opportunities.

I would like to thank our retiring CEO, Mr Sauat Mynbayev, for his achievements during his five year tenure. I would also like to express my appreciation to Mr Yerlan Baimuratov, who retired as an Independent Non-Executive Director.

KazMunayGas finished the 2018 year as a much stronger, safer and stable business. The transformation activities that enabled these achievements will continue. This will benefit our shareholders, employees and the Republic of Kazakhstan.

#### CHRIS WALTON

Chairman of the Board of Directors,  
JSC NC KazMunayGas, Independent Director

# STRATEGY

In 2018, KMG initiated a major project to update its Development Strategy by creating a strategic vision, mission and objectives for the next decade based on an analysis of growth-limiting factors and finding ways to overcome them.

In October 2018, the KMG Board of Directors approved the new Development Strategy until 2028.

## 2018-2028 DEVELOPMENT STRATEGY



### STRATEGIC GOAL 1

#### CREATE VALUE AND IMPROVE FINANCIAL STABILITY

**Strategic goal 1** focuses on overcoming factors reducing Company revenue, improving cash flows, consolidating its financial position and ensuring the required level of liquidity.

**Internal factors:**

- Natural decline in production at mature fields;
- Significant leverage;
- High operating costs;
- Lack of a systematic approach to the implementation of new technology;
- Insufficient automation and asset digitalisation;
- Non-core and loss-making assets in the company's portfolio.

**External factors:**

- Volatility of hydrocarbon prices;
- Need to meet growing domestic demand for gas and oil products.

### STRATEGIC GOAL 2

#### RAISE THE LEVEL OF SUBSIDIARY AND JOINT VENTURE MANAGEABILITY

The Company will develop and implement a clear hierarchy and distinct allocation of functions among corporate governance process parties. This will help KMG create a new development impulse through the implementation of a matrix organisational structure and the concentration of governance functions at its head office. That will increase the speed and value of the decision-making process and lead to greater control over Company income and costs.

One of the tools KMG can use to monitor income and costs will be the transparent and

**Meeting the “Create value and improve financial stability” goal will lead to improved cash flows and better investment returns.**

easy-to-understand value creation chain, which will automate integrated IT solutions and unify processes that will also be used to manage transfer pricing within the KMG Group.

A two-tier governance system implies closing down sub-holding companies. Once a two-tier governance model has been introduced, the Company will transition from the “Management Holding” model to the “Operating Holding” model.

**Realisation of the “Raise the level of subsidiary and joint venture manageability” strategic goal will help the Company make quick and effective operating improvements (more details on page 31).**

### STRATEGIC GOAL 3

#### CORPORATE GOVERNANCE AND SUSTAINABLE DEVELOPMENT

Corporate governance and sustainable development are two key components of the Strategy and the long-term sustainable development of the Company during the Strategy realisation period. Improving corporate governance will help integrate sustainable development principles into key business processes, operating activities and decision-making processes.

**The “Corporate governance and sustainable development” strategic goal should result in a system of governance that promotes better corporate social responsibility, work, health and environmental safety; improvements in regional economic impact (more details on page xx) and anti-corruption efforts; better relations with stakeholders; and improved corporate governance, corporate culture, corporate ethics and compliance ratings (more details on page 32).**

The Company may consider a range of options for realising its strategic vision, including a potential IPO of KMG shares and other transactions. However, a final decision on IPO has not yet been taken.

**IMPLEMENTATION PHASES OF STRATEGIC GOALS AND INITIATIVES**

Periods	Priorities
Short-term period until 2021	<ul style="list-style-type: none"> <li>Ensure Company financial sustainability and reduce leverage</li> <li>Implement and complete the transformation programme</li> </ul>
Medium-term period until 2023	<ul style="list-style-type: none"> <li>Improve operating performance</li> <li>Increase subsidiary and joint venture manageability levels</li> <li>Conclude the automation of key Company business processes</li> </ul>
Long-term period until 2028	<ul style="list-style-type: none"> <li>Increase oil reserves in operating assets</li> <li>Increase commercial gas reserves to guarantee supplies to China</li> <li>Ensure sustainable development</li> </ul>

Corporate governance and sustainable development are two key components of the Strategy and the long-term sustainable development of the Company over the Strategy realisation period

During 2018, to achieve the objectives of its new Development Strategy, KMG:

- grew in oil reserves from 8.9 mln tonnes to 668 mln tonnes (A+B+C1).
- developed and implemented a programme to stabilise production at its operating assets. Consolidated oil and gas condensate production reached 23.6 mln tonnes, with operating assets and mega projects accounted for 15.7 mln tonnes (66%) and 7.9 mln tonnes (34%), respectively.
- within the framework of its Strategy from 2017, began to export gas to China. Total supplies in 2018 amounted to 5.48 bcm.
- measures performed to reduce the Company’s consolidated debt helped the debt/EBITDA ratio fall to 2.5.
- PricewaterhouseCoopers awarded KMG a “BB” corporate governance rating after independent corporate governance testing.
- thanks to the above measures and initiatives, reached ROACE of 8.1% from 6.9% (in 2017).

Within the framework of its Development Strategy until 2025 (approved in 2016), during 2015-2018 KMG achieved the following key goals and objectives:

**Priority 1 – “Short-term and medium-term consolidation of the Company’s financial position”:**

- maintained production levels at its operating assets despite the “maturity” of fields belonging to those assets;
- recorded growth in reserves to planned levels;
- agreed a timetable for the repayment of external debt.

**Priority 2 – “Create a target business model”:**

- completed the consolidation of JSC KazMunaiGas Refining and Marketing;

- completed the buyback of JSC KazMunaiGas Exploration Production shares;
- aligned covenants in Eurobond issue documentation.

**Priority 3 – “Consolidation of KMG’s role as the architect of the oil and gas sector in Kazakhstan:**

- completed the modernisation of three oil refineries in Kazakhstan;
- diversified hydrocarbon transportation routes;
- created transportation infrastructure for gas exports to China.



# PERFORMANCE METRICS

KMG performance metrics focus on achieving the goals and objectives approved in the KMG 2018-2028 Development Strategy.

KMG uses a KPI (Key Performance Indicator)-based system to assess staff performance, with a focus on recognising performance and rewarding it with adequate material and non-material benefits.

## KMG KPIS

### INCLUDE:

- KPIs based on key financial, economic and sector indicators from the Company's business plan and division indicators;
- Individual KPIs based on a specific leader's strategic objectives;
- KPIs for members of the KMG Management Board set by the Board of Directors.

### ENSURE:

- Focus on realising Company Strategy and business plan indicators;
- Focus on constant improvements in the Company's financial and production performance;
- Compliance with all laws and regulations;
- Balanced and comprehensive nature of KPIs, ensuring motivation to achieve Company priorities
- Transparency, measurability, minimal sufficiency and consistency of KPIs;
- Cascading of KPIs.

The Company's performance rating system incorporates financial and economic indicators such as the return on average capital employed (ROACE), debt ratios (Debt/EBITDA), and sector KPIs (oil and gas production levels).

Executive management board and management-level employee compensation focuses on results, motivation, improving

work and operating performance, and includes short-term benefit elements for achieving KPIs.

KMG administrative staff performance is based on their professional development and personal performance. They receive quarterly performance appraisals based on annual goals, which go towards allocating quarterly bonuses.

## KEY PERFORMANCE INDICATORS

KPI	Unit of measurement	2017	2018
Net income*	bln tenge	443	696
ROACE**	%	6.9	8.1
Debt/EBITDA***	ratio	4.24	2.50
Corporate governance rating	rating	B	BB
Oil and gas condensate production	thous. tonnes	23,362	23,606

## OPERATING KPIS

Index	Unit of measurement	2014	2015	2016	2017	2018
Oil and gas condensate production	thous. tonnes	22,491	22,669	22,639	23,362	23,606
Oil production	mcm	7,025	7,577	7,395	7,996	8,317
Oil transportation	thous. tonnes	77,547	73,291	69,472	74,815	75,038
Gas transportation	mcm	105,444	102,750	88,077	100,857	111,567
Refining	thous. tonnes	18,053	17,390	17,673	18,207	19,715

\* net income due on the parent company's share

\*\* ROACE = (profit for the year + compensation costs expenses adjusted for tax payments)/average capital employed

\*\*\*as per approved methodology of SWF "Samruk-Kazyna" JSC

# KMG BUSINESS MODEL

## MISSION

Ensuring maximum Stakeholders benefits from participating in the development of the national oil and gas sector.

## VISION

A highly effective, national vertically integrated operating company that meets the highest safety and corporate governance standards.

## CULTURE

Promoting better corporate social responsibility, work, health and environmental safety; improvements in regional economic impact and anti-corruption efforts; improved corporate culture, corporate ethics and compliance.

## GLOBAL MARKET TRENDS

- Volatility of hydrocarbon material prices
- Changes in the structure of the global fuel and energy balance impacts the diversification of hydrocarbon sales markets
- Instability in access to international debt capital markets and possible further interest rate growth

## COMPETITIVE ADVANTAGES

1. Priority in the receipt of subsoil use rights to strategic subsoil plots.
2. Vertically integrated company.
3. Potential fields in the portfolio of explored assets.
4. Geological and geophysical data available on Kazakhstan sedimentary basins.

5. Opportunity to attract strategic partners for “carry-financing” upstream operations.
6. Participatory interest in major oil and gas assets.
7. JSC KazTransGas’s pre-emptive state right to purchase gas as the

- national gas and gas supply operator.
- 8. The availability of upgraded oil refinery capacity.
- 9. Diversified oil and gas transportation assets.

10. State support in the utilisation of oil refineries as strategic assets.
11. Access to international debt capital.
12. A good reputation on debt capital markets with more than 10 years of history.

## SUCCESS FACTORS

## STRATEGIC PRIORITIES

## STRATEGIC RESULTS

## CREATE GROWTH FOR STAKEHOLDERS

## MAIN RISK FACTORS

Strategic partners execute exploration obligations within established deadlines and within budget

### ADDITIONS TO RESERVES

Balanced capital structure

### FINANCIAL STABILITY

Social stability in the operating region

### PRODUCTION VARIABLES

Oil price not lower than 65-70 USD per bbl.

### PROFITABILITY

State support in the utilisation of oil refineries as strategic assets

### SERVICING OF LOANS RECEIVED TO UPGRADE OIL REFINERIES

CREATE VALUE AND CONSOLIDATE FINANCIAL STABILITY

IMPROVE SUBSIDIARY AND JOINT VENTURE MANAGEABILITY

CORPORATE GOVERNANCE AND SUSTAINABLE DEVELOPMENT

GROWTH IN CASH FLOWS AND INVESTMENT RETURN (PAGE 22)

INTRODUCTION OF A TWO-TIER GOVERNANCE SYSTEM (PAGE 23)

ETHICS, COMPLIANCE AND CORPORATE CULTURE (PAGE 138)  
CORPORATE ECOLOGICAL RESPONSIBILITY (PAGE 104)

### SHAREHOLDERS

Investment return and dividend payments on time (page 182)

### EMPLOYEES

Competitive salary, quality and safe working conditions, professional development, compliance with human rights, social guarantees, benefits and compensation (page 118)

### SUBSIDIARIES AND DEPENDENT ORGANISATIONS, JOINT VENTURES AND PARTNERS

Responsible partner, representation of interests with the state authorities, diversified hydrocarbon transportation routes (page 6-7)

### LOCAL COMMUNITIES

Job creation, development of social infrastructure, support of local manufacturers, small and medium-sized companies (page 126, 127)

### STATE

Energy security, guaranteed tax payments, responsible and effective use of human and natural resources, job creation (page 97)

- Unstable hydrocarbon global pricing
- Natural decline in production at mature fields
- Geological risk of geological and exploration projects
- Risk of negative ecological impact and harm to staff
- Social situation in the regions where operations are performed
- Gas deficit risk caused by an increase in gas consumption and reduction in gas production
- Instability in the geopolitical situation in Kazakhstan’s trading partners
- Changes in macrovariables in the Kazakhstan economy
- Changes in the situation on international capital markets, possible interest rate growths
- Legal risks related to overseas assets/ court proceedings
- Risk of negative consequences due to Russian sanctions
- Cyber risks
- Climate risks (page 130)

# TRANSFORMATION AND PRIVATISATION

## STRATEGY

« The strategic initiative to adopt a two-tier asset management model implies the transition from a “management holding” model to an “operating holding” model.

The KMG Group target operating model assumes simplifying production asset management by:

- withdrawing from non-core, auxiliary and non-strategic assets, which will help focus KMG resources on core asset management;
- KMG being able to manage production assets “directly” due to a reduction in the number of management levels and number of companies – the closedown of subholding companies and a transition to a two-tier management structure;
- transforming existing joint stock companies into limited liability partnerships, which will help simplify the management decision-making process. Transformation does not affect listed companies.



KMG has officially launched its transformation programme, which was developed by Samruk-Kazyna following a government initiative in January 2015. The aim of the programme is to improve financial and production indices, develop core businesses and strategic assets.

2018 saw the approval of the 2018-2021 Transformation Programme Charter and Road Map, according to which KMG transformation projects focus on several initiatives:

### INITIATIVE 1

“Business process re-engineering and digitalisation” includes 28 projects: 9 involving system and methodological changes, 6 - production and non-digital projects, and 13 - production and digital projects. The list will change as projects are completed, with new projects being added.

- Business process re-engineering and digitalisation
- Legal structure simplification
- People transformation
- Change management and design approach implementation

The largest project is the “Core business functions transformation and ERP implementation”, which will combine the KMG corporate centre and 6 key upstream subsidiaries operating in 3 of KMG’s main areas, specifically in “Downstream and oil services”, “Oil midstream and downstream”, and “Gas downstream”. The automation element of the project is due to be continued in 2019.

2018 saw the completion of the “New risk management model implementation: internal control system upgrade and business continuity management system implementation” initiative ([more details on risks on page 130](#)). The new risk management model will help speed up process risk intervention, improve business process transparency and reduce operating inefficiencies.

2018 also saw the completion of the project to “implement a new SAP PPM-based investment portfolio management model”, which involved transitioning KMG to portfolio management, enabling it to assemble a pool of investment projects from subsidiaries/divisions once a year and select (prioritise) the most effective, taking into account KMG costs for other capital investment and financial opportunities. SAP PPM implementation

### INITIATIVE 2

“Legal structure simplification” involves KMG’s transition to a two-tier management structure, with the integrated corporate centre remaining at level one, and all subsidiaries and dependent organisations at level two, which will improve manageability and effective decision making throughout KMG. The initiative will involve closing down subholding companies, selling assets and withdrawing from a number of non-core and non-strategic assets.

### INITIATIVE 3

“People transformation” focuses on changing corporate culture and developing leadership, making sure staff are qualified and implementing target processes by 31 December 2020.

should improve budget controls, speed up the decision-making process and ensure better project realisation control from the KMG corporate centre.

One of the most important Initiative 1 projects is the “Implementation of categorical procurement management”, which implies creating additional value, increasing economic benefits, assessing the total cost of ownership and reducing cost across the entire supply chain.

Procurement strategies can have significant benefits. For example, a 546 mln tenge saving was made in transportation services in Nur-Sultan, while a significant 1.3 bln tenge saving was made by launching an oil well tubing project. The realisation of 4 procurement-related categorical strategies managed to generate a saving of 2.6 bln tenge.

In 2018, KMG completed the buy-back of its share in JSC KazMunaiGas Exploration Production, increasing its interest to 99.6%. In May 2018, global depositary receipts and JSC KazMunaiGas Exploration Production common shares were delisted from the London and Kazakhstan stock exchanges. After integration, KazMunaiGas Exploration Production became part of the “Exploration, production and oil services” Corporate Centre division.

### INITIATIVE 4

Through “Change management and design approach implementation” KMG will achieve the next management level by 31 December 2019 by introducing changes of management culture and rules.



## PRIVATISATION PROGRAMME

One of the most important business transformation and structural improvement processes (Initiative 2 – “Legal structure simplification”) is asset privatisation, first and foremost, non-core assets.

In December 2015, the Kazakhstan Government approved a comprehensive privatisation plan for 2016—2020, which covers 73 of the KMG Group companies.

So far, 63 companies have either been sold, closed down or restructured, raising a total of 59.6 bln tenge.

Seven assets were sold in 2018, raising 23.2 bln tenge.

All remaining assets to be privatised are currently either undergoing pre-sale or closure procedures. Independent appraisers have been engaged to value them and determine the sales method to be used.

In November 2018, the KMG Board of Directors approved an additional list of 37 companies either directly or indirectly belonging to KMG for removal from the KMG Group.

Three assets were sold or re-organised through the programme in 2018, including the sale of KMG-Retail LLP for 60 512 mln tenge.

# DIGITALISATION

## STRATEGY

« According to the 2018-2028 Strategy, one of the tools for improving KMG performance is to unify and automate core support processes on the basis of an integrated corporate model. This will help generate an integrated chain for creating value in KMG, identify areas where that value is being “wasted” and generate a foundation for transparent and effective transfer pricing throughout the KMG Group. »

**KMG has been realising digitalisation projects to improve performance in all business segments since 2015, since the launch of the transformation programme.**

The most successful downstream digital project has been the “Intellectual field”, where at its Uaz field, Embamunaygas has introduced an oil and gas sector management system to generate maximum production. The project began to show its potential in 2016 during the pilot stage when electricity consumption fell by 10-15%, and well repair costs fell by 8-10%. In 2018, the project extended to the Embamunaygas Zhanatalap and East Makat fields, and is due to be further expanded in 2019 to the East Moldabek field (stage 1). Kazgermunai has been implementing the project at its Akshibulak, Nuraly and Aksai fields since 2017.

The Pavlodar and Atyrau refineries have transitioned to longer repair intervals to better ensure the required level of technical maintenance, reliability and mechanical integrity. Planned refinery overhauls will now be possible every three years thanks to the automation and implementation of new management processes, meaning operations will be suspended less often. The project should improve hardware reliability by 8-10%, reduce repair costs by 10% and raise refining by 300 thous. tonnes per year on average at each refinery. The project will also help reduce refined product inventory by 25% along with the need for unscheduled idle time and emergency work.

A key midstream oil project has been the launch of the KazTransOil main operation and maintenance centre (OMC), which has allowed it to manage oil freight traffic in 11 regions of the country directly from Nur-Sultan and ensure transportation safely. The OMC is able to manage oil intake and sales, Aktau port and railway overpass oil loading directly online.

The “Gas Midstream and Downstream” segment saw KazTransGas Aimak introduce a gas metering and sales data system (Ondiris) in 2018.

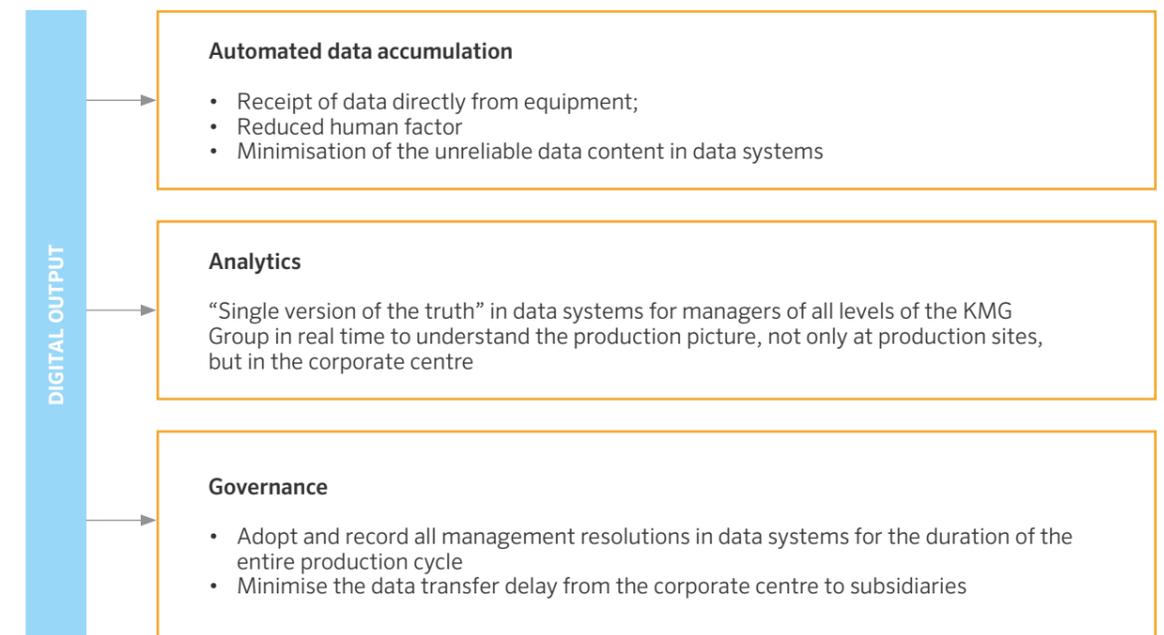
In 2018, KazTransGas launched blockchain technology in the gas sector, which has simplified gas pipeline maintenance and repair processes, increasing operating safety many times over and reducing resource losses ([more details on page 75](#)).

The Atyrau and Pavlodar refineries introduced Spiral planning and specialised software in 2018, which has allowed them to improve competitiveness and oil product output through better planning capabilities.

The introduction of the Spiral software at the Atyrau and Pavlodar refineries has already increased the accuracy and transparency of the planning process; increased refining depth; reduced fuel consumption and losses;

and increased revenue generated by crude oil suppliers. Spiral is involved in the generation of all monthly production plans. The project is due to be launched at the Shymkent Refinery in 2019.

## DIGITAL PRODUCTION CONCEPT



KMG currently has 13 projects in its digitalisation portfolio, but that number is due to change as projects are completed and new initiatives are launched.



# OPERATIONS OVERVIEW

## LETTER FROM THE CHAIRMAN OF THE MANAGEMENT BOARD



### DEAR SHAREHOLDERS, COLLEAGUES AND PARTNERS!

I was elected to the post of Chairman of the JSC NC KazMunayGas Management Board by Resolution of the KMG Board of Directors in November 2018, after having been a part of KMG for a long time as a Samruk-Kazyna representative on the Board of Directors, heading JSC Mangistaumunaigaz and JSC KazMunayGas Exploration Production. I have also spent time as the head of

Mangistau Oblast, where a key KMG production asset, JSC Ozenmunaigas, plays a key role. This experience has helped plan the way forward, taking into account both KazMunayGas strengths and weaknesses. As the Chairman of the Management Board, I am ready to make a far-reaching contribution to its prosperity in the interests of all stakeholders.

Samruk-Kazyna has given KMG an ambitious brief, which involves significantly increasing financial stability, reducing leverage and improving operating characteristics. And I am pleased to say that KazMunayGas 2018 results have lived up to the main shareholder's expectations.

In 2018, a number of events took place that opened new financial opportunities for the Company and created potential for future growth. For example, in September 2018, the Karachaganak partners signed an agreement to launch the SPOG Project to remove production restrictions on Karachaganak Processing Complex gas, process up to an additional 4 bln bcm of sour gas per year and produce an additional 10 mln tonnes of liquid hydrocarbons before the PSA expires. The project is due to be commissioned at the end of 2021.

In October 2018, JSC KazTransGas and PetroChina International Company Limited signed a long-term contract to increase Kazakhstan gas exports to China from 5 bln bcm to 10 bcm per year. Gas exports to China generates significant income for the KMG Group. The completion of oil refinery modernisation work is another significant achievement, as it is the catalyst for the KMG refineries to produce Euro-4 and Euro-5 ecological standard fuel. Output has increased and the assortment of oil products has improved, all of which have had a positive economic effect on oil refining. Additional light oil product output will help us meet domestic demand in full and even develop the opportunity to export at market prices. It is important to note that modernisation work was carried out while the refineries remained in operation. Overseeing a project of this size without suspending operations was very difficult, but KazMunayGas managed it.

Following modernisation work and the launch of its aromatic hydrocarbon production complex, the Atyrau Oil Refinery has added paraxylene to its benzol production operations, which should not only cover increased domestic demand, but leave surplus for exports to neighbouring countries and further afield.

Company transformation, including the digital transformation KazMunayGas is currently undertaking, covers the entire value creation chain — from the search for new reserves to field operations, and from refining to oil product sales. Crucially, digitalisation would not be possible without structural and organisational changes within the Company. You will never get the results you want by means of information systems if you don't restructure the business. With that in mind, KazMunayGas is currently transitioning to a new operating model,

reducing the number of asset management levels and developing back-office process models. All these measures will help make KMG a more contemporary and flexible company capable of reacting to market challenges. We have already successfully implemented intellectual field digital technology at a number of businesses to help better locate oil leaks, improve the process of identifying reasons for breakdowns, monitor production equipment, improve the performance of production and disposal wells, and reduce operating costs. We've also introduced digitalisation in the midstream sector. For example, the main KazTransOil dispatcher unit has been receiving and releasing oil online, supplying feedstock to refineries, exporting hydrocarbons and loading oil at the port in Aktau since 2018. The digitalisation project has helped increase production safety, lower the chances of accidents and reduce operating costs by shortening machinery downtime due to accidents and identifying malfunction and defects in a timely manner.

As the Deputy Chairman of the Samruk-Kazyna Management Board, I personally witnessed KMG's safety achievements in 2018. For the first time in its history, the Company recorded zero work-related fatalities over a 12-month period. The number of accidents resulting in lost work time (a period in excess of one day as a result of a work-related injury) fell 32% on 2017. All of this testifies the adoption and adherence to a safety culture within KMG.

Today, we are looking at introducing transparent and consistent financial controls for all initiatives and ensuring more effective risk management, which should allow us to evaluate potential solutions more objectively. Given the realities of the modern oil business, we need to be looking at becoming a more effective and safer company, being more technically-oriented, managing a more flexible asset portfolio, being able to take quicker decisions, remaining financially stable and preserving a socially responsible business.

**ALIK AIDARBAYEV**

Chairman of the KMG Management Board

# KMG OPERATING MODEL

PRODUCTION FACTORS

**OIL AND CONDENSATE PRODUCTION**  
**23,606** THOUS. TONNES  
**484.2** THOUS. BBL PER DAY

**PRODUCTION OF NATURAL AND ASSOCIATED GAS**  
**8,137** MCM

**OIL AND CONDENSATE RESERVES (A,B,C1)**  
**668.2** MLN TONNES OF OIL AND CONDENSATE  
**414.3** BCM OF NATURAL GAS

**OIL TRANSPORTATION**  
**75,038** THOUS. TONNES

**GAS TRANSPORTATION**  
**111,567** MCM

**OIL REFINING**  
**19,715** THOUS. TONNES

**HEADCOUNT**  
**83,116** THOUS.

- **24,091** IN THE UPSTREAM SECTOR
- **21,707** IN THE MIDSTREAM SECTOR
- **14,787** IN THE DOWNSTREAM SECTOR
- **22,531** AND OTHER AREAS

as at 31 December 2018

PRODUCTION ACTIVITIES

**OIL AND GAS PRODUCTION**  
**23.6** MLN TONNES OF OIL AND CONDENSATE  
**8,317** MCM OF NATURAL AND ASSOCIATED GAS

**OIL AND GAS PURCHASES**  
**2.9** MLN TONNES OF OIL AND CONDENSATE  
**23.3** BCM OF COMMERCIAL GAS

**OIL PRODUCT PURCHASES**  
**2.4** MLN TONNES

**OIL TRANSPORTATION** mln tonnes

JSC KazTransOil	45,309
Kazakhstan-China Pipeline LLP	7,999
MunaiTas North-West Pipeline Company LLP	1,978
Caspian Pipeline Consortium	12,675
JSC Kazmortransflot	7,077



**GAS TRANSPORTATION** bcm

JSC Intergas Central Asia	80.1
Asia Gas Pipeline LLP	24.6
Beineu-Shymkent Gas Pipeline LLP	4.2
JSC KazTransGas	2.6

Export **18%** Transit **67%** Domestic market **14%**

**REFINING**  
**9,066** THOUS. TONNES KMG OIL SUPPLIES FOR REFINING  
**13,038** THOUS. TONNES OIL SUPPLIES FROM THIRD PARTIES

**OIL PRODUCT OUTPUT**  
**6,570** THOUS. TONNES DIESEL  
**4,853** THOUS. TONNES GASOLINE  
**2,378** THOUS. TONNES FUEL OIL  
**826** THOUS. TONNES LIQUEFIED GAS  
**759** THOUS. TONNES VACUUM GAS OIL  
**2,948** THOUS. TONNES OTHERS

**OIL, GAS AND OIL PRODUCT SALES**

**16,744** THOUS. TONNES CRUDE OIL EXPORTS  
**6,991** THOUS. TONNES DOMESTIC CRUDE OIL SALES

**707** THOUS. TONNES OIL PRODUCT EXPORTS  
**2,188** THOUS. TONNES DOMESTIC OIL PRODUCT SALES

**8,917** MCM COMMERCIAL GAS EXPORTS  
**13,999** MCM DOMESTIC COMMERCIAL GAS SALES

SEGMENT ASSETS

• Tengizchevroil LLP	20%	• JSC KazTransOil	90%
• Karachaganak Petroleum Operating BV	10%	• Kazakhstan-China Pipeline LLP	50%
• North Caspian Operating Company	8.44%	• MunaiTas North-West Pipeline Company LLP	51%
• JSC Ozenmunaigas	100%	• OJSC Batumi Oil Terminal	100%
• JSC Embamunaygas	100%	• JSC KazTransGas	100%
• JSC Mangistaumunaigaz	50%	• JSC Intergas Central Asia	100%
• JV Kazgermunai LLP	50%	• Asian Gas Pipeline LLP	50%
• JSC Karazhanbasmunai	50%	• JSC KazTransGas Aimak	100%
• JSC PetroKazakhstan Inc.	33%	• Beineu-Shymkent Gas Pipeline LLP	50%
• Kazakhturkmunay LLP	100%	• NMSC Kazmortransflot	100%
• Kazakhoil Aktobe LLP	50%	• Caspian Pipeline Consortium	20.75%
• KazMunayTeniz LLP	100%		

• Pavlodar Oil Chemistry Plant LLP	100%
• Atyrau Refinery LLP	99.53%
• PetroKazakhstan Oil Products LLP	49.72%
• KMG International NV	100%
• JV Caspi Bitum LLP	50%

**SERVICES AND OTHERS**

• KMG Drilling & Services LLP	100%
• Oil Services Company LLP	100%
• Oil Construction Company LLP	100%
• Oil Transport Corporation LLP	100%
• Mangistauenergomunai LLP	100%
• Munaitelcom LLP	100%
• Ken-Kurylys-Service LLP	100%
• OzenMunaiService LLP	100%
• TenizService LLP	~49%
• KMG Systems & Services LLP	49%
• PSA LLP	100%
• SRI LLP	100%

# RESERVES AND EXPLORATION

## STRATEGY

Under the 2018-2028 Strategy, to ensure growth in reserves within the framework of organic growth, KMG plans to:

- carry out exploration at current contract areas using own funds and “carry financing”;
- carry out additional exploration at operating assets using Company funds;
- attract strategic partners for joint exploration and develop new fields under “carry financing” terms, specifically, with a focus on deep Palaeozoic deposits and offshore fields.

The possibility of acquiring oil and gas assets in Kazakhstan is being considered within the framework of non-organic growth.



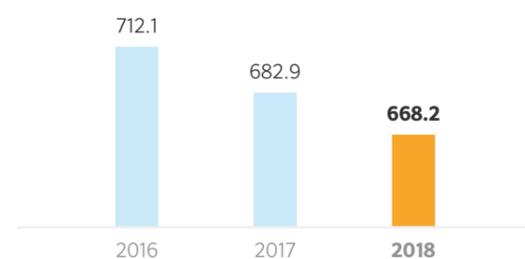
Oil reserve gains will be made possible through organic and non-organic growth. KMG links the growth in reserves with the realisation of onshore exploration projects

and in the Kazakhstan sector of the Caspian Sea, and in the future – with the further exploration of license blocks belonging to subsidiaries.

## KEY EVENTS

- Subsoil use rights have been received for the Beineu site in Mangystau Oblast.
- A Joint Operations Agreement and Financing Agreement for subsoil use rights at the Zhenis site in the Kazakhstan sector of the Caspian Sea has been concluded with LUKOIL.
- A portfolio of four potential subsoil use projects has been prepared. In addition, a full package of documents for the consideration of the KMG investment committee has been prepared for three potential projects in 2017.

### OIL AND CONDENSATE RESERVES (A,B,C1), MLN TONNES



### NATURAL GAS RESERVES (A, B, C1), BCM



The KMG portfolio essentially consists of mature fields, which has led to a situation where the resource base is depleting, making operating effectiveness a priority, along with the search for resource replenishment solutions, the preparation of new resources and their introduction both at new fields and mature fields after additional exploration. With this in mind, the Company is constantly looking for potential exploration ideas.

Furthermore, KMG, in conjunction with its Production and Drilling Research Institute, is currently surveying the Pricaspi, Ustyurt-Bozashin and Mangyshlak basins to prepare a portfolio of potential subsoil use blocks.

At 31 December 2018, according to the State Commission for Mineral Resource Reserves, KMG’s liquid hydrocarbon reserves (including participation interests) amounted to 668 mln tonnes (5,077 mln BOE), inclusive of natural gas of 7 811 mln BOE.

The Company plans to adopt international standard for reporting hydrocarbon reserves.

KMG’s proven hydrocarbon reserves fell 2% or by 14.7 mln tonnes (112 mln BOE) in 2018 from the previous year. The decline in oil and gas condensate reserves was generally caused by annual production, and the return of the Pribrezhnoye project contract.

**625.8** MLN TONNES

Oil reserves for 2018

**42.4** MLN TONNES

Gas condensate reserves for 2018

**414.3** MLN TONNES

Natural gas reserves for 2018

**7,811.2** MLN BOE

KMG liquid hydrocarbon reserves for 2018

Reserves (A, B, C1)	unit of measurement	2016	2017	2018
Oil	mln tonnes	667.2	639.7	625.8
Gas condensate	mln tonnes	44.9	43.2	42.4
Total (oil and gas condensate)	mln tonnes	712.1	682.9	668.2
Natural gas	bcm	430.7	418.8	414.3
<b>Total</b>	<b>mln BOE</b>	<b>8,254.5</b>	<b>7,954.1</b>	<b>7,811.2</b>

**RESERVES (A, B, C1) BREAKDOWN BY OPERATING ASSETS, AS AT 31 DECEMBER 2018**

mln tonnes	2016	2017	2018
<b>KMG operating assets</b>	<b>373.6</b>	<b>361.8</b>	<b>355.1</b>
JSC Ozenmunaigas (100%) + KazGPZ LLP (100%)	127.1	121.7	122.9
JSC Embamunaygas (100%)	74.4	74.5	75.9
JSC Karazhanbasmunai (50%)	21.5	20.4	19.4
JV Kazgermunai LLP (66.5%)	15.2	13.8	12.1
PKKR (33%)	6.7	6.5	5.7
Ural oil and gas (50%)	5.5	5.5	5.5
PKI - Kolzhan (33%)	2.9	3.2	3.1
Turgai Petroleum (16.5%)	1.9	1.8	1.75
PKI - PKVI (24.75%)	0.5	0.4	0.5
JSC Mangistaumunaigaz (50%) + Steppe Leopard (50%)	68.9	65.7	63.1
Kazakhoil Aktobe LLP (50%)	25.7	25.4	25.1
KazMunayTeniz LLP (25%)	6.9	6.9	6.9
Kazakhturkmunay LLP (100%)	7.1	6.7	6.3
Urikhau Operating (100%)	6.3	6.3	6.3
Pribrezhnoye (50%)	2.5	2.5	0.0
Amangeldy Gas LLP (100%)	0.5	0.5	0.47

**STRUCTURE OF OFFSHORE AND ONSHORE RESERVES, MLN TONNES**

589

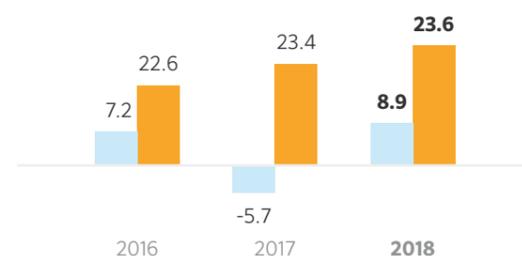
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● Onshore reserves

● Offshore reserves

**OIL AND CONDENSATE REPLENISHMENT RATIO**

in 2016	in 2017	in 2018
↗ 32%	↘ -24%	↗ 38%

**REPLENISHMENT OF OIL AND CONDENSATE RESERVES (INCLUSIVE OF THE KMG INTEREST), MLN TONNES**

● Growth in proven, recoverable oil and condensate reserves

● Oil and condensate production

**EXPLORATION**

KMG links the growth in resources with the resource potential of onshore exploration projects and those in the Kazakhstan sector of the Caspian Sea.

Given the amendments to tax and subsoil use law to stimulate exploration, KMG is working with partners to obtain subsoil use rights in the Caspian Sea. KMG and LUKOIL are planning to use agreements between them to conclude a hydrocarbon exploration and production contract for the Zhenis site with the Ministry of Energy.

KMG and its overseas partners are working together on a number of exploration and research projects at Caspian blocks, such as the Khvalynskoye, Tsentralnoye, Zhemchuzhina and Isatay fields and other sites.

In 2018, KMG performed planned seismic and drilling work at a number of contract territories and prepared new subsoil use contracts for the approval. It also drafted detailed further exploration programmes with action plans for the Kazakhturkmunay, Mangistaumunaigaz and Embamunaygas fields to ensure oil reserve growth.

To fulfil its development Strategy, KMG studies sedimentary basins to estimate oil and gas bearing potential and prepares a portfolio of potential subsoil blocks. In 2018, it completed construction of the South-Torgai sedimentary basin structural and tectonic model, and the Ustyurt-Bozashin tectonic-sedimentary model and sidewalls (North, East and South) at the Pricaspi sedimentary basin. It has prepared a portfolio of four potential subsoil use projects together with a full package of documents for three other potential projects and forwarded them on to the KMG investment committee for its consideration and further development.

Exploration work	2016	2017	2018
Number of exploration wells drilled, units	28	50	54
2D seismic exploration, thous. linear km <sup>2</sup>	2,000	-	1,000
3D seismic exploration, thous. km <sup>2</sup>	2,097	4,299	1,253
Open fields	-	-	-

# OIL AND GAS PRODUCTION

## STRATEGY

« To compensate the natural decline in production at operating assets, according to its 2018-2028 Strategy, KMG will take a number of measures to improve production efficiency and technological discipline, and involve fixed reserves to achieve maximum well productivity, improve the technological and economic performance of geological and technical measures by:

- promoting an innovative and technological production base, including field digitalisation projects;
- removing restrictions on overland infrastructure by resolving gas and water recycling issues;
- increasing the oil recovery factor at production assets;
- improving waterflood management;
- expanding polymer flooding;
- commissioning further exploration facilities at operating assets.

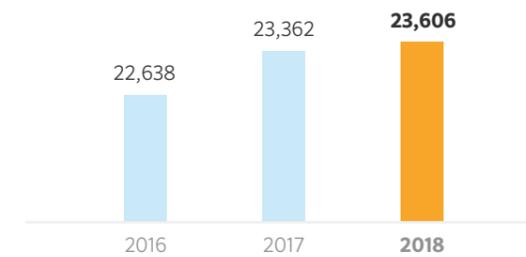


Oil and gas are produced at operating assets in which KMG participates directly in the management of production processes, and mega projects where KMG has interests, but do not operate production process.

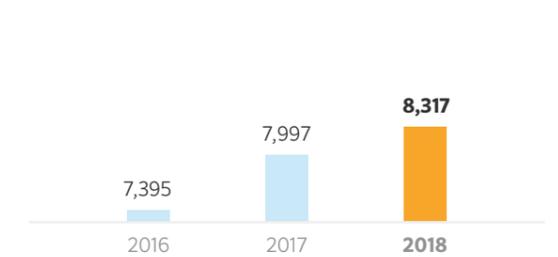
## KEY EVENTS

- Karachaganak partners signed an agreement sanctioning the removal of production restrictions on Karachaganak Processing Plant gas to maximise liquid hydrocarbon production.
- Oil production at Kashagan reached 343 thous. bbl per day thanks to a sour gas injection increases.
- The associated gas recycling issue at Kazakhoil Aktobe (Kozhasai) was resolved with the launch of a gas processing unit.
- In July 2016, Tengiz partners made a final investment decision to finance the Future Growth Project/ Wellhead Pressure Management Project to build a new 12 mln tonne/year refinery and crude gas reinjection facilities with capacity of 9.4 bcm. As at now, 53% of Project is realized and commissioning is planned for June 2022.

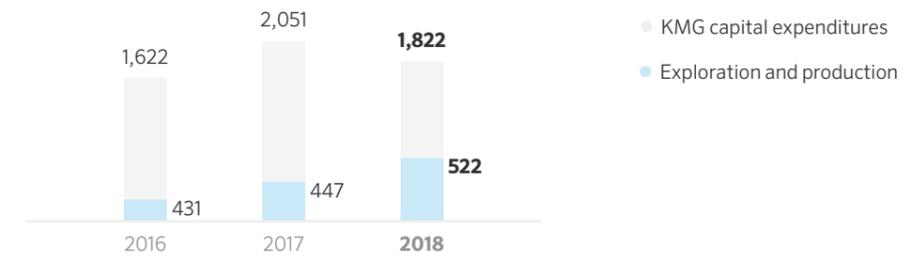
## OIL AND CONDENSATE PRODUCTION, THOUSAND TONNES



## GAS PRODUCTION, MCM



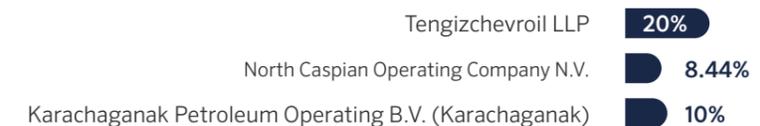
## CONSOLIDATED CAPITAL EXPENDITURES IN UPSTREAM SEGMENT ON ACCRUAL BASIS, MLN USD



## OPERATING ASSETS INCLUDE



## NON-OPERATING ASSETS (MEGA PROJECTS) INCLUDE



## OIL PRODUCTION

KMG oil and condensate production in 2018 amounted to 23.6 mln tonnes (176.7 mln bbl) or 484.2 thous. bbl a day, which exceeds

the annual plan by 1.3%. At the same time, operating and mega projects accounted for 15.7 mln tonnes (66%) and 7.9 mln tonnes (34%), respectively.

### OIL AND CONDENSATE PRODUCTION, INCLUSIVE OF THE KMG INTEREST

	2018		2017		2016	
	thous. tonnes	thous. bbl <sup>5</sup>	thous. tonnes	thous. bbl	thous. tonnes	thous. bbl
Ozenmunaigas + KazGPZ	5,488	39,675	5,488	39,678	5,564	40,228
Mangistaumunaigaz	3,187	23,042	3,178	22,977	3,145	22,738
Embamunaygas	2,895	21,043	2,840	20,647	2,832	20,589
Kazgermunai	1,354	9,998	1,400	10,338	1,468	10,840
Karazhanbasmunai	1,081	7,221	1,071	7,154	1,064	7,108
PetroKazakhstan Inc.	998	7,731	1,077	8,342	1,235	9,566
Kazakhturkmunay	376	2,710	387	2,789	292	2,104
Kazakhoil Aktobe	296	2,220	351	2,633	381	2,858
Amangeldy Gas	19	144	21	160	21	160
<b>Total for operating assets</b>	<b>15,693</b>	<b>113,785</b>	<b>15,813</b>	<b>114,718</b>	<b>16,002</b>	<b>116,190</b>
Tengiz	5,724	45,678	5,739	45,797	5,511	43,978
Karachaganak	1,095	8,607	1,125	8,843	1,047	8,229
Kashagan	1,094	8,672	686	5,438	79	626
<b>Total for mega projects</b>	<b>7,913</b>	<b>62,957</b>	<b>7,550</b>	<b>60,078</b>	<b>6,637</b>	<b>52,833</b>
<b>Total, KMG</b>	<b>23,606</b>	<b>176,741</b>	<b>23,362</b>	<b>174,796</b>	<b>22,638</b>	<b>169,024</b>

KMG has a 20%, 10% and 8.44% interest in Kazakhstan's three largest upstream projects at Tengiz, Karachaganak and Kashagan, respectively. In its mega projects, KMG

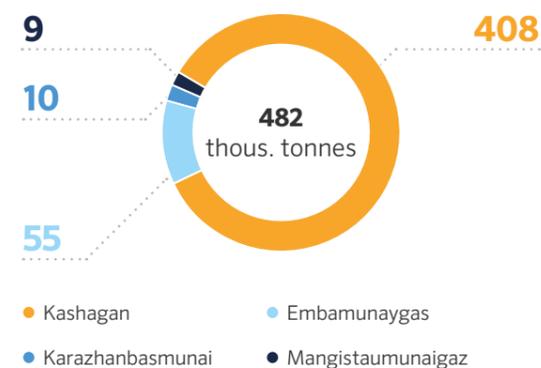
partners such global oil giants as Chevron, ExxonMobil, Shell, Eni, Total, Inpex, the Chinese National Petroleum Corporation (CNPC) and LUKOIL.

### COMPARISON OF OIL AND CONDENSATE PRODUCTION IN 2018 AND 2017, THOUS. TONNES



<sup>5</sup> On the assumption of individual barrelisation coefficients for each asset

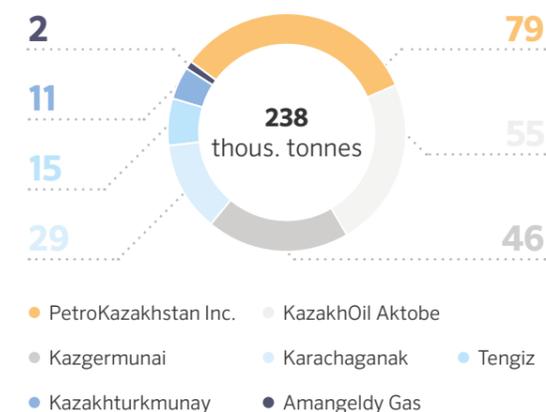
### GROWTH



In 2018, KMG oil and condensate production increased by 243 thous. tonnes or 1% from 23,362 thous. tonnes in 2017, mainly due to assets, inclusive of the KMG interest, improving production by 482 thous. tonnes, for the following reasons:

- Kashagan: + 408 thous. tonnes due to the start of gas reinjection in August 2017, gradual production increases, stable operations at offshore and onshore facilities, and the postponement of the previously planned shutdown for major repairs until 2019;
- Embamunaygas: + 55 thous. tonnes due to an increase in the number of new wells and corresponding additional production.

### DECLINE



At the same time, oil and condensate production declined at some assets:

- PetroKazakhstan Inc.: -79 thous. tonnes due to the natural decline in oil production;
- Kazakhoil Aktobe: -55 thous. tonnes due to gas flaring limits and reductions in reservoir pressure;
- Kazgermunai: -46 thous. tonnes due to a greater natural decline in oil production and the shutdown of wells with a high gas factor due to associated gas flaring restrictions;
- Karachaganak: -30 thous. tonnes due to an increase in the gas condensate factor, increased well flooding and a decline in performance at the Drizo low pressure gas dehydration unit;
- Tengiz: -15 thous. tonnes due to extensions to major HTL repairs (from 1 August until 9 September 2018).



## PARAMETERS OF UPSTREAM OPERATING ASSETS

KMG upstream operating assets are mostly made up of mature fields that have been in operation for decades. A total of 16,261 wells were in operation in 2018, of which 11,667 were classified as current declining well stock. Year-on-year there has been a 361 or 2.2% reduction in the number of wells in the current declining well stock.

In the last three years, current declining well stock has been responsible for 90% of oil and condensate production.

Technical oil characteristics differ significantly by region. The heaviest oil is produced at Karazhanbasmunai, with a barrelisation coefficient of 6.68 bbl per tonne. Oil produced at the major non-operating projects is lighter, recording a barrelisation coefficient of nearly 8 bbl per tonne.

## NUMBER OF KMG WELLS AND OPERATING ASSETS, UNITS

Number of wells	2016	2017	2018
New wells	464	541	604
Current producing well stock	11,841	11,796	11,667
Idle wells	456	631	495
Injection wells	3,627	3,654	3,495
<b>Total for KMG operating wells</b>	<b>16,388</b>	<b>16,622</b>	<b>16,261</b>

## PARAMETERS OF KMG PRODUCTION ASSETS

	Porosity	API density	Sulphur content, %	Number of fields	Average flow rate of new wells, tonnes/day	Average flow rate of current producing well stock, tonnes/day	Oil barrelisation ratio, bbl/tonne
Ozenmunaigas	0.19	36.51	0.14	2	11.2	4.2	7.23
Embamunaygas	0.27	32.03	0.62	33	12.2	3.7	7.30
KazGPZ	0.14	57.05	-	4	-	0.9	-
Karazhanbasmunai	0.30	19.81	1.55	1	3.1	2.2	6.68
Kazgermunai	0.26	39.95	0.10	5	19.5	28.3	7.38
PetroKazakhstan Inc.	0.09-0.30	51.25	0.03-0.08	19	11-18.2	0.9-30.4	7.75
Amangeldy Gas	0.10-0.24	-	0	3	0.65	1.09	-
Mangistaumunaigaz	0.14	30.77	0.20	15	12	6	7.23
Kazakhoil Aktobe	0.10	36.12	1.00	2	-	18.6	7.50
Kazakhturkmunay	0.14	36.12	3.17	6	-	39.4	7.21



## GAS PRODUCTION

Natural and associated gas production in 2018 amounted to 8,137 mcm (53.7 mln BOE), of which 2,483 mcm (31%) was generated at

operating assets and 5,653 mcm (69%) at mega projects, with Tengiz and Karachaganak accounting for the greatest share.

### GAS PRODUCTION, INCLUSIVE OF THE KMG INTEREST

	2018		2017		2016	
	mcm	thous. BOE <sup>6</sup>	mcm	thous. BOE <sup>2</sup>	mcm	thous. BOE <sup>2</sup>
Ozenmunaigas + KazGPZ	630	4,158	618	4,081	614	4,052
Mangistaumunaigaz	393	2,594	378	2,493	378	2,497
Kazgermunai	262	1,732	280	1,847	299	1,975
Amangeldy Gas	349	2,303	344	2,269	327	2,158
Kazakhoil Aktobe	249	1,643	301	1,987	308	2,030
Embamunaygas	221	1,459	198	1,307	191	1,262
Kazakhturkmunay	161	1,063	175	1,156	187	1,233
PetroKazakhstan Inc.	195	1,290	218	1,438	241	1,593
Karazhanbasmunai	22	148	18	119	19	126
<b>Total for operating assets</b>	<b>2,483</b>	<b>16,389</b>	<b>2,530</b>	<b>16,697</b>	<b>2,564</b>	<b>16,925</b>
Tengiz	3,125	20,625	3,172	20,395	3,016	19,906
Karachaganak	1,891	12,483	1,892	12,490	1,766	11,655
Kashagan	637	4,204	397	2,622	49	321
<b>Total for mega projects</b>	<b>5,653</b>	<b>37,312</b>	<b>5,462</b>	<b>36,047</b>	<b>4,831</b>	<b>31,883</b>
<b>Total, KMG</b>	<b>8,137</b>	<b>53,701</b>	<b>7,991</b>	<b>52,743</b>	<b>7,395</b>	<b>48,807</b>

Gas production levels include actual gas produced, but not reinjected gas. Gas

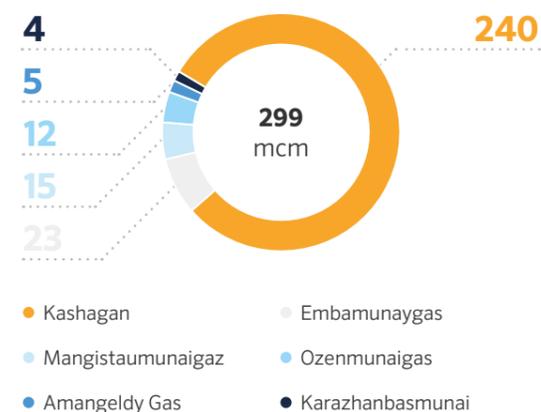
reinjection is used to support reservoir pressure, which is important in increasing oil production levels.

### COMPARISON OF OIL PRODUCTION IN 2018 AND 2017, MCM



<sup>6</sup> tcm = 6.6 BOE

### GROWTH



Gas production increased 1.8% (+145 mcm) from 2017 thanks to total production increases at Kashagan, Embamunaygas, Mangistaumunaigaz, Ozenmunaigas, Amangeldy Gas and Karazhanbasmunai of 299 mcm. However, gas production decreases of 154 mcm were recorded at KazGPZ, Kazakhoil Aktobe, Tengiz, Kazgermunai, PetroKazakhstan Inc. and Kazakhturkmunay.

Gas production in 2018 reached 4,568 mcm, which includes mega project production of 4,350 mcm in 2017. Year-on-year, commercial gas production increased in total by 263 mcm or 6.1%.

The KazGPZ plant, as well as processing its own raw materials, produces commercial gas using raw materials received from other KMG operating assets that do not produce commercial gas themselves.

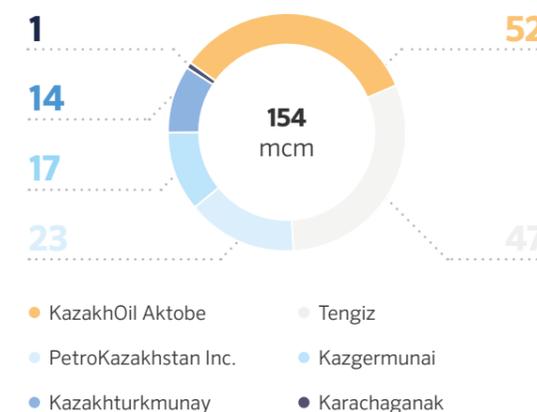
# 8,137 MCM

Volume of natural and associated gas produced in 2018

# 4,568 MCM

Commercial gas produced in 2018, inclusive of mega project production

### DECLINE



### GAS PRODUCTION BY OPERATING ASSET SUPPLYING SOUR GAS TO KAZGPZ, MCM

	2017	2018
Ozenmunaigas + KazGPZ	540	558
Mangistaumunaigaz	199	207
Kazgermunai	235	205
Amangeldy Gas	339	345
Kazakhoil Aktobe	180	173
Embamunaygas	30	154
Kazakhturkmunay	156	143
PetroKazakhstan Inc.	78	68
Karazhanbasmunai	0	0
<b>Total for operating assets</b>	<b>1,654</b>	<b>1,766</b>

### COMMERCIAL GAS PRODUCTION BY MEGA PROJECT, INCLUSIVE OF THE KMG INTEREST, MCM

	2017	2018
Tengiz	1,847	1,837
Karachaganak	878	949
Kashagan	223	301
<b>Total mega projects, inclusive of the KMG interest</b>	<b>2,651</b>	<b>2,802</b>



## MEGA PROJECTS

### TENGIZ

Tengizchevroil LLP (TCO) operates a license area incorporating the super-giant Tengiz field and the smaller, but still significant in terms of reserves, Korolevskoye field.

The Tengiz oil field was opened in 1979 and is one of the largest deep deposits in the world.

Chevron signed the Tengizchevroil project agreement on 2 April 1993 and received a hydrocarbon upstream licence for 40 years to operate the Tengiz oil field.

TCO explores, produces and sells hydrocarbons from the Tengiz and Korolevskoye fields in Atyrau Oblast together with its current partners - Chevron (50%), ExxonMobil (25%), KMG (20%) and LukArco (5%).

### TCO PRODUCTION ACTIVITIES

	Oil production, thous. tonnes	Associated gas production, mcm	Dry gas production, mcm	Liquid petroleum gas (LPG) production, thous. tonnes	Sulphur production, thous. tonnes	Gas reinjection, mcm
2017	28,697	15,860	9,237	1,382	2,566	3,097
2018	28,622	15,625	9,186	1,343	2,574	3,186

In 2018, TCO produced 28,622 thous. tonnes of oil, exceeding its annual plan by 824 thous. tonnes, but less than in 2017 by an insignificant 75 thous. tonnes (or 0.26%) due to longer HTL modernisation work between 1 August and 9 September 2018.

Gas production reached 15,625 mcm, exceeding the annual plan by 1,037 mcm, but falling slightly year-on-year by 235 mcm (or 1.5%) due to lower oil production levels.

### PRODUCT SALES

Oil, thous. tonnes	28,800
Dry gas, mcm	7,532
LPG, thous. tonnes	1,345
Sulphur, thous. tonnes	2,467

On 5 July 2016, TCO partners took an irreversible decision to finance its FGP and WPMP, involving the construction of a new 12 mln tonne of oil per year processing plant and facilities to reinject 9.4 bcm of sour gas per year; the construction of a new product collection system at its wells, pressure boost facilities, infrastructure and auxiliary facilities.

The project, which costs approximately 36.8 bln USD and will have a Kazakhstan content of 32%, is due to be commissioned in June 2022.

The project has already created 48 thous. jobs in Kazakhstan and led to staff training. When the new facilities are commissioned, a further 700 permanent jobs will be created.

**DIGITALISATION PROJECTS**

TCO is actively promoting the digitalisation of its business processes and implementing new technology to improve production and auxiliary process performance.

TCO is currently designing and implementing:

- an integrated corporate base, allowing TCO to improve and maintain data quality and guarantee the integrated sources of TCO data;
- the Tengiz comprehensive operating centre, which integrates work processes and improves cross-disciplinary activities, allowing TCO to improve its decision-making process;
- well performance forecasting, which has helped TCO maintain planned production levels;
- driver tiredness controls – artificial intellect warning drivers if it detects signs of micro sleep;
- water resource management – a dashboard enabling the user to see water available and water used in real time;
- a data management programme to plan and construct production facilities – an integrated comprehensive view of design and technical information;
- a well integrity web portal – an automated well probability process to improve engineer performance;
- fibre optic cables to collect measurements and data;
- cloud solutions.

**KASHAGAN**

Kashagan is Kazakhstan’s first major offshore oil and gas upstream deposit project, and incorporates four fields – Kashagan, Kalamkas-morye, Kairan and Aktoty.

The giant Kashagan field is one of the largest oil fields opened in the last few decades. Its recoverable reserves amount to approximately 2 bln tonnes (over 15 bln bbl) of oil. The Kashagan offshore reservoir is 80 km from Atyrau and lies at a depth of over 4 km below the sea bed.

The North Caspian Production Sharing Agreement was signed on 18 November 1997. Current participants of the project are KMG Kashagan BV (16.88%), Eni, Total, ExxonMobil, Shell (all 16.81%), CNPC (8.33%) and Inpex (7.56%). The operator, NCOC, operates on behalf of all of the contractors.

**KASHAGAN PRODUCTION ACTIVITIES**

	Oil production, thous. tonnes	Sour gas production, mcm	Sulphur production, thous. tonnes	Gas reinjection, mcm
2017	8,286	4,799	1,151	321
2018	13,219	7,697	1,340	2,235



In 2018, Kashagan oil production amounted to 13,219 thous. tonnes, exceeding the annual plan by 1,894 thous. tonnes, and rising significantly year-on-year by 4,933 thous. tonnes (or 59.5%) because oil production restrictions were in place before August

2017 as a consequence associated gas flaring restrictions and no gas reinjection. For the same reason, gas production in 2018 compared to 2017 increased by 2,898 mcm (or 60.4%). Sour gas production amounted to 7,697 mcm, exceeding the annual plan by 570 mcm.

## PRODUCT SALES

	Oil, thous. tonnes	Commercial gas, mcm	Sulphur, thous. tonnes
2017	640.5	223.8	7.7
2018	1,124.6	301.8	81.5

In 2018, KMG's share of oil sales reached 1,124.64 thous. tonnes, exceeding plan (919.17 thous. tonnes) by 22% due to the planned maintenance production suspension being moved from 2018 to 2019. Year-on-year, oil sales in 2018 grew by 76% due to higher production levels.

In 2018, KMG's share of commercial gas sales reached 301.8 mcm, exceeding the annual plan (176 mcm) by 71% due to the planned maintenance production suspension being moved to 2019. Likewise, because of the rise in commercial gas production and optimisation, sales grew by 35% in 2018 year-on-year.

In 2018, KMG's share of granulated sulphur sales amounted to 81.48 thous. tonnes, which is 8% short of the annual plan of 88.20 thous. tonnes due to a delay in reaching full capacity caused by unstable granulated sulphur production.

Starting operations in 2016, the consortium soon began to gain momentum, reaching its first target in early 2017 of 180,000 bbl a day. The most important technical achievement in

2017 was the launch of the sour gas reinjection initiative in the middle of August. The gradual increase in gas reinjection helps raise oil production levels. In 2018, the operator continued to increase production to design levels, basing its strategy on the consistent monitoring of equipment and processes, including collector operation. Having said that, the priority has always been safety.

KMG owns 50% of KMG Kashagan BV that has 16.88% interest in Kashagan mega project. The rest of 50% in KMG Kashagan BV belongs to Samruk-Kazyna or 8.44% in Kashagan mega project. According to an Agreement between Cooperative KazMunayGas (in which KMG has a 98.88% share) and Samruk-Kazyna, option to buyback 8.44% stake in Kashagan has been moved from 2018-2020 to 2020-2022.

Kashagan is currently actively focusing on the digitalisation of its business processes and implementation of digital technology in its operations, promoting improvements in operating and production performance, preventing accidents and protecting health and the environment.



## DIGITALISATION PROJECTS

Kashagan is currently implementing the following digitalisation programmes and initiatives:

- the use of tablets and mobile devices in production activities to collect and enter data, make readings, update and create applications and links online, and review guidelines and instructions;
- a system to monitor air quality, including 20 stations constantly monitoring pollutants at West Eskene and in Atyrau in real time;
- testing the use of unmanned aircraft to fly over pipeline sites, monitor and check flares, check the condition of constructions and execute ecological programmes;
- digitise geological research, digitise all geological data to expand processing capacity in the future, speed up data transfer and supplementary modelling.



**KARACHAGANAK PROJECT**

The Karachaganak project is part of the Final Production Sharing Agreement signed on 18 November 1997, which will be valid for 40 years from the moment it enters into force (27 January 1998).

Shares in the project are held by Shell (29.25%), Eni (29.25%), Chevron (18%), LUKOIL (13.5%) and KMG (10%), with Shell and Eni acting as the single Operator.

**KARACHAGANAK PRODUCTION AND FINANCIAL ACTIVITIES**

	Gas production, mcm	Liquid hydrocarbon production, thous. tonnes	Gas reinjection, mcm
2017	18,924	11,247	9,289
2018	18,913	10,953	8,589

In 2018, gas production at Karachaganak reached 18,913 mcm, exceeding the annual plan by 547 mcm. Year-on-year gas production fell in 2018 by 11 mcm (or 0.06%).

Liquid hydrocarbon production reached 10,953 thous. tonnes, exceeding the annual plan by 66 mcm. Liquid hydrocarbon production in

**PRODUCT SALES (2018)**

Oil, thous. tonnes	10,365
Unstable condensate, thous. tonnes	615
Sour gas, mcm	9,493

**DIGITALISATION PROJECTS**

Karachaganak is implementing its own Digitalisation Roadmap to depict the key areas to be digitised in an effort to streamline, improve and speed up business processes, including production, well operations, future project implementation, and increase local content potential and integration with other production infrastructure components.

The scope of work to manage 4D/5D construction has been determined. At the same time, a Sabisu system has been introduced to review projects, the installation of a Karachaganak Petroleum Operating data panel, risk estimates, and perform monthly project reviews.

**EXTERNAL FACTORS**

The average Brent oil price in 2018 was 71.31 USD per bbl\*, which is 31.6% higher than in 2017. This was predominantly caused by the reduction in oil production agreed by OPEC countries and major independent oil exporters, which gradually helped balance the market as a consequence of reduced supply.

2018 fell year-on-year by 294 thous. tonnes (or 2.6%) due to an increase in the gas condensate factor and increased water cut.

Gas reinjection amounted to 8,589 mcm, falling short of the annual plan by 520 mcm due to gas being sent for export rather than reinjection.

Karachaganak is currently reviewing design documentation to facilitate oil production increases. The plan is for the increases to be realised in stages between 2023 and 2025. Stage one will involve drilling new and overhauling existing wells, building gas processing facilities and additional compressors to increase gas reinjection, and building the necessary auxiliary facilities.

Plans have been drafted to use aircraft to carry out field work inspections.

Another project is looking at the possibility of introducing production, well management, intellectual field and other optimisation systems to streamline production.

With Eni support, Karachaganak is looking to a virtual reality project to create more realistic and interactive information for use in planning and training. Shell is planning to introduce a project that will allow the remote support of production processes and keep staff contact with hazardous environments to a minimum.

Tax accruals for 2018 in the oil and gas production sector rose 39% to 393 bln tenge (282 bln tenge in 2017) due to the influence of global oil prices on domestic market factors.

\*Thomson Reuters

# TRANSPORTATION

## OIL TRANSPORTATION

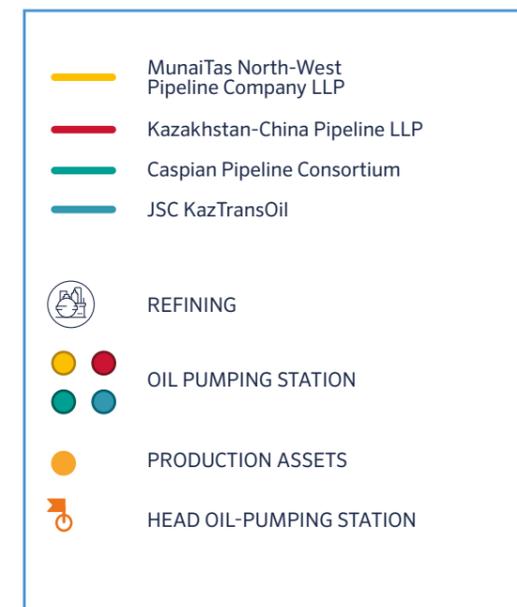
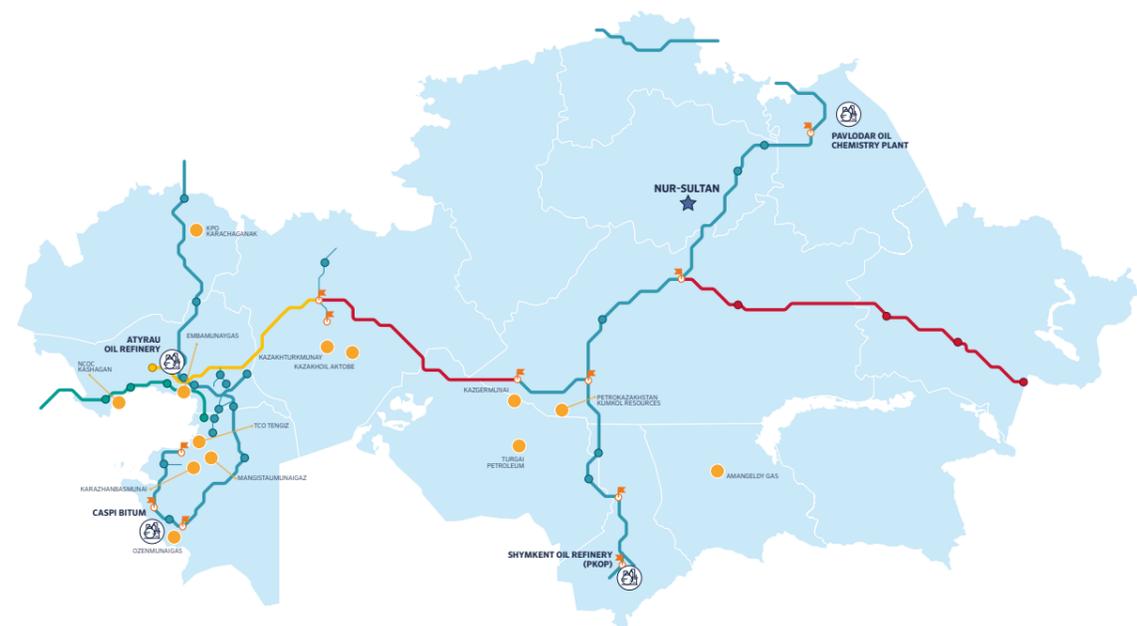
### STRATEGY

Given that KMG has completed the construction of oil export transportation infrastructure, its current medium-term goals are to:

- increase capacity utilisation by making KMG oil transportation systems more attractive and competitive;
- control operating costs.

KMG oil transportation takes two forms —by pipeline (through its subsidiary KazTransOil) and by tanker (through its subsidiary Kazmortransflot).

## PIPELINE TRANSPORTATION



- KazTransOil (KMG share - 90%) is the Kazakhstan national oil pipeline operator and owns an extensive network of 5.4 thousand km of major oil pipelines connected to almost all oil fields in Kazakhstan. It ensures the transportation of oil to four oil refineries, and exports oil through the Atyrau-Samara pipeline, transships oil to the CPC and Atasu-Alashankou oil pipelines, ships oil by tanker at Aktau Port and by railway. Oil pipeline transportation is supported by 37 booster stations, 64 oil furnaces, a 1,391 tcm tank farm. JSC KazTransOil also operates and maintains the Kazakhstan-China Pipeline, MunaiTas, Karachaganak Petroleum Operating, Caspian Pipeline Consortium and Turgai Petroleum pipelines.

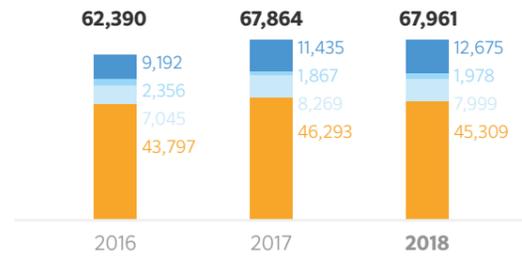
- Kazakhstan-China Pipeline (KazTransOil share - 50%) is the owner of the 965 km Atasu-Alashankou and 794 km Kenkiyak-Kumkol pipelines, and transports Kazakhstan and transit Russian oil to China, and domestically within Kazakhstan.
- MunaiTas (KazTransOil share -51%) is the owner of the 448.85 km Kenkiyak-Atyrau oil pipeline.
- Caspian Pipeline Consortium (“CPC”) (KMG share - 20.75%) is the largest international oil transportation project involving Russian, Kazakhstan and leading global production companies. It was created to build and operate a major pipeline of over 1,510 km (of which 452 km are in Kazakhstan). The CPC pipeline is one of the priority routes for Kazakhstan oil exports, linking the Kazakhstan oil field Tengiz with the South Ozereyevka oil terminal on the Black Sea (close to the port of Novorossiysk). It uses 15 booster stations, a 1 mcm tank farm and 3 single point moorings.

In 2018, the CPC pipeline transported 61.1 mln tonnes of oil, including 54.3 mln tonnes of Kazakhstan oil.

## KEY EVENTS

- A project to reverse the 6 mln tonne per year Kenkiyak-Atyrau oil pipeline was approved in July 2018 (page 73).
- December 2018 saw the approval of the cost to transport 10 mln tonnes of Russian oil through Kazakhstan to China at 15 USD per tonne (32% increase) for 2019-2023.

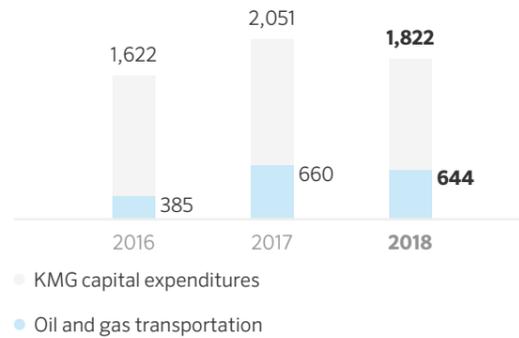
## MAJOR OIL TRANSPORTATION LEVELS, INCLUSIVE OF THE KMG INTEREST, THOUS. TONNES



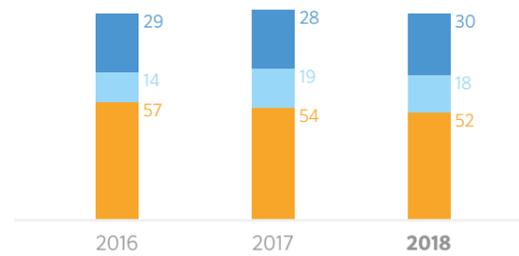
- Caspian Pipeline Consortium (20.75%)
- MunaiTas (51%)
- Kazakhstan-China Pipeline (50%)
- KazTransOil (90%)

In 2018, consolidated major pipeline traffic increased slightly by 97 thous. tonnes to 67,961 thous. tonnes mostly due to an increase in oil deliveries from Kashagan.

## CONSOLIDATED CAPITAL EXPENDITURES IN MIDSTREAM SEGMENT ON ACCRUAL BASIS, MLN USD



## CHANGES IN AND STRUCTURE OF OIL TRANSPORTATION, %



- Exports
- Transit
- Domestic

Domestic oil transportation in 2018 increased 9% due to a growth in oil refining at the Kazakhstan refineries, which led to a small decline in oil exports (-2%).

Pipeline export capacity is sufficient to meet current and planned production levels in Kazakhstan.



## INVESTMENT PROJECTS

In 2018, investment focused on maintaining and modernising the existing oil pipeline system, reducing idle time, accident and unplanned repair work risks; increasing reliability and improving service quality.

In the middle of 2018, KMG and Samruk-Kazyna approved the realisation of the MunaiTas project to increase the capacity of the Kenkiyak-Atyrau oil pipeline to 6 mln tonnes per year in the reverse direction. The project, which is due to be realised between 2018 and 2020, will mean the Pavlodar and Shymkent Refineries will be able to accept West-Kazakhstan oil and balance out the effect of the decline in production of Aktobe and Kumkol oil, and increase oil exports to China.

## DIGITALISATION

In 2018, within the framework of its digitalisation programme, KazTransOil completed the centralisation of its oil transportation dispatcher control, which allows the main control unit in Nur-Sultan to manage oil traffic for the entire pipeline network in 11 oblasts of Kazakhstan centrally and online, which includes oil receipts and supplies, and oil loading at Aktau port and railway overpasses. As a result, the former four-tier dispatcher control system has been reduced to a far more streamlined two-tier system.

## OIL TRANSPORTATION BY MARINE FLEET

The main oil tanker transportation routes are:

- the Caspian Sea;
- Black Sea and Mediterranean Sea routes.

At the end of 2018, Kazmortransflot production assets included six oil tankers with deadweight of 12,000-13,000 tonnes on the Caspian Sea and two Aframax oil tankers on the Black Sea.

## KEY EVENT

In October 2018, KMG, KMGI and Kazmortransflot entered into a Framework Agreement recognising Kazmortransflot as the general carrier for all crude oil freight controlled by KMGI or its subsidiaries/affiliates for 10 years.

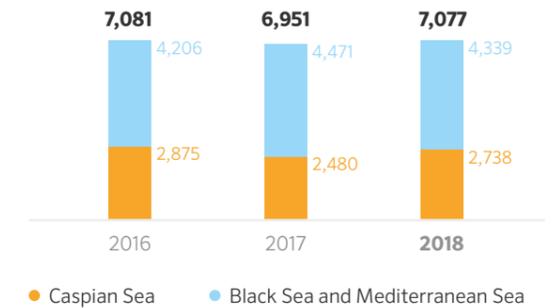
## KEY PERFORMANCE INDICATORS

Total oil tanker traffic in 2018 grew insignificantly by +2% to 7,077 thous. tonnes.

In 2019, oil tanker traffic is expected to drop to 5,490 thous. tonnes<sup>8</sup> due to a lack of guaranteed oil transportation contracts in the Caspian Sea.



## TRANSPORTATION TRAFFIC, THOUS. TONNES



## INVESTMENT PROJECTS

Kazmortransflot's main investment projects in 2017-2018 were linked to creating an offshore transportation system for the TCO FGP and WPMP.

January 2018 saw the completion of a third Sunkar self-propelled barge as part of the project to build a Caspian Class Barge for the FGP. In 2018, all three self-propelled barges were ready for service and completed the transportation of 28 modules.

In March 2018, the last of the three Irgiz tugs was completed for the FGP and immediately began operations.

<sup>8</sup> 100% of KMTF traffic. In 2019, KMG plans to sell a 51% interest in KMTF, which may drop in size due to a decline in KMG's consolidated share interest in KMTF to 49%.

## GAS TRANSPORTATION

### STRATEGY

« According to the 2018-2028 Strategy, KMG is focusing on exporting gas to China to make the best use of gas transportation potential and increase its export income component.

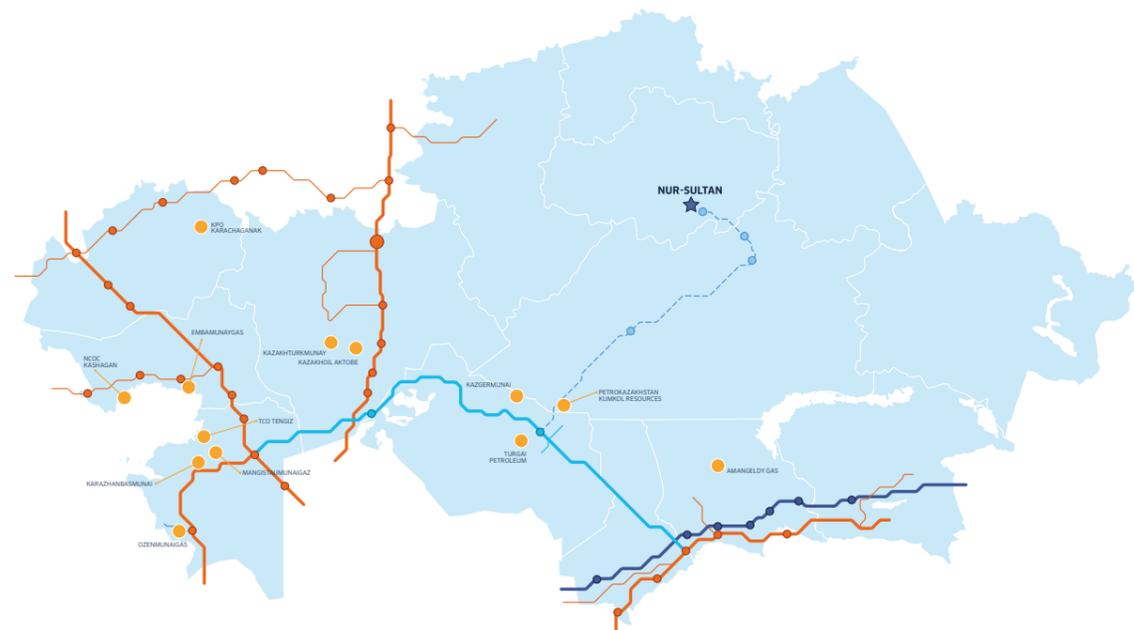
Expansion of Beineu-Bozoi-Shymkent and Kazakhstan-China pipeline capacity will help KMG increase stable commercial gas exports to China to 10 bln bcm per year, starting from 2019. »

Supplying customers reliably and effectively and diversifying the gas sales market are two of the Company's priorities.

KMG continues its active gas pipeline modernisation, investing significant amounts in projects to increase pipeline capacity, expand and modernise gas distribution networks. This has helped supply the regions with natural gas, remove the dependence

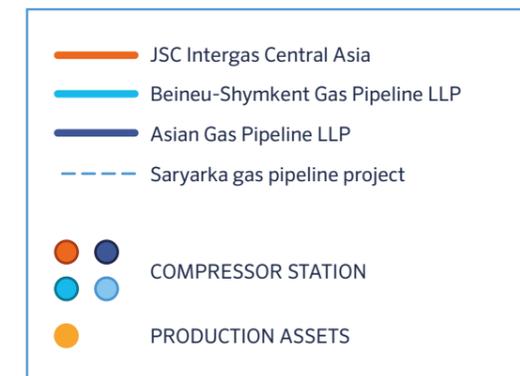
on imported gas and increased export route potential.

The KMG gas transportation system is managed by the 100% owned JSC KazTransGas Group .



## KEY EVENTS

- In July 2018, the government issued a resolution to declare Intergas Central Asia, a KazTransGas subsidiary, the gas pipeline national operator;
- In September 2018, KazTransGas and Waltbay LTD signed a purchase agreement for a 100% interest in OJSC KazTransGas-Tbilisi, for 40 mln USD;
- Given its experience and expertise, in October 2018, KMG took over the trustee management of Samruk-Kazyna's 50% of common shares in JSC AstanaGas KMG, responsible for building the Saryarka Gas Pipeline to supply gas to Nur-Sultan, central and northern regions of the country, to manage the investment project;
- In October 2018, KazTransGas PetroChina International Alashankou Company Limited signed a five-year long-term contract to increase Kazakhstan gas exports to China from 5 bcm to 10 bcm per year;
- December 2018 saw the completion of the construction of the Turkestan, Aral and Korkyt-Ata compressor stations as part of the project to increase Beineu-Bozoi-Shymkent pipeline capacity from 10 bcm to 15 bcm per year;
- In December 2018, KazTransGas and JSC Uztransgas signed a contract to transport up to 1 bcm of Uzbek natural gas through Kazakhstan for consumers in Tashkent;
- The largest compressor stations in Central Asia on the Kazakhstan-China pipeline "C" branch have been commissioned, which means that work to create a transnational Kazakhstan-China gas pipeline connecting four countries – Turkmenistan, Uzbekistan, Kazakhstan and China – has been completed.



**from  
5 to 10** BCM

Signed 5 year contract to increase Kazakhstan gas exports to China

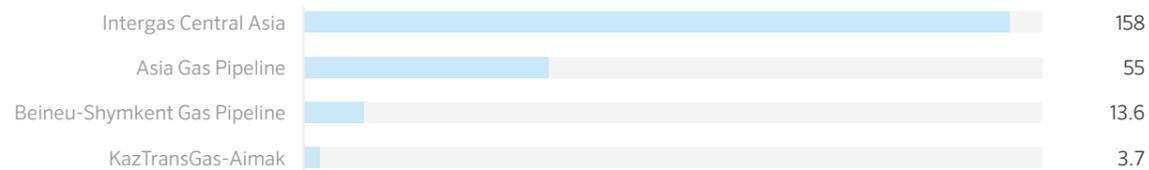
**KEY PERFORMANCE INDICATORS**

KazTransGas operates the largest gas pipeline network in Kazakhstan, stretching for 19,140 km and offering annual flow capacity of up to 224 bcm and gas distribution networks of over 47,000 km. It also manages 3

major underground gas storage facilities in Kazakhstan with capacity of 4.6 bcm.

40 compressor stations and 348 gas compressor units were involved in transporting gas in 2018.

**GAS PIPELINE CAPACITY, BCM PER YEAR**



**TOTAL GAS TRANSPORTATION VOLUMES (INCLUSIVE OF THE KMG INTEREST), BCM**

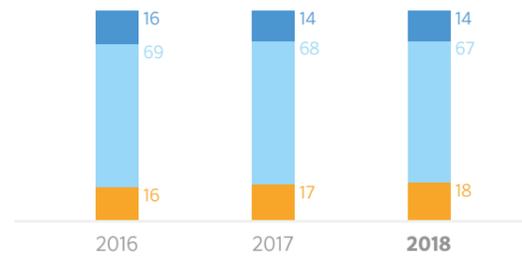


- Intergas Central Asia (100%)
- Asian Gas Pipeline (50%)
- Beineu-Shymkent Gas Pipeline (50%)
- KazTransGas Aimak (100%)

In 2018, gas traffic increased by 10.7 bcm (+11%) mainly due to an increase in the transit of Central Asian gas and increase in gas exports.

In October 2017, Kazakhstan exported gas to China, the most promising and largest market in Asia, for the first time, and in 2018 increased exports by 4.5 bcm (from Tengiz, Kashagan and CNPC-Aktobemunaigas).

**STRUCTURE OF GAS TRANSPORTATION, %**



- Exports
- Transit
- Domestic

**111.6** BCM

Increase in gas transportation in 2018

**10.7** BCM

Increase in gas transportation in 2018

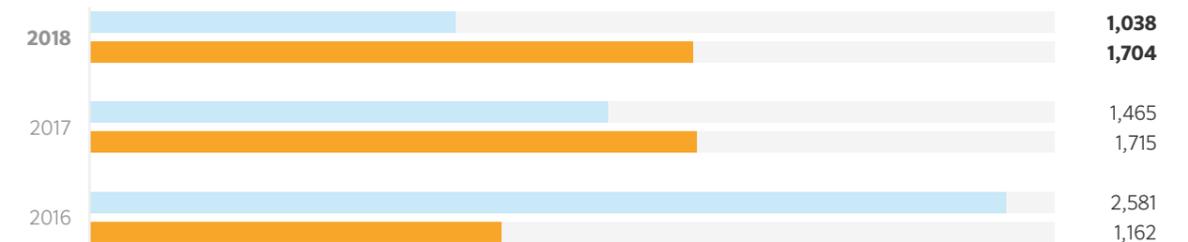


In 2018, KazTransGas and PetroChina International Alashankou Company Limited signed a purchase agreement to export natural gas to China, which helped exports increase to 10 bcm/year.

The Kozhasai field in Aktobe Oblast has commissioned a Gas Processing Company 300 mcm/year gas processing facility to increase the commercial gas export resource base.

Underground gas storage facilities (UGSF) are an integral part of the country's gas transportation system and are used to level out irregularities in gas demand; and ensure reliable and continuous supplies. UGSF injections decreased 32% in 2018 to 432 mcm due to gas reserves at the Bozoi UGSF decreasing by 1.75 bcm. Total active gas storage at the end of 2018 was 1.8 bcm.

**UGSF GAS INJECTION AND EXTRACTION, MCM M<sup>3</sup>**



- Injection
- Takeoff

## IMPACT OF EXTERNAL FACTORS

According to the Gas and Gas Supply Law, the Ministry of Energy, in conjunction with the Ministry of the National Economy, is responsible for approving annual maximum, domestic wholesale commercial gas prices.

In May 2018, it approved wholesale commercial gas prices for the period from 1 July 2018 until 30 June 2019, including a price rise of 6.6%-10% in southern regions of the

country. In June 2018, they were revised and returned to the previous level following a pricing meeting chaired by the Prime Minister. The Kazakhstan Security Council took the decision in November 2018 to reduce domestic wholesale prices for the period from 1 January 2019 until 30 June 2019 throughout the country by an average of 11% (from 3.8% in Shymkent and Turkestan to 17.5% in Almaty and Almaty Oblast).

## INVESTMENT PROJECTS

In 2018, the project to increase Kazakhstan-China Gas Pipeline (Branch C) capacity to 55 bcm per year was completed. Work has been started on drafting a feasibility study to increase A and B branch capacity to 40 bcm per year, which will help increase total gas pipeline capacity to 65 bcm per year.

This year should see the commissioning of the Aral, Turkestan and Korkyt-Ata compressor stations, which will increase Beineu-Bozoi-Shymkent gas pipeline capacity from 10 to 15 bcm per year and ensure Kazakhstan gas exports to China reach 10 bcm per year.

In 2019, work is due to be continued on the following long-term investment projects:

- to increase the Bukhara gas-bearing area-Tashkent-Bishkek-Almaty pipeline capacity and booster compressor station at the TIP-02 seal. After completion of the third gas-compressor unit, gas transportation capacity through the booster compression station will grow from 2 bcm to 3.5 bcm per year.
- Reconstruction of the Bozoi UGSF. Once the project has been completed, active gas storage capacity at the Bozoi UGSF will grow from 3 bcm to 4 bcm per year by 2021.



## REGIONAL GAS DISTRIBUTION AND GASIFICATION

### Taraz gas distribution station modernisation

Since 2012, the project has modernised 862 km of gas pipeline, together with 19.5 thous. cabinet-type points, 27 gas distribution cabinet-type points, 1 modular gas control unit, including 67.5 km of gas pipeline, 2,289 individual cabinet-type points. At 1 January 2019, approximately 29 thous. customers had been connected thanks to the project.

### Modernisation, reconstruction and new construction of gas distribution stations in Mangistau Oblast population centres

The project has helped lay roughly 80 km of gas pipelines this year, together with 1 cabinet-type gas control unit and 5 gas control block points. At 1 January 2019, approximately 1.7 thous. new customers had been connected thanks to the project.

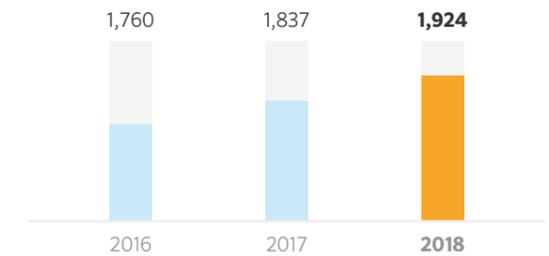
### Gasification of Kostanai Oblast population centres

Between 2016 and 2018, the project was responsible for laying 238 km of gas pipelines, together with 1 automatic gas distribution station, 11 gas control block points and 4 gas distribution cabinet-type points. Thanks to the project, 1.2 thous. customers have been connected to the gas supply.

### Almaty and Almaty Oblast gasification

21.4 km of gas pipelines and 10 cabinet gas control points were modernised in 2018 to connect new customers from 2019.

### NUMBER OF CUSTOMERS AT 31 DECEMBER 2018, THOUS.



### Saryarka gas pipeline construction

In December 2018, President Nazarbayev approved the construction of Saryarka gas pipeline, which will provide a stable gas supply to central regions of Kazakhstan and Nur-Sultan. The gas pipeline will connect Nur-Sultan from Kyzylorda through Zhezkazgan, Karaganda and Temirtau, and will have the potential to provide natural gas from Karachaganak, Tengiz and Kashagan to Kokshetau and Petropavlovsk. It will help the transition to far cheaper gas, significantly improving the ecological situation throughout the country and providing a business and production development stimulus, and also provide roughly 740 thous. people with a centralised gas supply.

The gas pipeline will be 1,061.3 km long and have capacity of up to 2.2 bcm/year in stage one. The construction phase will create 1,690 jobs with an extra 194 created afterwards.

up to  
2.2 BCM /YEAR

Saryarka gas pipeline stage 1 capacity

253.4 THOUS.

New customers in 2016-2018

## DEVELOPMENT OF GAS-ENGINE INFRASTRUCTURE

KazTransGas has a large number of operations across Kazakhstan as part of the Concept to transition Kazakhstan to a “green economy”.

The objective is to improve the ecology by transitioning vehicles from traditional fuel types such as gasoline or diesel to more ecologically friendly and efficient fuel types.

The main compressed natural gas (CNG) consumers are long-distance freight vehicles, buses, private buses, freight and passenger vehicles used by regional branches of KazTransGas subsidiaries, and private vehicles.

As part of a memorandum to work together in expanding the use of natural gas as a vehicle fuel option on the Europe-China international transportation route, Gazprom, CNPC and KMG organised a 10 thous. km international gas engine rally in September

2018 across China, Kazakhstan and Russia to promote natural gas as an ecologically- and economically friendly vehicle fuel form; test and get to know technology; and study the possible weaknesses in production and sales infrastructure.

In 2018, the government approved an action plan to expand the use of natural gas as motor fuel for 2019–2022, referring to CNG sales targets, the number of buses and public vehicles using CNG and the construction of gas compressor fuelling stations (GCFS).

In 2018, a total of 19,224 thous. m<sup>3</sup> of CNG was sold from GCFS in Almaty, Aktobe and Kostanai.

2019 should see the construction of new GCFS as soon as the required land is allocated and a consumer base has been confirmed.

## INNOVATIONS AND QUALITY MANAGEMENT

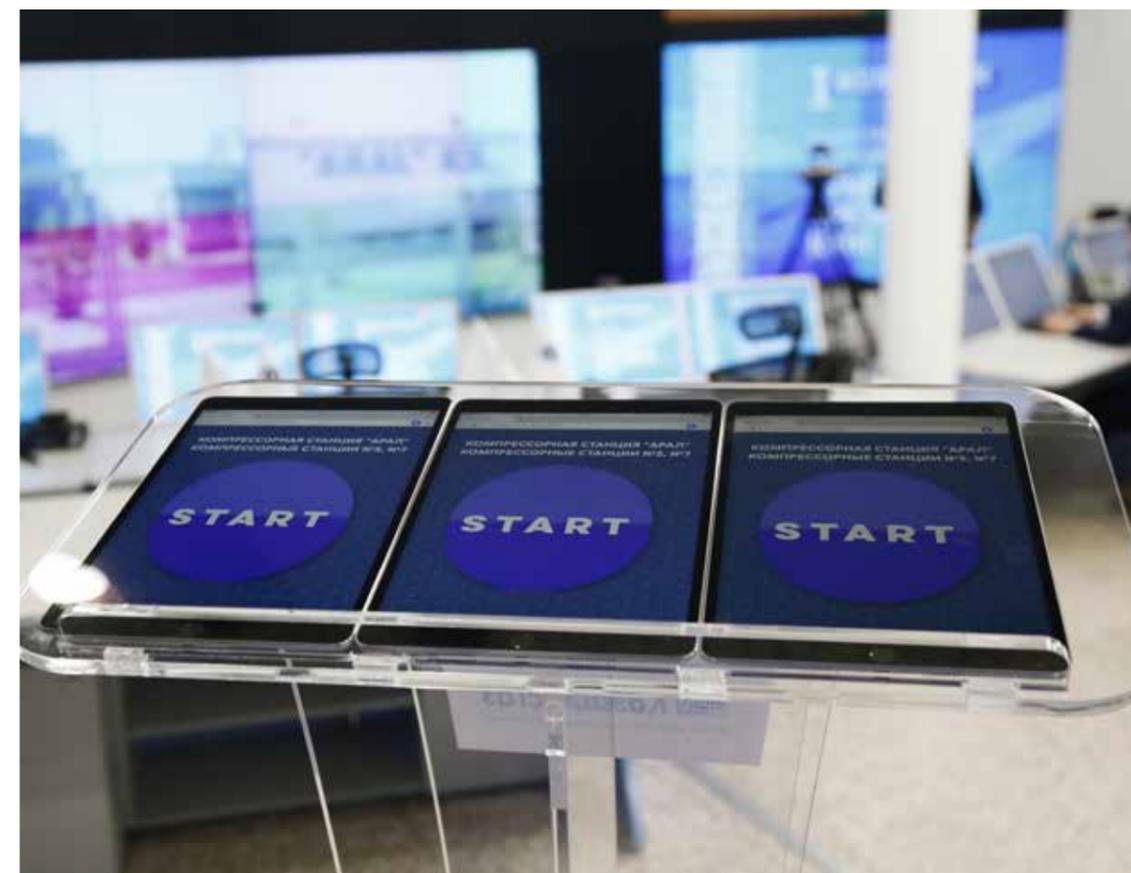
As part of its innovative development initiative and to improve research, KazTransGas has set up a scientific and technical council, which in 2018 considered and approved the following innovations:

- Pipeline rehabilitation by fitting polyethylene sleeves;
- Composite and coupled repair technology on major and field pipelines;
- Electrochemical anti-corrosion protection on major gas pipelines using low-current cathodic protection stations;
- An Analitik electrochemical protection comprehensive monitoring system with modular cathode protection stations and devices to support protection voltage and control current;

- The use of ball cocks in new and current KazTransGas Group projects;
- The anti-corrosion protection of oil and gas facilities using contemporary coatings made in Kazakhstan.

In 2018, KazTransGas commissioned a Central Dispatch Control in Kyzylorda for the Beineu-Bozoi-Shymkent gas pipeline, to act as a high-tech and computerised system collecting, processing and transferring data to ensure the safe and reliable operation of pipeline facilities.

Pilot testing has been planned in 2019 for the Analitik comprehensive electrochemical protection monitoring system with modular cathode protection stations on the Akshabulak-Kyzylorda gas pipeline (41 km), to assess the potential for subsequent implementation at new and current KazTransGas Group projects.



## DIGITALISATION PROJECTS

In 2018, KazTransGas Aimak launched its Ondiris gas metering and sales data system and expects to make 618 mln tenge of savings for KMG from it by 2023.

In 2018, KazTransGas launched the use of gas sector blockchain technology to initially monitor, service and repair gas midstream infrastructure, and control gas meters. The new technology significantly simplifies gas pipeline maintenance and repair processes, improves operating safety many times over and reduces resource losses. Blockchain technology in gas metering will help create an individual “Meter Digital Passport” for each customer, making it possible to track the entire process from the receipt of gas supply connection permission to meter installation and sealing.

KazTransGas’s digitalisation project portfolio planned for completion at the end of 2018 includes:

- The introduction of a KapStroi data system in KazTransGas Aimak;
- The centralisation of the KazTransGas gas data collection and meter reading system;
- The implementation of an analytical geoinformation system at gas pipeline facilities;
- A pilot project to test and inspect major gas pipelines and secure areas through Intergas Central Asia’s use of pilotless aircraft.

The projects are due to be realised during 2019.

# DOWNSTREAM

## STRATEGY

« After the modernisation programme, which helped the Company's oil refineries in Kazakhstan and Romania reach higher oil refining depths, under the 2018-2028 Strategy, the main objectives are:

- Kazakhstan refineries is to ensure sufficient liquidity to repay liabilities on time through cost reduction;
- the Petromidia refinery to improve performance by streamlining production processes, including through digitalisation, and supplying an optimal selection of oil products to increase sales margins, and pay dividends to the KMG corporate centre. »

Four oil refineries across Kazakhstan and two in Romania are responsible for processing KMG's and rest of Kazakhstan liquid hydrocarbons (predominantly oil).

## CONSOLIDATED CAPITAL EXPENDITURES IN DOWNSTREAM SEGMENT ON ACCRUAL BASIS, MLN USD

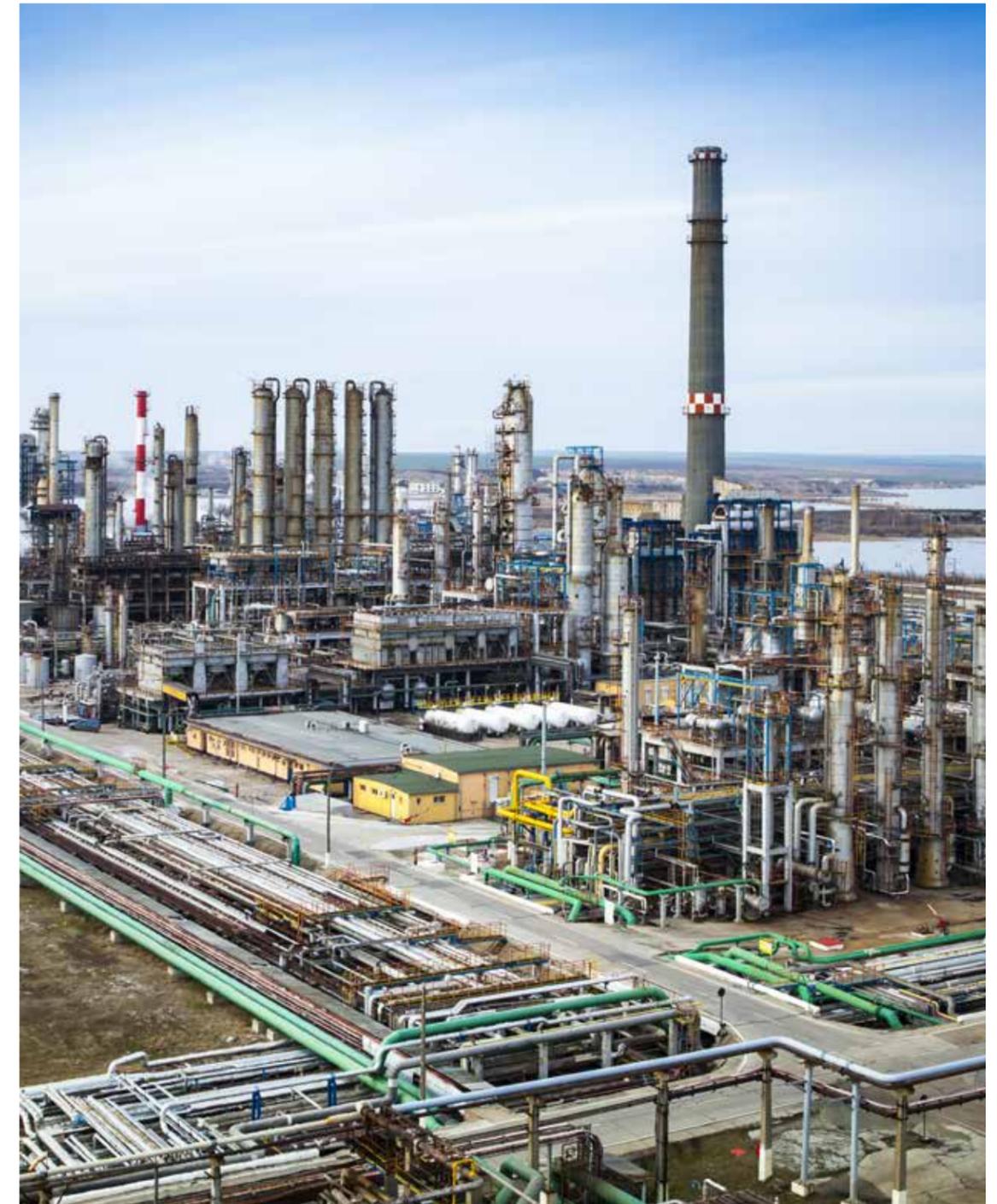


\* Refining data net of marketing was used in the calculation

The Atyrau Oil Refinery (Atyrau Refinery) was built in 1945, with the Pavlodar Oil Chemistry Plant (Pavlodar Refinery) following in the 1970s. The Shymkent Oil Refinery (Shymkent Refinery or PKOP) was commissioned in the middle of the 1980s, while the Caspi Bitum plant began operations in 2013 as part of the creation of a modern oil refining sector in Kazakhstan.

## KEY EVENTS

- In 2018, the Atyrau Refinery completed the commissioning of its new units.
- In September 2018, the Shymkent Refinery completed the second (final) modernisation stage.
- The Kazakhstan Government achieved its 2018 strategic initiative to become fully self-sufficient in fuels and lubricants.
- In November 2018, KMG and the Romanian Government set up the Kazakhstan-Romanian Investment Fund under an 80%/20% ownership arrangement, which is depending on the economic situation, will invest up to 1 bln USD over a seven-year investment period.
- According to its Strategy KMG sold its KazMunayGas-branded fuelling station network to PetroRetail for 60,512 mln tenge.



In 2007, KMG purchased the Rompetrol Group, which incorporates the largest oil refinery in Romania, Petromidia and the Vega Refinery (the only extraction naphtha producer in Central and Eastern Europe). The company has since been renamed KMG International (KMG).

#### CHARACTERISTICS OF KMG REFINING ASSETS

	Ayrau Refinery	Pavlodar Refinery	Shymkent Refinery	Caspi Bitum	Petromidia	Vega
Location	Ayrau, Kazakhstan	Pavlodar, Kazakhstan	Shymkent, Kazakhstan	Aktau, Kazakhstan	Navodari, Romania	Ploiesti, Romania
Commission year	1945	1978	1985	2013	1979	1905
Refining design capacity, mln tonnes	5	5.1*	6	1.0	6.0	0.5
KMG interest, %	99.53	100	49.72	50	54.63	54.63
Nelson index	13.9	10.5	8.2	-	10.5	-
Light oil product yield, %	57%	67%	64%	-	86.1%	-
Refinery co-owners	-	-	CNPC	CITIC	Romanian Government	Romanian Government

\* KMG is currently reviewing the possibility of building a hydrogen production facility, which should help increase Pavlodar Refinery annual capacity to 6 mln tonnes

<sup>8</sup> Design capacity includes oil refining of 5 mln tonnes and other hydrocarbon of 1 mln tonnes per year

The Pavlodar Refinery completed modernisation work in 2017; the Ayrau Refinery launched new units in 2018, while in September 2018, the Shymkent Refinery completed the final stage of its modernisation. As such, the Kazakhstan Government has achieved its strategic initiative to become fully self-sufficient in fuels and lubricants.

# 19,715

 THOUS. TONNES

Hydrocarbon processed in Kazakhstan in 2018, inclusive of the KMG interest

**+ 1,508 tonnes**   
GROWTH RELATIVE TO 2017

#### REFINING VOLUME

In 2018, KMG refined 19.7 mln tonnes or 410 thous. bbl per day of hydrocarbon:

Hydrocarbon refined, inclusive of the KMG interest, tonnes	2015	2016	2017	2018
Ayrau Refinery	4,867	4,760	4,724	5,268
Pavlodar Refinery	4,810	4,589	4,747	5,340
Shymkent Refinery (50%)	2,247	2,251	2,343	2,366
Caspi Bitum (50%)	188	312	359	409
<b>Total for Kazakhstan</b>	<b>12,111</b>	<b>11,911</b>	<b>12,173</b>	<b>13,384</b>
Petromidia	4,950	5,408	5,662	5,925
Vega	329	354	373	406
<b>Total for KMG</b>	<b>5,279</b>	<b>5,762</b>	<b>6,035</b>	<b>6,331</b>
<b>Grand total, inclusive of the KMG interest</b>	<b>17,390</b>	<b>17,673</b>	<b>18,207</b>	<b>19,715</b>

Hydrocarbon refining rose by 18.2 mln tonnes or 8% to 1,498 thous. tonnes in 2018 across all refineries due to:

- the Ministry of Energy increasing the volume that oil domestic producers had to supply to Kazakhstan refineries to ensure refinery capacity utilisation;

- Petromidia restoring capacity utilisation following unfavourable weather conditions and unscheduled refinery downtime in 2017 Q1.

	2017, thous. tonnes	2018, thous. tonnes	Increase by 2017, thous. tonnes	Increase by 2017, %
Ayrau Refinery	4,724	5,268	544	+12%
Pavlodar Refinery	4,747	5,340	593	+12%
Shymkent Refinery (50%)	2,343	2,366	23	+1%
Caspi Bitum (50%)	358	409	51	+14%
Petromidia	5,662	5,925	263	+5%
Vega	373	406	33	+9%
<b>Total</b>	<b>18,207</b>	<b>19,715</b>	<b>1,508</b>	<b>+8%</b>

#### CRUDE OIL SUPPLIES TO THE FOUR KAZAKHSTAN OIL REFINERIES

In 2018, KMG subsoil users supplied 56% or 3 mln tonnes of all hydrocarbon supplied to the Ayrau Refinery. They also accounted for 3 mln tonnes of crude or 58% of supplies to the Pavlodar Refinery. KMG's share of supplies to the Shymkent Refinery amounted to 11%. KMG and CITIC shared supplies equally to Caspi Bitum as its two shareholders.

As a result, KMG's share of hydrocarbon in the total sent for refining to the four Kazakhstan refineries rose by 811 thous. tonnes to 6,980 thous. tonnes or 43% in 2018.

	2015	2016	2017	2018
Ayrau Refinery	2,773	3,025	2,575	2,965
Pavlodar Refinery	2,248	2,755	2,640	3,089
Shymkent Refinery	522	547	589	516
Caspi Bitum	187	312	365	409
<b>TOTAL</b>	<b>5,749</b>	<b>6,638</b>	<b>6,169</b>	<b>6,980</b>



### CRUDE SUPPLIES TO THE ROMANIAN PETROMIDIA AND VEGA REFINERIES

Total refining volume at the Petromidia Refinery of 5.9 mln tonnes includes 5.0 mln tonnes of oil and 0.9 mln tonnes of other alternative feedstock, such as naphtha,

methanol, biodiesel, gases and others. Ozenmunaigas (1 mln tonnes), Embamunaygas (1 mln tonnes) and other suppliers supplied the 5 mln tonnes of hydrocarbon to the Petromidia Refinery.

hydrocarbons supplies to the Petromidia Refinery, thous. tonnes	2015	2016	2017	2018
Oil	4,205	4,708	4,706	5,028
Other hydrocarbons	745	700	956	897

Vega Refinery feedstock is 100% supplied from the Petromidia Refinery.

Feedstock supplies to the Vega Refinery, thous. tonnes	2015	2016	2017	2018
Raffinate for chemical use	160	161	172	193
Jet fuel	12	10	13	9
Heavy fuel	112	128	122	133
Sludge	3	1	2	8
C5-C6 solvents	43	61	60	61

### REFINERY PRODUCTION CAPACITY UTILISATION

In the reporting year, the KMG refineries, taking into account the KMG interest, were 96% utilised, which is in line with the global average. This is a 6% increase on 2017.

	Atyrau Refinery	Pavlodar Refinery	Shymkent Refinery (50%)	Caspi Bitum (50%)	Petromidia	Vega	Total
Design capacity, inclusive of the KMG interest, thous. tonnes	5,500	5,100	3,000	500	6,000	500	20,600
Hydrocarbon refining levels, inclusive of the KMG interest, thous. tonnes	5,268	5,340	2,366	409	5,925	406	19,715
Refinery utilisation in 2018, %	96%	105%	79%	82%	99%	81%	96%

According to historical practice, the refineries should close for 30-35 days for overhaul purposes, replacing or repairing parts and

components. However, since modernisation, they have switched from annual to three-year repair intervals.

#### CURRENT OIL REFINING BUSINESS MODEL AT THE KAZAKHSTAN REFINERIES

The Kazakhstan refineries only refine oil at established tariffs and do not purchase oil for refining or sell oil products received. The focus is exclusively on production issues, streamlining refining activities and reducing costs.

Refining tariffs take into account production costs and an investment component (capital investment to maintain current production levels and modernisation loans).

According to the Law On the Introduction of Amendments and Additions to Certain Legislative Acts of the Republic of Kazakhstan regarding Entrepreneurship dated 29 October 2015, from 1 January 2017 the State will no longer regulate refining prices, which has significantly simplified the process for agreeing oil refining tariff changes, which are currently coordinated by the Ministry of Energy.

#### TARIFFS TO REFINE 1 TONNE OF TOLLING FEEDSTOCK, TENGE

	Basic tariffs	Weighted average tariffs
Atyrau Refinery	January-July - 31,473 August-December 37,436	33,810
Pavlodar Refinery	17,250	17,250
Shymkent Refinery	January-19 July 16,302 20 July-December 22,500	19,579
Caspi Bitum	18,000	18,008

The table below shows historical refining data from the Kazakhstan refineries in the form of weighted average oil refining tariffs and the corresponding operating costs.

The entire amount of the processing tariff goes to cover operating expenses and the investment component. The investment component is used to repay loans (principal and interest) raised to finance capital-intensive modernisation and capital investments to maintain the current level of production.

Weighted average tariff	2015	2016	2017	2018
Atyrau Refinery	14,068	20,378	23,370	33,810
Pavlodar Refinery	10,162	14,895	15,429	17,250
Shymkent Refinery	11,454	11,454	12,809	19,579
Caspi Bitum	12,782	12,043	16,667	18,008

#### CURRENT OIL REFINING BUSINESS MODEL AT THE PETROMIDIA AND VEGA REFINERIES

The Petromidia and Vega Refineries operate according to the model where refineries purchase hydrocarbon, process them and then sell them either wholesale or retail.

The Petromidia Refinery refining margin, which is calculated as the difference between Urals oil prices and prices for refined oil products (gasoline, diesel, naphtha, liquid

gas, jet fuel, fuel oil, propylene, sulphur and oil coke), was 6.2 USD per bbl in 2018, which is nearly at plan and 0.2 USD per bbl lower than in 2017 (as a result of global oil prices).

	2015	2016	2017	2018
Petromidia refining margin, USD per bbl	8.4	6.4	6.4	6.2

#### OIL PRODUCT OUTPUT LEVELS

Oil product output, inclusive of the KMG operating interest, rose 1,148 thous. tonnes or 7% in 2018 to 18.3 mln tonnes thanks to an increase in refining feedstock supplies. An important factor in the changes at Kazakhstan's three largest refineries was the hike in light oil product output, which led to an increase in the value of the processing basket. For example, gasoline output increased by 24% and diesel by 7%. At the same time, thanks to refinery modernisation work, Ai-92 gasoline production at the Atyrau Refinery grew by 96%, at the Shymkent Refinery - 48% and at the Pavlodar Refinery - 24%.

During the reporting period, gasoline and diesel accounted for 62% of oil product output.

# 18,333

 THOUS. TONNES

Oil product production in 2018

**+ 1,148 thous. tonnes** ↗  
GROWTH RELATIVE TO 2017

Oil product output, thous. tonnes	2015	2016	2017	2018
Atyrau Refinery	4,522	4,489	4,481	4,740
Pavlodar Refinery	4,325	4,033	4,262	4,852
Shymkent Refinery (50%)	2,132	2,136	2,194	2,151
Caspi Bitum (50%)	185	307	353	405
<b>Total for Kazakhstan</b>	<b>11,163</b>	<b>10,965</b>	<b>11,290</b>	<b>12,148</b>
Petromidia	4,829	5,242	5,530	5,788
Vega	324	350	365	397
<b>Total for KMG I</b>	<b>5,153</b>	<b>5,592</b>	<b>5,895</b>	<b>6,185</b>
<b>Total, inclusive of the KMG interest</b>	<b>16,316</b>	<b>16,557</b>	<b>17,185</b>	<b>18,333</b>

Oil product output, thous. tonnes	2015	2016	2017	2018
Gasoline	3,515	3,799	3,900	4,853
Diesel	5,734	6,038	6,114	6,570
Liquid gas	563	575	586	826
Vacuum gas oil	1,275	1,276	1,278	759
Fuel oil	3,082	2,536	2,737	2,378
<b>Others</b>	<b>2,148</b>	<b>2,334</b>	<b>2,572</b>	<b>2,948</b>
<b>Total oil products</b>	<b>16,316</b>	<b>16,557</b>	<b>17,185</b>	<b>18,333</b>



## OIL AND CONDENSATE MARKETING

KMG sales of its own produced oil and condensate in 2018 amounted to 23,735 thous. tonnes, of which oil exports accounted for 16,744 thous. tonnes, and domestic oil supplies — 6,991 thous. tonnes. Supplies to refineries owned by KMG account almost all domestic supplies, with non-KMG mini-

refineries accounting for the remaining 0.4% of domestic supplies. KMG also resells oil purchased from third parties overseas. It is also worth mentioning that Ozenmunaigas and Embamunaygas export approximately 2,086 thous. tonnes for refining to the Petromidia Refinery (KMG's asset in Romania).

### SALES OF KMG PRODUCED OIL IN 2018 AND 2017, THOUS. TONNES

	2017			2018		
	Exports	Domestic	Total for 2017	Exports	Domestic	Total for 2018
Operating assets*	9,727	6,169	15,896	8,773	6,980	15,752
Mega projects**	7,525	3	7,529	7,971	12	7,983
<b>Total</b>	<b>17,252</b>	<b>6,173</b>	<b>23,424</b>	<b>16,744</b>	<b>6,991</b>	<b>23,735</b>

\* Ozenmunaigas, Embamunaygas, Mangistaumunaigaz, Karazhanbasmunai, Kazgermunai, PetroKazakhstan Inc., Amangeldy Gas, Kazakhoil Aktobe and Kazakhturkmunay

\*\* Tengizchevroil, Karachaganak Petroleum Operating and North Caspian Operating Company N.V.

## GAS MARKETING

The KMG subsidiary KazTransGas, which is the national gas and gas supply operator, exercises its pre-emptive state right to procure sour and commercial gas.

By law, subsoil users send commercial proposals to the national operator indicating sour and commercial gas volumes, prices and supply points. In turn, the national operator decides whether to exercise its pre-emptive right or not.

The national operator is currently exercising its pre-emptive right in relation to the following companies in which KMG has an interest, all of which sell gas domestically:

- KazGPZ (100%)
- Embamunaygas (100%)
- JV Kazgermunai LLP (50%)
- Kazakhoil Aktobe LLP (50%)
- Kazakhturkmunay LLP (100%)
- KazMunayTeniz LLP (100%)

Companies in which KMG has an interest and that are not affected by the state pre-emptive right are:

- Amangeldy Gas LLP (100%)
- TCO (20%)
- Karachaganak Petroleum Operating (10%)
- NCOC (8.44%)

The above companies all sell gas domestically and for export.

On the whole, exports rose in 2018 due to a significant increase in supplies to China from 15 October 2017, which continued throughout 2018. In October 2018, KazTransGas and PetroChina International Alashankou Company Limited signed a five-year contract to increase Kazakhstan gas exports to China from 5 bcm to 10 bcm per year.

The increase in exports to Russia and decline in exports to Uzbekistan were caused by the re-distribution of export gas flows. Gas supplies were increased to Kyrgyzstan due to consumption growth in the north of the country. Due to consumption growth in all regions of Kazakhstan, domestic gas sales increased by 9%.

### NATIONAL OPERATOR COMMERCIAL GAS SALES FOR 2017 AND 2018, MCM

KazTransGas gas sales	2017	2018
<b>Exports</b>	<b>4,949</b>	<b>8,917</b>
to Russia	2,073	2,350
to Kyrgyzstan	249	275
to Uzbekistan	1,624	807
to China	1,003	5,484
<b>Domestic sales</b>	<b>12,793</b>	<b>13,999</b>
<b>Total sales for the year</b>	<b>17,742</b>	<b>22,916</b>

## GAS SALES RESOURCES, MCM

Gas sales resources	18,153	23,297
Gas purchased in Kazakhstan	13,376	17,209
Companies with KMG participation	6,446	10,195
Third parties	6,930	7,014
Gas imports	4,777	6,088
Russia	3,038	3,216
Uzbekistan	1,739	2,872

## OIL PRODUCT MARKETING

KMG sells oil products wholesale from the Atyrau and Pavlodar Refineries after refining oil purchased from Ozenmunaigas, Embamunaygas and Kazakhturkmunay. In light oil product sales, the priority remains sales to the subsidiaries KMG Aero LLP and KMG Onimderi LLP, and to meet Ozenmunaigas and Embamunaygas production needs.

In line with instructions from the state authorities, KMG ships diesel for agricultural industry purposes, and provides fuel oil to social and industrial facilities and institutions during the heating season.

All remaining oil products are sold to third parties domestically or exported.

Oil product sales grew in 2018 by 480 thous. tonnes to 2,868 thous. tonnes thanks to an increase in oil supplies for refining according to Ministry of Energy timetables. At the same time, the ratio of domestic to export oil product supplies changed significantly from 60%/40% in 2017 to 75%/25% in 2018, mainly due to the completion of refinery modernisation and increases in light petroleum output and reduced dark petroleum output. Consequently, the share of supplies to domestic subsidiary gasoline, diesel and jet fuel trading companies grew.

**2,868** THOUS. TONNES

Wholesale sales of KMG oil products produced in Kazakhstan

**+ 480 thous. tonnes** ↗

OIL PRODUCT SALES GREW COMPARED TO 2017

**707** THOUS. TONNES

of KMG oil products produced in Kazakhstan exported

## WHOLESALE SALES OF KMG OIL PRODUCTS PRODUCED IN KAZAKHSTAN, THOUS. TONNES

Wholesale sales of KMG oil products, thous. tonnes	2017			2018		
	Domestic	Exports	Total for 2017	Domestic	Exports	Total for 2018
Gasoline	409	0	409	701	0	701
Diesel	726	0	726	954	0	954
Jet fuel	10	0	10	34	0	34
Fuel oil	151	567	718	192	414	606
Vacuum gas oil	0	327	327	0	200	200
Furnace fuel	24	17	41	43	23	66
Hardened coke	0	22	22	0	25	25
Total coke	40	24	64	44	33	77
Sulphur	1	0,2	1,2	9	4	13
Benzol	0	3,7	3,7	0	5	5
Bitumen	19	0	19	53	0	53
Paraxylene	0	0	0	0	2	2
Liquid gas	47	0	47	128	0	128
Hydrogen generation unit feedstock	0	0	0	4	0	4
<b>Total</b>	<b>1,427</b>	<b>961</b>	<b>2,388</b>	<b>2,162</b>	<b>707</b>	<b>2,868</b>

In 2018, diesel supplies to agricultural product manufacturers increased by 100 thous. tonnes to 272 thous. tonnes.

Gasoline and diesel supplies to KMG Onimderi LLP retail fuelling stations increased by 458 thous. tonnes to 1 307 thous. tonnes in 2018. Fuel oil sales for social and industrial facilities and institutions increased in 2018 by 17 thous. tonnes to 54 thous. tonnes. KMG Aero LLP received 34 thous. tonnes of jet fuel (+24) and 42 thous. tonnes of fuel oil (+18 thous.

tonnes) to meet the needs of the Integrated Aviation Fuel and Fuel Oil Operator, airports and commercial aviation.

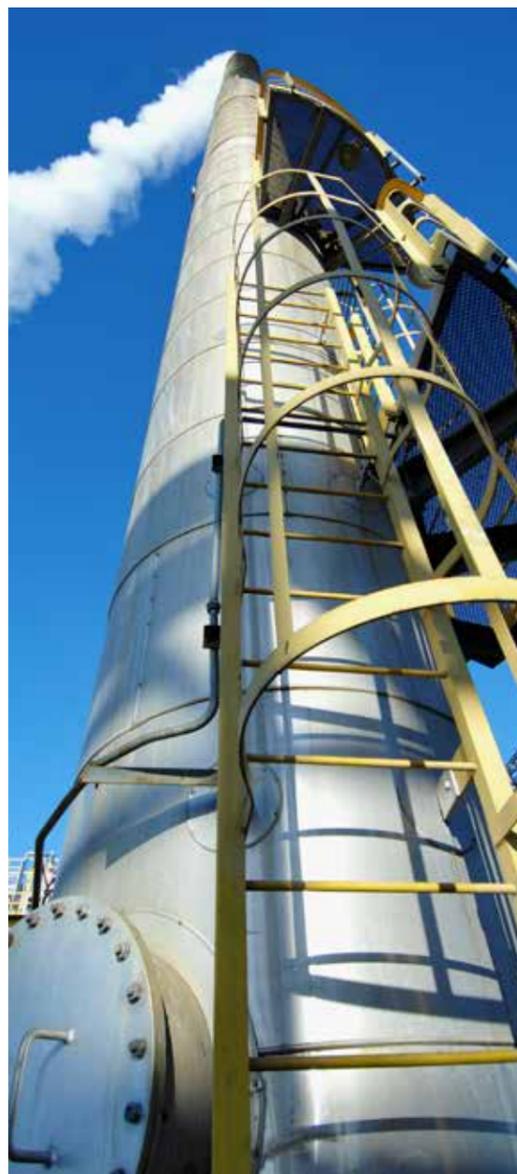
The plan is to continue the large-scale wholesale sale of oil products refined at the Atyrau and Pavlodar Refineries from oil purchased from Ozenmunaigas, Embamunaygas and Kazakhturkmunay.

From February 2019, by law, 5% of liquid gas has to be sold through electronic trading platforms.

## WHOLESALE SALES OF KMG OIL PRODUCTS

KMG wholesale oil product sales increased 46% to 7,169 thous. tonnes in 2018 thanks to an increase in fuel oil sales.

KMG oil product sales, tonnes	2017	2018
Gasoline	1,349	1,336
Diesel	2,857	3,062
LPG	320	314
Jet fuel	244	316
Others	388	483
Polypropylene	84	91
LDPE	60	49
HDPE	0	3
Propylene	20	21
Plastic bottles	1	0
Bitumen	96	102
Furnace fuel	33	35
Naphtha	110	121
Environmental solvents	41	43
White Spirit	8	7
Hexane	82	84
Fuel oil	309	2,273
Vacuum gas oil	7	7
<b>Total</b>	<b>6,010</b>	<b>8,345</b>



## RETAIL FUELLING STATION NETWORK IN KAZAKHSTAN

According to its Strategy and government plan KMG sold its KazMunayGas-branded fuelling station network to PetroRetail for 60,512 mln tenge. The deal was closed in February 2019.

At the end of 2018, KMG's share of the domestic retail oil product market was 14-15%.

Retail oil product sales in the KMG fuelling station network in 2018 increased by 8% to 1.3 mln tonnes thanks to a rise in production of oil products at the Kazakhstan refineries. At the same time, the share of purchased oil products sold increased from 6% to 11% on account of the sale of carry-over balances of imported oil products.

## RETAIL OIL PRODUCT SALES IN 2017 AND 2018, THOUS. TONNES

	2017	2018
<b>Retail sales of own oil products</b>	<b>1,154</b>	<b>1,187</b>
Gasoline	499	498
Diesel	602	652
Liquefied gas	54	37
<b>Retail sale of oil products purchased (including imports)</b>	<b>77</b>	<b>146</b>
Gasoline	35	63
Diesel	42	83
<b>Total oil product sales</b>	<b>1,231</b>	<b>1,333</b>

## KMG RETAIL NETWORK

The KMG retail network is represented by 600 fuelling stations in Romania and 234 overseas fuelling stations.

- Romania: 600 stations and 551 mini-tanks established at wholesale clients. The retail market share is 15%;

- Neighbouring countries: 234 stations - Bulgaria: 56 (3% market share), Georgia 96 (17% market share) and Moldova 82 (24% market share) - predominantly leased CODO (contractual transfer of the maintenance of existing filling stations to partners).

KMG retail oil product sales increased 6% to 1 176 thous. tonnes in 2018 due to an increase in diesel and LPG sales.

## KAZAKHSTAN REFINERY MODERNISATION

The main objectives of the Kazakhstan refinery modernisation were to:

- increase refining depth and total refinery capacity to 16.5 mln tonnes of oil per year;
- meet domestic demand for oil products in full;

- improve the quality of vehicle fuel to K4 and K5 ecological standards in accordance with Customs Union technical regulations;
- reduce the environmental burden through the use of improved vehicle fuels with low carcinogenic content;
- increase refinery competitiveness and create more attractive oil refining conditions.

## REFINERY MODERNISATION RESULTS

## ATYRAU REFINERY

- benzol (133 thous. tonnes) and paraxylene (496 thous. tonnes) production for the first time in Kazakhstan;
- K4 and K5 vehicle fuel output increased: gasoline – from 643 thous. tonnes to 1,400 thous. tonnes per year and jet fuel – from 20 thous. tonnes to 250 thous. tonnes per year;
- 100% eco-friendly K4/K5 standard diesel produced;
- the complex can produce fuel or petrochemical products, depending on domestic requirements;
- due to the net surplus of gasoline following the launch of the advanced oil refining complex, the aromatic hydrocarbon production complex has been operating in petrochemical mode since October 2018;
- a reduction in fuel oil production from 1,500 thous. to 500 thous. tonnes per year;
- an increased repair interval of 3-4 years.

## PAVLODAR REFINERY

- K4 and K5 standard motor fuel production launched;
- 100% production of high octane petrol;
- jet fuel production launched;
- an increased repair interval of 3 years.

## SHYMKENT REFINERY

- K4 and K5 standard motor fuel production launched;
- high-octane gasoline production more than doubled;
- high-octane gasoline production increased to 2.2 mln tonnes per year;
- oil refining depth and refinery design capacity increased to 6.0 mln tonnes per year;
- an increased repair interval of 3 years.

## POST-MODERNISATION QUALITATIVE AND QUANTITATIVE IMPROVEMENTS TO PLANNED CAPACITY

Completion of modernisation work has helped the Kazakhstan refineries significantly improve qualitative and quantitative characteristics, which are presented in the following tables.

## ATYRAU REFINERY CAPACITY

Index	Unit of measurement	Pre-modernisation	Post aromatic hydrocarbon production complex commission	Post advanced oil refining complex commission
Refining output	Thous. tonnes	4,300	5,500	5,500
Gasoline	Thous. tonnes	600.8	446.7	1,745.0
Diesel	Thous. tonnes	1,258.8	1,521.9	1,640.0
Jet fuel	Thous. tonnes	65.6	149.0	244.0
Refining depth, %	%	50.2%	65%	87%

## PAVLODAR REFINERY CAPACITY

Index	Unit of measurement	Pre-modernisation	Post-modernisation*
Refining output	Thous. tonnes	5,100**	5,100**
Gasoline	Thous. tonnes	1,691 (K2 quality)	1,786 (K4 quality)
Diesel	Thous. tonnes	2,147 (K2 quality, inclusive of a kerosene fraction)	1,667 (K4 and K5 quality, depending on hydrogen supply)
Jet fuel	Thous. tonnes	TS-1 was not produced due to the increase in mercaptans in oil and the absence of any hydrotreating unit	351 (RT jet fuel)
Refining depth, %	%	75.33%	77.39%

\* After modernisation, base products (gasoline, jet fuel and diesel) meet TR TS 013-2011 standards

\*\* The potential for building a hydrogen production unit, which would increase Pavlodar Refinery annual capacity to 6 mln tonnes, is currently under consideration

## SHYMKENT REFINERY CAPACITY

Index	Unit of measurement	Pre-modernisation	After Stage 1	After Stage 2***
Refining output	Thous. tonnes	4,857	5,250	6,000
Gasoline	Thous. tonnes	1,038.2	1,121.9	2,186
Diesel	Thous. tonnes	1,375.6	1,486.8	1,946
Jet fuel	Thous. tonnes	231.3	249.9	425
Refining depth, %	%	74.53%	74.53%	81.6%

\*\*\* Insignificant adjustments may be made after a state expertise in June 2019

# SERVICE PROJECTS

## STRATEGY

« To address oil service issues, KMG is planning a number of medium- and long-term measures, such as:

- making sure assets break even;
- completing the withdrawal of non-core oil services and concentrating on core activities.



KMG service activities are predominantly provided by 14 main companies and include:

- drilling oil and gas wells; operating drilling rigs; servicing and carrying out major and underground well repairs; and down-the-hole well treatment;
- supporting offshore oil operations; developing and managing coastal and offshore infrastructure projects, production automation and ensuring ecological safety at offshore fields;
- transporting freight and passengers; providing field transportation and maintenance; repairing and maintaining vehicles;
- maintaining, launching and testing oil production electrical installations; pumping oil and injecting sea water into the reservoir;
- servicing measuring apparatus, automation, remote control and telecommunications systems; checking and repairing measuring apparatus; and servicing security alarms;
- construction and assembly work;
- producing and transporting drinking water; transporting sea water; repairing and servicing major pipelines, water supply wells, pumping stations and tanks; planning and conducting measures to protect major water conduits against corrosion;
- catering, landscaping social facilities and others.

## SERVICE PROJECTS

In 2018, KMG Drilling & Services LLP and Parker Drilling created the joint venture KMG Parker Drilling Company LLP, with the former holding a 49% stake. In February 2018, Karachaganak Petroleum Operating and KMG Parker Drilling Company LLP signed a five-year contract to provide drilling services.

The joint venture KMG Nabors Drilling Company LLP provides drilling and well workover services at Tengiz. In 2018, it drilled and handed over 28 wells to TCO, and is

continuing with the drilling of 11 wells, as well as repairs at 6 wells.

In January 2019, KMG and JV Caspian Drilling Company signed a memorandum of understanding with respect to a number of oil and gas sector areas.

In February 2019, KMG Drilling & Services LLP and SOCAR signed a trustee management agreement for the joint use of the Setti self-elevating drilling rig in BP, SOCAR and other

Caspian Sea projects. After modifications, the rig will start operations at the Apsheron field in Azerbaijan.

Since 2017, Support Vehicle and Well Servicing Department LLP has been providing drilling services at the Karazhanbas field, drilling 44

wells in 2018, and with plans to drill another 60 in 2019. It also provides well workover services to Maersk Oil Kazakhstan GmbH. In addition to generating well repair income, the company has also managed to improve its experience in international standards through its operations at the Dunga field.



## OFFSHORE OIL AND GAS SUPPORT SERVICES

TenizService LLP has been commissioned by TCO to realise the “Freight Transportation Route” project in the northern section of the Caspian Sea, to create an offshore and onshore transportation system to supply out-sized cargo (modules) for the Tengiz FGP and WPMP.

The project incorporates the North-Caspian Sea Approach Canal and Port with a turning basin and berths, cargo receipt and storage buildings and structures with all engineering facilities, a rotation village for 350 persons and an office, as well as approach routes and a vehicle road to the Tengiz field.

In April 2018, TCO issued the project with a certificate of readiness, which meant TenizService could begin operations. A total of 87 modules with a combined weight of approximately 48,000 tonnes were delivered and unloaded for the FGP during the 2018 navigation period.

TenizService used only qualified personnel to ensure the uninterrupted supply, unloading and dispatch of modules. No accidents and down time were recorded.

KMG Systems & Services LLP is responsible for preventing and responding to oil spills in the North-Caspian Sea both onshore and offshore. It also produces and services oil and gas equipment and machinery.

Under its project to “localise pressure gauge production”, KMG Automation LLP, which was created by KMG Systems & Services LLP and Schneider Electric, launched an assembly line in December 2018 to manufacture 4 thous. pressure gauges per year in Atyrau for use in a number of sectors and facilities. The production line, which is unique for Kazakhstan, was developed within the framework of the state digitalisation and import substitution programme.

## IMPACT OF EXTERNAL FACTORS

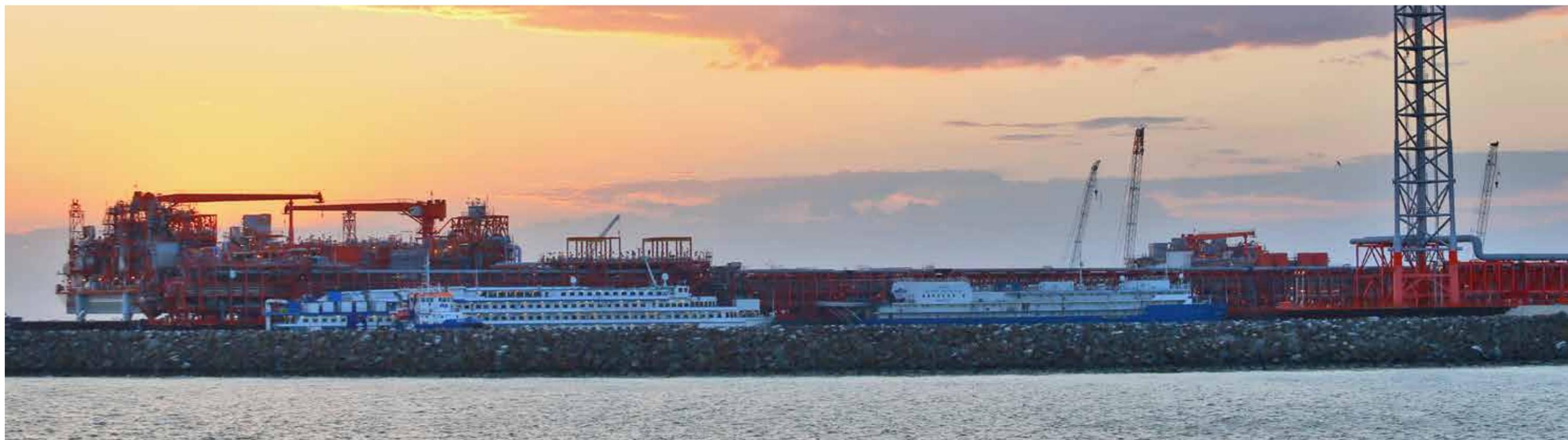
The negative effect of global oil market volatility, and the increased cost of feedstock, materials and equipment, have directly led to reductions in Mangistaumunaigaz production programme, the main customer for oil service companies such as Oil Services Company LLP, Oil Transport Corporation LLP, Oil Construction Company LLP, Mangistauenergomunai and Munaitelcom LLP, which have incurred significant losses due to reduced income and growing costs. With this in mind, KMG has committed to refund the losses and upgrade fixed assets, and in 2018 launched a number of measures to help the service companies rehabilitate, and since 2012 has provided financial aid to loss-making oil service companies of 209.7 bln tenge.

To improve performance and ensure oil service assets break even, KMG has:

- led the search for additional oil service operations, including overseas;
- performed cost reduction measures;
- turned non-core assets over to trustee management and outsourced auxiliary functions (HR, IT and others);
- sold oil service facilities that are not required.

These medium-term measures should help the companies break even.

Furthermore, 2017-2018 saw the launch of an early retirement programme and a programme for the mutual termination of employment agreements in return for compensation. Under the “5/50” programme, if they agree to redundancy, oil service company employees receive 50% of their salary for five years, making it easier to streamline loss-making companies.





# CORPORATE RESPONSIBILITY

# CLIMATE CHANGE

**In November 2016, Kazakhstan ratified the Paris Agreement, which outlines the international and legal principles for global efforts to reduce greenhouse gas emissions, increase energy efficiency, transition to renewable energy sources and gradually move away from fossil fuel flaring.**

Meeting the commitments adopted by Kazakhstan within the framework of the Paris Agreement is one of the most important aspects of KMG operations. For that reason, the KMG Strategy has defined the management of greenhouse gas emissions, the reduction of regular flaring; improvements in emission intensity based on production generation and improved energy efficiency as

priorities. The key mechanisms behind their implementation include amending energy efficiency greenhouse gas emission legislation, and reducing the Company's negative impact on the environment.

KMG is currently developing more detailed financial disclosures around climate change (specifically, recommendations from a

Climate-related Financial Disclosure Task Force) to quantitatively measure and discuss ecological risks in public financial statements. Furthermore, KMG is planning in 2019 to join the Carbon Disclosure Project Climate Programme and submit its first report disclosing data on direct and indirect greenhouse gas emissions in the KMG Group for 2018 ([more details on page 106](#)).

## CORPORATE GOVERNANCE

- KMG is part of the Kazenergy and Ministry of Energy working groups drafting a new Ecological Code. The KMG Work and Environmental Safety Director heads the Kazenergy Coordinating Council for Ecology, Social Responsibility and Transparency Issues.
- Work and environmental safety issues are heard at monthly KMG Management Board and Board of Directors meetings, raising manager and specialist responsibility. In 2019, the Board of Directors created a Work Safety, Industrial Security, Environmental Protection and Sustainable Development Committee.
- KMG always assesses the environmental impact of any activity. Any such projects undergo a state ecological review, the results of which are publically available on the oblast Akimat websites.

- Since 2017, KMG has had a Roadmap in place outlining its commitments to save energy and improve efficiency for 2017-2020 ([more details on page 110](#)).
- KMG operates an integrated ecological management system based on ISO 14001: 2015, current environmental legislation, ecological management principles and a process-focused approach. Detailed ecological data is disclosed in sustainable development reports (available at [http://www.kmg.kz/rus/ustoichivoe\\_razvitie/reports/](http://www.kmg.kz/rus/ustoichivoe_razvitie/reports/)).
- Since 2017, KMG has been a member of the Global Methane Initiative project network, which in 2018 oversaw pilot projects to discover and measure methane leaks at KMG production facilities in Mangistau Oblast.

## RISK MANAGEMENT

The Company's Risk Register and Chart for 2019, which was approved by the KMG Board of Directors, highlights and measures ecological risks; proposes management solutions and identifies risk owners. Changes to key risks

and efforts to reduce them are monitored constantly and summarised in quarterly reports sent to the KMG Management Board and Board of Directors ([details on page 130](#)).

## STRATEGY

KMG's goal is to constantly reduce the negative environmental impact of its operations, which involves:

- drafting an integrated environmental policy and establishing standard operating requirements;
- preventing significant ecological issues through project management and a risk-oriented approach to improving ecological indices;
- working with interested parties on ecological issues;
- creating organisational opportunities to best develop corporate ecological policy; ensuring KMG adheres to "green economy" principles and executing action plan points to implement a Concept to help Kazakhstan transition to a "green economy".

A medium-term sustainable development goal is to reduce emissions during the flaring of associated petroleum gas at production assets.

The role of natural gas will grow as power generating companies transition to fuel types that would allow them to reduce emissions. The expectation is that gas will become one of the main electricity-generating fuels in the next decade. Development of the gas-related area of the business is one of KMG's strategic goals.

In 2018, KMG developed an emissions management policy consisting of eight key principles, six of which are directly related to climate change, such as:

- observing greenhouse gas emission quotas;
- measuring, recording and monitoring emissions, including indirect greenhouse gas emissions;
- ceasing the regular flaring of sour gas during hydrocarbon production;
- taking measures to reduce emissions and reducing the "carbon footprint";
- managing carbon assets;
- continuously improving emission management activities (for example, forecasting, preventing and minimising client change-related damage).

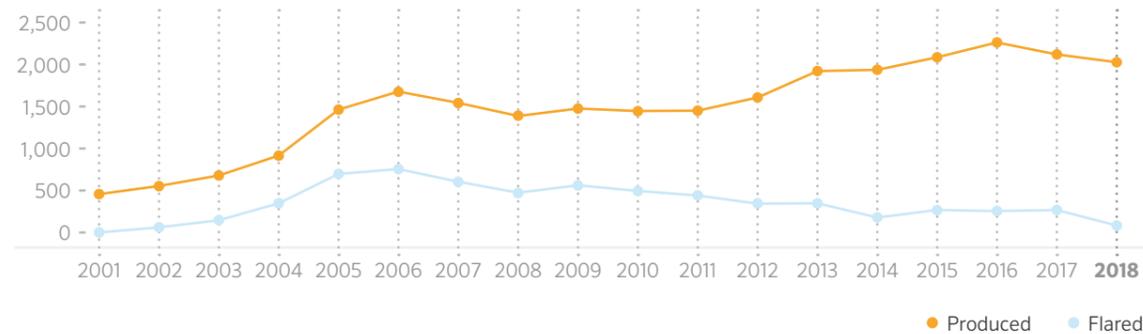
## PROJECTS

### APG recycling

The greatest achievement in the last year was the increase in associated petroleum gas recycling to 93% (from 85% in 2017) thanks to JSC Embamunaygas's commissioning of a central gas processing facility (CGPF) [\(details](#)

[on page 107\)](#). Gas flaring reductions have helped reduce pollutant and greenhouse gas emissions. The Kozhasai field CGPF in Aktyubinsk Oblast is due to be commissioned in full in 2019.

### CHANGES IN ASSOCIATED PETROLEUM GAS PRODUCTION AND FLARING IN KMG (2001-2018), MCM



### Saryarka gas pipeline

KMG is an active participant of the project to provide gas to Nur-Sultan through the Saryarka gas pipeline, which has helped transition 192 private and 48 small municipal boilers, 22 thous. private homes and city heat and power plant boilers (TETS-1,2,3) from coal to gas, which should go a long way to improving the local ecological situation [\(more details on page 73\)](#).

**36.1** THOUS. TONNES PER YEAR

Reduction in harmful emissions (sulphur dioxide, carbon monoxide, nitrogen dioxide, nitrogen oxide and solid particles)

### Vehicle transition to gas

To promote the Concept of Kazakhstan's transition to a "Green Economy", KMG has been actively developing gas-engine infrastructure, enabling municipal buses and private vehicles to convert to compressed natural gas or CNG [\(more details on page 74\)](#).

**19.2** MCM

Condensed natural gas sold by KazTransGas Onimderi LLP in 2018 in Almaty, Aktobe and Kostanai

### Domestic transition to K4 and K5 standard fuel

Thanks to modernisation work, in 2018, oil refineries in Kazakhstan began to produce K4 and K5 (identical to Euro-4 and Euro-5) gasoline and diesel, which are less environmentally harmful due to significantly lower sulphur and benzol content, and the removal of the highly toxic additive N-Methylaniline. This will help reduce the negative effect of vehicle emissions and have a positive impact on the country's ecological situation, as a whole.

	K2	K4	K5
Sulphur (mg/kg)	500	50	10
Benzol (%)	5	1	1

### Recovery of vapour generated when filling and storing oil in tanks

To control and reduce light hydrocarbon emissions during the vertical tank oil filling and storage process, KazTransOil is using a vapour recovery unit at the Atyrau Oil Pipeline Administration, which uses absorbent coal to treat hydrocarbon vapour. Clean air is released into the atmosphere, while hydrocarbon particles are collected and returned to the tank using absorbent liquid.

3,000,000 tonnes of oil	Emission
Tank without a recovery unit	2,100.6 tonnes
Tank with a recovery unit	262.5 tonnes

# KMG EFFORTS TO REALISE SUSTAINABLE DEVELOPMENT GOALS

Based on its Corporate Governance Code and newly approved Strategy until 2028, KMG treats sustainable development as a strategic goal on a par with increasing its long-term value. Implementing and integrating sustainable development principles in key business processes, operating activities and decision-making processes will become one of the Company's priorities.

Samruk-Kazyna management has been working on creating a sustainable development management system since 2016, expanding Management Board and Board of Directors authority with respect to considering sustainable development issues. A Work Safety, Industrial Security, Environmental Protection and Sustainable Development Committee has been set up to manage the integration of sustainable development at senior management levels. Interaction with interested parties and training courses are held regularly to promote a sustainable development culture.

KMG publishes annual sustainable development reporting to ensure the transparency of its operations for interested parties, which involves following international standards, specifically Global Reporting Initiative (GRI Standards). A copy of the Sustainable Development Report is available at: [http://www.kmg.kz/rus/ustoichivoe\\_razvitie/reports/](http://www.kmg.kz/rus/ustoichivoe_razvitie/reports/)

Since 2006, KMG has been a member and active participant of the UN Global Compact, supporting allegiance to its 10 principles and 17 sustainable development goals. The Company's annual sustainable development report discusses progress within the framework of the UN Global Compact and is available at: <https://www.unglobalcompact.org/what-is-gc/participants/6810>



## 10 PRINCIPLES OF THE UN GLOBAL COMPACT

 HUMAN RIGHTS	01.	Business should support and respect the protection of internationally proclaimed human rights.
	02.	Business should not be complicit in human right abuses.
 LABOUR	03.	Business should uphold the freedom of association and the effective recognition of the right to collective bargaining.
	04.	Business should eliminate all forms of forced and compulsory labour.
	05.	Business should act to ensure the effective abolition of child labour.
	06.	Business should eliminate discrimination in respect of employment and occupation.
 ENVIRONMENT	07.	Business should support a precautionary approach to environmental challenges.
	08.	Business should undertake initiatives to promote greater environmental responsibility.
	09.	Business should encourage the development and diffusion of environmentally friendly technologies.
 ANTI-CORRUPTION	10.	Business should work against corruption in all its forms, including extortion and bribery.

# ECOLOGICAL RESPONSIBILITY

## STRATEGY

« According to the 2018-2028 Strategy, KMG’s environmental protection priorities are to manage greenhouse gas emissions and reduce flaring; manage water resources; manage waste generation; land reclamation and improve energy efficiency. »

The rational use of natural resources and minimising environmental impact are the cornerstones of KMG operations, and focus on ending gas flaring, increasing energy savings, managing emissions and waste generation, moderating water use and repairing damaged land.

KMG recognises its obligation to current and future generations to preserve the environment in the regions where it operates. Striving to reduce its negative impact on the environment, KMG is constantly looking for opportunities to apply and introduce new practices and technology.

Work and industrial safety, and environmental protection, including measures to adapt to climate change are all coordinated by the KMG Corporate Centre, which, identifies areas for improvement, goals and objectives for future activities; analyses achievements and benchmarks against earlier periods and leading international companies (International Association of Oil and Gas Producers or IOGP).



## KEY EVENTS

- For the second year in succession, KMG has topped the ecological responsibility transparency rating for oil and gas companies in Kazakhstan. In January 2019, Nur-Sultan hosted a ceremony organised by the Russian World Wildlife Fund and the CREON Group with the support of the Ministry of Energy and in partnership with

the UN Environment Programme in Central Asia, CREON Capital and the National Rating Agency, to announce the results of its ecological responsibility rating<sup>11</sup>.

- Intergas Central Asia was recognised as the 2018 winner of the Paryz social responsibility contest in the “Contribution to the Ecology” nomination.

## ENVIRONMENTAL AND AIR PROTECTION

KMG strives to reduce its impact on the atmosphere by generating a prudent attitude to resources, conducting conservation measures and constantly reducing pollutant emissions and greenhouse gases.

One of the methods used to reduce emissions into the atmosphere is to improve product environmental characteristics, such as producing K4 and K5 standard fuel, which has been made possible due to oil refinery modernisation. KMG subsidiaries and dependent organisations have taken measures to ensure the installation of units to remove sulphur compounds from refinery gases; ensure the production of eco-friendly diesel (reduce SO2 emissions from mobile sources by 2.3 thous. tonnes); replace oil-contaminated transformers with dry insulation transformers; replace tank rim seals and others.

<sup>11</sup> The main evaluation criteria are ecological management, environmental impact and information disclosure / transparency. In 2018, the rating included 19 companies producing hydrocarbons in Kazakhstan

### REDUCTION OF GREENHOUSE GAS EMISSIONS

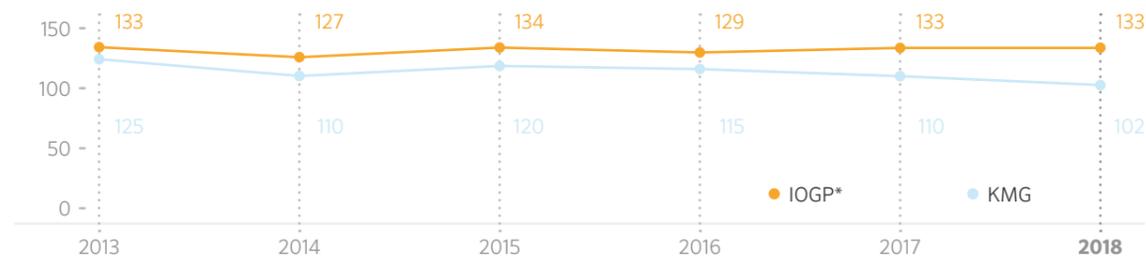
KMG measures direct greenhouse gas emissions, which are then verified and submitted annually to the authorities. Greenhouse gas emissions are calculated using statutory guidelines and cover carbon dioxide (CO<sub>2</sub>); methane (CH<sub>4</sub>); nitrogen dioxide (N<sub>2</sub>O) and perfluorinated hydrocarbon.

From 2019, KMG will start recording indirect greenhouse gas emissions within the framework of the Carbon Disclosure Project.

Information on KMG's direct and indirect greenhouse gas emissions can be found in its Sustainable Development Report for 2018 and Carbon Disclosure Report.



### GREENHOUSE GAS EMISSIONS' RATE TONS OF CO<sub>2</sub> PER 1,000 TONNES OF EXTRACTED RAW MATERIALS



\*International Association of Oil and Gas Producers

### APG RECYCLING

With its goal to reduce APG flaring to a minimum, in 2015, KMG took part in World Bank "Full APG Recycling by 2030" working meetings in September 2016 and on 20 November 2018 to discuss the initiative's status in KMG and possible cooperation in reducing regular APG flaring.

Natural and associated gas production in the main KMG production subsidiaries in 2018 reached 2,483 mcm\* (of which APG accounts for 2,049.5 mcm), and flared gas - 148.9 mcm. In other words, APG recycling has never been higher - 93%. Gas flaring is currently at 6 tonnes per 1 000 tonnes of hydrocarbon produced (11 in 2017), thanks to

**93** %

of associated oil gas recycled in 2018

the commissioning of a gas processing facility at Zhylyoimunaigas and Embamunaygas and the reduction in Kazakhoil Aktobe production levels and gas flaring.

2019 should see the commissioning of a CGPF at the Kozhasai field, reducing gas flaring and decreasing pollutant emissions. Furthermore, the gas recycling systems at the Laktybai and South Karatobe fields in Aktyubinsk Oblast are due to be expanded.

### APG FLARING INTENSITY

Quantity of HCM per 1,000 tonnes of HCM produced



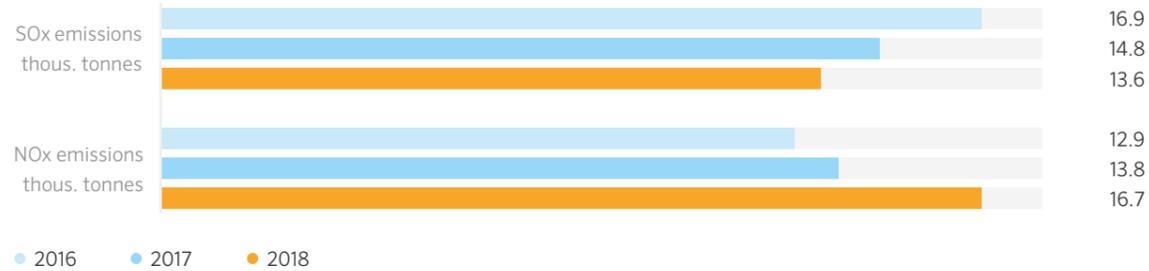
\*International Association of Oil and Gas Producers

### POLLUTANT EMISSIONS

KMG adheres to a number of industrial environment monitoring programmes, which involve observing air emissions at established sampling locations to assess the potential impact of industrial activities on the environment. The majority of pollutant emissions are generated as a result of fuel gas flaring in boilers, process furnaces and compressors, gas turbine units, as well as the gas in flares.

There has been an 8% drop in pollutant emissions (SO<sub>x</sub>) compared to 2017 due to a reduction in refinery gas flaring, and measures to reduce sulphur oxide/dioxide emissions in the downstream and midstream sectors. The growth in pollutant emissions (NO<sub>x</sub>) in 2018 was caused by the rise in gas exports and the introduction of new industrial facilities.

**SOX, NOX EMISSIONS FOR THE KMG GROUP**



**PROTECTION OF WATER RESOURCES**

Kazakhstan is recognised as having a large water shortage; and for that reason KMG is looking at ways to reduce its fresh water consumption, focusing on water reuse and recycling, and improving the quality of waste water treatment.

In 2018, KMG adopted a corporate water management standard, which will be introduced gradually throughout the company in 2019, to identify the basic principles for using water resources – the so-called 8 “water” rules, whereby KMG:

1. recognises and unconditionally accepts the importance of a careful and rational attitude to the country’s water resources;
2. strives to not only meet statutory requirements in Kazakhstan, but also meets international standards and best practices, and considers the opinion of all interested parties in the regions where it operates;
3. considers the preservation of fresh water and how it is used in the management decision-making process, and in operational management;

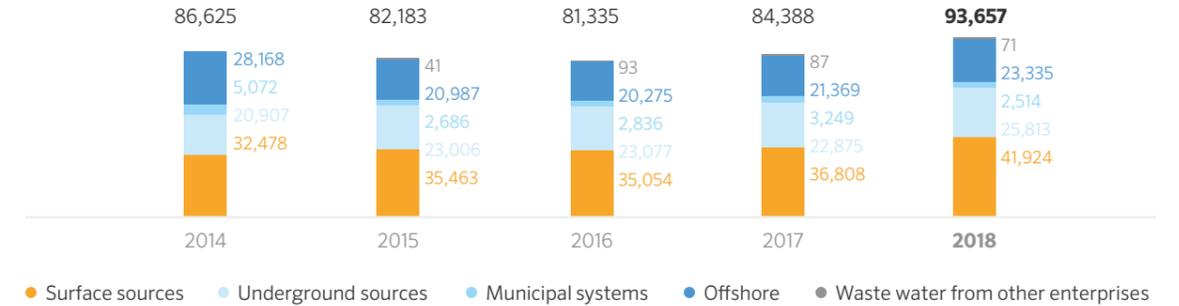
In 2018, Shymkent Refinery improved sewage treatment capacity and quality following the completion of modernisation work. Additional sewage treatment at the reverse osmosis unit will help save up to 1.5 mcm of fresh water every year. At the same time, pollutant emissions will fall by up to 90% due to the sealed nature of machinery and equipment.

4. understands and assesses primary water sources, irrespective of whether water is taken directly or purchased through intermediaries;
5. strives not to use drinking water for production purposes;
6. strives to ensure the 100% metering of water collection and disposal;
7. strives to reduce fresh water withdrawal as much as possible by introducing irrigation and water saving technology, and reduces waste disposal, raising water treatment quality to maximise water recycling;
8. grows potential, participating in sector associations and supporting international water resource initiatives to study best practices to improve its water resource management system.

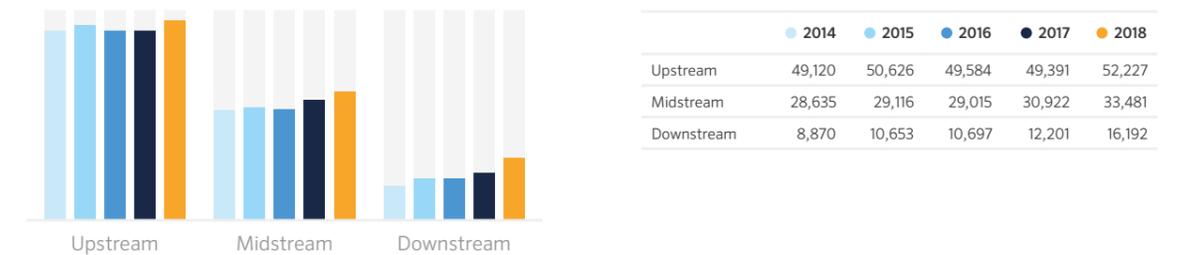
The standard reflects management and employees’ commitment to preserving fresh water, and creates a foundation for a new direction in water management.

The Shymkent Refinery has also been involved in a number of ecological projects to reduce water consumption and improve the ecological situation at the plant, introducing a system for recycling treated waste water in the fire-fighting system. These measures have led to a 30% saving in fresh water, which previously would have been taken from the municipal water supply system.

**KMG GROUP WATER DRAW-OFF, BY SOURCE, TCM**



**WATER INTAKE BY BUSINESS AREAS, THOU. M<sup>3</sup>**



**WASTE MANAGEMENT**

KMG records all waste generated, including that by contractors, and also monitors contractors for their compliance with waste transportation, disposal and recycling requirements.

One of the KMG Group’s main waste management priorities is compliance with statutory waste handling requirements, which requires the group companies to develop and implement group waste management programmes, allocate significant funds to resolve issues related to waste generation

and land contamination at industrial facilities. They are also involved in studying new waste management approaches and techniques for implementation at industrial facilities.

Due to its major objective to eliminate historical pollution, oil-contaminated areas and accumulated oil waste inherited from the Soviet era, KMG has studied all cases of historical pollution and developed plans to eliminate all forms of historical pollution taking into account the characteristics of each field and region as well as climactic conditions.

**ENERGY EFFICIENCY**

KMG has a roadmap in place outlining how subsidiaries and dependent organisations, including jointly controlled organisations and joint ventures could save energy and improve energy efficiency in 2017-2020, by:

- increasing senior management responsibility, introducing energy efficiency KPIs for leaders responsible for energy conservation and efficiency;
- ensuring the rational use of energy resources;

- reducing the payment burden through energy efficiency and conservation measures;
- ensuring energy efficiency by building, reconstructing and overhauling power equipment;
- raising private investment to improve energy efficiency, including in energy service contracts;
- improving energy efficiency compliance controls;
- observing statutory energy conservation and efficiency requirements.

KMG's main strategic energy saving and efficiency initiatives involve modernising process machinery, introducing energy saving technology, streamlining thermal energy

generation and consumption, and developing own energy sources, including APG use.

As the majority of energy saving and efficiency measures, specifically the introduction of process machinery and equipment at a cost of 889.4 mln tenge, were realised at the end of 2018, the saving in physical terms will only be seen in 2019. The saving on fuel and energy resource purchases amounted to 395.2 mln

**541.5** THOUS. GJ

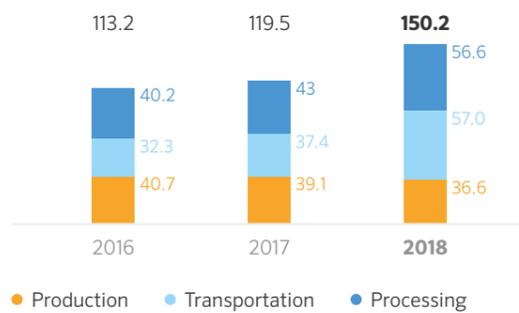
saving of fuel and energy resources; or 13.9 mln kW of electricity, 24.2 thous. Gcal of heat energy, 9 621 tcm of natural gas and 458 thous. litres of fuel and lubricants

tenge, which translates to a recoupment period of 2.5 years.

**FUEL AND ENERGY RESOURCE SAVING FOR 2018, THOUS. JOULES**

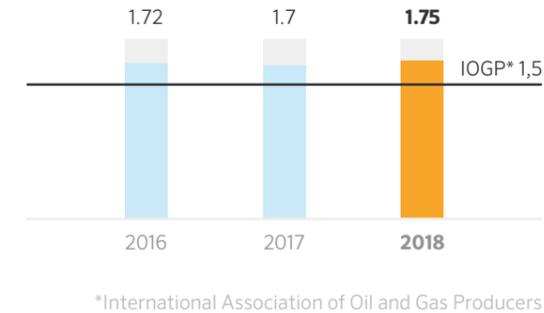


**POWER CONSUMPTION BY SECTOR, MLN GJ**



Energy resource consumption grew in 2018 due to increased water content at mature fields, and refinery modernisation, which led to the introduction of new processing facilities to increase oil refining depth.

**SPECIFIC ENERGY RESOURCE CONSUMPTION TO PRODUCE HYDROCARBON IN 2016-2018**



**1.75** GJ/TOE

Specific consumption of energy resources in hydrocarbon production in 2018

In 2017, International Association of Oil and Gas Producers (IOGP) reporting companies consumed on average 1.5 GJ of energy for every tonne of hydrocarbons produced.

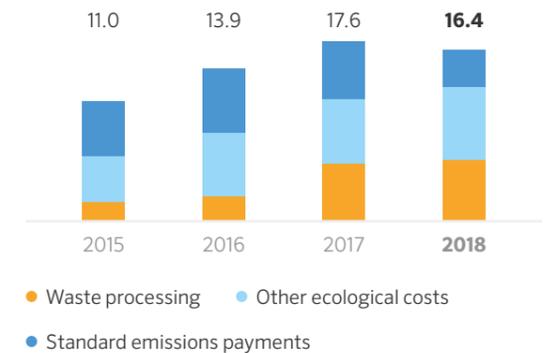
**ECOLOGICAL PAYMENTS AND OTHER EXPENSES**

In 2018, the environmental regulator imposed excess emission fines, damages and taxes on the KMG Group of 86 bln tenge, 9.7 bln tenge of which it recognised and paid, disputing the remaining claims in court.

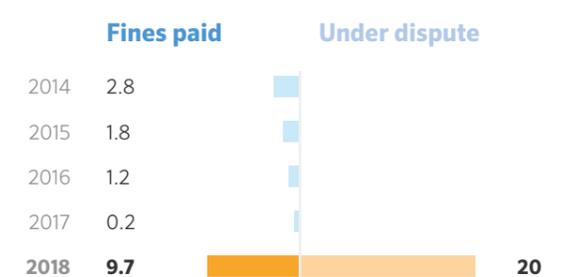
Among them, Mangistaumunaigaz received a fine of 55.9 bln tenge for disposing of production waste without an emissions permit in 1999-2017. KMG managed to prove the lawsuit was unlawful and in January 2019 the Mangistau Oblast Judicial Board cancelled all fines and taxes.

Embamunaygas was fined 29.7 bln tenge, including fines, pollution damages and excess gas flaring taxes for flaring sour gas without the corresponding permit at the Zhylyoimunaigas CGPF between 1 November and 9 October 2018. The infringement occurred due to a delay in the launch of the LO-CAT sulphur treatment system at the CGPF until the end of December 2018. Sour gas flaring was immediately stopped. The company paid 9.2 bln tenge of the original amount in 2018 and continued to dispute the remaining amount in court.

**CHANGES IN ECOLOGICAL PAYMENTS AND COSTS, TENGE MLN**



**ECOLOGICAL FINES IN 2014-2018, BLN TENGE**



Ecological costs include taxes for standard emissions, cost for environmental measures, insurance, environmental compensation, investments to prevent environmental impact

and others. KMG has increased its waste treatment budget to recover historical waste and contaminated soil. Investment in waste treatment has tripled since 2015 to more than

1/3 of all environmental protection costs. At the same time, there has been a drop in

emission payments due to the reduction in atmospheric air emissions.

**WORK AND HEALTH SAFETY**

In the last 4 years, KMG has introduced significant work, industrial and environmental safety measures, which helped 2018 be recognised as the safest ever in terms of accidents. KMG has reached its goal of reaching the Global Safety Top 20 by 2020 in terms of the fatal accident rate, and by 2020, is looking to be one of the best in terms of injury rates.

The number of injuries has fallen to an all-time low - 32% compared to 2017. There has been a significant drop in road accidents (26%) and driving-related accidents (47%). All vehicles have been fitted with seatbelts, and over 90% of passenger vehicles with GPS.

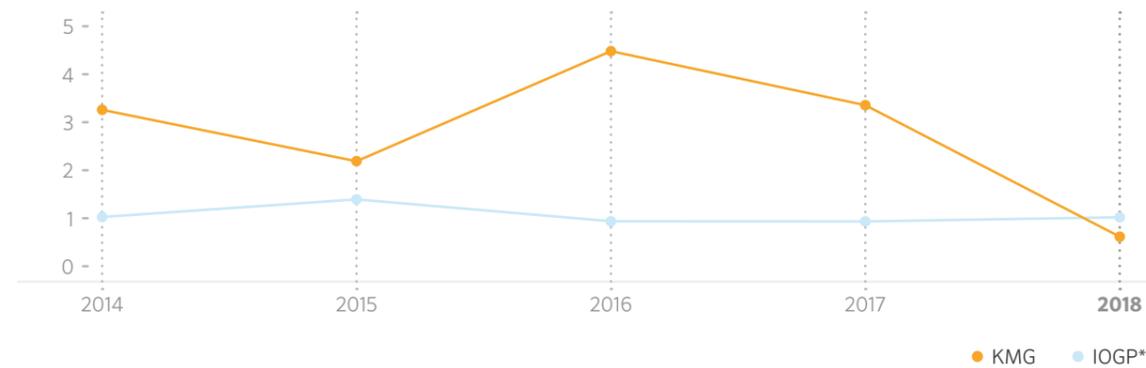
**32** %

Percentage reduction in the number of injuries compared to 2017

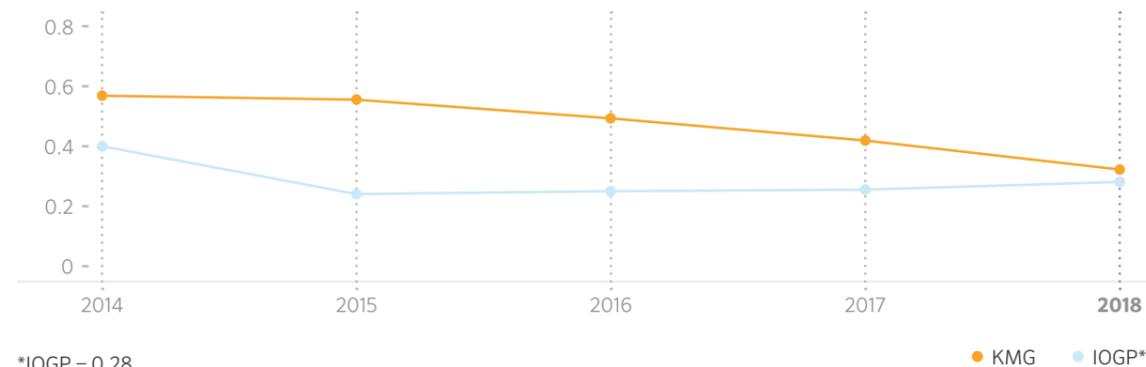
**90** %

Passenger vehicles fitted with GPS systems

**FATAL ACCIDENT RATE (FAR)**



**LOST TIME INJURY RATE (LTIR)**



\*IOGP = 0,28

\*International Association of Oil and Gas Producers

The main measures used to improve safety culture and reduce work-related injuries are:

- By the end of 2018, four Convincer road accident seat belt safety simulators were in operation across the country, providing over 8,000 demonstrations.
- Safe driving training has been provided to develop driving skills and change drivers' attitude to safety. Twelve trainers have received the required qualification.
- Behavioural Safety Observations have continued, with 68,263 new observations in 2018.
- A Driver Safety Observation Programme has been implemented, with 23,495 observations made in 2018.
- Subsidiaries recording high injury levels have been audited.
- Onsite presentations have been made to train employees in new safety programmes, and senior management in the importance of their involvement in safety processes.

- The IV Annual Forum of Safety General Directors was held under the aegis of "100% work safety is each person's priority". Similar forums are being held in subsidiaries for line managers.
- The IV Annual Chairman of the KMG Management Board competition for the "Best innovative health, safety and environmental ideas and practices" was held for KMG employees.

In the last four years, the number of non-work related deaths has fallen by 22%, while the number of work days missed due to illness has fallen by 50%.

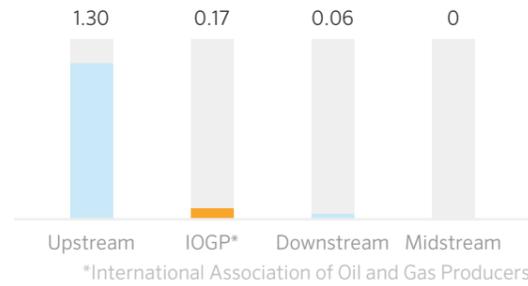
To a large extent, this has been made possible by the constant promotion of Fit-For-Work programmes, which incorporate high-quality and extensive pre-work medical examinations, and the opportunity to choose from a number of healthy meal options. A user-friendly health programme has been developed for employees, first aid equipment upgraded and more medical staff employed at more than 200 first aid points. KMG drafted and used a health scorecard for the first time in 2018, so that employees can rate the services they receive, allowing the Company to analyse where it needs to focus its efforts.



### INDUSTRIAL SAFETY

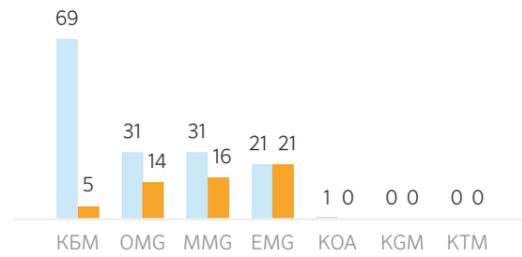
In 2018, KMG oversaw an industrial and fire safety benchmarking exercise for each business sector according to the Tier 1 Process Safety Event Rate (PSER) with IOGP oil producing companies, which scored 0.17 or significantly lower than KMG in its Upstream sector, which scored 1.3, and higher than in the KMG Downstream (0.06) and Midstream (0) sectors. In addition, KMG oil producing subsidiaries were graded according to the number of Tier 1 Process Safety Events (56), which is a significant improvement on the previous year (152).

**TIER 1 PROCESS SAFETY EVENT RATE, (PER MLN LABOUR HOURS) SPILLS > 1 TONNE**



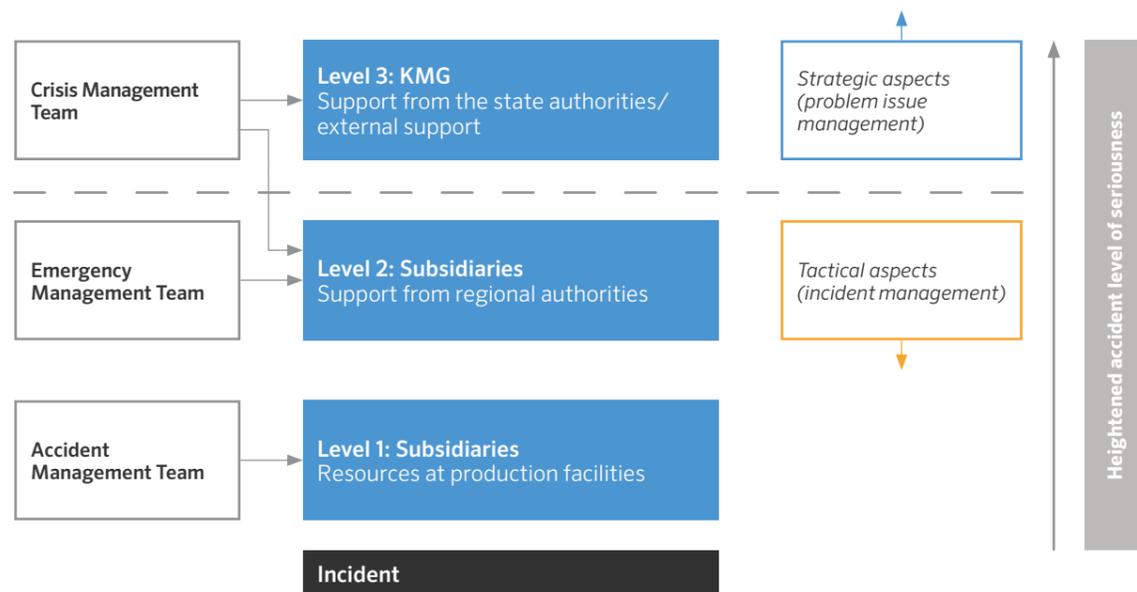
The main cause of oil spills in KMG is corrosion-related field oil pipeline leaks, which is why in 2019, KMG is continuing efforts to reduce instances of field oil pipeline failure and leaks by ensuring pipelines are tested, modernised, replaced, inhibited and cleaned on time and to required specifications so as to improve integrity and reliability. In 2017, to reduce the number of work accidents during the technical maintenance and repair of electrical equipment across the KMG Group, the Company introduced a Lock out - Tag out (LOTO) power source insulation system, which, by the end of 2018, had been successfully launched in 90% of entities.

**TIER 1 PROCESS SAFETY EVENT RATE, (SPILLS > 1 TONNE)**



Scorecards have been introduced to assess the readiness of non-state fire-fighting services to prevent and extinguish fires at the various KMG subsidiaries. A comprehensive analysis of the results has indicated those subsidiaries in need of urgent correctional work.

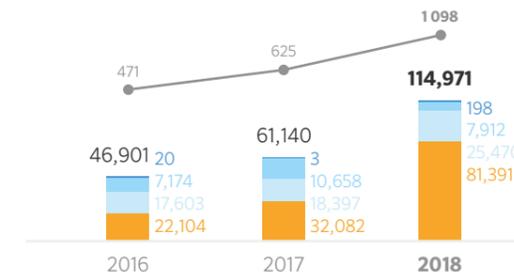
Draft Crisis-Management Guidelines have been created to prevent major accidents and ensure prompt accident response, and reduce the severity of any consequences or possible harm caused.



According to the guidelines, a multi-tier crisis management system is used to ensure effective crisis forecasting, recognition and responses, ensuring a smooth transition from

emergency response efforts at the subsidiary (tactical) level to a higher emergency response levels from the KMG corporate centre (strategic level).

**CHANGES IN, STRUCTURE AND NUMBER OF KMG EMPLOYEES TAKING TRAINING<sup>12</sup>, BY ACTIVITY, PERSONS**

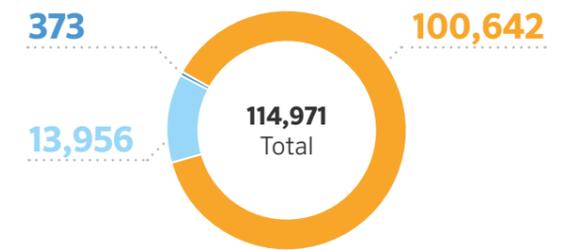


- Exploration, production and oil service
- Transportation
- Refining and marketing
- Corporate centre

Given the specific nature of production facilities in the Kazakhstan oil and gas sector, the possibility of industrial accidents and statutory requirements, KMG places great importance on training its people in work, industrial and fire safety.

A total of 44,458 KMG employees have received training, 44,575 - free of charge, at the Company's six training facilities/ centres under the "70/20/10 - on-the-job training/internal training/external training" programme.

**STRUCTURE OF THE NUMBER OF TRAINED EMPLOYEES BY TYPES OF TRAINING IN 2018, PERSONS**



- Industrial safety training
- Work safety training
- Environmental protection training

To improve safety culture, KMG has teamed up with ExxonMobil to provide a free two-tier exchange of experiences-based training course to over 65 KMG Group employees.

A further 220 KMG Group employees received training on the newly implemented "Incident Response" and "Audits and Reviews" modules.

In 2017 and 2018, the Company paid special attention to highlighting and correcting dangerous behaviours, which has culminated in the "Incident Reporting Without Consequence" pilot programme planned for 2019, which will focus on identifying unsafe working conditions, and give all staff members the opportunity to express their concerns.

<sup>12</sup> 2018 saw a change in how KazMunaiGas Exploration Production data is presented - 100% coverage of reporting data for all subsidiaries

# SOCIAL RESPONSIBILITY

## STRATEGY

« To realise 2018-2028 Strategy initiatives, the Company plans to:

- Develop corporate culture and enhance manager skills.
- Unify and improve HR function performance.
- Improve staff quality, taking into consideration business requirements.
- Achieve positive involvement and social stability.
- Implement a comprehensive talent management system – transition from a hiring system to staff continuity, ensuring transparency in hiring procedures and staff motivation, promoting and appointing effective and potential KMG Group employees.



KMG’s social responsibility activities focus on the creation of safe and comfortable working conditions, ensuring a social welfare system for employees and their family members, providing constant professional growth opportunities and contributing to the sustainable development of the regions where it operates.

## KEY EVENTS

- KMG’s social stability rating (STR) from the Samruk-Kazyna Social Partnership Centre, has grown from 61% to 74% since 2013.
- KMG Group employees and 34 oil and gas facility professions. The winners received “Uzdik Maman” medals and cash prizes.
- KMG hosted the “Best in Profession – 2018” contest at its production facilities for 3,300
- More than 300 members of 40 KMG Group companies took part in an annual Olympics.

## STAFF POLICY

KMG staff policy focuses on identifying the demand for specialists, taking into account strategic goals and objectives, improving human resources allocation and performance incentives linked to Company profit, and ensuring good staff morale based on respect. KMG strives to hire the best candidates available using open and transparent methods, offer staff training, ensure safety, develop motivation and professional development programmes.

KMG Group headcount at the end of 2018 was 83,116 (90,111 in 2017).

2018-2028 staff policy requires KMG to create an integrated information space with an integrated data storage and processing centre through a single installation. Basic and extended processes will be automated using 1C and SAP platforms over a three-year period.

In 2018, KMG introduced and carried out a comprehensive assessment for the first time of 2017 operating results, representing an overall employee evaluation and from a performance perspective, and the development of personal

and professional competencies. The assessment identifies further actions, such as a procedure to place employees in a candidates’ pool until certification recommendations, which will eventually be introduced in all KMG subsidiaries.

## COLLECTIVE AGREEMENTS

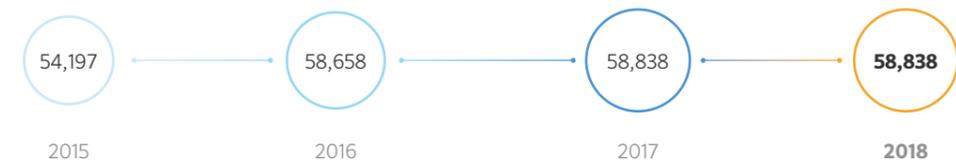
KMG currently has a number of collective agreements in place with production enterprise teams, which vary both in content (social support conditions) and in structure.

A standard collective agreement has been developed to standardise salaries, social welfare, working conditions, work and leisure time and others. It also incorporates a step-by-step approach to resolving collective employment issues should they arise. Collective agreement templates throughout the KMG Group will help build employment relations at a statutory level, rule out the unjustified overpayment or underpayment of employee benefits; recommend consistent actions in the event of employment disputes

to prevent conflicts and remove tension.

In the many KMG subsidiaries, the standard collective agreement will provide a basic social package, covering benefits related to annual leave; child birth/adoption, the death of an employee or family member; maternity payments; benefits to attend to a child up to the age of 18 months; compensation for redundancy if an employee is unable to transfer to another job due to disability or incapacity; voluntary medical and health insurance for employees and their family members; places for children aged between 7 and 14 in children's health camps and others. The subsidiaries may provide additional packages depending on their financial situation.

## THE NUMBER OF KMG GROUP EMPLOYEES COVERED BY COLLECTIVE AGREEMENTS



**SOCIAL STABILITY RATING**

Between 2013 and 2018, KMG's Social Stability Rating from the Samruk-Kazyna Social Partnership Centre increased from 61% to 74%, which is "above average."

KMG has used Social Stability Ratings to develop and update action plans for all areas in KMG and specific subsidiaries requiring social stability input.

The KMG Social Stability Action Plan covers the many areas of Group activities affecting employee social wellbeing (internal

communications, food quality, living conditions, the provision of PPE, training, career growth and others).

A survey was taken of the involvement and satisfaction of KMG Group administrative and management staff. Findings show which working conditions employees are happy with and vice versa, how employees rate communication and relationship development, how their standard of living has changed compared to the previous period and their quality of life.

**STAFF AND TRAINING**

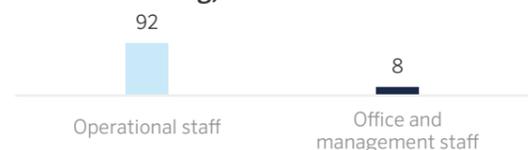
**Among employees who completed their training**



**At the average cost of training**



**Percentage of employees who took training, %**



High percentage of trained operational staff is associated with compulsory training of employees working at hazardous production facilities, in accordance with the legislation of the Republic of Kazakhstan.

KMG places special importance on the development of both production and administrative human capital.

To improve the training and development process; form and maintain staff qualifications, and ensure the most effective use of budget funds, KMG has been implementing a "70/20/10 - on-the-job training/internal training/external training" staff training and development concept since 2016, one of the innovations of which has been the Institute of Internal Trainers, remote employee training, internships and leader development programmes.

<sup>13</sup> Each training session taken was used to calculate the number of individuals trained (for example, if one employee took two training courses, the number of individuals trained is two)

As part of the "Formula for Success" internship programme, employees can exchange experience with colleagues from other KMG Group companies, and in partner companies. Since its inception, more than 50 employees from KMG subsidiaries such as Embamunaygas, Oil Services Company LLP, Mangistaumunaigaz and others have enjoyed internships in 5 partner companies. 53 employees from 9 companies have had internships with 6 KMG subsidiaries. In addition, in 2018, KMG sent 15 exploration and oil services employees to the ENI Corporate University for six-month production training.

To develop employees, KMG also provides internships at the invitation of its partners - JCCP and JOGMEC, which every year accept over 20 KMG Group employees for training in areas such as the upstream and downstream sectors to HR and finance. On average, training lasts between two weeks and a month, and involves representatives from various countries in related industries, which allows them to share their experience and knowledge.

In conjunction with General Electric, KMG has sent 7 employees for 5-month oil and gas technology training to the General Electric Oil and Gas University in Florence, Italy.

In 2017, the KMG State Committee approved an Integrated Development Programme for KMG and subsidiary corporate centre senior managers, and an Effective Leader Programme for directors, their deputies and Integrated Staff Reserve participants. The Integrated Development Programme was completed in 2018 and has received good feedback. It has taken on 99 senior managers from 26 subsidiaries and covered all current development areas such as digital leadership, influence and emotional leadership. In addition, 2018 saw the development of the Upstream Human Capital Development Programme and its pilot launch at Kazakhturkmunay and Kazakhoil Aktobe. The

programme helps participants design projects to improve company performance and is due to be launched in other upstream companies in 2019.

In conjunction with the above, KMG actively looks to increase the number of people it sends on training year-on-year. For example, in 2018, it trained 129 thous. people<sup>13</sup> at a cost of 5.7 bln tenge, which is 2.5% more than in 2017. The increase in the number of trainees and expenses was thanks to the launch and realisation of the above programmes.

The average number of academic hours allocated to each employee on training was 14.3, of which 14.5 hours were allocated to men and 15 hours to women.

Training and development is provided irrespective of gender and position.

0.58% of employees took training culminating in certification.

One of the priorities for the long-term development of KMG is the creation of a staff reserve list, which involves finding and highlighting young and potential leaders to create new format leaders with all contemporary skills.

The main principle is the goal-oriented and systematic training of management candidates to ensure management succession and provide employees with the opportunity to develop and grow in the KMG Group.

Besides the above training programmes, KMG has invested in two-diploma EMBA programmes for reservists. Since it was launched, 35 reservists without a masters have completed the course; with another 14 currently studying on a similar programme for 2018-2019.

Likewise, three team-building and training meetings have been held with reservists since the programme came into existence. The programme also includes training and seminars to improve personal and business skills.

**STAFF PROFESSIONAL DEVELOPMENT AND MOTIVATION**

Number of employees taking training <sup>14</sup> , thous.	2016	2017	2018
	<b>98.2 (97.9)</b>	<b>123.2</b>	<b>129.4</b>
including upstream sector employees	48.7 (48.4)	58.3	67.5
midstream sector employees	18.1	23.5	29
downstream sector employees	7.6	19.6	10.5
Other areas	22.5	20.6	20.7
KMG Corporate Centre	1.3	1.2	1.7

Training costs, mln tenge	2016	2017	2018
	<b>4,626.5 (4 540.2)</b>	<b>5,590.7</b>	<b>5,679.4</b>
including for upstream sector employees	2,148.4 (2 062.1)	2,286.7	2,585.5
midstream sector employees	967.2	1,289.1	1,530.5
downstream sector employees	337.4	873.4	504.2
Other areas	849	694.7	673.6
KMG Corporate Centre	324.5	446.8	385.6

**CORPORATE EVENTS**

KMG, in conjunction with the various teams and trade unions, has introduced new team-building exercises or corporate events at the KMG level, such as:

- the “Uzdik Maman” professional skills contest;
- summer Olympics;
- youth rallies.

In 2018, the following KMG subsidiaries hosted the final stage of the “Best in Profession – 2018” contest for KMG Group employees:

- Mangistaumunaigaz - oil and gas production worker; well research worker; seam pressure support worker; repair and technical maintenance engineer and lathe operator;
- KazTransOil – electrical welder, electrician, gauge and automatic equipment technician; chemical analysis laboratory assistant, oil treatment worker;
- Oil Services Company LLP – well overhaul team and underground well repair team;
- Oil Transport Corporation LLP – vehicle driver; cement truck driver/operator; mobile dewaxing unit operator and mobile crane operator.

<sup>14</sup> Each training session taken was used to calculate the number of individuals trained (for example, if one employee took two training courses, the number of individuals trained is two). Thus, the annual number of employees taking training exceeds KMG Group headcount

3,300 employees from 34 basic oil and gas professions took part in the first stage of the contest, with 186 from 20 professions reaching the final. In 2017, that figure was 120 persons from 17 professions.

Premises, special working areas, equipment, computer classes, accessories and equipment were set up at production facilities for the theoretical and practical sessions, while guidelines referring to contest procedures and conditions were drafted and approved for each profession. The contest winners received “Uzdik Maman” medals<sup>15</sup> and cash prizes.



<sup>15</sup> Contest news, photos and videos: [http://www.kmg.kz/uzdik\\_maman2018](http://www.kmg.kz/uzdik_maman2018)

<sup>16</sup> Information on the Spartakiada (Olympics) on the KMG website: <http://www.kmg.kz/spartakiada2018>.

In 2018, KMG held its regular Spartakiada (Olympics)<sup>16</sup> for more than 40 companies, with over 310 employees from 23 companies taking part in 8 disciplines (mini-football, volleyball, basketball, chess, togiz-kumalak, arm-wrestling, swimming and table tennis).

Since 2014, KMG has promoted an active Youth Policy, which has led to the creation of

youth councils in 45 subsidiaries to hold annual rallies where participants take part in cultural events, meet with state representatives and take masterclasses (for example, on subjects such as “mediation as a way of resolving conflicts”, “leadership in action”, “personal efficiency” and others), discuss youth issues and generate the corresponding recommendations.

### INTEGRATED INTERNAL COMMUNICATION SYSTEM

All KMG production enterprises have been implementing internal communication rules since 2016, whereby senior executive officers and work collectives meet twice a year, subsidiary line managers meet with collectives, and managers with trade unions quarterly, to allow employees to address questions to Group management and receive timely responses. In 2018, more than 65 meetings were held between senior officers and teams.

Line managers also meet with structural division, site, team and workshop employees, and hold unscheduled meetings with teams to discuss issues requiring swift resolution, such as hiring.

Each subsidiary has created a chief executive blog and corporate information site, installed monitors for video announcements on corporate internal policy. Information stands have been set up to make internal notifications. Employee surveys are held once a year to highlight problem issues in the subsidiaries.

Management holds quarterly meetings with subsidiary trade unions to discuss the most important issues regarding collective agreements and work discipline, to consider team.

### SPONSORSHIP AND CHARITY

In 2016, the Samruk-Kazyna Board of Directors approved the Fund's charity policy and programme, whereby all Samruk-Kazyna companies, including KMG take part in charity initiatives through the Samruk-Kazyna Trust, whose key directives are to:

- help people and communities in social and medical terms;

- develop the media, the cultural community and develop human potential;
- consolidate employment relations, ethnic relations and investments in sustainable community growth;
- support regional business initiatives.

### FUNDS ALLOCATED BY KMG FOR CHARITY, MLN TENGE

**1,225** MLN  
TENGE

Charity expenses in 2017

In the last year, 350,000 Kazakhstan nationals, many of whom were children, received help from Samruk-Kazyna Trust. For example, 1,627 children diagnosed with infantile cerebral paralysis received free physiotherapy as part of the “Health Children” project, while 209 children who could not be cured in Kazakhstan were sent overseas for treatment as part of the “Give the Children a Life” projects.

199 children received accommodation at family-type children’s villages; 1,306 families received psychological, social and legal aid under the “Caring Home for Children” project.

Thanks to the “Young Talent” project, in 2018, 27 talented children received grants to take part in international contests and competitions.

In addition, much work was done to popularise various professions among school children. By the end of the project, 21,332 school children had received free vocational guidance training.

1,530 youngsters in Nur-Sultan visit Zamandas youth clubs free of charge, where they can take part in artistic, sporting and science-based activities. 600 teenagers took part in the “Tugan Yelge Sayakhat” project, visiting one of the country’s main tourist sites.

Great Patriotic War veterans are also well cared for. In 2018, a total of 4,770 volunteer visits were organised, whereby 1,200 veterans received food, medicines and cleaning services. In addition, throughout the year, war veterans and rear-guard members received free railway tickets to travel around Kazakhstan and the CIS throughout the year.

**1,698** MLN  
TENGE

Charity expenses in 2018

KMG and the Fund for the Development of the State Language launched a series of radio lessons and set up a website with business documentation in Kazakh - [www.resmihat.kz](http://www.resmihat.kz). 80,000 people now have the chance to learn Kazakh at [www.soyle.kz](http://www.soyle.kz).

Thanks to the “Medical Trains” project, 42,306 people, including 6,552 children, living in remote areas received access to qualified doctors. Likewise, the “EREKET” project received a great deal of positive feedback as 265 representatives from 180 non-commercial organisations received training in the principles of businesses. 96 grants were issued.

Two intervention programme centers were opened to provide correctional help to children with learning difficulties in Semei and Shymkent, each helping up to 150 children every year. In addition, last year, 7 inclusive education centres were opened in Nur-Sultan, Aktobe, Kokshetau and Ust-Kamenogorsk.

Last year, Samruk-Kazyna Trust continued its efforts to develop mass sport. One of its most popular events, which was supported personally by President Nazarbayev, was the “Other You!” Challenge, which brought together over 300,000 people.

A project to set up sports and children’s playgrounds gained momentum in 10 regions, resulting in 52 new sports grounds covering an area of over 52,000 m<sup>2</sup>.

**REGIONAL DEVELOPMENT**

Subsoil use agreements concluded by KMG subsidiaries stipulate the allocation of significant funds to develop the region

where they operate and provide social aid to underprivileged sections of the population. In 2018, the KMG Group allocated approximately 6 bln tenge for these purposes.

**JSC Ozenmunaigas**

**900** MLN TENGE

allocated annually to a fund to develop infrastructure in Zhanaozen and Karakiyan District

**JV Kazgermunai LLP**

**1,465** MLN TENGE

allocated to construct a youth centre in Kyzylorda, as part of socio-economic development for 2018-2019

**MNK KazMunayTeniz LLP**

**371** MLN TENGE

contributed to finance reconstruction of the Shetpe-Kyzan vehicle highway in Mangistau District

**JSC Embamunaigas**

**596** MLN TENGE

allocated in 2018 to build kindergartens, a secondary school and sport and recreation centre in the villages of Sagyz and Karabau in Kyzylkogin District, and in the village of Akkystau, Isatay District

**Pavlodar Oil Chemistry Plant LLP**

**200** MLN TENGE

provided to the city of Pavlodar to support a number of sports and sporting events

**Kazakhoil Aktobe LLP**

**9** MLN TENGE

of social aid allocated to underprivileged sections of society



**PROCUREMENTS AND LOCAL CONTENT**

Total KMG Group procurements of goods, work or services in 2018 amounted to 2 trillion 428 bln tenge. Local content was 77%, including 77% for goods and 80% for work and services.

The KMG Group's local content percentage in 2018 exceeded the 2017 figure by 2%.

	2016		2017		2018	
	bln tenge	Local content percentage, %	bln tenge	Local content percentage, %	bln tenge	Local content percentage, %
<b>Total procurements</b>	<b>1,871</b>	<b>76</b>	<b>2,553</b>	<b>75</b>	<b>2,428</b>	<b>77</b>
Goods	722	83	863	79	824	77
Work/services	1,149	71	1,690	73	1,604	80

In 2018, local content increased from 75% to 77%, because in 2017 refinery modernisation work demanded a great number of imports purchased from overseas suppliers.

requests for explanations on normative documents – and helps potential suppliers reduce the quantity of paper documents, time and cash involved in procurement processes.

KMG transitioned to the updated Samruk-Kazyna electronic procurement platform which incorporates the following 4 subsystems – electronic agreements; price databases and price lists; electronic procurement questions from potential suppliers and electronic

Kazakhstan has been a World Trade Organisation member since 2016, which has led to Samruk-Kazyna procurement guidelines, which are used by KMG, having to remove all arrangements to support domestic providers of goods, work and services, except for subsoil use contracts.



# CORPORATE GOVERNANCE

# RISK MANAGEMENT

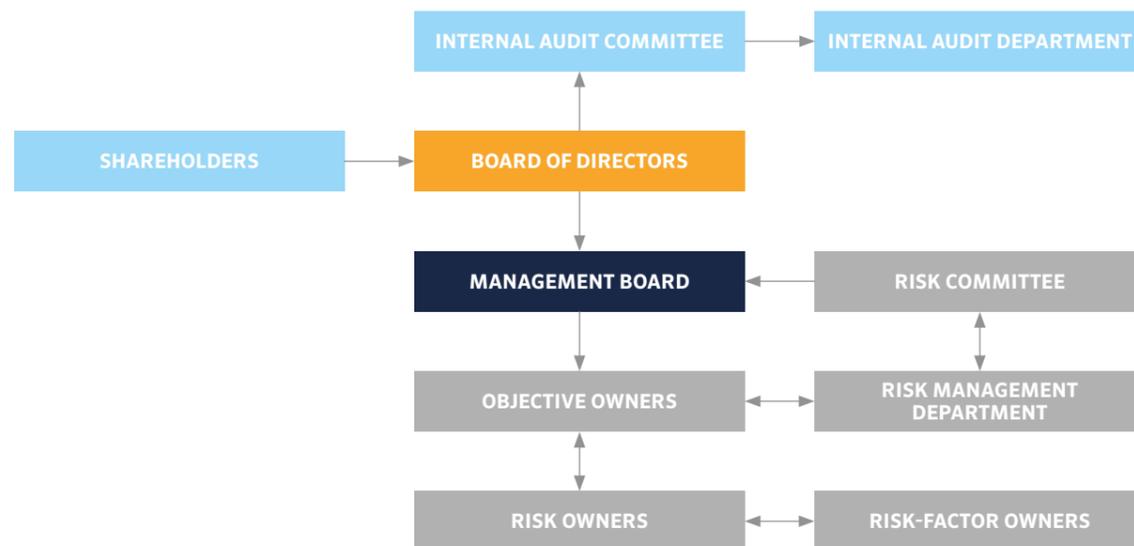
The corporate risk management system is a key component of the corporate governance system, and is used to identify, assess, monitor and mitigate potential risks that may adversely affect KMG, its subsidiaries and dependent entities in their efforts to achieve strategic and operational goals.

Group operations are subject to:

- production risks associated with the production process;
- non-production risks associated with non-production business processes;
- difficult-to-manage or unmanageable external environmental risks.

The KMG Board of Directors approves the Group’s Risk Register, Risk Map and Risk Management Plan on an annual basis. In 2018, the Risk Register and Risk Map identified and assessed risks in the above areas. Risk management measures were developed and risk owners identified for each risk, while the Group monitors key risk dynamics and implements key risk mitigation measures by sending quarterly risk reports to the KMG Management Board and Board of Directors.

## ORGANISATIONAL STRUCTURE OF KMG’S CORPORATE RISK MANAGEMENT SYSTEM



## KEY PRODUCTION RISKS

### Decline in production

A key operating risk is the decline in production at fields in the final stages of development and growing production costs.

To maintain and increase production levels at mature fields, KMG:

- monitors compliance with well repair intervals.
- performs underground well repairs, well overhaul and workover programmes in good time.
- modernisation obsolete equipment and machinery.
- implements technical controls over key oil production processes.

### Geological risk

The realisation of new exploration projects always comes with geological risks. Preliminary drilling is more complex due to the difficulty in extracting hydrocarbons, which requires contemporary technical solutions.

To reduce its geological risk, KMG uses new technology to process and interpret seismic data, and engages strategic partners for the joint exploration and development of new fields.

### Risks of adverse ecological impact and climate change

As an integrated industrial company, KMG is significantly exposed to the risk of adverse ecological impact and climate change. Its environmental protection priorities are to:

- manage greenhouse gas emissions and reduce flaring;
- manage water resources;
- manage waste generation;
- reclaim land;
- increase energy efficiency.

To mitigate the risk of adverse ecological impact, the Company:

- monitors the prevention of significant ecological aspects based on project management and a risk-based approach to improving ecological variables;
- works with interested parties on ecological issues;
- fully develops corporate ecological projects, and ensures KMG adheres to “green economy” principles.

### Risks of harming production staff and damaging property as a result of accidents and emergencies, man-made disasters at production facilities and sites

The Company's production activities are potentially dangerous, due to the explosion and fire hazards involved, could harm production staff and property as a result of accidents and emergencies, man-made disasters at production facilities and sites, and as a result of the unlawful actions of third parties. The consequences of these risks affect the Company's reputation, production and financial activities.

To mitigate production risks, KMG:

- repairs equipment and machinery in good time in accordance with statutory requirements;
- performs reconstruction and modernisation work in good time;
- estimates the best operating schedules for equipment and machinery;
- tests for and identifies potentially dangerous factors that can lead to corrosion;
- ensures the professional development of maintenance personnel.

To prevent industrial accidents, KMG implements organisational and technical measures that ensure:

- safe working conditions, and the prevention of occupational injuries and diseases;
- timely knowledge training and occupational health and safety assessment; the presence at the work site of supervisors and officials;
- internal occupational health and safety controls.

KMG is gradually introducing modern technical security equipment and improving security activities at those oil pipeline sites most exposed to criminal acts.

In accordance with statutory industrial and environmental safety requirements, KMG takes out annual compulsory civil liability insurance for facility owners whose operations have an inherent risk of harming third parties, and compulsory environmental insurance. Likewise, as part of the KMG Corporate Reinsurance Programme, whose purpose is to establish procedures for launching corporate risk insurance programmes to protect assets and liabilities belonging to KMG and its subsidiaries, KMG takes out annual voluntary property damage insurance (risk of accidental loss, destruction or damage).

### Social risk

KMG is exposed to the risk of unsanctioned strikes arising as a consequence of measures to streamline operations and improve its financial condition as a whole. The oil service section of the business is more exposed to the risk of unsanctioned strikes, as oil service companies tend to be less profitable, and at the same time employ far more people.

To mitigate social risks, KMG:

- has developed and implemented the "5/50 Programme", which offers compensation in exchange for the termination of employment agreements.
- raises awareness among teams of the reasons for cost reductions and working conditions in the case of a transition to trustee management.
- develops job retention guarantees with employee representatives and develops a compensation system for when a company transitions to trustee management.
- in accordance with internal communication guidelines, at least twice a year organises planned reporting meetings between the chief executive and team; holds quarterly

meetings with line managers and structural divisions, site, team and workshop employees; holds unscheduled meetings between management and teams to discuss issues requiring immediate resolutions; holds quarterly meetings between management and trade unions; and organises meetings between employees and the chief executive to discuss personal issues.

- ensures management regularly visit subsidiaries to hold working meetings with teams. Any issues are resolved onsite or by creating joint working groups.
- creates an integrated youth policy system to promote an active life style, engage youngsters and directly participates in social and production life.

Efforts to ensure social stability in the various KMG teams have led to a reduction in feelings of dissent, which is confirmed by research carried out by the Samruk-Kazyna Centre for Social Partnership and Communication and Social Stability Ratings. Action plans have been drafted for those areas where Social Stability Ratings have indicated signs of unrest.

## KEY NON-PRODUCTION RISKS

### Liquidity and financial stability risks

KMG's key risks are those associated with liquidity and financial stability. Insufficient financial resources may lead to non-compliance with debt covenants, and jeopardise the implementation of strategically important projects and sustained development. To mitigate these risks, and apply the relevant technology, KMG is focusing on improving operating performance, clearly prioritising capital costs, and rationalising its asset and project portfolios.

### Corruption risk

Intentionally corrupt actions for personal gain and material interests, including for other parties, and any fraud or corruption are completely unacceptable, regardless of the value of financial losses.

As a subject of anti-trust legislation in Kazakhstan and other statutory anti-corruption measures, KMG has adopted anti-corruption standards and is committed to:

- implementing and consolidating internal and compliance controls;
- conducting anti-corruption monitoring;
- analysing corruption risks;

### Tax risk

KMG is also exposed to tax risk, in the form of varying interpretations of tax law. It cannot influence tax authority decisions regarding additional tax assessments, fines and penalties based on disputed interpretations of tax law after tax reviews. To mitigate its tax risks, the Company is constantly looking to improve tax administration processes and conduct tax reviews.

- promoting an anti-corruption culture;
- creating organisational and legal mechanisms that ensure accountability, controllability and the transparency of decision-making processes;
- adopting and complying with business ethics rules;
- preventing conflicts of interest.

KMG continues to work to introduce and consolidate its internal control systems, establishing an integrated policy to prevent illegal and unfair acts both on the part of third parties and its employees; establish internal investigation procedures for illegal and unscrupulous employee acts. It also operates a corruption hotline service.

## KEY EXTERNAL RISKS

### Oil price fluctuations

A fall in oil prices will significantly impair KMG's financial performance. To mitigate its risks, KMG creates price risk models and compares findings with projections, all of which help it quickly reduce costs

### Interest rate and commercial bank liquidity risk

Interest rate changes and reduced commercial bank liquidity in Kazakhstan may have a negative effect on the availability of temporarily free cash and, consequently, have a negative impact on the Company's financial results. To mitigate these risks, the Company diversifies investments in financial instruments and regularly monitors how temporarily free cash is allocated among the KMG Group. As a result of its risk management efforts, the Company ensures the required return on temporarily free cash.

KMG's major part of earnings is generated in US Dollars and main source of borrowings is the international lending market. For these

and capital investments so it can meet its obligations should the oil price fall; and does not exclude the possibility of purchasing financial instruments to protect itself against a significant drop in oil prices.

reasons the greater part of its debt portfolio is USD-denominated. Interest rates for servicing a portion of these loans are based on LIBOR and EURIBOR interbank lending rates. An increase in interest rates may cause KMG's debt servicing costs to appreciate, which in turn may have an adverse effect on solvency and liquidity ratios.

The main reasons for a deterioration in financial stability are low operating efficiency, the financing of long-term projects against short-term and medium-term borrowings. KMG is currently taking measures to reduce debt, improve operating efficiency to ensure it is in a "green" credit risk zone.

### Country risks

The Group holds cash in current/ correspondent and deposit accounts with financial organisations in foreign countries; purchases overseas issuer securities; implements investment projects overseas by establishing affiliates and joint ventures; and acquires shares in foreign companies. Any changes in the economic and political situation, or military action or conflicts in any of these countries may have a negative effect on financial performance. KMG limits its country risk by setting country limits based on an economic, political, strategic, social or other analysis of the recipient country.

To help it manage its financial risks, KMG sets limits on balance sheet and off-balance sheet liabilities to counterparty banks, and country limits.

### Cyber risks

The global growth in cyber criminality and the growing influence of digitalisation on production and management processes in KMG have increased the risk of attacks on its data and communication system. To mitigate cyber-risks, KMG regularly updates its security software; implements specialised information security facilities to automate the monitoring

of external and internal threats, and monitors organisational and practical measures to protect its data and communication system. It regularly tests system exposure to external attacks; analyses the security of information technology infrastructure; audits network components, and monitors operating system security. It also monitors and promotes awareness of new cyber threats arising.

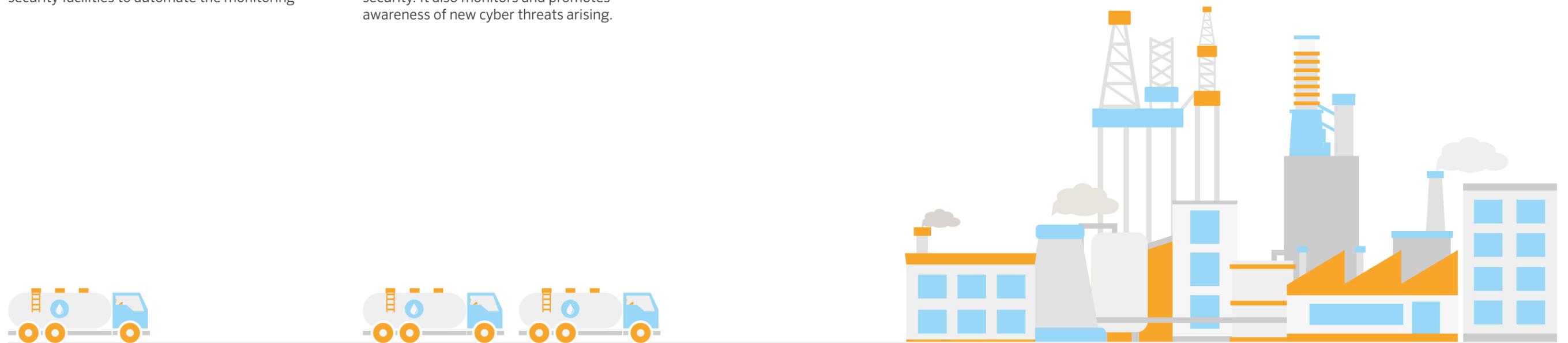
Since 2014, the USA and European Union have been periodically imposing sanctions on Russia, specific Russian individuals and companies. In 2018, new sanctions appeared and existing restrictions were made more severe. KMG has analysed the impact of the economic sanctions against Russia on its activities and possible reactions, and has considered joint projects/significant transactions with Russian organisations, and the related operating and financial risks. Under the current package of anti-Russian sanctions, the KMG Group has not faced suspension or any other restrictions of operating activities as a consequence of business relationships with Russian business partners.

### Reputation risk

KMG is exposed to reputation risk, which affects its business reputation and investor, partner and other stakeholder relations. It implements a series of measures to manage the risk, including monitoring media publications regarding its activities daily; publishing articles about itself in the media; organising briefings, press conferences and senior management speeches to highlight the various aspects of its activities, and responds swiftly to negative media coverage.

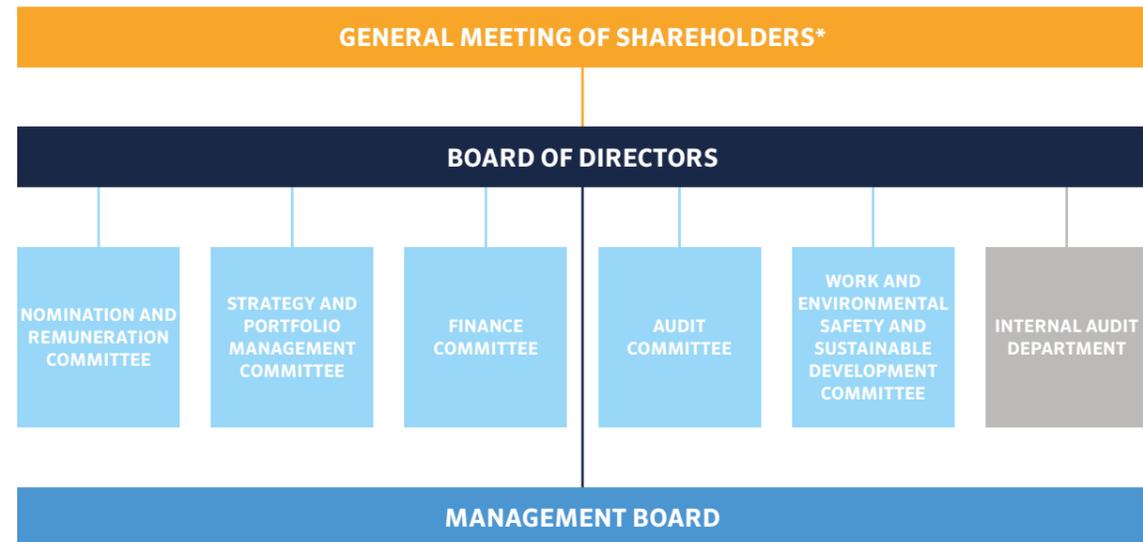
Generally, KMG completed all of its key risk management efforts in 2018; taking all appropriate measures to respond to key risks and reducing the likelihood of their occurrence and mitigating/preventing possible financial losses.

As part of its Transformation Programme, in 2018, KMG developed internal controls (process level risk management) and a continuity management system (management of risks leading to the cessation of activities). In 2019, it will continue to implement an internal control system and continuity management system in its subsidiaries.



# CORPORATE GOVERNANCE

## CORPORATE GOVERNANCE STRUCTURE IN KMG



\*REPRESENTED BY THE SAMRUK-KAZYNA MANAGEMENT BOARD

## CORPORATE GOVERNANCE SYSTEM IN KMG

- The KMG corporate governance system represents the aggregate of processes to manage and control KMG activities, and a system of relations among the shareholders (Samruk-Kazyna and the National Bank of Kazakhstan), the Board of Directors, Management Board and interested parties. The competencies of the KMG bodies are clearly defined in the KMG Charter.
- The KMG corporate governance system is based on respect for the rights and legitimate interests of shareholders and key stakeholders: the State, strategic partners, investors and KMG employees.
- The existing KMG corporate governance structure is continuously improving, taking into account the requirements and standards of national and international corporate governance practices.
- Since 2015, KMG has been implementing the Corporate Governance Code, approved by Samruk-Kazyna Management Board Resolution (Minutes No. 22/15 dated 27 May 2015). The Code aims to improve corporate governance and transparency, and confirm KMG's commitment to proper corporate governance standards.

## BOARD OF DIRECTORS

- The Board of Directors is responsible for the overall management of KMG activities, except for issues attributed by law and/or the Charter to the exclusive competence of the General Meeting of Shareholders or KMG Management Board. Decisions of the Board of Directors are made in accordance with the procedure determined by the KMG Charter.
- According to the KMG Charter, the Board of Directors is responsible for prioritising KMG activities and approving development strategy; reviewing and taking decisions on potential acquisitions and other significant financial issues, including the terms and conditions for issuing bonds and derivatives; taking decisions to conclude major transactions and related-party transactions; taking decisions to acquire, transfer (assign) subsoil use rights (after statutory approval from the competent authority); concluding joint activity contracts (agreements) with strategic partners for the joint implementation of subsoil use contract projects; approving investment projects whose full implementation implies that KMG and/or organisations whose voting shares or participatory interests are owned directly or indirectly by KMG should make aggregate investments in excess of 20 bln tenge, and any other issues provided for by Kazakhstan law and/or the KMG Charter.
- The KMG Board of Directors is not only responsible for managerial decisions but also plays a key role in the development of KMG's corporate governance system. For example, the results of independent corporate governance testing are submitted to the KMG Board of Directors for consideration together with corporate governance rating information and recommendations for improvements, which the Board of Directors uses to approve action plans to improve KMG's corporate governance system. The Board of Directors also regularly monitors any activities being implemented and approves reports detailing compliance with the principles and provisions of the KMG Corporate Governance Code; reports on the implementation of action plans to improve KMG's corporate governance system.

### AT THE END OF 2018, THE KMG BOARD OF DIRECTORS OPERATED AS FOLLOWS:



1. **Christopher John Walton**

Chairman, Independent Director, appointed by a Samruk-Kazyna Management Board Resolution dated 17 April 2014, protocol N°12/14.



2. **Alik Serikovich Aidarbayev**

Chairman of the KMG Management Board, appointed by Samruk-Kazyna Management Board Resolution dated 23 April 2018, protocol N°13/18.



3. **Stephen James Whyte**

Independent Director, appointed by a Samruk-Kazyna Management Board Resolution dated 29 June 2017, protocol N°20/17.



4. **Philip John Dayer**

Independent Director, appointed 1 June 2018, Samruk-Kazyna Management Board Protocol N° 18/18 dated 15 July 2018.



5. **Uzakbay Suleymenovich Karabalin**

Samruk-Kazyna representative, appointed by a Samruk-Kazyna Resolution dated 18 February 2016, protocol N°06/16, re-appointed by Samruk-Kazyna Management Board Resolution dated 29 June 2017, protocol N°20/17.



6. **Baljeet Kaur Grewal**

Samruk-Kazyna representative, appointed by a Samruk-Kazyna Resolution dated 19 April 2016, protocol N°12/16, re-appointed by Samruk-Kazyna Management Board Resolution dated 29 June 2017, protocol N°20/17.



7. **Almasadam Maidanovich Satkaliyev**

Samruk-Kazyna representative, appointed by a Samruk-Kazyna Resolution dated 19 December 2018, protocol N°41/18.



8. **Yerlan Urazgeldiyevich Baimuratov**

Independent Director, appointed by a Samruk-Kazyna Resolution dated 29 June 2017, protocol N°20/17. From 4 January 2019 terminated his authority as a member of The KMG Board of Directors.

### DURING 2018, THE FOLLOWING CHANGES OCCURRED IN THE KMG BOARD OF DIRECTORS:

- By Samruk-Kazyna Management Board Resolution dated 23 April 2018 (protocol N°13/18), the authority of member of the KMG Management Board, Samruk-Kazyna representative, Adamas Olegas Ilkyavichyus was terminated prematurely, and Alik Serikovich Aidarbayev was appointed a member of the KMG Board of Directors as a Samruk-Kazyna representative.
- By Samruk-Kazyna Management Board Resolution dated 15 June 2018 (protocol N°18/18) Philip John Dayer was appointed a member of the KMG Board of Directors as an independent director.
- By Samruk-Kazyna Management Board Resolution dated 19 December 2018 (protocol N°41/18) the authority of member of the KMG Board of Directors, Sauat Mukhametbayevich Mynbayev was terminated prematurely, and the authority of member of the KMG Board of Directors Alik Serikovich Aidarbayev was terminated as a Samruk-Kazyna representative; member of the KMG Board of Directors Alik Serikovich Aidarbayev was appointed Chairman of the KMG Management Board and member of the KMG Board of Directors Almasadam Maidanovich Satkaliyev was appointed a Samruk-Kazyna representative.
- From 4 January 2019, Yerlan Urazgeldiyevich Baimuratov terminated his authority as a member of the KMG Board of Directors.
- The procedure for nominating and electing candidates to the Board of Directors is determined by the Charter and other normative documents, executed by a General Meeting of Shareholders together with the Chairman of the Board of Directors and Chairman of the Nomination and Remuneration Committee, and is governed by principles of transparency, objectiveness and professionalism in the search for and hiring of candidates.
- Members of the Board of Directors are elected from those proposed for election as representatives of shareholders and other entities. Candidates to the Board of Directors should possess the knowledge, skills and experience required to perform their functions and ensure long-term growth in value and sustainable development, and also have an impeccable business reputation.
- The Chairman of the Board of Directors is elected by the General Meeting of Shareholders.
- Independent directors are elected in accordance with approved guidelines for selecting independent directors in the Samruk-Kazyna Group of companies.
- The period of tenure of the Board of Directors is three years. Board of Directors' members may be re-elected for a period of over 6 consecutive years in exceptional cases taking into account the need to retain composition quality. In exceptional cases, members may be elected for periods of more than 9 years.

## MEMBERS OF THE BOARD OF DIRECTORS



### CHRISTOPHER JOHN WALTON

Chairman of the KMG Board of Directors,  
Independent director

Member of the KMG Board of Directors since 2014.

**Date of birth:** 19.06.1957

**Education:**

- Bachelor of Arts (Political Science), University of Western Australia
- Master in Business Administration (MBA), Finance, University of Western Australia

**Employment Record:**

In addition to being the Chairman of the Company, he is also Audit Chair of the UK's Submarine Delivery Agency and a non-executive member of the Royal Navy's National Shipbuilding Strategy Client Board. He is a trustee of the Guild of Freemen of the City of London Charity.

In the past, Chris Walton held the positions of the Chairman of the coal-miner Asia Resource Minerals Plc; ship operator Goldenport Holdings; and Lothian Buses Plc. He has also served as the Interim Chairman of the UK Institute of Directors (IoD). He held the post of Senior Independent Director and Audit Chair of oil exploration company Rockhopper Exploration Plc; Audit Chair of Kazakhstan Temir Zholy JSC; and Non-Executive Member of the Audit and Risk Committee of the Department for Culture, Media and Sport, UK. From 2002 until 2005 he was a Member of the Regional Economic Advisory Council of the Bank of England (SE England & Anglia).

He held the post of Finance Director & CFO of EasyJet Plc, where he successfully led the IPO of the Company. Chris Walton held senior financial and commercial posts in major Australian airlines Qantas, Air New Zealand, Australia Post and Australian Airlines. Mr. Walton also served in the Australian Army Reserve.

Chris Walton is a Fellow of the Institute of Directors and a Fellow of the Royal Aeronautical Society.

**Does not own shares in KMG, its subsidiaries and/or dependent entities.**



### ALIK SERIKOVICH AIDARBAYEV

Member of the KMG Board of Directors,  
Chairman of the KMG Management Board

Member of the KMG Board of Directors since 2018.

**Date of birth:** 19.05.1963

**Education:**

- Kazakh Polytechnic Institute named after V.I. Lenin, degree in Oil and Gas Fields Development Technology and Complex Mechanization

**Employment Record:**

Between 1985 and 1995, Alik Aidarbayev worked as a technician Process Operator, then Deputy Head of Injection Shop at Zhetibayneft Field Office of Mangyshlakneft; Head of Injection Shop, Head of the Oil and Gas Production Unit, and then as Deputy General Director and First Vice-President of Yuzhkazneftegas.

He has held the positions of General Director of Turgai Petroleum; General Director of Mangistaumunaigaz; KMG Upstream Managing Director; General Director of Mangistaumunaigaz; General Director of KazMunaiGas Exploration Production; Mangistau Oblast Akim; First Vice-Minister for Investment and Development and Deputy Chairman of the Samruk-Kazyna Management Board.

**Does not own shares in KMG, its subsidiaries and/or dependent entities.**



## BALJEET KAUR GREWAL

Member of the KMG Board of Directors, Samruk-Kazyna representative

Member of the KMG Board of Directors since 2016.

**Date of birth:** 02.05.1976

### Education:

- Baljeet has a degree (1st Class Hon) in International Economics from the University of Hertfordshire
- Baljeet is an alumnus of Cambridge University, holds an Executive MBA (Cambridge University)

### Employment Record:

Ms Grewal was Managing Director, Strategy and Portfolio Investments at Samruk Kazyna Sovereign Wealth Fund.

She has 18 years of experience in senior executive posts in banks and financial institutions, she was Advisor at the Asian Development Bank, Managing Director & Vice Chairman at the investment research arm of Kuwait Finance House; she served as Vice President and the Head of Investment Banking Research at Maybank Group, Malaysia; and held senior investment banking posts at ABN AMRO Bank, and Deutsche Bank.

Baljeet has deep experiences in strategy, investment advisory and national economic strategies in emerging markets. She worked in close cooperation with the ECB, IMF, World Bank and various governing bodies on regulatory and policy development in emerging markets.

She is an award winning research analyst, having been awarded 18 international investment awards and has extensive experience in the oil and gas sector of developing and frontier markets. Baljeet is a key advocate of women in finance.

**She has no shares in KMG or in any of its subsidiaries and/or affiliates.**



## UZAKBAY SULEYMENOVICH KARABALIN

Member of the KMG Board of Directors, Samruk-Kazyna representative

Member of the KMG Board of Directors since 2016.

**Date of birth:** 14.10.1947

### Education:

- Mining Engineer, Gubkin Russian State Oil and Gas University
- Post-graduate study at the Gubkin Russian State Oil and Gas University
- PhD in Technical Sciences
- Doctor of Engineering Science
- Academician of the Kazakhstan National and International Engineering Academies

### Employment Record:

Uzakbay Karabalin has extensive oil industry experience and has worked for South Emba Oil and the Gas Exploratory Expedition Department of Kazneftegazorazvedka; Kazakh Geological Exploration Oil Research Institute; the regional administration of Prikaspiygeologiya; the Guryev Branch of the Lenin Kazakh Polytechnic Institute; the industry department of the Executive Office of the President of the Republic of Kazakhstan and the Cabinet of Ministers of the Republic of Kazakhstan.

In the past he has held the positions of Head of the Main Oil and Gas Department of the Ministry of Energy and Fuel Resources; Deputy Minister of Energy and Fuel Resources; Deputy Minister of the Oil and Gas Industry; First Vice-President of Kazakhoil, acting President of Kazakhoil; President of KazTransGas; Vice Minister of Energy and Mineral Resources; President of KazMunayGas; General Director of Mangistaumunaigaz; General Director of the Kazakhstan Institute of Oil and Gas; Minister for Oil and Gas and First Deputy Minister for Energy.

He has also held the posts of Chairman of the KazTransOil Board of Directors, Oil and Gas Transport, KazMunayGas and KazMunaiGas Exploration Production; Chairman of the Coordinating Council of the Kazenergy Association; Member of the Supervisory Board of KazRosGas; Member of the Council of National Investors of the President of the Republic of Kazakhstan; Deputy Chairman of the Kazenergy Association; Chairman of the Board of Directors of the Atyrau Oil and Gas University; and a member of the Board of Directors (independent director) of KING.

**Does not own shares in KMG, its subsidiaries and/or dependent entities.**



## ALMASADAM MAIDANOVICH SATKALIYEV

Member of the KMG Board of Directors,  
Samruk-Kazyna representative

Member of the KMG Board of Directors since 2018.

**Date of birth:** 31.10.1970

### Education:

- Stanford University, Higher School of Business - Stanford Executive Program (SEP)
- Nazarbayev University, Higher School of Business (joint programme with Duke University's Fuqua School of Business) - Executive MBA, Master's in Business Administration (for managers)
- Russian Academy of Economics and Civil Service of the Russian President - Master's in Economics, International Institute of Public Administration and Civil Service, Public Finance School, Programme - financial economics
- Al-Farabi Kazakh State University, Alma-Ata - mechanic, applied mathematics

### Employment Record:

He has held the posts of Director of TaSSaT; Manager and Head of the Clearing Department at KazTransOil; Vice-President for Economics, Managing Director of the Nur-Sultan Representative Office, Head of the KazTransOil Project Management Department; Financial Director and Vice-President for Economics of KEGOC.

He has also held the posts of First Vice-President of; Director of the Electrical Assets Management Department of Kazakhstan State Asset Management Company Samruk; Director of the KEGOC; Vice-Minister for Energy and Mineral Resources; Chairman of the Management Board, First Vice-President and President of KEGOC; Managing Director of Samruk-Kazyna; Chairman of the Board of Samruk-Energy; Deputy Chairman of Kazenergy; and Head of the Asset Management Department of Samruk-Kazyna.

He has also held the posts of member of the Board of Directors of Kazakhstan Temir Zholy; Chairman of the Board of Directors of KEGOC; member of the Board of Directors of the Kazakhstan Electricity Association; Chairman of the Kazakhstan National Committee of the World Energy Council; member of the Kazenergy Association Council; Chairman of the Coordination Council of the Kazenergy Association for the Development of the Energy Sector; Chairman of the Energy Committee of the National Chamber of Entrepreneurs of Kazakhstan Atameken; member of the Presidium of the National Chamber of Entrepreneurs of Kazakhstan Atameken; and Chairman of the Committee for Energy and Electrical Engineering of the Union of Machine Builders of Kazakhstan.

**Does not own shares in KMG, its subsidiaries and/or dependent entities.**



## STEPHEN JAMES WHYTE

Member of the KMG Board of Directors,  
Independent director

Member of the KMG Board of Directors since 2017.

**Date of birth:** 20.01.1966

### Education:

- BSc Hons, Geophysics from University of Edinburgh
- International Baccalaureate, Lester Pearson College

### Employment Record:

Stephen Whyte has an extensive experience in oil and gas industry. He held a variety of positions during his career: Development Team Leader at Shell, Manager of Joint Venture and Infrastructure for Europe of Shell EP Europe, Commercial Director, Business Development Manager, Non-Op Asset Manager and Exploration Manager at CLYDE Petroleum B.V., Vice President of EP and Country Manager of Brazil at Shell Brazil, Senior Vice President, Europe and Central Asia, Commercial, at BG Group, Chief Operating Officer and Head of Exploration and Production at Galp Energia.

Stephen is currently Non-Executive Chairman of Genel Energy Plc, and is a non-Executive Director of Echo Energy Plc. Stephen has been Non-Executive Chairman of Sound Energy Plc and also served on the Board of Galp Energia, Portugal's largest company, as an Executive Director. Stephen has sat on and chaired Nominations Committees, Remuneration Committees, Audit Committees, Reserves Committees and HSE Committees in those various roles.

**Does not own shares in KMG, its subsidiaries and/or dependent entities.**



## PHILIP JOHN DAYER

Member of the KMG Board of Directors,  
Independent director

Member of the KMG Board of Directors since 2018.

**Date of birth:** 05.01.1951

### Education:

- LLB (Bachelor of Laws), King's College London University
- Fellow of the Institute of Chartered Accountants in England and Wales

### Employment Record:

Having qualified as a chartered accountant, Philip pursued a corporate finance career in investment banking with a number of leading banks.

He left ABN AMRO Hoare Govett in 2005 and since then has been a non executive director with a number of companies in the oil and gas, software, and financial services sectors.

In 2006 Philip acted as a consultant for Rosneft on its successful IPO.

At present Philip is a member of the boards of Severstal, VTB Capital and the Parkmead Group. Between 2010 and 2018 he was a member of the Board of Directors of KazMunaiGas Exploration & Production.

**Does not own shares in KMG, its subsidiaries and/or dependent entities.**



## LUIS MARIA VIANA PALHA DA SILVA

Member of the KMG Board of Directors,  
Independent director

Member of the KMG Board of Directors since 2019.

**Date of birth:** 18.02.1956

### Education:

- BSc (Hons) Economics, Instituto Superior de Economia
- BSc (Hons) Economics / Management and Business Administration, Universidade Católica Portuguesa
- AMP, Executive Education, University of Pennsylvania - Wharton School of Economics
- Key Strategic Issues in Modern Retail, INSEAD
- Leading Organic Growth, Darden School - University of Virginia

### Employment Record:

From 1981 to 1986, was employed as a manager by a leading Portuguese company, producing inorganic chemistry. During the next six years, from 1987 to 1992, was employed as a Chief Financial Officer by COVINA, Companhia Vidreira Nacional - a leading Portuguese company, producing sheet glass.

For three years held an office of a Secretary of State for Trade, where he was in charge of foreign trade and control over Portuguese national investment, foreign trade and food safety authorities as well as antimonopoly aspects.

From 1995 to 2001, when he was a Chief Financial Officer of CIMPOR, he initiated mergers and acquisitions that brought the company to one of the top regional producers of cement, concrete, mortar, lime and other building materials. In 2001, started his duties in JERÓNIMO MARTINS CFO, and subsequently, from 2004 to 2010, held the post of Group CEO and CFO. During this period, the JM shares proved the highest growth dynamics in Portugal, having risen in price from 0.5 euros to 10 euros per share. Recent years, has held an office of Vice President of the Board of Directors and Head of Operations in the Oil Refinery and Marketing Department at GALP Energia. In this position he was responsible for development of two refineries in Portugal. Since 2015, has held the post of Chairman of the Board of Directors at PHAROL.

In the past, he held the positions of the Chairman at APETRO, National Association of Petroleum Companies, Independent member, Board of Directors and Audit Committee, NYSE Euronext, New-York, Chairman at Portuguese Association of the Capital Markets. He is currently Independent member, Board of Directors, Nutrinveste, top Portuguese olive oil company, Member of Advisory Board for Strategy, School of Economics and Administration, Catholic University of Portugal (Universidade Católica Portuguesa) and Chairman of the Audit Committee at Fundação Francisco Manuel dos Santos.

**Does not own shares in KMG, its subsidiaries and/or dependent entities.**

## RESPONSIBILITY OF THE BOARD OF DIRECTORS

### IN ACCORDANCE WITH THE KMG CHARTER:

- The Board of Directors is responsible to the General Meeting of Shareholders for the general management of KMG activities;
- The Board of Directors is responsible for ensuring management effectiveness, long-term value growth and sustainable development in all organisations whose voting shares or participatory interests are owned directly or indirectly by KMG.

### IN ACCORDANCE WITH THE LAW ON JOINT STOCK COMPANIES:

- The Board of Directors monitors and, if possible, eliminates any potential conflicts of interest at the level of officials and the General Meeting of Shareholders, including the misuse of KMG assets and corruption when concluding related-party transactions;
- The Board of Directors monitors the effectiveness of KMG corporate governance practices;
- Members of the Board of Directors act in accordance with statutory requirements in Kazakhstan, the KMG Charter and internal documents based on awareness and transparency, and in the best interests of the Group and its shareholders;
- Members of the Board of Directors should treat all shareholders fairly and make objective independent judgements on corporate matters

### IN ACCORDANCE WITH THE KMG CORPORATE GOVERNANCE CODE:

- Members of the Board of Directors should duly perform their duties and ensure the growth of the long-term value and sustainable development of KMG;
- The Board of Directors and its committees should observe a balance of skills, experience and knowledge that ensures decisions are independent, objective and effective, and in the best interests of KMG, with fair treatment of all shareholders, taking into account the principles of sustainable development;
- The Board of Directors is diverse in terms of experience, personal characteristics and gender. It is made up of independent directors in a number sufficient to ensure the independence of decisions made and the fair treatment of all shareholders;
- Members of the Board of Directors should be evaluated annually based on a structured process approved by the KMG Board of Directors. At the same time, at least once every three years, evaluations are made with the involvement of an independent professional organisation. An evaluation should identify the contribution of the Board of Directors and each of its members to the growth of the long-term value and sustainable development of KMG, and identify directions and recommend measures for improvement. Evaluation results are considered when re-electing or dismissing members of the Board of Directors.

## REQUIREMENTS FOR INDEPENDENT DIRECTORS

### IN ACCORDANCE WITH THE LAW ON JOINT STOCK COMPANIES, AN INDEPENDENT DIRECTOR:

- is not an affiliate of KMG and has not acted as such for the three years preceding his/her election to the Board of Directors (except for his/her tenure as an independent director of the given joint stock company) and is not affiliated with KMG affiliates;
- is not accountable to officials of KMG or entities affiliated to it, and was not accountable to such persons during the three years prior to his/her election to the Board of Directors;
- is not a public official;
- is not a shareholder representative at meetings of bodies of the given joint stock company and did not act as such during the three years prior to his/her election to the Board of Directors;
- does not participate in the audit of the given joint stock company as an auditor employed by the audit organisation, and did not participate in any such audits during the three years prior to his/her election to the Board of Directors.

### IN ACCORDANCE WITH THE RULES FOR SELECTING INDEPENDENT DIRECTORS OF SAMRUK-KAZYNA COMPANIES, AN INDEPENDENT DIRECTOR:

- has publicly declared his/her status as an independent director before being elected to the Board of Directors;
- has special skills in certain areas related to the functional responsibilities of an independent director, is a member of Board of Directors committees, has strong communication skills, and works on the basis of the principles of transparency, objectivity, constructiveness and professionalism;
- is generally aware of key issues specific to an organisation similar to KMG in the scope and nature of operations, and demonstrates an understanding of:
  - regulatory obligations
  - the competitive environment in domestic and international markets
  - the specifics of corporate finance, internal controls, strategy and/or appointments and/or remuneration to provide an expert opinion as a member of the relevant KMG Board of Directors committee.
- is able to analyse comprehensively and evaluate objectively information provided and develop an independent position

on issues based on principles of legality, fairness and the equal treatment of all shareholders;

- has an impeccable reputation and demonstrated positive achievements in the business and/or industry environment, and adheres to high ethical standards;

- has the required time to participate in the work of the Board of Directors, not only at meetings of the Board of Directors, but also additional time to duly study materials prepared for meetings of the Board of Directors;
- is not a member of the Boards of Directors in more than four companies

**IN ACCORDANCE WITH THE KMG CORPORATE GOVERNANCE CODE, AN INDEPENDENT DIRECTOR:**

- is a person who has the required professionalism and independence to make independent and objective decisions that are free from the influence of individual shareholders, the executive body and other stakeholders;
- is actively involved in the discussion of issues where a conflict of interests is possible (preparing financial and non-financial statements, concluding related-party transactions, nominating executive body candidates, and setting remuneration for executive body members);
- should monitor the possible loss of the status of independence and notify promptly the Chairman of the Board of Directors of

any such situations. In the event of any circumstances affecting the independence of a member of the Board of Directors, the Chairman of the Board of Directors will promptly bring this information to the attention of shareholders to make an appropriate decision;

- may not be elected to the Board of Directors for more than nine consecutive years. Election for a term of more than nine years is allowed in exceptional cases. Election of an independent director to the Board of Directors takes place annually with a detailed explanation of the need to elect the member of the Board of Directors and the influence of this on independence in the decision-making process.

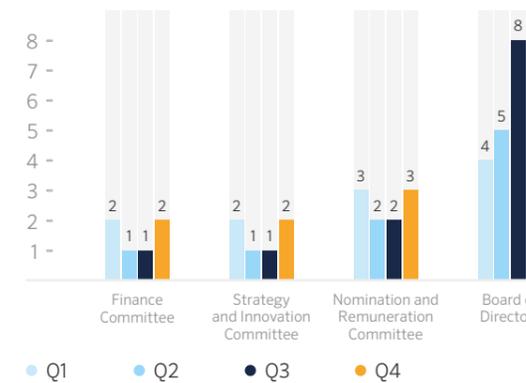
**ACTIVITIES OF THE BOARD OF DIRECTORS**

In 2018, the Board of Directors held 20 sessions discussing 426 issues, broken down by committee as follows:

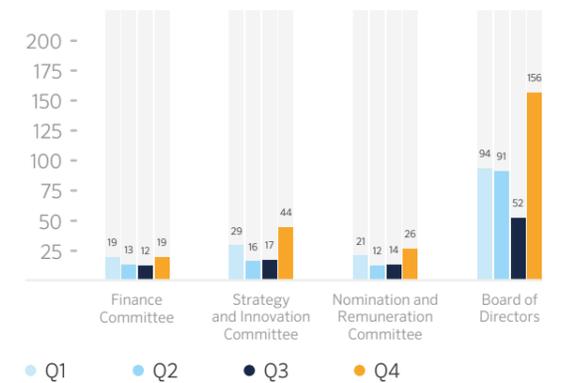
- Finance Committee: 6 sessions and 63 issues;
- Strategy and Portfolio Management Committee (previously the Strategy and Innovation Committee): 6 sessions and 44 issues;

- Nomination and Remuneration Committee: 10 sessions and 73 issues;
- Audit Committee: 10 sessions and 87 issues;
- The Work and Environmental Safety and Sustainable Development Committee was created in December 2018.

**NUMBER OF SESSIONS**



**NUMBER OF ISSUES CONSIDERED**



In 2018, the Board of Directors carried out effective work on the management of the company and made a number of improvements in the corporate governance system. During the meetings, key issues were considered and decisions were made on the most important areas of activity of the vertically integrated national oil and gas operator. So, the Board of Directors has been active in its work and made decisions on the following key issues:

- Development Strategy until 2028;
- Consolidated Development Plan for the period from 2019 through 2023;
- Corporate key performance indicators and their targets for 2019;
- Financial sustainability, including the management of KMG's obligations in terms of optimizing the covenant package for KMG's public debt;
- Transformation Program for 2018-2021;
- Investment projects of the KMG group;
- Big oil and gas projects(Kashagan, Tengiz, and Karachaganak);
- Construction of Saryarka gas pipeline;
- Portfolio management;
- Integration of business processes of KMG with those of KAZMunaiGas Exploration & Production;
- Subsoil use issues;
- Labor and environmental protection at KMG Group;
- Sustainable development and Sustainability Report for 2017;
- Improvement of corporate governance;
- Improving risk management, internal control and business continuity management systems;
- Introduction of the system of ethics and compliance, modernization of the corporate culture;
- Improving the activities of the Board of Directors (dynamics, composition, automation, evaluation, delegation, optimization).

### IN 2018, THE BOARD OF DIRECTORS APPROVED, AMONG OTHERS, THE FOLLOWING DOCUMENTS:

- KMG Development Strategy until 2028;
- Consolidated Development Plan of KMG for 2019-2023;
- Key performance indicators of KMG and its subsidiaries for 2019;
- KMG Transformation Roadmap for 2018-2021;
- Action Plan to integrate KazMunaiGas Exploration Production and KMG business processes;
- KMG Business Ethics Code;
- KMG 2017 Annual Report;
- KMG 2017 Sustainability Report;
- Findings from an independent corporate governance review of KMG in 2017;
- KMG Staff Policy for 2018-2028;
- Job grades, salaries for KMG management transferred to grade-based salaries;
- Guidelines for assessing the performance of the Board of Directors, its committees, the Chairman and members of the Board of Directors and KMG Corporate Secretary;
- Statute on the KMG Compliance Department;
- Statute on the KMG Internal Audit Department;
- Annual KMG Internal Audit plan for 2019;
- KMG Internal Control System Policy;
- Continuity Policy for KMG, its subsidiaries and dependent organisations;
- KMG Internal Control System Guidelines.

## COMMITTEES OF THE BOARD OF DIRECTORS

### IN ACCORDANCE WITH THE LAW ON JOINT STOCK COMPANIES:

To address the most important issues and provide recommendations to the Board of Directors, KMG has set up committees of the Board of Directors to consider:

- strategic planning;
- personnel and remuneration;
- internal audit;
- social issues;

- other issues provided for by internal KMG documents.

The committees of the Board of Directors consist of members of the Board of Directors and experts who have the required professional knowledge to work in a particular committee. All committees of the Board of Directors are headed by a member of the Board of Directors. The Head of the executive body may not be the chairman of a committee of the Board of Directors.

### IN ACCORDANCE WITH THE KMG CORPORATE GOVERNANCE CODE:

Committees of the Board of Directors promote deep and thorough consideration of issues within the competence of the Board of Directors and improve the quality of decisions made, especially in areas such as audit, risk management, proper and effective application of the Samruk-Kazyna Procurement Rules for Goods, Work and Services; the appointment

and remuneration of members of the Board of Directors and the executive body, sustainable development, including occupational health and safety and environmental protection. The existence of committees does not relieve members of the Board of Directors from liability for decisions made within the competence of the Board of Directors.

## AS AT THE END OF 2018, THE FOLLOWING COMMITTEES REPORTED TO THE KMG BOARD OF DIRECTORS

Committee	Composition
<b>Strategy and Innovation Committee</b> (Strategy and Portfolio Management Committee since 2019)	<ul style="list-style-type: none"> <li>• <b>Stephen James Whyte (Chairman)</b></li> <li>• Christopher John Walton</li> <li>• Uzakbay Suleymenovich Karabalin</li> <li>• Baljeet Kaur Grewal</li> <li>• Philip John Dayer</li> </ul>
<b>Nomination and Remuneration Committee</b>	<ul style="list-style-type: none"> <li>• <b>Yerlan Urazgeldiyevich Baimuratov (Chairman for 2018)</b></li> <li>• Philip John Dayer (Chairman from 2019)</li> <li>• Christopher John Walton</li> <li>• Stephen James Whyte</li> <li>• Uzakbay Suleymenovich Karabalin</li> </ul>
<b>Finance Committee</b>	<ul style="list-style-type: none"> <li>• <b>Christopher John Walton (Chairman)</b></li> <li>• Stephen James Whyte</li> <li>• Baljeet Kaur Grewal</li> <li>• Philip John Dayer</li> <li>• Yerlan Urazgeldiyevich Baimuratov</li> </ul>
<b>Audit Committee</b>	<ul style="list-style-type: none"> <li>• <b>Philip John Dayer (Chairman)</b></li> <li>• Christopher John Walton</li> <li>• Stephen James Whyte</li> </ul>
<b>Work and Environmental Safety and Sustainable Development Committee (since 2019)</b>	<ul style="list-style-type: none"> <li>• <b>Philip John Dayer (Chairman)</b></li> <li>• Christopher John Walton</li> <li>• Stephen James Whyte</li> </ul>

In the context of the Committees, members of the Board of Directors focus on a detailed review and analysis of interrelated functions, issues and areas. The meetings of the Committees are held with the participation of invited experts, business leaders and other interested parties. The committees make recommendations to the Board of Directors for an appropriate decision.

## FUNCTIONS AND OBJECTIVES OF THE BOARD OF DIRECTORS' COMMITTEES

Committee	Functions
<b>Strategy and Portfolio Management Committee</b>	<p>The Committee assists the Board of Directors by developing and presenting recommendations on:</p> <ul style="list-style-type: none"> <li>• development strategy and investment policy, including priority areas;</li> <li>• planning KMG financial and operating activities;</li> <li>• monitoring KMG transformation.</li> </ul>
<b>Nomination and Remuneration Committee</b>	<p>The Committee assists the Board of Directors by developing and presenting recommendations on:</p> <ul style="list-style-type: none"> <li>• planning Board of Directors and Management Board succession;</li> <li>• managing the constant and objective assessment of Board of Directors, Management Board, Corporate Secretary and employee performance;</li> <li>• managing an effective staff policy, payroll and remuneration system, and providing social support, professional development and training officials and employees;</li> </ul>
<b>Finance Committee</b>	<p>The Committee assists the Board of Directors by managing an effective KMG financial policy, developing and presenting recommendations on:</p> <ul style="list-style-type: none"> <li>• managing the constant and effective assessment of financial performance;</li> <li>• monitoring the correlation between equity and debt, financial structure and financial strategy, to meet short-term and long-term objectives and plans;</li> <li>• preliminarily considering and monitoring the realisation of investment projects.</li> </ul>
<b>Audit Committee</b>	<p>The Committee assists the Board of Directors by developing and presenting recommendations on:</p> <ul style="list-style-type: none"> <li>• establishing an effective financial and economic control system;</li> <li>• monitoring the reliability and performance of internal control and risk management systems, and the execution of corporate governance documentation;</li> <li>• monitoring the independence of external and internal audit, and processes for complying with Kazakhstan law.</li> </ul>
<b>Work and Environmental Safety and Sustainable Development Committee</b>	<p>The Committee was created at the end of 2018 to assist the Board of Directors in:</p> <ul style="list-style-type: none"> <li>• ensuring work and environment safety,</li> <li>• implementing sustainable development principles in strategic planning and socio-economic development of KMG;</li> <li>• KMG social obligations and programmes within the framework of subsoil use contracts;</li> <li>• managing KMG operating continuity;</li> <li>• managing KMG ecological performance.</li> </ul>



## STATEMENT OF THE CHAIRMAN OF THE FINANCE COMMITTEE

« In 2018 the Finance Committee under the Board of Directors of NC KazMunayGas was facilitating the efforts of KMG to improve the company's financial standing including its financial solvency. Among the most critical deals that were closed were those that were focused on reducing the net debt of KMG and on improving its liquidity. They were de-listing of KazMunaiGas E&P and deals to arrange prepayments for crude oil supplies by KMG Kashagan B.V.

The financial solvency is regularly addressed by the Finance Committee prompting some detailed and constructive discussions with focus on assessment of the impact various

oil price scenarios may have on the liquidity of KMG, the implementation of significant investment projects, M & A deals, financing big investment projects, etc. The Finance Committee also addressed eurobond issue by KMG and discussed at length the terms of issue and placement of those. The Finance Committee regularly makes recommendations on various approaches that could be taken towards preparation of financial statements. »

**Christopher Walton,**  
**Chairman of the Board of Directors of JSC NC KazMunayGas, Independent Director, Chairman of the Finance Committee of the Board of Directors of JSC NC KazMunayGas for Finance**

### KEY ISSUES CONSIDERED BY THE FINANCE COMMITTEE IN 2018:

- Financial sustainability (at each meeting), including:
  - scenario planning of cash flows taking into account oil prices, the main obligations of KMG and KMG Group, the implementation of social projects, etc.;
  - consideration of measures to improve the financial and monetary stability of KMG and KMG Group;
  - management of liabilities and liquidity, including by revising the issues and terms of placement of Eurobonds;
- development of the optimal capital structure of KMG and transfer pricing;
- setting limits on balance sheet and off-balance sheet liabilities for counterparty banks of NC KazMunayGas.
- Value chains of NC KazMunayGas in "Oil-Oil Products" and "Gas" for 2019-2023.
- Integration of business processes of NC KazMunayGas and Exploration Production KazMunayGas.
- Interaction of NC KazMunayGas with investors.



## STATEMENT OF THE CHAIRMAN OF THE NOMINATION AND REMUNERATION COMMITTEE

« In 2018 the Nominations and Remuneration Committee under the Board of Directors of NC KazMunayGas (hereinafter referred to as the NRC) was mainly focused on the following areas: pursuing an efficient HR policy; pay structure and bonuses; social support; and skills development and training of officers and employees of NC KazMunayGas. The NRC also addressed the composition of the Board of Directors of KMG and that of its committees, of the Management Board of KMG, and of the supervisory boards and executive bodies of subsidiaries of KMG; and articulated key performance indicators for executives of the KMG group. The NRC was specifically focused on the HR policy of KMG for 2018-2028 and on

the way the organizational structure of KMG was built. The NRC put considerable efforts to further promote the role of the Ombudsman and of the compliance function within the KMG group. While systemically ensuring sustainability within KMG, the NRC made a recommendation to the Board of Directors to set up a health, safety, environment and sustainability committee, and with support from the Board the said committee has been established. »

**Philip Dayer,**  
**Independent Director, Chairman of the Nominations and Remuneration Committee under the Board of Directors of NC KazMunayGas**

### KEY ISSUES CONSIDERED BY THE NOMINATION AND REMUNERATION COMMITTEE IN 2018:

- Ensuring an effective HR policy, including a Report on the implementation of the HR Policy of NC KazMunayGas for 2017-2021;
- Approval of the Regulations on the Compliance Service, the Ombudsman;
- Composition of the Board of Directors of NC KazMunayGas, taking into account the matrix of skills and competencies;
- Appointment of the Head of Compliance, the Ombudsman;
- Delegation of issues to the Committees of the Board of Directors of NC KazMunayGas;
- Approval of the final performance of corporate key performance indicators of NC KazMunayGas for 2017;
- Approval of maps of motivational key performance indicators of the executives of NC KazMunayGas and their target values for 2018;
- Monitoring the execution of the motivational KPI cards of the executives of NC KazMunayGas;
- Training plan for members of the Board of Directors of NC KazMunayGas;
- Structure of NC KazMunayGas and approaches to setting the level of wages to employees accepted at NC KazMunayGas from Exploration Production KazMunayGas;
- Quarterly Report of the Corporate Secretary Service of NC KazMunayGas.



## STATEMENT OF THE CHAIRMAN OF THE STRATEGY AND PORTFOLIO MANAGEMENT COMMITTEE

« In 2018 the Strategy and Innovations Committee under the Board of Directors of NC KazMunayGas (hereinafter referred to as the SIC) was focused on making adjustments to Company's long-term plans for the next decade. The outcome of this was the adoption of the NC KazMunayGas Development Strategy for 2018-2028. In addition to this, the SIC was also actively involved in creating value and in transfer pricing. The SIC made increased efforts on improving the management of brownfields in the company's asset portfolio. This included adopting best practices into the organizational structure, and putting in place a matrix organization in the Upstream Block. We focused on ensuring that our corporate key performance indicators are weighted towards our Brownfield production delivery, exploration growth, transformation progress, and incorporate more stretching target bands. In the area of procurement we have started to hold the business accountable for developing a diverse oilfield service and equipment sector national market. The SIC was also bringing focus onto our gas investments capital efficiency and where they fit strategically.

In the areas of portfolio we focused on introducing project ranking processes to both existing brownfields as well as exploration licenses; reviewing asset divestment proposals and exploration portfolio management; bringing new discipline to partner selection and minimum contract criteria for investment projects. In 2018 we initiated full (cross segment) value chain analysis into our

business to identify underperforming areas. In downstream we have initiated a major benchmarking review to quantify losses in our refineries. In the area of innovation we identified and matured a new approach to monetization / financing through gas pipeline securitisation.

To make sure that KMG is appealing to investors, the SIC was involved in improving the corporate governance within KMG by regularly considering recommendations from a third party consultant on how corporate governance could be improved upon as well as follow-up reports from the corporate secretary on how those recommendations were being put into practice.

A significant milestone was that the role of the SIC has been revised for the SIC to place a greater focus on investment policy and on making KMG more attractive to investors along with some other strategic aspects reserved to the Board of Directors. In the area of governance we ensured progress on our long-term governance improvement journey based on meeting the roadmap objectives derived with external support, and explored new providers of Ethics and Compliance processes and capability. »

**Stephen James Whyte,  
Independent Director, Chairman of the  
Strategy and Portfolio Management  
Committee of the Board of Directors of JSC  
NC KazMunayGas for Strategy and Portfolio  
Management**

### KEY ISSUES CONSIDERED BY THE STRATEGY AND INNOVATION COMMITTEE IN 2018:

- Adjustment of the company's long-term plans for the next 10 years (Development Strategy till 2028);
- Improving the management of mature fields by designing and implementing a matrix organisational structure within the technical functions of the E&P block;
- Review of Consolidated Development Plan of NC KazMunayGas for 2019-2023;
- Reorientation of corporate key performance indicators to supply of products, growth of geological exploration, progress in transformation and coverage of more stretching target ranges;
- Bringing the business to account for the development of a diverse national market for oilfield services and equipment;
- Efficiency of investment in gas resources and their strategic fit in the overall portfolio;
- Implementing processes to rank portfolio projects for both existing fields and exploration licenses;
- Consideration of proposals for the sale of assets and management of a portfolio of geological exploration;
- Introduction of a new discipline in the choice of partners, identifying the Ultimate Beneficial Owners and minimum contract criteria for investment projects;
- Initiating an evaluation of a new form of monetisation regarding securitisation of pipeline tariff income;
- Comparative analysis to quantify refinery losses;
- Improving corporate governance in KMG by considering the recommendations of an independent consultant (PWC) on improving corporate governance;
- Revision of the role of the SIC to strengthen the Committee's focus on investment policy issues and increase the investment attractiveness of KMG;
- Progress in our long-term path to improve management based on the achievement of the Transformation Project roadmap objectives obtained with support from external consultants;
- Research of new suppliers of processes and opportunities on ethics and compliance;
- Complete intersegment analysis on the value chain.



## STATEMENT OF THE CHAIRMAN OF THE AUDIT COMMITTEE

« We present our annual Audit Committee (Committee, AC) report which provides an insight into our work, the issues handled and the focus of the AC's deliberations. The AC assists the Board in fulfilling its oversight responsibilities in areas such as: internal and external audit; the integrity of financial reporting; the effectiveness of risk management and the internal control system; governance; and, compliance matters.

In 2018, the Audit Committee strongly focused on controlling KMG's financial and business operations, by, for example, conducting regular reviews of the Company's consolidated financial statements for completeness and accuracy. The AC also assessed the most material accounting issues. We gave recommendations on the appointment of an external auditor for 2019-2021 for JSC NC KazMunayGas and the significant companies of the KMG group.

A major transformation of the Company's internal audit service resulted from the integration of JSC NC KazMunayGas and JSC KazMunaiGas Exploration Production. The Committee approved a new IAS organisational structure by setting up two departments with six sections, having allocated resources by competencies and focusing on specific areas of KMG's activities. We improved our internal audit guidelines by approving the revision of major methodological documents. The

Committee paid close attention to monitoring: the effectiveness of KMG's risk management and internal control system; and, the results of significant audits and outstanding control weaknesses, as well as potential improvements and mitigating actions agreed with management.

We received briefings on Corporate governance improvements in accordance with the Corporate Governance Improvement Plan (CGIP) for 2018-2020 approved by the Board of Directors and monitored the actions implemented to improve the effectiveness of the Board of Directors and Executive body and areas of risk management, internal control and audit.

Specific attention was given to topics that we considered particularly significant, for example, the issues and judgements related to KMG's 2018 Consolidated Financial Statements and the revision of the Corporate accounting policies of the KMG group of companies.

I would like to thank each member of the AC for their contributions to the Committee and believe that their expertise will be valuable to the work of the Committee in driving KMG's performance and financial stability. »

**Philip John Dayer,**  
Chairman of the Audit Committee

## MAIN ACTIVITIES OF THE COMMITTEE IN 2018

### Meetings

The Audit Committee holds regular meetings in presentia, including conference call meetings. In 2018 10 Audit Committee

meetings were held. The Audit Committee has considered 87 issues in 2018, out of which 69 were internal audit issues, 8 were external audit issues and 10 were other issues.

### Financial statements

The Committee reviewed: quarterly and annual consolidated financial statements for the year ended December 31, 2018, interim management reports, estimates, judgements and principles used in the preparation of reports and the accuracy, transparency and clarity of the disclosures presented therein.

The AC received reports from management and the external auditor on accounting, financial reporting and taxation issues.

Also in 2018, the Committee approved the new editions of the KMG group's Corporate Accounting Policies.

### Risk management and internal control system

Improvement of the internal control system and risk management is one of the most important tasks for KMG.

The Audit Committee held regular meetings with the director of the risk management department in 2018 to review material risks and relevant KMG risk management and internal control plans.

During these meetings, quarterly risk reports, a risk appetite statement, a risk register and risk management action plan, a risk map, risk tolerance levels and a key risk indicator register of KMG for 2019 were reviewed and assessed.

### External audit

The external audit of KMG's consolidated financial statements for 2018 was conducted by an independent auditing company EY.

In the opinion of the auditor, the "consolidated financial statements present fairly, in all material respects, the consolidated financial position of the Group as at December 31, 2018 and its consolidated financial performance and its consolidated cash flows for the year then ended in accordance with International Financial Reporting Standards (IFRSs)".

During 2018, the Audit Committee held regular meetings with the external auditor to discuss, review and make decisions on the following issues:

- the results of the audit of the consolidated financial statements of KMG for 2018;
- the Management letter on the results of the audit of the consolidated financial statements of KMG and its subsidiaries for 2017;
- the results of audit review of consolidated financial statements of KMG for the 1st quarter of 2018;

- the results of audit review of the consolidated financial statements of KMG for 6 months 2018;
- the results of audit review of consolidated financial statement of KMG for 9 months of 2018;
- requests for providing non-audit services;

**Internal Audit Function**

Internal audit of KMG is carried out by the Internal Audit Service of KMG.

In conducting its activity the IAS is guided by the legislation of the Republic of Kazakhstan, the KMG Charter, resolutions of KMG authorities and internal documents regulating the IAS work.

During 2018 the Audit Committee reviewed the following issues relating to the internal audit service:

1. the IAS annual report on its performance for 2017;
2. the Annual audit plan of the IAS for 2019;
3. the IAS budgeting procedure;
4. the quarterly reports of the KMG IAS, including consideration of the significant findings based on the results of the audits conducted, as well as monitoring the implementation of the recommendations of the IAS;
5. the quarterly assessments of the IAS staff;
6. the IAS Strategic Plan for 2018-2020;
7. the IAS Plan for improvement of the corporate governance system, based on the results of the PWC diagnostics;

- the status of non-audit services for 2017 and 2018;
- the selection of an external auditor for 2019-2021 for KMG and the significant companies of the KMG group;
- EY audit services fee; and,
- the external auditor's independence and objectivity.

8. the IAS Budget for 2018;
9. the salary levels of IAS KMG employees;
10. the KPI's of the IAS head, directors of departments and section leaders for 2018;
11. information on confirming the independence of employees of the IAS for 2018;
12. the appointment and termination of IAS employees;
13. information on measures taken by the Atyrau Refinery according to the results of the audit conducted in 2017;
14. the report on compliance with the provisions of the KMG Corporate Governance Code;
15. amendments to the annual audit plan of IAS KMG for 2018 to include audits of KMG EP's assets;
16. the merging procedure with the KMG EP IAS;
17. the salary scheme and staffing list of employees merged from KMG EP to the positions of KMG IAS; and,
18. the job descriptions of employees merged from KMG EP to the positions of KMG IAS.

The Audit Committee monitors not only the results of the IAS activity but also pays attention to the development of professionalism and career opportunities of employees of the Service. This issue is included in the IAS reports and considered by the Audit Committee on a quarterly basis. Quarterly reports include information on the achievements of the IAS employees such as

**Other issues**

The audit committee reviewed the implementation of the CGIP and the results of the management's self-diagnosis of KMG's corporate governance. Following that review, the AC recommended, amongst other matters, the creation of a Committee on Health, Safety and Environment and Sustainable Development to report to the KMG BoD.

obtaining certificates, attending trainings/ seminars and other skills development activities.

Professionalism of the IAS is a major key to the effectiveness of the KMG internal audit function. Accordingly, the process of learning and development is assigned an important role.

The AC requested the IAS to carry out an anonymous survey on health and safety related issues at each location that IAS visits to conduct an audit. The results of these surveys reveal the workforce's expectations with respect to health and safety matters and provide valuable information to the management of KMG.

**SIGNIFICANT ISSUES CONSIDERED BY THE AUDIT COMMITTEE**

The Committee considered, among other things, a number of significant issues related to KMG's financial reporting including:

Key judgements and estimates in financial reporting	Audit Committee activity	Conclusion / Outcomes
<b>Exploration and evaluation assets</b>		
Judgement is required to determine whether it is appropriate to carry tangible and intangible assets related to exploration and evaluation costs on the balance sheet.	Reviewed the exploration write offs for projects N and Satpayev.	Exploration and evaluation assets totalled KZT 189.8bn at 31 December 2018. Write offs of KZT 102.4 during the year. See note 8 to the Financial Statements.
<b>Impairment of long term assets</b>		
Management judgement and estimates on uncertain matters such as product mix, loss ratios, future product prices, discount rates, production profiles and the impact of inflation on operating expenses, are required to assess the carrying value of KMG's refinery cash generating units.	Reviewed the management's assessment of impairment indicators.	Agreed with the management that there were no impairment indicators with respect to the refinery assets.
KMG International In the light of KMG's performance, the carrying value of the asset was tested for impairment.	Reviewed the management's assessment of impairment indicators.	A loss on impairment of KZT43.7bn was recognized in the Financial Statements of which KZT21.2bn was allocated to property, plant and equipment and KZT22.5bn was allocated to intangible assets. See notes 7, 10 and 27 to the Financial Statements.

#### Provisions for litigations

KMG is a party to various legal actions. Management judgement and estimates are required on the merits on any case, the uncertainty surrounding the result of judicial proceedings and the timing of appeal processes.

Reviewed the provisions for, and disclosures relating to, the Group's major disputes, litigation and arbitration proceedings.

The AC accepted the management's assessments. See note 34 to the Financial Statements.

In addition to the above key judgements and estimates, the AC reviewed the Group's compliance with its financing covenants

given that compliance has a major impact on the going concern assumption used in the preparation of the accounts.

#### CONCLUSION

The Audit Committee performed all of the tasks and functional duties within its remit, established by the KMG Code of Corporate Governance, the Regulations on the Audit Committee, and by the resolutions of the Board of Directors of KMG.

### EVALUATION OF THE PERFORMANCE OF THE BOARD OF DIRECTORS

- In accordance with the KMG Charter, the performance of the Board of Directors, its committees and members of the Board of Directors should be assessed annually within the framework of a structured process approved by the Board of Directors. The process should comply to Samruk-Kazyna strategy. In addition, their performance should be measured once every three years by an independent professional organisation.
- In 2018, the Board of Directors approved (Minutes №14/2018) Guidelines for evaluating the activities of the Board of Directors, its Committees, Chairman, members of the Board of Directors and the KMG Corporate Secretary. The document was drafted to include Samruk-Kazyna recommendations.
- In 2018, the independent consultant – PricewaterhouseCoopers carried out a review of the level of corporate governance in KMG, which was also used to evaluate the performance of the Board of Directors and its committees. After the review, the KMG Board of Directors approved a detailed plan to enhance corporate governance in KMG for 2019-2020, which contains a number of measures for further improvements in the activities of the Board of Directors and its committees.

### REMUNERATION OF THE BOARD OF DIRECTORS

- Samruk-Kazyna Management Board Resolution № 35/16 dated 26 September 2016 approved Guidelines for forming Samruk-Kazyna company boards of directors, stipulating, among others, a procedure for remunerating members of the Board of Directors. Remuneration levels take into account the duties of each member of the Board of Directors, the volume of company activities, and long-term goals and objectives. Remuneration is paid to independent directors. Samruk-Kazyna representatives on boards of directors receive remuneration based on a decision of the Samruk-Kazyna Management Board.
- The Independent Directors, Christopher John Walton, Philip John Dayer and Stephen James Whyte, and member of the Board of Directors, Baljeet Kaur Grewal receive fixed annual remuneration of 150,000 USD, while Independent Director Yerlan Urazgeldiyevich Baimuratov and member of the Board of Directors, Uzakbay Suleymenovitch Karabalin receive fixed annual remuneration of 18,200,000 tenge.
- In addition, the independent directors and member of the Board of Directors Baljeet Kaur Grewal receive additional remuneration as follows:

As the Chairman of the KMG Board of Directors - 75,000 USD per year;

As Chairman of the:

- Audit Committee – 35,000 USD per year;
- Nomination and Remuneration Committee – 25,000 USD per year;
- Finance Committee – 25,000 USD per year;
- Strategy and Investment Committee – 25,000 USD per year;
- Work and Environmental Safety and Sustainable Development Committee – 25,000 USD per year.

As members of the:

- Audit Committee – 17,500 USD per year;
- Strategy and Portfolio Management Committee – 12,500 USD per year;
- Nomination and Remuneration Committee – 12,500 USD per year;
- Finance Committee – 12,500 USD per year;
- Work and Environmental Safety and Sustainable Development Committee – 12,500 USD per year.
- The independent directors and member of the Board of Directors Baljeet Kaur Grewal for participating in a session (meeting) initiated by the Chairman of the KMG Board of Directors and/or the Chairman of the Management Board of Samruk-Kazyna, the Chairman of the KMG Management Board receive 2,000 USD for each session, with no more sessions held than one per day.

## IMPROVEMENTS TO CORPORATE GOVERNANCE PRACTICE

KMG corporate governance structure is constantly being improved to meet international standards and comply with contemporary international practices.

In 2018, PricewaterhouseCoopers LLP (“PwC”) carried out independent testing of the level of corporate governance in KMG using PwC methodology. KMG received a corporate governance rating of “BB”, which meets the objectives of the KMG Corporate Governance Rating Action Plan.

The increase in the KMG rating from “B” in 2017 to “BB” in 2018 is testimony to the improvements made in corporate governance practices thanks to the planned and systematic work done to realise the Corporate Governance Improvement Plan developed after the independent corporate governance testing performed by PwC in 2017. During 2018, the Company initiated a number of initiatives aimed at improving corporate governance, with the greatest progress made in Board of Directors’ performance, risk management and transparency.

In 2018, the Samruk-Kazyna and KMG Development Strategies outlined the main milestones in the KMG Corporate Governance Rating Action Plan until 2028. To further improve corporate governance practices and achieve action plan goals, the Company developed a Detailed Plan to improve KMG Corporate Governance in 2019-2020, consisting of over 500 events, which will help achieve even greater progress in areas such as Board of Directors and Executive Body performance, risk management, internal control and audit, sustained development, shareholder rights and transparency.

### THE FOLLOWING TABLE OUTLINES THE CHANGES IN CORPORATE GOVERNANCE RATINGS:

Section / Rating	Weight	2017	2018
Board of Directors and Executive Body performance	25%	B	BB
Risk management, internal control and audit	25%	BB	BB
Sustainable development	20%	B	B
Shareholder rights	15%	BB	BB
Transparency	15%	B	BB

## KEY CORPORATE GOVERNANCE ACHIEVEMENTS

### CREATION OF THE BOD COMMITTEE ON SAFETY, HEALTH, ENVIRONMENT AND SUSTAINABLE DEVELOPMENT (HEREINAFTER – HSESDC)

A comparative analysis was carried out to determine the quantitative and qualitative composition of the Committee for Safety, Health and Safety at the example of large oil and gas companies, and proposals were developed for the optimal quantitative

composition of the Committee, its area of expertise and the number of meetings per year. By the decision of the Board of Directors on 12/12/2018 (Minutes No. 19/2018), HSESDC was created and the Regulation on the Committee was approved, its composition was determined.

### THE BOARD OF DIRECTORS PROVIDES STRATEGIC DIRECTION AND CONTROL OVER THE IMPLEMENTATION OF SUSTAINABLE DEVELOPMENT

The obligation of the Board of Directors to ensure the growth of long-term value and sustainable development is stipulated by the KMG Charter.

In 2018, “Corporate Governance and Sustainable Development” was identified as one of the strategic objectives in the KMG Development Strategy until 2028, which includes initiatives related to the sustainable development of operating assets, human capital development, ensuring industrial safety,

environmental responsibility, implementation of compliance and ethics and implementation of best management practices.

The new HSESDC is assigned control over the implementation of sustainable development. At the first meeting of HSESDC, a presentation was made on the status of implementation of the sustainable development system in the Company and the Committee gave a number of instructions aimed at intensifying work in this area.

### SEPARATE BOD MEETING ON STRATEGY AND SUSTAINABLE DEVELOPMENT

On July 24, 2018, a strategic session was held, during which issues of Strategy and Sustainable Development were considered - a discussion of the draft of the updated KMG Development Strategy until 2028 was

held and a review of the implementation of Sustainable Development in the Company was conducted. The first leaders of the main subsidiaries were invited to participate in the Strategic Session.

### DELEGATION OF CERTAIN MATTERS OF THE BOD TO ITS COMMITTEES

The BoD has proceeded to address matters to be reserved to Committees so as to reduce the number of items on agenda of the BoD by delegating certain items, and to focus on discussion of strategic and key matters of the Company.

On 26 July 2018 the BoD in its resolution (minutes NO. 11/2018) delegated to the Nomination and Remuneration Committee of the BoD (NRC) the following matters:

1. Election of members of the BoD and the Executive Body in subsidiaries and affiliates;

2. Evaluation of performance, compensation, succession, and development plans for members of the Executive Body and the Corporate Secretary;
3. The KPI for executives that are not members of the Executive Body.

It was also decided that the Audit Committee of the BoD would be delegated with overseeing

### COMPOSITION OF THE BOD

During 2018 the independent consultant noted improvements in the composition of the BoD of KMG. The number of independent directors with oil and gas background increased, and there were some changes in the composition of the BoD in terms of representatives of the shareholder. During 2018 there were the following changes in the composition of the BoD:

On 23 April 2018 the Management Board of the Fund in its resolution (minutes No. 13/18) dismissed a member of the BoD of KMG, representative of the Fund Adamas Olegas Ilkevicius from the BoD of KMG, and elected Alik Serikovich Aidarbayev as a member of the BoD of KMG to represent the Fund. On 19

### FOLLOW UP ON KEY MATTERS OF THE COMPANY

To oversee the implementation of key initiatives of KMG and take prompt corrective steps, the BoD of KMG regularly hears updates from the CEO on key changes in activities; updates on health, safety and environment; reports on operational and financial performance; report on interested party transactions closed by the Management Board; overviews of the progress made with the implementation of the strategy; KPI and investment projects; follow-up reports on the Consolidated Development Plan of KMG;

risk management and internal control systems in place and internal audit as well.

With the delegation of items factored in, hearing sessions have been put in place to hear reports from Chairpersons of Committees of the BoD at meetings of the BoD on items that have been addressed by respective Committees of the BoD. The hearing of reports from Chairpersons of Committees has been included in the activity plan of the BoD for 2019.

December 2018 the Management Board of the Fund in its resolution (minutes No. 41/18) dismissed a member of the BoD of KMG Sauat Mukhametbayevich Mynbayev, a member of the BoD of KMG Alik Serikovich Aidarbayev as a representative of the Fund, and elected the Chairman of the Management Board (CEO) of KMG Alik Serikovich Aidarbayev as a member of the BoD, and Almasadam Maidanovich Satkaliyev as a representative of the Fund.

The NRC in its resolution approved a Skills and Competencies Matrix for members of the BoD. It is now being filled in and reviewed. This would help identify what skills and competencies the BoD is lacking. Based on the review, candidates to the BoD with the needed skills and competencies would be sought after.

risk reports; reports from chairpersons of Committees of the BoD on matters that have been delegated to those Committees; follow-up reports on resolutions of the BoD; and reports on performance of the teams that should report to the BoD.

At each of its meetings, the Strategy and Portfolio Management Committee of the BoD reviews and discusses follow-up reports on big oil and gas projects (Kashagan, Karachaganak and Tengizchevroil), transformation, and privatizations.

### BOD PERFORMANCE IMPROVEMENT TREND

Following a third party diagnostics of corporate governance that was conducted in 2018, the independent consultant noted that the Company has started the process of optimizing operating rhythm of the BoD in terms face-to-face meetings reduction. The consultant also noted that the frequency that has been established would allow independent directors to receive regular updates on the activities of the Company and to provide coaching to the Company's Executive Body. The Corporate Secretary in collaboration with the Chairman of the BoD put a greater focus in agendas on strategy and performance results. Agenda items of the BoD are normally

prioritized by the level of their importance, and comprise four sets: Minutes and resulting decisions which addresses resolutions and instructions from previous meetings of the BoD, and in which minutes of previous meetings of the BoD are discussed; Health, Safety, Environment in which the BoD of KMG addressed health, safety, environment aspects within KMG; Items requiring decisions is the lengthiest and comprises most of the items to do with operational, investment and financial performance of KMG; Information for note comprises periodic updates for members of the BoD to be aware of all key changes in the Company's business on time.

### QUALITY AND PROMPTNESS OF PRESENTING PAPERS TO THE BOD

To make sure that items are added to agenda of the BoD on time, the Company has made amendments to the Charter in terms of time required for papers to be presented to a meeting of the BoD. Chairperson of the BoD must draw up agenda of a meeting of the BoD at least ten calendar days prior to the meeting, and when it comes to development strategy or consolidated development plan of KMG, motivational KPI for head and members of the executive body, annual report or involvement in incorporation of a legal entity, then agenda must be drawn up at least fifteen business days prior to the meeting.

Rules of Preparation and Tabling Materials at Meetings of the Board of Directors of JSC NC "KazMunayGas" and/or its Committees have been developed to set requirements for preparation of papers for meetings of the BoD and its Committees. Once those Rules are approved, regular feedbacks are expected from each member of the BoD as to the quality and promptness of materials submitted to a meeting of the BoD.

A new template of Explanatory Note for members of the BoD has been put in place which is both concise and informative. It must show risks, economic effect, as well as reference to the Development Strategy and the Business Plan of KMG.

### APPROVAL OF DOCUMENTS ON EVALUATION OF PERFORMANCE OF MEMBERS OF THE BOD AND THEIR TRAINING

The Company has updated the Regulations for Evaluation of Performance of the BoD, Committees of the BoD, the Chairperson, members of the BoD, and the Corporate

Secretary with due account for the methodology instructions from the Fund, and also approved Training Plans and Development Plans for members of the BoD for 2019.

## INTERNAL AUDIT SERVICE OF KMG

The central Internal Audit Service (IAS) reports to the KMG Board of Directors and is managed by the Audit Committee of the KMG Board of Directors. It operates in compliance with Kazakhstan law, KMG internal regulations and International Occupational Internal Audit Standards.

The main goal of the IAS is to provide the Board of Directors with independent and objective information to ensure the effective management of KMG and its subsidiaries by employing a systematic approach towards improving risk management, internal control and corporate governance processes.

To perform its activities in accordance with an annual audit plan, the IAS:

- assesses the reliability and effectiveness of applicable internal controls and risk management procedures;
- assesses the reliability, completeness and objectivity of the accounting system and financial statements of KMG and its subsidiaries and affiliates prepared on the basis of it;
- assesses the rationality of using the resources of KMG and its subsidiaries and the methods used to ensure the preservation of assets;
- controls compliance with statutory requirements in Kazakhstan, corporate regulations and rules for performing operating, investment and financial activities.

The IAS uses audit results to provide recommendations on improving KMG operations. It systematically monitors and controls the development and implementation of measures aimed to implement recommendations.

Pursuant to the requirements of International Occupational Internal Audit Standards and to ensure the proper quality of internal audit, the IAS implements a system for the continuous professional development of auditors. As a result, of its 36 IAS employees, 29 or 83% hold international certificates and diplomas, such as:

- Certified Internal Auditor – 7;
- Diploma in International Financial Reporting – 5;
- Kazakhstan Professional Accountant – 11;
- Certified Accounting Practitioner/Certified International Professional Accountant – 4;
- Certified Professional Internal Auditor Diploma – 12;
- Certified Fraud Examiner – 2;
- Certified Information Systems Auditor – 2.

## MANAGEMENT BOARD

- The Management Board reports to the Board of Directors, and is responsible for managing KMG's daily activities and ensuring they comply with the strategy, development plan and decisions adopted by the General Meeting of Shareholders and the Board of Directors.

### IN ACCORDANCE WITH THE KMG CORPORATE GOVERNANCE CODE:

- the Board of Directors and Management Board should work together in a spirit of cooperation, act in the best interests of the Group and make decisions based on the principles of sustainable development and fair attitude to all shareholders
- the Chairman and members of the Management Board should have impressive professional and personal characteristics, an impeccable business reputation and adhere to strict ethical standards

## MEMBERS OF THE MANAGEMENT BOARD



**ALIK  
SERIKOVICH  
AIDARBAYEV**

### Chairman of the KMG Management Board

Member of the Board of Directors since 2018.

**Date of birth:** 19.05.1963

#### Education:

- Kazakh Polytechnic Institute named after V.I. Lenin, degree in Oil and Gas Fields Development Technology and Complex Mechanization

#### Employment Record:

Between 1985 and 1995, Alik Aidarbayev worked as a Technician Process Operator, then Deputy Head of Injection Shop at Zhetibayneft Field Office of Mangyshlakneft; Head of Injection Shop, Head of the Oil and Gas Production Unit, and then as Deputy General Director and First Vice-President of Yuzhkazneftegas.

He has held the positions of General Director of Turgai Petroleum; General Director of Mangistaumunaigaz; KMG Upstream Managing Director; General Director of Mangistaumunaigaz; General Director of KazMunaiGas Exploration Production; Mangistau Oblast Akim; First Vice-Minister for Investment and Development and Deputy Chairman of the Samruk-Kazyna Management Board.

**He has no shares in KMG or in any of its subsidiaries and/or affiliates.**



**KAIRAT  
KAMATAYEVICH  
SHARIPBAYEV**

**Deputy Chairman of the Management Board.  
Gas Transportation and Marketing**

Member of the Board of Directors since 2016.

**Date of birth:** 16.08.1963

**Education:**

- Kazakh Agricultural Institute
- Abai Almaty State University
- Candidate of Political Sciences

**Employment Record:**

Kairat Sharipbayev began his career in 1985 as an agriculturalist. Between 1991 and 1999, he worked for Koktem, Shyn-Asyl and Zhetisu in management positions. He has held the positions of Deputy Akim of Taraz, First Vice President of Daur, President of the Kitap Publishing House, and Chairman of the Board of Directors of Danko.

In 2001, he began his career in the gas and gas supply sector, taking up the positions of Director of the Gas Transportation and Marketing Department, Deputy General Director for Marketing and Commerce at Intergas Central Asia; Deputy General Director for Marketing at KazTransGas; Managing Director for Commerce at Kazakhstan Temir Zholy; General Director (Chairman of the Management Board) of KazTransGas Aimak, and General Director (Chairman of the Management Board) of KazTransGas.

Since 11 December 2015 he has been the Chairman of the KazTransGas Board of Directors.

**He has no shares in KMG or in any of its subsidiaries and/or affiliates.**



**ZHAKYP  
NASIBKALIYEVICH  
MARABAYEV**

**Deputy Chairman of the Management Board -  
Chief Operations Officer**

Member of the Board of Directors since 2019.

**Date of birth:** 09.08.1962

**Education:**

- Gubkin Russian State Oil and Gas University, Mining Engineering
- Moscow State University of Management

**Employment Record:**

Began his career in 1984 with Komsomolskneft as its Head of Engineering. He then took up a number of positions including Commercial Director at SPHINX State-Owned Corporation; the Head of Raw Hydrocarbons and Petrochemicals, Department Deputy Director, Chief Engineer at the Ministry of Foreign Trade; and the Head of Offshore Operations at the Ministry of Energy and Fuel Resources.

He has held the positions of Vice-President and General Director of KazakhstanCaspishelf; Director of Investments and New Projects, Commercial Director at Kazakhoil; Vice-President for Gas Projects at Kazakhoil; Deputy CEO - member of the management board of Halyk Bank of Kazakhstan; Operational Service Vice-President at KazTransOil; Vice-President at Kazakhoil; Deputy General Director at Oil and Gas Transportation; Managing Director at KazMunayGas; Chairman of the Competent Share Management Authority at Karachaganak Petroleum Operating; General Director at KazMunaiGas Exploration Production; Managing Director at KMG and Chairman of the Board of Directors of KazMunaiGas Exploration Production.

Between November 2006 and December 2008, he was the Chairman of the Kazenergy Coordination Council. Between December 2008 and February 2019, he was the Deputy Managing Director at NCOC.

**He has no shares in KMG or in any of its subsidiaries and/or affiliates.**



**KURMANGAZY  
ORYNGAZIYEVICH  
ISKAZIYEV**

**Deputy Chairman of the Management Board  
for Geology and Exploration**

Member of the Board of Directors since 2018.

**Date of birth:** 11.05.1965

**Education:**

- Mining engineer and geologist, Kazakh Polytechnic Institute named after V.I. Lenin
- Candidate of Geology and Mineralogy, Tomsk Polytechnic University

**Employment Record:**

He began his career as an Operator at the Balykshy Exploratory Drilling Office, after which he took up the position of Cementing Shop Operator at the Embaneft Association; Geologist at Exploration Drilling No.1 for the Balykshy Exploration Drilling Office.

He has held positions such as Category II Geologist at the Embamunaygas Atyrau Central Dispatch Office; Chief Geologist/Deputy Director at the Atyrau Production Enhancement and Wells Overhaul Office; Director of Geology and Oil Deposit Development at Embamunaygas.

He has held the positions of Deputy Director and Director of Geology and Deposit Development at KazMunaiGas Exploration Production; Executive Director of Oil and Gas Production; Managing Director of Geology, Geophysics, and Reservoirs; Chief Geologist; Chief Geology and Promising Projects Officer; Managing Director for Non-Operating Assets (Tengiz, Kashagan, and Karachaganak); and Managing Director of Geology at KMG.

**He has no shares in KMG or in any of its subsidiaries and/or affiliates.**



**DAUREN  
SAPARALIYEVICH  
KARABAYEV**

**Deputy Chairman of the Management Board -  
Chief Financial Officer**

Member of the Board of Directors since 2016.

**Date of birth:** 11.06.1978

**Education:**

- International Economic Relations, Kazakh State Academy of Management
- Master of Finance, Texas A&M University

**Employment Record:**

Dauren Karabayev began his career in 2001 as a credit analyst at ABN AMRO Bank Kazakhstan. In 2003 he was appointed Head of the bank's Credit Management Department.

From 2004, he held the position of Managing Director at Halyk Bank of Kazakhstan. From 2007 until June 2016, he was the Deputy Chairman of the Management Board of Halyk Bank of Kazakhstan. He then held the position of Project Supervisor at McKinsey & Company Inc. until September 2016.

**He has no shares in KMG or in any of its subsidiaries and/or affiliates.**



**DANIYAR  
SUINSHLIKOVICH  
TIYESSOV**

### Deputy Chairman of the Management Board for Oil Refining and Marketing

Member of the Board of Directors since 2016.

**Date of birth:** 06.12.1970

**Education:**

- Atyrau Institute of Oil and Gas, Process Engineer
- East-Kazakhstan State University, Lawyer

**Employment Record:**

He launched his career in 1994 as a Manager at Manas TGP, then as a Manager at Bata and Executive Director with Abyz. He has held the positions of Assistant to the First Vice President, Secretary of the Board of Directors at Atyrau Refinery; Senior Manager at Kazakhoil; Deputy General Manager of the Atyrau Refinery Modernisation Project Management Group; Head of the Day-to-day Operations Control Sector, Senior Specialist of the Day-to-day Operations Corporate Governance and Monitoring Sector of the Atyrau Refinery Project Management Department; Deputy Director of the Oil and Gas Refining and Petrochemistry Department, and later Deputy Director of the Petrochemistry Development Department at KMG; Head of the Capital Construction Office, General Director of a Business Under Construction Directorate and Chief Financial Officer of the Business Under Construction Directorate of the Atyrau Refinery.

He has also held the positions of Deputy General Director for Production at Trade House KazMunaiGas; Deputy Chairman of Management Board for Refining and Petrochemistry, Managing Director for Oil Refining and Marketing; Deputy Chairman of the Management Board for Oil Refining and Marketing at KMG; General Director of KazMunayGas - Refining & Marketing; Senior Vice President at KMG; and Oil Transportation, Refining and Marketing Executive Vice President at KMG.

**He has no shares in KMG or in any of its subsidiaries and/or affiliates.**



**DAULETZHAN  
KENESOVICH  
KHASANOV**

### Managing Director for Human Resources

Member of the Board of Directors since 2018.

**Date of birth:** 21.10.1971

**Education:**

- Economist, West-Kazakhstan Agricultural Institute
- Mining Engineer, Atyrau Oil and Gas Institute

**Employment Record:**

Dauletzhan Khasanov has held the posts of Deputy Chief Accountant at Tengiz; Chief Accountant at Kurmangazy TD, Kazakhtelecom; Deputy Chief Accountant at Ozenmunaigas, Embamunaygas; Chief Accountant at Caspi Neft; EuroAsia Group; Deputy Director for Economics and Finance, Finance Department Directors and Deputy Chief Accountant at Embamunaygas and KazMunaiGas Exploration Production.

- He has held the positions of Deputy General Director for Economics and Finance at Kazgermunai; KMG interest Management Director in conjunction with Director at UTT and OS; Karazhanbasmunai President; General Director and Chairman of the Management Board of Ozenmunaigas - Deputy General Director and Management Board member at KazMunaiGas Exploration Production; Managing Director of Share Management at KazMunaiGas Exploration Production; Senior Director for Economics and Finance and Management Board member at Tau-Ken Samruk.

**He has no shares in KMG or in any of its subsidiaries and/or affiliates.**



**DANIYAR  
AMIRBAYEVICH  
BERLIBAYEV**

### Deputy Chairman of the Management Board for Oil Transportation, International Projects and Construction of the Saryarka Gas Pipeline

Member of the Board of Directors since 2019.

**Date of birth:** 21.12.1968

**Education:**

- Lawyer, Al-Farabi Kazakh State University

**Employment Record:**

He began his career in 1991 as a junior research fellow with the Kazakh SSR Academy of Sciences, and then moved on to become a lawyer, and then Head of the Legal Department with Barikon. He has held the positions of Project Assessment Senior Specialist with the National Agency of Foreign Investments, after which he was promoted to the Deputy Head of Foreign Investments at the Ministry of Economics' National Foreign Investment Agency; Head of Legal Due Diligence and Legal Department Deputy Director with the State Export-Import Bank (Eximbank).

Since 1997, he has been with the KMG Group as the Head of Investment Projects, KazTransOil Head of Corporate Financing, Executive Director of Finance, Economic and Financial Adviser; Vice President, Chief Economics and Finance Officer and Senior Vice President at KazTransGas; Deputy General Director of Intergas Central Asia; Senior Deputy General Director of Oil and Gas Transport NC; Senior Deputy General Director of KazTransGas and Managing Director for Corporate Management at KMG; Deputy General Director for Corporate Development at KazTransGas; Managing Director of Finance and Economy at KMG and General Director with Kazmortransflot. Between 2005 and 2007, he was First Deputy General Director of KazTransGas - General Director of Intergas Central Asia.

He has held the positions of KMG Transportation and Refining Vice President; KazMunayGas - Refining and Marketing as a Managing Director of Gas Projects, and then General Director; KMG Managing Director of Gas Projects; Senior Deputy Chairman of the KMG Management Board and Deputy Chairman of the Management Board of the KMG Corporate Centre.

**He has no shares in KMG or in any of its subsidiaries and/or affiliates.**



**YESSEN  
KAIRZHANULY  
KAIRZHAN**

### Managing Director for Procurement and Supplies

Member of the Board of Directors since 2019.

**Date of birth:** 15.11.1962

#### Education:

- Kazakh Polytechnic Institute named after V.I. Lenin, specialisation in Oil and Gas Field Machinery and Equipment
- Moscow State Agroengineering University named after V.P. Goryachkin, specialisation in Business Economics and Management
- Russian State Educational Institution of Higher Vocational Education of the National Economy Academy, MBA in Management-International Business, specialisation in Business Administration

#### Employment Record:

Yessen Kairzhan began his career in 1985 as a Mechanic, Engineer, Senior Engineer at the Zhetybaineft Field Office, Mangyshlakneft Union. He has held the positions of Rigging Operations Foreman at the Mangyshlak Rig Building Office; Deputy Production Services Base Officer at Yuzhneftegas.

He has also held the positions of Deputy General Director at Kumkol-LUKOIL; Deputy General Director at Turgai Petroleum; General Director at Turgai Petroleum; President at Karazhanbasmunai; First Deputy General Director and General Director at Kazgermunai.

**He has no shares in KMG or in any of its subsidiaries and/or affiliates.**



**DMITRY  
NIKOLAYEVICH  
SALOV**

### Managing Director for Information Technology, Transformation and Digitalisation

Member of the Board of Directors since 2018.

**Date of birth:** 10.11.1979

#### Education:

- Economist Manager, Rudny State Industrial Institute
- Certified ITIL Expert, certified ISO 200000 Consultant/Manager, Certified Project Manager

#### Employment Record:

Dmitry Salov began his career in 1998 as an Information Technology Manager with Okan Intercontinental (Nur-Sultan). He has held the positions of IT and Telecommunications Manager with Eko Hotel & Suites in Lagos (Nigeria); Shymkent Refinery IT and Telecommunications Manager; Sarbanes-Oxley Manager, Senior IT and Project Manager; Corporate IT and Telecommunications Director with PetroKazakhstan Overseas Services Inc. (Almaty).

He has also held the positions of General Director at Richfit International for China National Petroleum Corporation International Projects; Managing Director for Information Technology at KMG in conjunction acting Managing Director for KMG Transformation.

**He has no shares in KMG or in any of its subsidiaries and/or affiliates.**

## ACTIVITIES OF THE MANAGEMENT BOARD IN 2018

In 2018, the KMG Management Board adopted 698 resolutions, of which 690 (98.9%) were taken “in presentia”, which fully complies with best corporate governance practices and the KMG Corporate Governance Code. It also drafted 53 minutes of meetings of the Executive Body.

195 of the total “in presentia” resolutions adopted in 2018 were duly forwarded to the KMG Board of Directors for its consideration.

Of these, 98 issues dealt with draft documents or changes and additions to current resolutions and internal documents, and decisions on how to sell share and participation interests in KMG subsidiaries; agreements on the disposal of subsoil rights, issuing and placing Eurobonds, KMG’s acquisition of equity interests in specific subsidiaries and others.

In accordance with the authority of the Board of Directors pertaining to the exclusive competency of the General Meeting of Shareholders of KMG subsidiaries, 12 KMG Management Board resolutions were initiated regarding the activities of JSC KazMunaiGas Exploration Production (3), KazMunayTeniz (3), KazTransOil (3), KBTU (1), Kazmorttransflot (1) and KMG Karachaganak (1).

Likewise, during the reporting period, the Management Board forwarded 49 issues regarding the conclusion of major transactions in excess of 20 bln tenge in value and transactions in which KMG has an interest, to the Board of Directors for its review.

In 2018, 18 issues were initiated for the KMG Board of Directors to issue its permission for subsidiary investment projects and transactions worth a total of 20 bln tenge.

In addition, the Management Board approved and sent 11 reports for the consideration of the Board of Directors, including reports on:

- transactions concluded in which it has an interest, on which decisions were taken by the KMG Management Board in 2017 Q4 and 2018 Q1-3;
- KMG risks for 2017 Q4 and 2018 Q1-3;
- the realisation of the KMG 2017-2021 Consolidated Development Plan for 2017;
- the execution of an Action Plan to improve KMG corporate governance for 2016-2017;
- KMG sustainable development for 2017.

The Management Board initiated 7 issues in accordance with Samruk-Kazyna investment policy, approved by Resolution of the Samruk-Kazyna Board of Directors (protocol N°142 dated 26 September 2017) and the Corporate Investment Activity Standard of Samruk-Kazyna and legal entities in which 50% or more of the voting shares (participation interest) are owned directly or indirectly by Samruk-Kazyna, approved by Resolution of the Samruk-Kazyna Management Board (protocol N°21/18 dated 9 July 2018) for the consideration of the Samruk-Kazyna Investment and Strategy Committee and subsequent consideration of the KMG Board of Directors.

In accordance with the Guidelines for organisations in the Samruk-Kazyna group of companies to conclude transactions, for which the Joint Stock Companies Law establishes special conditions, in 2018, the Management Board adopted 112 resolutions on transactions in which KMG has an interest.

Within the framework of the authority of the general meeting of subsidiary shareholders, the Management Board, to determine KMG's position and subsequent vote by authorised KMG representatives at general meetings of shareholders, adopted:

- 22 resolutions as a shareholder of CPC-K (11), CPC-P (3), KazTransOil (3), KazMunaiGas Exploration Production (2), AstanaGas KMG (2) and TH KazMunaiGaz AG in liquidazione (1);
- 99 resolutions to determine KMG's position as a member/trustee manager of an equity interest, including in Atyrau Refinery (11), TCO (10), Kazakhstan Petrochemical Industries Inc. (7), N Operating Company (6), Air Liquide Munay Tech Gases (6), Central Oil and Gas Company (5), Isatay Operating Company (5), KazMunaiGas-Service (5), Cooperatieve KazMunaiGaz U.A. (4), Kazakhoil Aktobe (4), TenizService (4), PGS Kazakhstan (4), JV CASPI BITUM (4), Caspian Oil and Gas Company (3), Samruk-Kazyna Corporate University (3), Becturly Energy Operating (3), Karagandy CCI (3), KMG-Ustyurt (3), JV Kazgermunai (3), KazOilMash (2), Beineu-Munaigas (2), KazRosGas (1) and Kazakhstan Pipeline Ventures (1).

In addition, the Management Board adopted 31 resolutions as the Sole Shareholder/entity holding all voting share of KMG subsidiaries, including Ozenmunaigas (12), Embamunaygas (8), KBTU (4), TH KazMunaiGaz NV (2), KMG (2), N Block BV (2) and KazTransGas (1).

229 Management Board resolutions are those of the Sole Shareholder/Sole Founder/entity holding all shares of KMG subsidiaries, including the KMG Production and Drilling Research Institute (19), Oil Services Company (16), Oil Construction Company (13), KMG-Kumkol (13), KMG Drilling & Services (12), Mangistauenergomunai (12), Munaitelcom (12), Oil Transport Corporation (11), KazMunaiGasOnimderi (11), KazMunayTeniz (10), Urikhtau Operating (10), Pavlodar Refinery (10), KMG-Security (9), Satpayev Operating (7), KMG-Eurasia (7), Kazakhturkmunay (6), Kazmorttransflot (6), KMG-Retail (6), KMG-Karachaganak (5), KMG Systems & Services (5), PSA (4), KazMunaiGas-Aero (4), AktauNefteService (3), KazOilMash (3), KazMunaiGas-Service (2), Kazakhstan Trade and Exhibition Centre Corporate Fund (2), Ken-Kurylys Service (2), Water Production and Transportation Department (2), OzenMunaiService (2), KMG EP Catering (2), Kazakh Gas Processing Plant (1), Kurmangazy Petroleum (1), and Dzhabul Petroleum (1).

In accordance with the competency of the Management Board to agree transactions, with the corresponding competence in the charter of an organisation, in which KMG directly or indirectly owns voting shares or participation interests, which property result in a purchase or disposal valued in excess of 8 bln tenge, as established by the KMG Management Board, or if any such organisation or KMG conclude investment projects that assume a total investment in excess of 8 bln tenge, during the reporting year the KMG Management Board issued resolutions on 29 such transactions, including 6 in Kazmorttransflot, 5- Pavlodar Refinery, 4 - KazMunaiGas-Service, 3 - KazMunayTeniz, 2 each - KazMunaiGasOnimderi and Kazakhturkmunay, 1 each - KazMunaiGas Exploration Production, KazTransOil, KMG-Karachaganak, Oil Services Company, KMG Production and Drilling Research Institute, Oil Transport Corporation and Urikhtau Operating.

In accordance with the guidelines for Samruk-Kazyna and organisations in which 50% or more of voting shares (participation interest) are owned directly or indirectly by Samruk-Kazyna either through title or trustee management, approved by Resolution of the Fund Board of Directors N°126 dated 28 January 2016, the KMG Executive Body adopted 10 resolutions to make procurements from a single source.

## REMUNERATION OF THE MEMBERS OF THE MANAGEMENT BOARD

Total remuneration of the members of the KMG Management Board for 2018 amounted to 543 534 808.33 tenge, which includes total salaries and all benefits in monetary form paid by KMG to members of the Management Board while members of the Management Board in 2018, and the total remuneration of the members of the Management Board

In 2018, the Management Board also approved:

- KMG dividend policy in relation to subsidiaries and dependent organisations;
- a new version of the KMG transformation programme Charter;
- a new version of the list of KMG "Management" positions;
- key motivation indicator charts for specific KMG management employees and their target values for 2018;
- KMG "Management" and administrative position grades;
- 4 regulations, 3 instructions, 3 guidelines, 20 rules, 4 procedures, 5 plans and others.

(management) for 2017, in accordance with Compensation Rules for members of the Management Board (management), Internal Audit Department members and the KMG Corporate Secretary, approved by Resolution of the KMG Board of Directors N°1/2012 dated 13 February 2013.

# INFORMATION FOR SHAREHOLDERS AND INVESTORS

## KMG SHARE HOLDERS (AS AT 31 DECEMBER 2018)

Shareholder name	Common shares, quantity	Common shares, %	Preferred shares, quantity	Total shares	Total shares, %
JSC Sovereign Wealth Fund "Samruk-Kazyna"	551,698,745	90.42	-	551,698,745	90.42
National Bank of the Republic of Kazakhstan	58,420,748	9.58	-	58,420,748	9.58

## DETAILS OF KMG SHARE ISSUES (AS AT 31 DECEMBER 2018)

Share type	Quantity of authorised shares	Quantity of outstanding shares	Quantity of unallocated shares
Common	849,559,596	610,119,493	239,440,103

## KMG CREDIT RATINGS

Moody's : Baa3 (August 2017)  
S&P: BB (November 2018)  
Fitch: BBB- (March 2019)

## DIVIDEND POLICY

### Principles of KMG dividend policy:

- guarantee Samruk-Kazyna's payment of dividends on the state-owned stake;
- ensure the financing of Samruk-Kazyna activities, including the financing of new activities and investment projects implemented at Samruk-Kazyna's expense;
- the Companies' need to finance development costs, including the cost of investment activities;

### Dividends

Samruk-Kazyna Management Board Resolution dated 21 May 2018 approved the following procedure for allocating KMG net income for 2017 of 437,485,878,000 tenge:

- 1) 36,271,669,196.06 tenge, which is 8.29% of KMG consolidated net income, to pay dividends;
- 2) the remaining net income for 2017 of 401,214,208,830.94 tenge, to remain at the disposal of KMG.

The approved value of dividends for 2017 per common share of KMG was 61.54 tenge.

### Details of dividends paid in previous years:

- Dividends paid based on 2014 results amounted to 31.1 bln tenge;
- Dividends paid based on 2015 results amounted to 59.7 bln tenge;
- Dividends paid based on 2016 results amounted to 6.6 bln tenge;
- Dividends paid based on 2017 results amounted to 36.2 bln tenge.

## INTERACTION WITH INVESTORS

Period	Event	Location
February 2018	Non-deal Road Show with investors	Frankfurt, London, Boston and New York
February 2018	Conference meetings with investors	Miami
March 2018	FY 2017 Financial and Operational Results conference call with investors	Nur-Sultan
June 2018	1Q FY 2017 Financial and Operational Results conference call with investors	Nur-Sultan
September 2018	Conference meetings with investors	London
September 2018	2Q FY 2017 Financial and Operational Results conference call with investors	Nur-Sultan
October 2018	Non-deal Road Show with investors	Frankfurt, London and New York
December 2018	3Q FY 2017 Financial and Operational Results conference call with investors	Nur-Sultan

## CGC COMPLIANCE REPORT FOR 2018

This Report on compliance / non-compliance with the provisions and principles of the Corporate Governance Code (the "Code") of JSC NC KazMunayGas ("KMG") (approved by resolution of the Sole Shareholder of KMG on 27 May 2015, Minutes No. 22/15) has been developed in furtherance of item

6 of the Code, and covers information on KMG's compliance / non-compliance with the principles and provisions of the Code. In general, at year-end 2018, KMG was in compliance with most of the provisions and principles of the Code, except for the following aspects:

N°	REFERENCE TO THE CODE	PROVISIONS OF THE CODE	"EXTENT OF COMPLIANCE"	COMMENTS
<b>GOVERNMENT</b>				
1	Item 2 of Chapter 1 of Section 2	It is recommended to make sure the optimal asset structure is in place for Organizations within the Fund. In a Holding Company, a parent company may be established in the form of a stock company. Other organizations are recommended to be established in the form of a limited liability partnership. Those Organizations that have already been established in the form of a stock company, it is recommend to consider reorganizing them into limited liability partnerships with account for economic, legal and other aspects and in the best interests of the Fund's group. When creating a new Organization the most preferable business structure would be limited liability partnership. New Organizations may only be established in the form of a stock company in exceptional cases when as Organization's shares are going to be traded on a stock exchange in future.	complies partially	The KMG Group Transformation Programme stipulates reducing the number of management levels by merging subholdings with the national company. The Transformation Programme involves simplification of KMG Group asset structure by closing/reorganising subholdings. With that in mind, certain steps were taken in 2018 to integrate KazMunayGas Exploration & Production with KMG, and a task force was established to integrate KazTransGas JSC with KMG. In December 2015, the Kazakhstan Government approved a Comprehensive Privatisation Plan for 2016-2020, incorporating 73 KMG Group companies. In 2018, six companies were sold as part of the privatization programme. Assets of the KMG Group will be optimized further. When creating new Organisations, KMG would be giving preference to limited liability partnerships. In 2018, no legal entities in the form of stock company were created.
2	Item 14 of Chapter 1 of Section 2	Board of Directors of the Fund and Organizations should make sure that business ethics standards are implemented and observed. All officers and employees of the Fund and the Organizations must acknowledge that they have read and understood the Code of Business Ethics by signing the acknowledgement form and regularly reaffirming their knowledge of the Code.	complies partially	As per recommendations made by the independent consultant PricewaterhouseCoopers LLP following the diagnostics of corporate governance of KMG, a revised Code of Business Ethics has been developed and approved (resolution of the Board of Directors adopted on 29 November 2018, minutes No. 18/2018). A statement has been disseminated among all officers and employees of KMG for them to look through the Code of Business Ethics and regularly reaffirm their knowledge of the Code and acknowledge that they have read and understood the Code. Subsidiaries and affiliates of KMG were instructed to develop / harmonize business ethics documents with the Code of Business Ethics of KMG.
<b>THE FUND AND ITS ORGANISATIONS</b>				
3	Item 3 of Chapter 2 of Section 2	Boards of Directors of the Companies shall be fully independent in decision-making within their remit as established by the charters of the Companies.	complies partially	Pursuant to item 4 of the KMG Charter, KMG's financial and production activities are carried out based on economic independence; pursuant to item 13 of the KMG Charter, KMG's objective is to generate net income from independent economic activity; pursuant to item 24 of the KMG Charter, KMG resolves all issues related to the planning of production activities, salaries, logistics, social development, income distribution, recruitment, placement and staff retraining independently. At the same time, the Kazakh Act on National Wealth Fund and certain Samruk-Kazyna documents (Investment Policy approved by the Samruk-Kazyna Board of Directors on 26 September 2017; Guidelines for approving the appointment and early termination of the authority of the heads of executive bodies of those legal entities whose voting shares are directly or indirectly owned by Samruk-Kazyna, as approved by Resolution of the Samruk-Kazyna Management Board dated 16 October 2012, Minutes No. 40/12) stipulate procedures that restrict the KMG Board of Directors' full independence in the decision-making process (including the conclusion of M&A transactions and the appointment of heads of KMG subsidiary executive bodies).
4	Item 9 of Chapter 2 of Section 2	Other possible mechanisms of managing a group of a holding company include the centralization of certain functions (like planning, treasury, accounting, information technology, legal support, internal audit, etc.).	complies partially	Within the framework of the Business Transformation Programme, KMG, given the results of an analysis of existing business processes, decided to centralise its treasury, IT, accounting and tax accounting, and HR functions on the basis of the relevant specialised service organisations - Shared Service Centres. The phased implementation of the corresponding function centralisation projects was in progress in 2018. In future, in accordance with the schedule provided by the Transformation Programme Roadmap, a finance shared service center is going to be established that would be responsible for accounting, tax accounting and treasury. Internal audit was centralised in 2008, except in those KMG Group companies, where the existence of a separate internal audit service is a statutory requirement.

Nº	REFERENCE TO THE CODE	PROVISIONS OF THE CODE	"EXTENT OF COMPLIANCE"	COMMENTS
<b>SUSTAINABLE DEVELOPMENT</b>				
5	Item 5 of Chapter 3 of Section 2	The Fund and its Organizations should have a sustainability corporate governance system in place	<b>complies partially</b>	As per the detailed corporate governance improvement plan, in 2019 KMG is going to approve a Manual for Sustainable Development Management System within the KMG group. The document will be developed in line with the Code and the Reference Model on Sustainable Development for portfolio companies within Samruk Kazyna JSC and will include description of the way the interaction with parties concerned should be; the integration of sustainable development principles into key processes and monitoring; the preparation of annual reports on sustainable development; the implementation of priority areas (initiatives) in the area of sustainable development; the development and maintenance of the sustainable development culture; risk identification and assessment; document management; and performance evaluation in the area of sustainable development.
6	Item 5 of Chapter 3 of Section 2	The Board of Directors provides strategic guidance and monitors the implementation of sustainable development. The Executive Body develops an appropriate action plan and submits it to Board of Directors for consideration.	<b>complies partially</b>	The obligation of the KMG Board of Directors is to ensure the growth of long-term value and sustainable development as provided by the KMG Charter. In 2018 sustainable development was declared a strategic goal in the Development Strategy until 2028. A strategy session was held in July 2018 to discuss sustainable development. In December 2018 a new committee was established under the Board of Directors - Health, Safety, Environment and Sustainable Development Committee (HSE & SD Com). The HSE & SD Com will oversee the implementation of sustainable development. KMG has no action plan in place to implement sustainable development. It should be in place according to the draft of Manual for Sustainable Development within the KMG group which is expected to be approved in 2019. The document sets out the procedure and processes for developing a sustainable development action plan for the KMG Group.
7	Item 5 of Chapter 3 of Section 2	Sustainable development should be integrated into: 1) management system; 2) development strategy; 3) key processes including risk management, planning (long-term (strategy), mid-term (5-year development plan) and short-term (annual budget) periods), reporting, risk management, human resource management, investments, operations, etc., and decision-making at all stages from bodies (general meeting of shareholders (sole shareholder), Board of Directors, executive body) to ordinary employees.	<b>does not comply</b>	The work to integrate sustainable development into key processes is expected to commence after the Board of Directors approves the Sustainable Development Manual for companies within the KMG group in 2019. The document sets out, inter alia, the integration of sustainable development principles into key processes in line with the Code and the respective Reference Model of Samruk Kazyna.
8	Item 5 of Chapter 3 of Section 2	The sustainability management system should have clearly defined roles, competencies and responsibilities assigned to each body and all employees for implementation of principles, standards and respective sustainability policies and plans.	<b>complies partially</b>	Board of Directors has a specific responsibility to promote the principles of sustainable development while: - keeping track of the implementation of the Company's Strategy based on analysis of short-term and long-term KPI; - defining the meaning of the sustainable development principles for the Company, and makes sure they are effectively communicated to all parties concerned; - scrutinizing the corporate governance principles, social and environmental aspects set out in the Code that need to be accounted for when developing a strategy, business plan or investment strategy Company. Managing Director for Strategy is responsible for: - developing and implementing a sustainable development management system that would help follow the sustainable development principles and goals; - integrating the sustainable development management system into key processes, the Development Strategy and decision-making processes of KMG. Managing Director for Health, Safety and Environment is responsible for: - taking part in establishing a sustainable development management system; - assisting in the integration the sustainable development management system into key processes insofar as as it pertains to his/her business line. Managing Director for Human Resources has social responsibility while: - taking part in establishing a sustainable development management system; - assisting in the integration the sustainable development management system into key processes insofar as as it pertains to his/her business line. Managing Director, Vice President - Finance Director is responsible for business prosperity: - assisting in the integration the sustainable development management system into key processes insofar as as it pertains to his/her business line. In 2017 a department for organizational and sustainable development was established within the Company which is a business unit responsible for preparation of Sustainability Report and the implementation of sustainable development principles.
<b>SHAREHOLDERS RIGHTS</b>				
9	Item 2 of Chapter 4 of Section 2	Each Organization must have a transparent procedure for electing and setting fees for its Board of Directors (Supervisory Board and/or Executive Body) approved by general meeting of shareholders (the Sole Shareholder)/Member (the Sole Member). The election to the Board of Directors (Supervisory Board and/or Executive Body) should be conducted in the manner specified by Kazakh laws, the Charter and internal documents of the Organization and by this Code.	<b>complies partially</b>	The election of members to the Board of Directors and their remuneration are regulated by the Guidelines for the formation of the Boards of Directors of Samruk-Kazyna companies, as approved by the resolution of the Samruk-Kazyna Management Board dated 26 September 2016 (Minutes No.35/16). In furtherance of the detailed corporate governance improvement plan of KMG that was approved by the Board of Directors, in 2019-2020 certain activities will be taking place to improve performance of the Board of Directors / Supervisory Boards of subsidiaries: approval and implementation of corporate governance of KMG; annual hearing by the Board of Directors of KMG and/or Chairman of the Management Board of KMG of reports on performance of the Board of Directors and on improvement of corporate governance from Boards of Directors / Supervisory Boards and chief executives of subsidiaries and affiliates of KMG, and on liaisons with Corporate Secretaries of Boards of Directors / Supervisory Boards of Company's subsidiaries.
10	пункт 2 of Chapter 4 of Section 2	Net profit and dividends must be paid by Companies with over fifty percent of their shares/stake owned by the Fund subject to ownership or trust management title in compliance with the dividend policy of the Fund.	<b>complies partially</b>	KMG distributes net profit and pays dividends in accordance with the Samruk-Kazyna dividend policy. Based on the outcome of an independent assessment of corporate governance within KMG that was performed in 2017 by an independent consultant PricewaterhouseCoopers LLP, it was recommended that KMG develops its own dividend policy. According to the detailed corporate governance improvement plan of KMG for 2019-2020, the relevant event will be implemented in 2020.

N°	REFERENCE TO THE CODE	PROVISIONS OF THE CODE	"EXTENT OF COMPLIANCE"	COMMENTS
<b>BOARD OF DIRECTORS AND EXECUTIVE BODY</b>				
11	Item 6 of Chapter 5 of Section 2	The Fund and its Organizations must have succession plans for members of the Board of Directors in order to maintain business continuity of operations and any changes in the composition of the Board of Directors that may be made in future.	<b>complies partially</b>	To identify skills and expertise of the current Board of Directors and determine the profile of skills, knowledge and experience for candidates to the Board of Directors of KMG a skills and competencies matrix for members of the Board of Directors was approved at a meeting of the Nomination and Remuneration Committee of the Board of Directors of KMG (minutes No. 5/2018 dated 30 May 2018). The skills and competencies matrix will help maintain a well-balanced composition of the Board of Directors of KMG when it comes to required skills, expertise and competencies. In 2019 the Succession Plan is going to be reviewed at a meeting of the Nomination and Remuneration Committee and based on the discussion this will be brought to the Board of Directors of KMG for consideration.
12	Item 7 of Chapter 5 of Section 2	The Board of Directors should approve a training program for each member of the Board of Directors.	<b>complies partially</b>	Measures to develop and approve a training programme* for members of the Board of Directors of KMG are envisaged by the Activity Plan of the Board of Directors of KMG for 2019 and by the detailed corporate governance improvement plan of KMG for 2019-2020 that was approved by the Board of Directors of KMG.
13	Item 12 of Chapter 5 of Section 2	Meetings of the Board of Directors should be held in accordance with the work plan approved until the start of the calendar year. Such work plan should include a list of items to be addressed and the dates of the meetings.	<b>complies partially</b>	Meetings of the KMG Board of Directors in 2017 were conducted in compliance with the approved Work Plan of the Board of Directors, which includes, among others, meeting agenda items and dates. The Work Plan of the KMG Board of Directors for 2018 was not approved before the beginning of the corresponding calendar year. The decision to approve the Work Plan of the KMG Board of Directors was made by the KMG Board of Directors on 25 January 2018 (Minutes No.1/2018).
14	Item 12 of Chapter 5 of Section 2	It is recommended that meetings of the Board of Directors take place 8 to 12 times a year.	<b>complies partially</b>	In 2018, the Board of Directors held 20 meetings, of which: 6 were regular physical meetings attended by all member of the Board of Directors; 5 were regular meetings held by conference call; 8 were extraordinary meetings held by conference call; and one more meeting was to discuss the strategy and sustainable development. Following the corporate governance diagnostics, taking into consideration the assessment of performance of the Board of Directors, the consultant noted that the Company proceeded to optimize the workflow by reducing the number physical meetings. It was also noted that current regularity of meetings of the Board of Directors would help the independent directors be updated on Company's performance and advise the Executive Body.
15	Item 12 of Chapter 5 of Section 2	It is recommended that items to be reviewed by the Board of Directors throughout a year are equally distributed so that they are thoroughly and fully discussed and that prompt and proper decisions are made.	<b>complies partially</b>	In 2018 the Board of Directors of KMG had 20 meetings, of which 11 were regular meetings of the Board of Directors, eight meetings were extraordinary ones via conference call (simultaneous discussion by members of the Board of Directors by telephone) and one Strategy session to discuss the Strategy and sustainable development. The agenda of the meetings of the Board of Directors were planned so that more items are reviewed at regular physical meetings of the Board of Directors to be attended personally by members of the Board of Directors. Therefore, in 2018 the agenda of physical meetings of the Board of Directors had more items than those held as a conference call. The agenda of physical meetings of the Board of Directors of KMG had between 20 and 43 items. At its extraordinary meetings, during the reporting period the Board of Directors of KMG reviewed between one and four items. Another reason for such a disparity is the need in convening extraordinary meetings because of the nature of the items. These are items that required immediate decision - like commitments of KMG as part of management of shares that KMG holds in big oil and gas projects, and management of banking covenants to do with eurobonds.
16	Item 10 of Chapter 5 of Section 2	Fees for a member of the Board of Directors of an Organization should be set in accordance with the methodology developed by the Fund. In doing so, the expected positive effect for the Organization from the contribution made by such member to the Board of Directors should be taken into account.	<b>complies partially</b>	The resolution of the Board of Directors of Samruk Kazyna that was adopted on 26 September 2016 (minutes No. 35/16) approves Guidelines for composition of the Board of Directors of Samruk Kazyna that envisages, inter alia, the manner of setting fees for members of the Board of Directors. When setting the amount of fees the following will be taken into consideration: the obligations of the members of the Board of Directors, the scope of operations of the company, long-term goals and objectives. Independent directors are entitled to fees. The fees for representatives of Samruk Kazyna that sit on the Board of Directors of Organizations will be set pursuant to resolution of the Management Board of Samruk Kazyna. The work to implement the respective document for Boards of Directors / Supervisory Boards of subsidiaries of KMG is scheduled for 2019.
17	Item 13 of Chapter 5 of Section 2	The Board of Directors, committees and members of the Board of Directors should be assessed annually as part of a structured and approved process that is approved by the Board of Directors of the Organization. This process should follow the methodology of the Fund. At least once every three years, an independent professional firm should make the assessment.	<b>complies partially</b>	On 4 October 2018 (minutes No. 14/2018) the Board of Directors in its resolution approved Terms of Reference for the Board of Directors, its Committees, the Chairperson, members of the Board of Directors and for the Corporate Secretary of KMG. The document was designed with due account for instructional guidelines of Samruk Kazyna. No assessment of performance of the Board of Directors was made in 2018 as PricewaterhouseCoopers LLP conducted diagnostics of corporate governance within KMG.
18	Item 14 of Chapter 5 of Section 2	Assessment of the Board of Directors, its committees and members of the Board of Directors, feedback to members of the Board of Directors and the development of follow-up improvements should all be carried out under the direction of Chairman of the Board of Directors. The outcome of the assessment should be discussed at a separate meeting of the Board of Directors followed by a training program developed for the Board of Directors and for each of its members individually.	<b>complies partially</b>	In 2018 an independent consultant PricewaterhouseCoopers LLP conducted diagnostics of corporate governance within KMG. where it assessed, among other things, performance of the Board of Directors and its Committees. Following the diagnostics, the Board of Directors of KMG approved a detailed corporate governance improvement plan for KMG for 2019-2020 that contains a number of steps to improve performance of the Board of Directors and its Committees. The outcome of the diagnostics was reviewed at a meeting of the Board of Directors on 6 February 2019 (minutes No. 1/2019).
19	Item 12 of Chapter 5 of Section 2	The Board of Directors should review resolutions that had been adopted earlier. It should analyze both the resolution and the decision-making process. Resolutions that had been adopted earlier should be reviewed if the Board of Directors is assess its own performance.	<b>complies partially</b>	Resolutions that had been adopted earlier were reviewed by the independent consultant in 2017 and in 2018 when it was conducting the diagnostics of corporate governance within KMG, and also as part of assessment of performance of the Board of Directors it made respective analysis. Similar steps are going to be taken in 2019 as part of assessment of performance of the Board of Directors of KMG.
20	Item 15 of Chapter 5 of Section 2	An induction and succession planning programme must be developed within an organization for the Corporate Secretary.	<b>complies partially</b>	Steps to develop and approve the Succession Plan for the Corporate Secretary are expected to be taken in 2019 in furtherance of the detailed corporate governance improvement plan for KMG for 2019-2020. Such succession planning should ensure continuity of knowledge about performance of the Company's Board of Directors.
<b>RISK MANAGEMENT AND INTERNAL CONTROLS</b>				
21	Item 7 of Chapter 6 of Section 2	The Board of Directors together with the Audit Committee are responsible for annual assessments of the efficiency of risk management and internal controls.	<b>complies partially</b>	In 2018, the independent consultant PricewaterhouseCoopers LLP tested the level of KMG's corporate governance through five components including Risk Management, Internal Control and Audit.

\* The Training Programme for members of the Board of Directors of KMG is already approved as at the date of approval of this Report (resolution of the Board of Directors that was adopted on 7 March 2019, minutes No. 3/2019)



# FINANCIAL STATEMENTS



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## Independent auditor's report

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

### Opinion

We have audited the consolidated financial statements of National Company "KazMunayGas" JSC and its subsidiaries (the Group), which comprise the consolidated statement of financial position as at 31 December 2018, the consolidated statement of comprehensive income, consolidated statement of changes in equity and consolidated statement of cash flows for the year then ended, and notes to the consolidated financial statements, including a summary of significant accounting policies.

In our opinion, the accompanying consolidated financial statements present fairly, in all material respects, the consolidated financial position of the Group as at 31 December 2018 and its consolidated financial performance and its consolidated cash flows for the year then ended in accordance with International Financial Reporting Standards (IFRSs).

### Basis for opinion

We conducted our audit in accordance with International Standards on Auditing (ISAs). Our responsibilities under those standards are further described in the *Auditor's responsibilities for the audit of the consolidated financial statements* section of our report. We are independent of the Group in accordance with the International Ethics Standards Board for Accountants' *Code of Ethics for Professional Accountants (IESBA Code)* and we have fulfilled our other ethical responsibilities in accordance with the IESBA Code. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

### Key audit matters

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the consolidated financial statements of the current period. These matters were addressed in the context of our audit of the consolidated financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters. For each matter below, our description of how our audit addressed the matter is provided in that context.

We have fulfilled the responsibilities described in the *Auditor's responsibilities for the audit of the consolidated financial statements* section of our report, including in relation to these matters. Accordingly, our audit included the performance of procedures designed to respond to our assessment of the risks of material misstatement of the consolidated financial statements. The results of our audit procedures, including the procedures performed to address the matters below, provide the basis for our audit opinion on the accompanying consolidated financial statements.

### Key audit matter

#### Impairment of non-current assets

We considered this matter to be one of the most significance in our audit due to materiality of the balances of non-current assets, including upstream, exploration and evaluation, downstream assets and investments in upstream and midstream joint ventures and associates, to the consolidated financial statements, the high level of subjectivity in respect of assumptions underlying impairment analysis and significant judgements and estimates made by management. In addition, the combination of volatility in oil prices and Tenge, increased inflation and cost of debt and uncertainty about future economic growth affects the Group's business prospects and therefore triggers potential impairment of the Group's assets.

Significant assumptions included discount rates, oil and petroleum product prices forecasts and inflation and exchange rate forecasts. Significant estimates included production forecast, future capital expenditure and oil and gas reserves available for development and production.

Information on non-current assets and the impairment tests performed is disclosed in *Note 4* to the consolidated financial statements.

### How our audit addressed the key audit matter

We involved our business valuation specialists in the testing of impairment analysis and calculation of recoverable amount performed by management. We analyzed the assumptions underlying management forecast. We compared oil and petroleum products prices used in the calculation of recoverable amounts to available market forecasts.

We compared the discount rates and long-term growth rates to general market indicators and other available evidence.

We tested the mathematical integrity of the impairment models and assessed the analysis of the sensitivity of the results of impairment tests to the changes in assumptions.

We analysed disclosures on impairment test in the consolidated financial statements.



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### **Compliance with debt covenants**

In accordance with the terms of certain financing arrangements, the Group should comply with certain financial and non-financial covenants. There is a higher likelihood that covenants impacted by trading volumes, revenue and profit may be breached particularly in subsidiaries impacted by volatility of oil prices and higher operating expenses, therefore, we focused on this area during our audit. Breaching covenants could result in funding shortages. Cross default provisions are in place under the Group's financing arrangements. Compliance with the financing covenants is one of the matters of most significance in the audit since it can have a major impact on the going concern assumption used in the preparation of the consolidated financial statements, and on classification of interest-bearing liabilities in the consolidated statement of financial position.

Information on compliance with covenants is disclosed in *Note 18* to the consolidated financial statements.

### **Other information included in the Group's 2018 annual report**

Other information consists of the information included in the Group's 2018 Annual Report other than the consolidated financial statements and our auditor's report thereon. Management is responsible for the other information. The Group's 2018 Annual Report is expected to be made available to us after the date of this auditor's report.

Our opinion on the consolidated financial statements does not cover the other information and we will not express any form of assurance conclusion thereon.

In connection with our audit of the consolidated financial statements, our responsibility is to read the other information identified above when it becomes available and, in doing so, consider whether the other information is materially inconsistent with the consolidated financial statements or our knowledge obtained in the audit or otherwise appears to be materially misstated.

We examined the terms of financing arrangements and analysed financial and non-financial covenants, terms for early repayment and events of default. We examined the presence of confirmations received from banks related to compliance with financial covenants. We compared data used in the financial covenants calculations with the financial statements. We tested arithmetic accuracy of financial covenants calculations.

We analysed the disclosures in respect of debt covenants compliance in the consolidated financial statements of the Group.



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### **Responsibilities of management and the Audit Committee for the consolidated financial statements**

Management is responsible for the preparation and fair presentation of the consolidated financial statements in accordance with IFRSs and for such internal control as management determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, management is responsible for assessing the Group's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Group or to cease operations or has no realistic alternative but to do so.

The Audit Committee is responsible for overseeing the Group's consolidated financial reporting process.

### **Auditor's responsibilities for the audit of the consolidated financial statements**

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with ISAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements.

As part of an audit in accordance with ISAs, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- ▶ Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- ▶ Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Group's internal control.



- ▶ Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- ▶ Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the consolidated financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group to cease to continue as a going concern.
- ▶ Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- ▶ Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

We communicate with the Audit Committee, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide the Audit Committee with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.



From the matters communicated with the Audit Committee, we determine those matters that were of most significance in the audit of the consolidated financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

The partner in charge of the audit resulting in this independent auditor's report is Gulmira Turmagambetova.

*Ernst & Young LLP*



Gulmira Turmagambetova  
Auditor / General Director  
Ernst and Young LLP

Auditor qualification certificate  
No. 0000374 dated 21 February 1998

050060, Republic of Kazakhstan, Almaty  
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12 March 2019



State audit license for audit activities on the territory of the Republic of Kazakhstan: series МФЮ-2 No. 0000003 issued by the Ministry of finance of the Republic of Kazakhstan on July 15, 2005

# CONSOLIDATED FINANCIAL STATEMENTS

## CONSOLIDATED STATEMENT OF FINANCIAL POSITION

In thousands of tenge	Note	As at December 31	
		2018	2017 (Restated)*
<b>Assets</b>			
<b>NON-CURRENT ASSETS</b>			
Property, plant and equipment	7	4,515,169,879	4,080,164,484
Exploration and evaluation assets	8	189,799,553	253,326,100
Investment property	9	24,187,775	27,423,225
Intangible assets	10	173,077,337	185,205,427
Long-term bank deposits	11	52,296,877	48,523,034
Investments in joint ventures and associates	12	4,895,444,182	3,823,629,586
Deferred income tax asset	30	97,881,412	98,680,503
VAT receivable		113,073,093	96,666,045
Advances for non-current assets		27,176,258	124,906,942
Loans and receivables due from related parties	15	638,527,897	672,448,689
Other financial assets		4,752,591	4,161,312
Other non-current assets		16,941,980	17,401,423
		10,748,328,834	9,432,536,770
<b>CURRENT ASSETS</b>			
Inventories	13	312,298,668	250,368,907
VAT receivable		66,522,257	69,605,981
Income tax prepaid		53,142,708	36,134,973
Trade accounts receivable	14	493,977,474	467,867,255
Short-term bank deposits	11	386,459,273	1,638,940,642
Loans and receivables due from related parties	15	148,615,167	169,501,500
Other current assets	14	204,722,719	196,110,129
Cash and cash equivalents	16	1,539,452,842	1,263,987,456
		3,205,191,108	4,092,516,843
Assets classified as held for sale	5	61,759,624	24,904,588
		3,266,950,732	4,117,421,431
<b>Total assets</b>		<b>14,015,279,566</b>	<b>13,549,958,201</b>

## CONSOLIDATED STATEMENT OF FINANCIAL POSITION (CONTINUED)

In thousands of tenge	Note	As at December 31	
		2018	2017 (Restated)*
<b>Equity and liabilities</b>			
<b>EQUITY</b>			
Share capital	17	916,540,545	709,344,505
Additional paid-in capital	17	40,794,146	243,876,410
Other equity		83,185	83,185
Currency translation reserve		1,764,108,464	1,295,091,189
Retained earnings		4,341,062,348	3,665,191,668
<b>Attributable to equity holders of the Parent Company</b>		<b>7,062,588,688</b>	<b>5,913,586,957</b>
<b>Non-controlling interest</b>	17	<b>80,479,625</b>	<b>870,017,901</b>
<b>Total equity</b>		<b>7,143,068,313</b>	<b>6,783,604,858</b>
<b>NON-CURRENT LIABILITIES</b>			
Borrowings	18	3,822,647,614	3,417,111,859
Provisions	20	229,797,170	203,774,487
Deferred income tax liabilities	30	479,597,579	380,738,225
Financial guarantees		11,501,379	10,767,166
Prepayment on oil supply agreements	19	480,250,001	581,577,501
Other non-current liabilities		40,261,965	46,426,823
		5,064,055,708	4,640,396,061
<b>CURRENT LIABILITIES</b>			
Borrowings	18	330,590,078	884,140,278
Provisions	20	98,470,933	78,812,199
Income tax payable		13,271,808	10,081,239
Trade accounts payable	21	632,739,333	513,851,048
Other taxes payable	22	105,026,042	101,198,347
Financial guarantees		1,831,135	1,170,697
Prepayment on oil supply agreements	19	384,200,000	332,330,000
Other current liabilities	21	236,987,600	202,444,812
		1,803,116,929	2,124,028,620
Liabilities directly associated with the assets classified as held for sale	5	5,038,616	1,928,662
<b>Total liabilities</b>		<b>6,872,211,253</b>	<b>6,766,353,343</b>
<b>Total equity and liabilities</b>		<b>14,015,279,566</b>	<b>13,549,958,201</b>
<b>Book value per ordinary share</b>	17	<b>11.424</b>	<b>11.195</b>

\* Certain numbers shown here do not correspond to the consolidated financial statements for the year ended December 31, 2017 and reflect adjustments made, refer to Note 5

## CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME

In thousands of tenge	Note	За годы, закончившиеся 31 декабря	
		2018	2017 (Restated)*
Revenue	23	6,988,964,296	4,793,762,540
Cost of sales	24	(5,353,492,461)	(3,704,456,783)
<b>Gross profit</b>		<b>1,635,471,835</b>	<b>1,089,305,757</b>
General and administrative expenses	25	(247,127,562)	(200,433,904)
Transportation and selling expenses	26	(659,447,128)	(440,568,108)
Impairment of property, plant and equipment, intangible assets	27	(165,522,259)	(24,659,554)
Loss on disposal of property, plant and equipment, intangible assets and investment property, net		(3,516,894)	(3,814,867)
Other operating income		23,034,658	20,164,501
Other operating expenses		(24,143,678)	(33,595,412)
<b>Operating income</b>		<b>558,748,972</b>	<b>406,398,413</b>
Net foreign exchange (loss)/gain		(38,319,521)	67,054,683
Finance income	28	161,026,892	122,573,831
Finance costs	28	(427,655,205)	(306,355,390)
Reversal of impairment of investments in joint ventures	12	–	14,845,359
Impairment of assets classified as held for sale		(168,378)	(67,594)
Net income on disposal of subsidiary	6	18,358,902	–
Share in profit of joint ventures and associates, net	29	697,326,157	414,949,811
<b>Profit before income tax</b>		<b>969,317,819</b>	<b>719,399,113</b>
Income tax expenses	30	(279,259,657)	(190,284,988)
<b>Profit for the year from continuing operations</b>		<b>690,058,162</b>	<b>529,114,125</b>
<b>Discontinued operations</b>			
Profit/(loss) after income tax for the year from discontinued operations	5	3,452,792	(3,666,118)
<b>Net profit for the year</b>		<b>693,510,954</b>	<b>525,448,007</b>
<b>Net profit/(loss) for the year attributable to:</b>			
Equity holders of the Parent Company		695,863,672	443,407,854
Non-controlling interest		(2,352,718)	82,040,153
		<b>693,510,954</b>	<b>525,448,007</b>

## CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME (CONTINUED)

In thousands of tenge	Note	За годы, закончившиеся 31 декабря	
		2018	2017 (Restated)*
<b>Other comprehensive income</b>			
Other comprehensive income/(loss) to be reclassified to profit or loss in subsequent periods			
Exchange differences on translation of foreign operations		479,195,360	(75,011,198)
Accumulated differences on translation of disposal group		(475,673)	(423,776)
<b>Other comprehensive income/(loss) to be reclassified to profit or loss in the year</b>		<b>478,719,687</b>	<b>(75,434,974)</b>
Other comprehensive loss not to be reclassified to profit or loss in subsequent periods			
Actuarial loss on defined benefit plans of the Group		(3,658,106)	(1,148,036)
Actuarial loss on defined benefit plans of joint ventures		(159,594)	(173,333)
Write-off of deferred tax assets		–	(150,746)
Tax effect		(85,489)	8,642
<b>Other comprehensive loss not to be reclassified to profit or loss in the year</b>		<b>(3,903,189)</b>	<b>(1,463,473)</b>
<b>Other comprehensive income/(loss) for the year</b>		<b>474,816,498</b>	<b>(76,898,447)</b>
<b>Total comprehensive income for the year, net of tax</b>		<b>1,168,327,452</b>	<b>448,549,560</b>
<b>Total comprehensive income for the year attributable to:</b>			
Equity holders of the Parent Company		1,161,006,802	366,948,405
Non-controlling interest		7,320,650	81,601,155
		<b>1,168,327,452</b>	<b>448,549,560</b>

\* Certain numbers shown here do not correspond to the consolidated financial statements for the year ended December 31, 2017 and reflect adjustments made, refer to Note 5

## CONSOLIDATED STATEMENT OF CASH FLOWS

In thousands of tenge	For the years ended December 31	
	2018	2017
<b>Cash flows from operating activities</b>		
Receipts from customers	7,619,487,095	5,634,357,593
Payments to suppliers	(5,097,946,002)	(3,715,959,005)
Other taxes and payments	(1,257,586,494)	(914,413,795)
Income taxes paid	(186,199,158)	(112,604,740)
Interest received	134,364,944	104,803,503
Interest paid	(248,341,171)	(216,639,835)
Payments to employees	(387,218,685)	(369,717,122)
Taxes received from Tax authorities	29,875,789	79,392,887
Social payments and pension funds	(52,368,596)	(51,613,541)
Other payments	(100,077,386)	(37,717,403)
<b>Net cash flows from operating activities</b>	<b>453,990,336</b>	<b>399,888,542</b>
<b>Cash flows from investing activities</b>		
Withdrawal/(placement) of bank deposits, net	1,295,272,246	(457,272,356)
Purchase of property, plant and equipment, intangible assets, investment property and exploration and evaluation assets	(430,306,245)	(464,352,881)
Proceeds from sale of property, plant and equipment, intangible assets, investment property and exploration and evaluation assets	8,710,820	1,408,198
Proceeds from disposal of subsidiaries (Note 6)	18,111,600	9,151,261
Cash acquired with subsidiaries	-	180,678
Dividends received from joint ventures and associates	160,060,909	271,782,500
Acquisition of and contribution to joint ventures	(1,467,361)	(2,625)
Proceeds from disposal of joint ventures (Note 5)	2,000,000	-
Refund of contribution to joint ventures	93,072,267	1,714,856
Loans given to related parties	(64,716,059)	(184,707,890)
Repayment of loans due from related parties	40,983,976	455,324
Refund/(acquisition) of debt securities	243,942	(332,401)
Note receivable from a shareholder of a joint venture (Note 31)	29,174,223	-
<b>Net cash flows from/(used in) investing activities</b>	<b>1,151,140,318</b>	<b>(821,975,336)</b>

## CONSOLIDATED STATEMENT OF CASH FLOWS (CONTINUED)

In thousands of tenge	For the years ended December 31	
	2018	2017
<b>Cash flows from financing activities</b>		
Proceeds from borrowings (Note 18)	1,249,906,641	1,508,170,132
Repayment of borrowings (Note 18)	(2,069,977,321)	(689,074,491)
Dividends paid to Samruk-Kazyna and National Bank of RK (Note 17)	(36,273,040)	(45,877,517)
Dividends paid to non-controlling interests (Note 17)	(6,389,605)	(12,415,761)
Share buyback by subsidiary (Note 17)	(642,524,031)	-
Issue of shares (Note 17)	7	1
<b>Net cash flows (used in)/from financing activities</b>	<b>(1,505,257,349)</b>	<b>760,802,364</b>
Effects of exchange rate changes on cash and cash equivalents	179,467,721	22,436,734
Change in allowance for expected credit losses	(97,970)	-
<b>Net change in cash and cash equivalents</b>	<b>279,243,056</b>	<b>361,152,304</b>
Cash and cash equivalents, at the beginning of the year	1,266,604,815	905,452,511
<b>Cash and cash equivalents, at the end of the year</b>	<b>1,545,847,871</b>	<b>1,266,604,815</b>

## CONSOLIDATED STATEMENT OF CHANGES IN EQUITY

In thousands of tenge			Attributable to equity holder of the Parent Company				Non-controlling interest	Total
	Share capital	Additional paid-in capital	Other equity	Currency translation reserve	Retained earnings	Total		
<b>As at December 31, 2016 (restated) (Note 5)</b>	696,376,625	243,655,405	222,074	1,370,264,462	3,322,319,176	5,632,837,742	801,560,097	6,434,397,839
Net profit for the year	-	-	-	-	443,407,854	443,407,854	82,040,153	525,448,007
Other comprehensive income	-	-	-	(75,173,273)	(1,286,176)	(76,459,449)	(438,998)	(76,898,447)
<b>Total comprehensive income for the year</b>	-	-	-	(75,173,273)	442,121,678	366,948,405	81,601,155	448,549,560
Contribution to share capital	12,967,880	221,005	-	-	-	13,188,885	-	13,188,885
Dividends	-	-	-	-	(45,878,887)	(45,878,887)	(13,269,562)	(59,148,449)
DISTRIBUTIONS TO SAMRUK-KAZYNA	-	-	-	-	(23,634,306)	(23,634,306)	-	(23,634,306)
Transactions with Samruk-Kazyna (Note 17)	-	-	-	-	(29,735,993)	(29,735,993)	-	(29,735,993)
Execution of share-based payments	-	-	(130,900)	-	-	(130,900)	130,900	-
Forfeiture of share-based payments	-	-	(7,989)	-	-	(7,989)	(4,689)	(12,678)
<b>As at December 31, 2017 (restated)</b>	709,344,505	243,876,410	83,185	1,295,091,189	3,665,191,668	5,913,586,957	870,017,901	6,783,604,858
<b>As at December 31, 2017 (restated) (Note 5)</b>	709,344,505	243,876,410	83,185	1,295,091,189	3,665,191,668	5,913,586,957	870,017,901	6,783,604,858
Changes in accounting policy (Note 3)	-	-	-	-	(12,391,462)	(12,391,462)	(6,195)	(12,397,657)
<b>As at January 1, 2018 (restated)</b>	709,344,505	243,876,410	83,185	1,295,091,189	3,652,800,206	5,901,195,495	870,011,706	6,771,207,201
Net profit for the year	-	-	-	-	695,863,672	695,863,672	(2,352,718)	693,510,954
Other comprehensive income	-	-	-	469,017,275	(3,874,145)	465,143,130	9,673,368	474,816,498
<b>Total comprehensive income for the year</b>	-	-	-	469,017,275	691,989,527	1,161,006,802	7,320,650	1,168,327,452
Contribution to share capital (Note 17)	207,196,040	(203,082,264)	-	-	-	4,113,776	-	4,113,776
Dividends (Note 17)	-	-	-	-	(36,271,669)	(36,271,669)	(6,200,599)	(42,472,268)
Distributions to Samruk-Kazyna (Note 17)	-	-	-	-	(27,383,179)	(27,383,179)	-	(27,383,179)
Transactions with Samruk-Kazyna (Note 17)	-	-	-	-	(88,545,678)	(88,545,678)	-	(88,545,678)
Acquisition of subsidiaries	-	-	-	-	-	-	345,040	345,040
Share buyback by subsidiary (Note 17)	-	-	-	-	148,473,141	148,473,141	(790,997,172)	(642,524,031)
<b>As at December 31, 2018</b>	916,540,545	40,794,146	83,185	1,764,108,464	4,341,062,348	7,062,588,688	80,479,625	7,143,068,313



Notes to the consolidated financial statements

# TERMS, ABBREVIATIONS AND ACRONYMS

## KMG, Company, Group

## JSC National Company KazMunayGas

<b>APG</b>	Associated oil gas	<b>KBTU</b>	Kazakhstan-British Technical University
<b>BBL</b>	Barrels	<b>KMG Corporate Centre</b>	Corporate Centre of JSC National Company KazMunayGas
<b>BOE</b>	Barrels of oil equivalent	<b>KMGI</b>	KMG International Group of Companies
<b>CODO</b>	Company owned – dealer operated	<b>KPI</b>	Key performance indicator
<b>CPC</b>	Caspian Pipeline Consortium	<b>LLP</b>	Limited liability partnership
<b>EBITDA</b>	Earnings before Interest, Taxation, Depreciation and Amortisation	<b>NCOC</b>	North Caspian Operating Company NV
<b>EIA</b>	Energy Information Administration	<b>OPEC</b>	Organisation of Petroleum Exporting Companies
<b>FGP</b>	Future growth project	<b>TCO</b>	Tengizchevroil LLP
<b>GCFS</b>	Gas compressor fuelling station	<b>TOE</b>	Tonnes of oil equivalent
<b>GDP</b>	Gross domestic product	<b>UGSF</b>	Underground gas storage facilities
<b>hydrocarbons</b>	Hydrocarbon materials	<b>UN</b>	United Nations
<b>HR</b>	Human resources	<b>WPMP</b>	Wellhead pressure management project
<b>HSE</b>	Health and safety		
<b>IFRS</b>	International Financial Reporting Standards		
<b>JSC</b>	Joint Stock Company		

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## HOT LINE OF THE SAMRUK-KAZYNA GROUP OF COMPANIES

In accordance with the Information Sharing Policy, you can report any incidents or potential incidents of theft, fraud, corruption and other violations of basic business principles or the Samruk-Kazyna Business Code.

**Telephone:** 8 800 080 19 94  
**E-mail:** sk.hotline@deloitte.kz

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## ANNUAL REPORT

