JSC NC "KazMunayGas" MANAGEMENT REPORT ON THE RESULTS OF FINANCIAL AND ECONOMIC ACTIVITIES

for twelve months ended December 31, 2018

The purpose of the document is to assist in understanding and assessing the trends and significant developments in the Group's operating and financial results. This review is based on the Group's audited consolidated financial statements and shall be read in conjunction with the audited consolidated financial statements and supporting notes. All financial data and discussions are based on audited consolidated financial statements as prepared in accordance with the International Financial Reporting Standards ("IFRS"). In accordance with the Group's accounting policies investments in joint ventures and associates are accounted for using the equity method and therefore are not consolidated line by line ("equity method treated enterprises").

All amounts in tenge are in million KZT unless otherwise indicated. The figures are rounded though specific indicators have been calculated based on actual figures before rounding.

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1. GENERAL INFORMATION

JSC NC KazMunayGas is a vertically integrated company operating for exploration, production, transportation, refining and marketing of as well as selling crude oil, gas and refined products in Kazakhstan and abroad.

KMG Int.s a state-owned oil and gas enterprise of the Republic of Kazakhstan established by the Decree No.811 of the President of the Republic of Kazakhstan dd. 20 February 2002 and by the Decree No. 248 of the Government of the Republic of Kazakhstan dd. 25 February 2005. KMG was established by the merger of CJSC National Oil and Gas Company "Kazakhoil" and National Company "Oil and Gas Transportation". As the result of the merger KMG acquired all the assets and liabilities including stakes in all businesses owned by these companies.

The shareholders of KMG are JSC NWF Samruk-Kazyna (90% minus 1 share) and the National Bank of the Republic of Kazakhstan (10% plus 1 share). The Group holds more than a quarter of Kazakhstan national market of oil and gas condensate and dominates in national oil and natural gas refining and transportation through trunk pipelines.

In the reporting period the Group's (group of companies) largest businesses are:

- JSC Ozenmunaigas and JSC Embamunaygas (oil and gas exploration and production);
- KazTransOil JSC (oil transportation);
- KazTransGas JSC (gas transportation and sales);
- KazMunayTeniz JSC (petroleum operations at sea);
- Atyrau Refinery LLP (crude oil refining);
- Pavlodar Oil Chemistry Refinery LLP (crude oil refining);
- KMG INT.nternational N.V. (refining and marketing of crude oil and refined products in Romania and countries of the Black Sea and Mediterranean basin).

Kazakhstan ranks 12th among countries with the proven reserves of oil and gas condensate 22nd among countries with natural gas reserves and 17th in terms of oil and gas production.

Significant events within the reporting period

Corporate side

Since May 10 2018 the GDRs and common shares of JSC KazMunaiGas Exploration Production (hereinafter - KMG EP) have been delisted from the London and Kazakhstan Stock Exchanges. KMG owns approximately 99.6% of KMG EP common shares.

KMG and CEFC China Energy have canceled their deal for a 51% stake in KMG Int. KMG will continue to own and manage hn with full consolidation of the performance results.

In September 2018 KTG sold a 100% interest in KTG-Tbilisi to WALTBAY LTD for $40 million.

In October 2018 KMG International N.V. (80% stake) and Societatea de Administrare a Participaţiilor în Energie S.A. (20% stake) (a company managing interest in energy sector and nominated by the Romanian Ministry of Energy) set up the joint Kazakh-Romanian Investment Fund with an initial share capital of $5 million. The Fund will focus on energy investment projects as directed by the overall KMG Int. Strategy. KMG (as parent company) has no commitments to finance the Kazakh-Romanian investment fund.

In October 2018 KMG received 50% of the common shares of Samruk-Kazyna JSC in AstanaGas KMG JSC (the project company responsible for the construction of the Saryarka Gas Pipeline to supply Astana and central and northern regions of the country with gas) in trust in order to manage this investment project considering KMG accumulated experience and expertise.

On November 13 2018 KMG EP's Board of Directors extended the redemption program for preferred shares until January 31 2019. The company redeemed 1 239 087 preferred shares or 65.04% of all preferred shares.

In November 2018 S&P Global Ratings upgraded KMG's rating from "BB-/kzA" to "BB/kzA +" with a "stable" outlook. This took Company's stand-alone credit profile from "b" to "b +".

In November 2018 Alik Aidarbayev was appointed as a Chairman of the KMG Management Board.

Within the frames of Asset portfolio privatization and optimization program the following institutes were sold within a year: KTG Tbilisi LLC for 40 Mln US Dollars JSC Kazakhstan-British Technical University (KBTU) for 11370 Mln KZT; KMG Retail LLP for 60512 Mln KZT KMG Service Georgia for 10.3 MIn US Dollars.

Operations side

In 2018 Kashagan produced 13 219 thousand tons (104 790 thousand barrels) which is 60% higher than the same period in 2017. The average daily production was 36 216 tons/day (287 thousand b/d). Production has grown due to a gas re-injection system introduced in August 2017 as well as due to an increase in equipment reliability and operating ratio.

In September 2018 the Karachaganak Project partners formally agreed to approve a Project for removal of gas production restrictions for Karachaganak Refinery. This project will allow additional 4 billion cubic meters of raw gas to be processed per year and additional 10 million tons of liquid hydrocarbons to be produced before Final Production Sharing Agreement expires. The project is scheduled to be commissioned in late 2021. Investments in Project for removal of gas production restrictions for Karachaganak Refinery will reach $ 1.1 billion.

As part of a modernization effort the AR has completed commissioning operations with facilities in pilot production mode.

In September 2018 the Shymkent Refinery completed commissioning of process units of the second (final) modernization stage with facilities in pilot production mode.

In October 2018 KTG and the recognized organization PetroChina International Company Limited signed a 5-year contract providing increase in export of Kazakhstan gas to China from 5 billion cubic meters to 10 billion a year.

Financial side

In January and April 2018 KMG received an additional two advance tranches totaling USD500 million under an arrangement to supply TCO’s crude oil signed in Dec 2017.

In April and September 2018 KMG received USD102 and USD85 mln respectively in dividends from TCO.

On April 24 2018 KMG Int.ssued 7,12 and 30.5-year Eurobonds for a total of USD 3.25 bn. In May 2018 the funds were used to redeem 4 issues of Eurobonds with a face value of USD 3.137 bn.

On May 17 2018 KMG sold its 100% stake in the chartered capital of KMG-Service Georgia LLC.

On July 2 2018 KMG repaid its Eurobonds issued in 2008 for a total value of USD 1.6 bn.

On August 6 2018 pursuant to the Agreement to Amend the Advancing Agreement signed in July 2018 KMG Kashagan B.V. received an additional advance payment of USD 600 mln. The funds were used to repay the last tranche of USD 844 mln in debt to the consortium participants for 8.44% stake in the NCP.

In October 2018 KMG made an early repayment of PJSC Sberbank loan worth USD371.4 mln.

2. BASIC MACROECONOMIC FACTORS

The main factors affecting the performance indicators of the Company are:

- fluctuations in prices of crude oil and refined products;
- impact of exchange rate changes;
- changes in oil and gas transportation rates;
- taxation.

Below are the macroeconomic indicators for 2018 that have affected the group's business.

Indicator	Measurement unit	For 12 months ended Dec 31 2018	For 12 months ended Dec 31 2017	Fluctuation	
				Abs.	%
End of period inflation (CPI in % to the corresponding month of the previous year)	%	5.3	7.1	-1.8	-25.4
Export customs duties for oil	$/ton	67	48	19	39.6
Monthly Calculation Index (MCI)	tenge	2 405	2 269	136	6.0

2.1. Changes in market prices for crude oil and refined products

Prices for crude oil and refined products in the international and local markets have a significant impact on the Company's performance results.

Change in global oil prices (USD/barrel)	For 12 months ended Dec 31 2018	For 12 months ended Dec 31 2017	Δ %
Brent	71.31	54.19	31.6
Urals	70.22	53.27	31.8

Source: Thomson Reuters

In general crude prices have been driven by a number of reasons beyond Company's will and the Company's management is unable to predict the severity of the price volatility.

The pricing dynamics for refined products in the international and local markets has been driven by a number of factors – most importantly crude oil prices demand and supply for refined products competition markets remoteness from processing businesses seasonal shortages in supply of refined products in particular in urban areas due to seasonal agricultural operations and respective re-distribution of supplies from urban to agricultural areas.

Average prices for refined products	Measurement unit	For 12 months ended Dec 31 2018	For 12 months ended Dec 31 2017	Δ %
Fuel oil	USD/ton	407	315	29.4
Naftha	USD/ton	585	467	25.3
Jet fuel	USD/ton	672	512	31.2

Average retail prices for refined products in Kazakhstan	Measurement unit	For 12 months ended Dec 31 2018	For 12 months ended Dec 31 2017	Δ %
AI 96 fuel	USD/ton	519	504	3
AI 92/93 fuel	USD/ton	489	479	2
AI 80 fuel	USD/ton	282	299	-6
Diesel fuel (summer type)	USD/ton	514	418	23
Jet fuel	USD/ton	619	539	15

Source: Argus Caspian Markets

The increase in the average annual wholesale prices for diesel fuel and jet fuel in the internal market of Kazakhstan at 2018 year-end exceeded the 2017 prices by more than 15%. The price change has been driven by the impact of refined products market of the Russian Federation and deficit at the domestic market.

The growth of average annual wholesale prices for high-octane fuels in the internal market of Kazakhstan at 2018 year-end was about 3% versus 2017. The dynamics of wholesale prices was weakened by gasoline surplus in the domestic market by the end of 2018.

With the transition to the production of light oil products of K4/K5 environmental class from Jan 1 2018 and the halt in production of AI-80 gasoline at local refineries Argus Caspian Markets no longer publishes AI-80 fuel price quotations after Feb 2018.

2.2. Changes in the foreign exchange rate

The change in the exchange rate of tenge against the US dollar has significantly affected and will continue to affect the Company's consolidated results since a significant proportion of the Company's revenues from sales of crude oil and refined products is denominated in US dollars whilst a significant portion of the Company's expenditure is in tenge. Most of the Company's borrowings and payables are also denominated in US dollars.

	Average rate for the period	**End of the period**
Over 12 months Dec 31 2018 (1 KZT vs. 1 USD)	344.7	384.2
Over 12 months Dec 31 2017 (1 KZT vs. 1 USD)	326.1	332.3

Source: National Bank of Kazakhstan

2.3. Oil and gas transportation rates

Pipeline transport of crude oil

Since most oil regions in Kazakhstan are remote from the main markets for crude oil and refined products oil producers depend on transport infrastructure as well as on access available.

The Group transports a big portion of crude oil exported and sold in the domestic market via trunk pipelines in Kazakhstan all owned by KTO subsidiary of KMG. The Group also owns 20.75% of share capital in the Caspian Pipeline Consortium.

Crude oil is transported through trunk pipelines by KTO Group of Companies under oil transportation contracts concluded with consumers as per the standard form approved by order No.266 of the Minister of National Economy of the Republic of Kazakhstan dd. March 27 2015. These contracts establish the rights and obligations of the parties during oil transportation. The Group's oil is transported through trunk pipelines of KTO Group of Companies to the domestic market and abroad together with oil of other producers.

With the adoption of amendments to the Law of the Republic of Kazakhstan "On Amendments to Certain Legislative Provisions of the Republic of Kazakhstan on Natural Monopolies and Regulated Markets" in force from May 2015 oil transportation services for transit across and outside the Republic of Kazakhstan have been removed from natural monopolies. In February 2018 KTO approved (order No. 46 order No. 47) the following rates to be charged for pipeline delivery services:

- for export outside the Republic of Kazakhstan - KZT 6 398.92 per 1 ton for every 1000 km (VAT excluded) in force from April 1 2018 to be increased by KZT 581.72 per 1 ton for every 1000 km;
- for transit across the Republic of Kazakhstan through the Kazakhstan section of the Tuymazy-Omsk-Novosibirsk-2 trunk pipeline – KZT 4 292.4 per 1 ton for every 1000 km (VAT excluded) in force from April 1 2018 to be increased by KZT 2 565.3 per 1 ton for every 1000 km;
- for transportation of Russian oil through the territory of Kazakhstan to China along the transportation route border of the Russian Federation - border of the Republic of Kazakhstan (Priirtyshk) - Atasu (Republic of Kazakhstan) - Alashankou (People's Republic of China) - KZT 3 916 per 1 ton (USD 11.36 for 1 ton).

Threshold rates to be charged for regulated delivery of oil to the internal market of Kazakhstan via trunk pipelines of KTO for 2015-2019 have been approved by the Committee on Regulation of Natural Monopolies and Protection of Competition (Order No. 347-OD dd. August 21 2015) in force from October 1 2015 as follows:

- in 2015 - KZT3 225.04 per ton per 1000 km (VAT excluded);
- in 2016 - KZT3 547.46 per ton per 1000 km (VAT excluded);
- in 2017 - KZT3 902.13 per ton per 1000 km (VAT excluded);

- in 2018 - KZT4 292.40 per ton per 1000 km (VAT excluded);
- in 2019 - KZT4 721.72 per ton per 1000 km (VAT excluded).

Gas transportation

Gas is transported through main gas pipelines and gas distribution systems by KTG Group of Companies. Main gas transportation is carried out by Intergas Central Asia as well as by joint ventures - Asian Gas Pipeline LLP Beineu-Shymkent Gas Pipeline LLP. Gas is transported through distribution pipelines by KazTransGas Aimak.

International gas transit and export rates

In accordance with the amendments made to the Law "On natural monopolies" in May 2015 gas export services have been removed from governmental regulation. Gas transit and export rates are set contractually without approval by the Committee on Regulation of Natural Monopolies and Protection of Competition.

Main transport rates for exports have been approved as follows:

- Intergas Central Asia JSC– 1 206 tenge/thousand m^3 per 100 km (VAT excluded);
- Asia Gas Pipeline LLP – 1 234 tenge/thousand m^3 per 100 km (VAT excluded);
- Beineu-Shymkent Gas Pipeline LLP – 18 071 tenge/ thousand m^3 (VAT excluded).

Rates to deliver gas through trunk and distribution pipelines in the internal market

Gas transport rates in the internal market are governed by the Committee on Regulation of Natural Monopolies and Protection of Competition in accordance with the procedure established by the law.

Main transport rates for consumers in Kazakhstan have been approved as follows:

- Intergas Central Asia JSC since January 1 2017 – 2 212.7 tenge/thousand m^3 (VAT excluded);
- Asia Gas Pipeline LLP since March 1 2016 – 3 494.4 tenge/thousand m^3 (VAT excluded);
- Beineu-Shymkent Gas Pipeline LLP since March 1 2016 – 18 071 tenge/ thousand m^3 (VAT excluded).

2.4. Refining tariffs

Starting from April 2016 three local major oil refineries (AR, PR, PKOP) began to utilize a new refining model under which the refineries provide only oil refining services at established rates and do not buy oil for refining and do not sell the refined products. These obligations now lie with oil suppliers which sell refined products independently. With a vertically integrated structure of the KMG Group and its new refining business model each business segment is now able to focus on its specific area of expertise which ultimately increases the operational efficiency of the entire KMG Group of Companies. In light of KMG's transformation and its transition from a strategic manager of the assets to an operational manager the refining business model helps refineries focus only on business aspects resulting in optimized refining operations and reduced costs.

In accordance with the Law "Concerning the introduction of amendments and additions to certain entrepreneurial regulatory acts of the Republic of Kazakhstan" dated October 29 2015 No. 376-V governmental regulation of refining fees has been removed from January 1 2017.

Average weighted tariffs in force during 2018 and the previous similar period are listed below:

Refinery	Unit of measurement	12 m 2018	12 m 2017
Atyrau Refinery LLP	tenge/ton	33 810*	23 370**
Pavlodar Oil Chemistry Refinery LLP	tenge/ton	17 250	15 429
Petro Kazakhstan Oil Products LLP	tenge/ton	19 579	12 809
JV CASPI BITUM LLP	tenge/ton	18 008	16 667

* Weighted-average- rate for the period given an increase from 31 473 tenge/ton to 37436 tenge/ton from Aug 1 2018.

** Weighted-average rate for the period given an increase from 20 501 tenge/ton to 24512 tenge/ton from Apr 1 2017.

2.5. Taxation

The table below shows established tax rates applied by the Group during the relevant periods:

Tax	31/12/2018	31/12/2017	Taxable base
Corporate Income Tax (CIT)	20%	20%	Taxable income
Value Added Tax (VAT)	12%	12%	Sale of goods works and services
Property tax	1.50%	1.50%	average annual book value of taxable items as determined according to accounting data
Land tax	variable rate depending on the purpose and quality of a land plot	variable rate depending on the purpose and quality of a land plot	land plot area
Emission fees	variable rate depending on the type of emissions	variable rate depending on the type of emissions	actual volume of emissions within and/or above the established standards for environmental emissions
Export Rental Tax	0%-32% Based on the scale tied to the oil global price	0%-32%	amount of crude oil and refined product exports
Commercial discovery bonus	0.1%	0.1%	value of reserves (crude oil gas condensate natural gas) approved by an authorized state body
Mineral Extraction Tax (MET)	0%-18%	0%-18%	value of crude oil gas condensate and natural gas produced
Excess Profit Tax (EPT)	sliding scale of 0%-60% rates	sliding scale of 0%-60% rates	portion of producer's net income defined as a difference between total annual income and deductions (in the amount of actual CAPEX if related to fixed assets) and CIT exceeding an amount equal to 25% of the amount of these deductions. EPT is calculated for each individual license contract.
Crude oil and gas condensate excise	0 tenge/ton	0 tenge/ton	the volume of crude oil and gas condensate produced and sold

Excise rates for 1 ton (in KZT) and duties					
	Dec 31 2018		Dec 31 2017		Taxable base
Excise duty on refined products	Gasoline (except for jet fuel)	Diesel fuel	Gasoline (except for jet fuel)	Diesel fuel	volume of oil products refined sold and imported
Wholesale distribution of internally produced gasoline (except for jet fuel) and diesel fuel by producers (June - October)	10 500	9 300	10 500	9300	
Wholesale distribution of internally produced gasoline (except for jet fuel) and diesel fuel by producers (November – May)	10 500	540	10 500	540	
Wholesale distribution of gasoline (except for jet fuel) and diesel fuel by companies and individuals	0	0	0	0	
Retail sales of gasoline (except for jet fuel) and diesel fuel by producers use for own business needs (June - October)	11 000	9 360	11 000	9360	
Retail sales of gasoline (except for jet fuel) and diesel fuel by producers use for own business needs (Nov – May)	11 000	600	11 000	600	
Retail sales of gasoline (except for jet fuel) and diesel fuel by companies and individuals use for own business needs	500	60	500	60	
Import	4 500	540	4 500	540	
Handover of excisable goods referred to in subparagraph 5) of Article 462 of the Tax Code which are the refined give and take raw materials (June – October)	10 500	9 300	10 500	9300	
Handover of excisable goods referred to in subparagraph 5) of Article 462 of the Tax Code which are the refined give and take raw materials (Nov – May)	10 500	540	10 500	540	
Excise duty on crude oil	Based on the scale tied to the oil global price		Based on the scale tied to the oil global price		Export volumes

The rates of mineral extraction taxes, export rental taxes and export duties on crude oil and refined products are tied to the global oil price and change accordingly. If crude oil and gas condensate are sold and/or handed over in the domestic market of the Republic of Kazakhstan including in kind towards the payment of MET, Export Rental Taxes royalties and Kazakhstan's share in products to a recipient on behalf of state or if used for internal business needs a reduction factor of 0.5 is applied to established rates.

The MET rate for natural gas is 10 percent. When natural gas is sold in the domestic market MET is paid at rates depending on the annual production volumes.

In February 2016 the Ministry of National Economy of the Republic of Kazakhstan introduced a progressive scale of export customs duties on crude oil. Under the new regulation export customs duties are calculated at an average market price of crude oil that has emerged in the world markets for Brent and Urals. In force from March 1 2016 ECD on fuel oil was reduced to $30 per ton. Based on the oil scale - at world prices below $25 per barrel the ECD rate is 0 and at world prices above $25 per barrel the ECD rate is determined in accordance with the scale.

Export rental tax is calculated based on the scale of rates when global oil prices are above USD 40 per barrel.

3. GROUP'S PERFORMANCE INDICATORS

3.1. Oil and condensate production

Performance results	Unit of measurement	For 12 months ended Dec 31 2018	For 12 months ended Dec 31 2017	Δ (+/-)	Δ %
Oil and condensate produced including shares in joint ventures	thousand tons	23 606	23 362	244	1
Gas produced including shares in joint ventures	mln. m3	8 137	7 991	145	2
Oil refined at own refineries and JV's refineries	thousand tons	19 715	18 207	1 508	8
Oil transported by trunk pipelines	thousand tons	67 961	67 864	97	0
Oil turnover	mln tons*km	62 833	63 604	-772	-1
Oil transported by sea	thousand tons	7 077	6 952	125	2
Gas transported by trunk pipelines	mln. m3	111 567	100 857	10 710	11
Scope of gas transportation activities	bn cub.m*km	56 699	47 901	8 798	18

Consolidated volume of oil and condensate produced (thousand tons)	For 12 months ended Dec 31 2018	For 12 months ended Dec 31 2017	Δ (+/-)	Δ %
	23 606	**23 362**	**244**	**1**
Ozenmunaigas JSC (100%) + KazGPZ LLP (100%)	5 488	5 488	0	0
Embamunaygas JSC (100%)	2 895	2 840	55	2
Kazakhturkmunay LLP (100%)	376	387	-11	-3
KazTransGas JSC (Amangeldy Gas) (100%)	19	21	-2	-9
Kazgermunay LLP (50%)	1 354	1 400	-46	-3
Mangistaumunaigas LLP (50%)	3 187	3 178	9	0
Karazhanbasmunay JSC (50%)	1 081	1 071	10	1
Kazakhoil-Aktobe LLP (50%)	296	351	-55	-16
Petrokazakhstan Inc (33%)	998	1 077	-79	-7
Tengizchevroil JSC (20%)	5 724	5 739	-15	0
KPO B.V. (10%)	1 095	1 125	-29	-3
KMG Kashagan B.V PCLL (50%)	1 094	686	408	60

The consolidated volume of oil and condensate production for the reporting period amounted to 23 606 thousand tons which is 244 thousand tons more than the same period last year.

During 2018 Kashagan oil production was up by 59.5% year-on-year to 1 094 thous. tonnes. Kashagan oil production was positively impacted by commissioning of crude gas reinjection system in August 2017, reliability improvement of equipment and production efficiency increase.

This increase was partially offset by lower production at PKI and KGM fields due to natural depletion restricted production at KOA fields due to the gas flaring limits in force during the reporting period (the limit was increased from September 27 2018) and due to low formation pressure.

Decrease in production at the Karachaganak field is mainly attributable to high gas-condensate factor, wells water-cut, low performance of sour-gas drying unit and planned overhaul in October 2018.

3.2. Gas production

During the reporting period the consolidated production of (associated and natural) gas across the Group reached 8 137 mln m3. The increase was 146 mln m3 or 2% versus 2017.

Consolidated volume of gas produced (associated and natural type) (mln m^3.)	For 12 months ended Dec 31 2018	For 12 months ended Dec 31 2017	Δ (+/-)	Δ %
	8 137	**7 991**	**146**	**2**
Ozenmunaigas JSC (100%) + KazGPZ LLP (100%)	630	618	16	3

Consolidated volume of gas produced (associated and natural type) (mln m^3.)	For 12 months ended Dec 31 2018	For 12 months ended Dec 31 2017	Δ (+/-)	Δ %
Embamunaygas JSC (100%)	221	198	21	11
Kazakhturkmunay LLP (100%)	161	175	-14	-8
KazTransGas JSC (Amangeldy Gas) (100%)	349	344	5	2
Kazgermunay LLP (50%)	262	280	-17	-6
Mangistaumunaigas LLP (50%)	393	378	16	4
Karazhanbasmunay JSC (50%)	249	301	-52	-17
Kazakhoil-Aktobe LLP (50%)	22	18	4	24
Petrokazakhstan Inc (33%)	195	218	-23	-10
Tengizchevroil JSC (20%)	3125	3172	-47	-1
KPO B.V. (10%)	1891	1892	-1	0
KMG Kashagan B.V PCLL (50%)	637	397	244	61

Mostly the growth for the Kashagan Project was accomplished by limitation of production until August 2017 due to the gas flaring limits and absence of gas re-injection/utilization while growth for KTG was enabled after the Ayrakty Deposit was put to test production in September 2017 with new wells at Amangeldy field brought into pilot production as well decrease at KOA field due to gas flaring limits and at TCO field due to reduced oil production in June 2018 owing to repair of sour gas injection facility lasting for 7 days as well as extension of scheduled overhaul of sour gas injection facilities for 13 days.

3.3. Gas transported by trunk pipelines

Primary export pipeline routes for Kazakhstan oil are the following:

- Atyrau-Samara pipeline (KazTransOil JSC - 100%);
- Atasu-Alashankou pipeline (KazTransOil JSC - 50%);
- Caspian Pipeline Consortium (JSC NC "KazMunayGas" - 20.75%).

KTO transports oil to the internal and export markets and provides oil transit services.

Consolidated volume of oil transported by trunk pipelines by companies (thousand tons)	For 12 months ended Dec 31 2018	For 12 months ended Dec 31 2017	Δ (+/-)	Δ %
	67 961	**67 864**	**97**	**0**
KazTransOil JSC	45 309	46 293	-985	-2
“MunaiTas” North-West Pipeline Company” LLP (51%)	1 978	1 867	111	6
Kazakhstan-China Pipeline LLP (50%)	7 999	8 269	-270	-3
Caspian Pipeline Consortium-K JSC (20.75%)	12 675	11 435	1 240	11
Oil turnover (mln tons*km)	**62 833**	**63 604**	**-771**	**-1**
KazTransOil JSC	38 040	39 823	-1 783	-4
“MunaiTas North-West Pipeline Company” LLP (51%)	776	733	44	6
Kazakhstan-China Pipeline LLP (50%)	7 304	7 805	-501	-6
Caspian Pipeline Consortium-K JSC (20.75%)	16 713	15 243	1 470	10

Oil transportation volumes have grown mainly due to higher supplies of oil from the Kashagan field. KTO pipelines delivered lower volumes of oil since Kashagan oil was relocated into the CPC system. KCP pipelines delivered lower volumes since oil from Aktobe fields was relocated to the pipelines “MunaiTas North-West Pipeline Company” LLP.

3.4. Oil transported by sea

Current primary routes for delivery of oil by sea:

- Routes via the Caspian Sea;
- Routes via the Black and Mediterranean Seas.

Consolidated volume of oil transported by sea by directions (thousand tons)	For 12 months ended Dec 31 2018	For 12 months ended Dec 31 2017	Δ (+/-)	Δ %
	7 077	6 952	125	2
Aktau-Baku		234	-234	-100
Aktau-Makhachkala	1 875	663	1212	183
Turkmenbashi-Baku		137	-137	-100
Makhachkala - Baku	863	1 447	-584	-40
Black Sea	1 861	3 024	-1 163	-38
Mediterranean	2 478	1 447	1 030	71

The increase has mostly been caused by a decrease of oil deliveries via the Aktau-Makhachkala route in 2017 as oil from Kazakhstan failed to meet the requirements of Transneft PJSC. In 2018 local suppliers agreed to deliver about 2 million tons of heavy crude oils.

Due to reduction of delivery volume to Petromidia by the Black Sea carriers were redirected to the Mediterranean Sea where outside off-schedule volumes were attracted.

The suspension of transportation in the direction of Makhachkala-Baku due to the transfer of five Caspian tankers to bareboat charter since August 2018.

3.5. Gas transportation

Gas is transported via international transit routes and to internal markets and export markets.

Consolidated volume of oil transported (mln m^3)	For 12 months ended Dec 31 2018	For 12 months ended Dec 31 2017	Δ (+/-)	Δ %
	111 567	**100 857**	**10 710**	**11**
International transit	69 173	65 801	3 373	5
Export routes	24 243	17 713	6 530	37
Internal destinations	18 151	17 344	807	5
Consolidated volume of oil transported (mln m^3)	**111 567**	**100 857**	**10 710**	**11**
Intergas Central Asia JSC	80 135	76 565	3 570	5
KazTransGas Aimak JSC	2 622	2 501	121	5
Asia Gas Pipeline LLP (50%)	24 635	19 607	5 027	26
Beineu-Shymkent Gas Pipeline LLP (50%)	4 176	2 185	1 991	91
Scope of gas transportation activities (bn cub.m*km)	56 699	47 901	8 798	18

Total volumes of gas transported increased by 10 710 million m^3 due to:

- increased gas production at KMG Kashagan;
- increased gas flows from Gazprom;
- increased supply of Central Asian gas;
- higher consumption across the Republic of Kazakhstan.
- increased transportation volumes to China.

3.6. Crude oil refining

- PR (entirely owned by KMG): balanced refining capacity is 6 million tons per year with conversion capabilities as high as 78.56% in the reporting period;
- AR (99.49% belongs to KMG): rated refining capacity is 5.5 million tons per year with conversion capabilities as high as 68.24% in the reporting period;
- Shymkent Oil Refinery (PKOP 49.73% owned by KMG): design capacity is 6 million tons per year with conversion capabilities as high as 74.36% in the reporting period;
- CaspiBitum (50% owned by KMG): road bitumen plant using Karazhanbas oil as feedstock. Design refining capacity is 1.0 mln tons per year.
- KMG Int. (Rompetrol Rafinare) includes two refineries Petromidia and Vega and Petrochemicals facility:
    - Petromidia - (entirely owned by Rompetrol Rafinare S.A.) 5 mln tons per year of design capacity.

- Vega Refinery - (entirely owned by Rompetrol Rafinare S.A.) 500 thousand tons per year of design capacity. Vega is the only company in Romania that converts alternative types of feedstock (naphtha heavy hydrocarbon fractions fuel oil).

thousand tons	For 12 months ended Dec 31 2018	For 12 months ended Dec 31 2017	Δ (+/-)	Δ %
	19 715	**18 207**	**1508**	**9**
Atyrau Refinery LLP	5 268	4 724	544	12
Pavlodar Oil Chemistry Refinery LLP	5 340	4 747	593	12
Petro Kazakhstan Oil Products LLP (50%)	2 366	2 343	23	1
JV CASPI BITUM LLP (50%)	409	359	50	14
KMG INT.nternational N.V. (Rompetrol Rafinare)	6 331	6 035	296	5

Refining volumes increased due to:

- AR – staged completion of refinery modernization and extension of mean time before failure;
- PR – completion of refinery modernization;
- KMG Int. (Petromidia and Vega refineries) – low volumes in 2017 due to petromidia capacity loss because of weather conditions in the first quarter, Reformer shutdown in February refinery overhaul in May. Nevertheless change in refined crude oil composition and positive effects after implementation of initiatives on optimization at the refinery during the reporting period;
- PKOP – completion of modernization commissioning increase of hydroskimming capacity in 2018;
- CaspiBitum – increase in crude oil refining volume in accordance with the applications of the supplier of crude on processing terms – Karazhanbasmunai JSC.

3.7. Sale of crude oil refined products and gas

Sale of KMG's produced oil

thousand tons	For 12 months ended Dec 31 2018			For 12 months ended Dec 31 2017		
	Export	Internal market	Total	Export	Internal market	Total
Operating assets*	8 773	6 980	15 752	9 727	6 169	15 896
Mega-projects**	7 971	12	7 983	7 525	3	7 529
Total	**16 744**	**6 991**	**23 735**	**17 252**	**6 173**	**23 424**

* Ozenmunaigas JSC Embamunaygas JSC Mangistaumunaigas LLP Karazhanbasmunay JSC Kazgermunay LLP PetroKazakhstan Inc. Amangeldy Gas Kazakhoil-Aktobe LLP Kazakhturkmunay LLP;
** Tengizchevroil JSC KPO B.V. KMG Kashagan B.V PCLL.

The main reason of sales increase is the appointment of TH KMG N.V. in June 2017 as the affiliated trader of the Republic of Kazakhstan and KMG to administer procurement and sales of Karachaganak oil.

Sale of refined products

In the reporting period KMG, KMG EP, KMG O, KMG A, PR and KMG Int. were the companies selling refined products.

thousand tons	For 12 months ended Dec 31 2018	For 12 months ended Dec 31 2017	Δ (+/-)	Δ %
Wholesale	**8 730**	**6 212**	**2 518**	**41**
Light oil products	4 328	3 552	776	22
Dark oil products	3 369	1 663	1 706	103
Petrochemicals	117	107	10	9
Liquefied gas	272	250	22	9
Misc	645	641	4	1
Retail sales	**2 509**	**2 342**	**167**	**7**
Light oil products	2 349	2 182	167	8
Liquefied gas	158	156	1	1

Other	2	3	-1	-33
Total	**11 239**	**8 554**	**2 685**	**31**

thousand tons	For 12 months ended Dec 31 2018	For 12 months ended Dec 31 2017	Δ (+/-)	Δ %
Sale of domestic refined products	**2 894**	**2 544**	**350**	**14**
Wholesale distribution*	1 561	1 313	248	19
Retail sale	1 333	1 231	102	8
KMG INT.NT.'s sale of refined products	**8 345**	**6 010**	**2 335**	**39**
Wholesale distribution	7 169	4 899	227	46
Retail sale	1 176	1 111	65	6
Total	**11 239**	**8 554**	**2 685**	**31**

* except for volumes sold in bulk to KMG's fuel stations

The wholesale trade volumes increased due to greater sales of dark oil products in particular fuel oil by KMG Int. to Asian market as well as increased sales of light refined oil products: gasoline and diesel fuel due to increased production at Kazakhstan refineries owing to completion of refineries modernization.

Gas sale

Natural gas sales are primarily delivered by KTG. The company does wholesale purchases of natural gas for the domestic market, delivers gas via regional gas distribution systems, operates gas distribution facilities and networks and sells natural gas to the internal market.

Gas sales

mln.m^3	For 12 months ended Dec 31 2018	For 12 months ended Dec 31 2017	Δ (+/-)	Δ %
Export sale	8 917	4 949	3 968	80
Sale to internal market	13 999	12 793	1 206	9
Total	**22 916**	**17 742**	**5 174**	**29**

Export sale growth was driven by an increase in gas sales to China, Kyrgyzstan and Russia. Sales in the internal market have been driven by growing numbers of consumers and higher production volumes in the regions.

4. GROUP'S FINANCIAL FIGURES

mln tenge	For 12 months ended Dec 31 2018	For 12 months ended Dec 31 2017	Δ (+/-)	Δ %
Revenues from sale of products and services	6 988 964	4 793 763	2 195 202	46
Cost of goods sold and services provided	-5 353 492	-3 704 457	-1 649 036	45
Gross profit	**1 635 472**	**1 089 306**	**546 166**	**50**
G&A	-247 128	-200 434	-46 694	23
Shipping and sale costs	-659 447	-440 568	-218 879	50
Impairment of fixed assets exploration assets and intangible assets net	-165 522	-24 660	-140 863	571
Revenue/(loss) from retirement of fixed assets net	-3 517	-3 815	298	-8
Other revenues/(losses)	-1 109	-13 431	12 322	-92
Operating profit	**558 749**	**406 398**	**152 351**	**37**
Foreign exchange gain/loss net	-38 320	67 055	-105 374	-157
Financial revenue	161 027	122 574	38 453	31
Financial expenditure	-427 655	-306 355	-121 300	40
Impairment of investments in joint ventures and associates		14 845	-14 845	-100
Impairment of assets classified as held for sale	-168	-68	-101	149
Revenue/(loss) from retirement of subsidiaries	18 359		18 359	
Share in revenues/(losses) of companies treated under equity accounting method	697 326	414 950	282 376	68
Pre-tax revenue/(loss)	**969 318**	**719 399**	**249 919**	**35**
Corporate income tax expenditure	-279 260	-190 285	-88 975	47
Revenue/(loss) from discontinuing operations	3 453	-3 666	7 119	-194
Net revenue/(loss)	**693 511**	**525 448**	**168 063**	**32**

4.1. Revenues

Revenues from product sales and service provision

mln tenge	For 12 months ended Dec 31 2018	For 12 months ended Dec 31 2017	Δ (+/-)	Δ %
Refined products sales	2 117 883	1 393 082	724 801	52
Crude sales (including Crude Quality Bank)	3 321 194	2 313 189	1 008 005	44
Commercial-grade gas sales	772 726	363 856	408 870	112
Oil transported	165 911	169 371	-3 459	-2
Gas transported	140 429	155 559	-15 131	-10
Oil refined	175 618	129 067	46 551	36
Oilfield services	75 309	72 641	2 668	4
Other	219 894	196 996	22 898	12
Total	**6 988 964**	**4 793 763**	**2 195 202**	**46**

Volumes of products sold and services provided

	Unit of measurement	For 12 months ended Dec 31 2018	For 12 months ended Dec 31 2017	Δ (+/-)	Δ %
Refined products sales	thousand tons	11 249	8 755	2 495	28
Crude sales	thousand tons	18 319	17 665	653	4

Commercial-grade gas sales	mln cub. m³.	23 269	17 752	5 517	31
Oil transported by trunk pipelines	thousand tons*km	32 218	39 952	-7 734	-19
Gas transported	mln m³*km	59 255	58 241	1 014	2
Oil refined	thousand tons	12 344	10 804	1 540	14

Average estimated prices

	Unit of measurement	For 12 months ended Dec 31 2018	For 12 months ended Dec 31 2017	Δ (+/-)	Δ %
Refined products sales	KZT per ton	188 266	159 122	29 144	18
Crude sales	KZT per ton	181 299	130 944	50 355	38
Commercial-grade gas sales	KZT per thousand m³	33 208	20 496	12 712	62
Oil transported by trunk pipelines	KZT per ton	4 839	4 029	811	20
Gas transported	KZT per thousand m³	2 370	2 671	-301	-11
Oil refined	KZT per ton	14 227	11 947	2 280	19

Crude sale revenues take up a significant share in a revenue structure. The growth in revenues was triggered by larger sales volumes increasing world prices for Brent crude (Brent Crude price during the reporting period was $71.3 per barrel in 2017 - $54.2 per barrel) and dollar exchange rate during the reporting period.

Main reasons of increase:

- Refined products sales – increase of Platt's quaotations for gasoline and diesel fuel and increased sales of Petromidia refined products by KMG Int. due to more favorable weather conditions, increase refined products trading mainly in the Asian market owing to higher demand;
- Commercial gas sales – increased gas sales to China, increased sales to Kyrgyzstan and Russia, increased number of local consumers and production volumes in regions;
- Oil transportation – increased transportation tariffs (export tariff increase from 5 817.2 to 6 398.9 KZT per 1 ton per 1000 km from 1 april 2018 (excl.VAT); local market by 10% from 1 January 2018);
- Raw hydrocarbons conversion – increased refining volumes in accordance with the production plans approved by the Ministry of Economy of the Republic of Kazakhstan and increased tariff for oil refining: PR (2017 – 15 429 KZT/ton 2018 – 17 250 KZT/ton); AR (2017 – 23 370 KZT/ton 2018 – 33 810 KZT/ton).

In this revenues from gas transportation declined due to reduction of export gas transportation through Central Asia Central pipeline by TCO as well as revenues from international transit due to reduction of Central Asian gas transit as a result of reduced supply of Uzbek gas for PJSC “Gazprom”.

4.2. Expenditure

Cost of goods sold and services provided

mln tenge	For 12 months ended Dec 31 2018	For 12 months ended Dec 31 2017	Δ (+/-)	Δ %
Materials and reserves	1 381 812	876 232	505 580	58
Crude oil raw gas and gas products	2 931 146	1 853 281	1 077 865	58
Payroll costs	291 693	311 973	-20 279	-7
Depreciation and amortization	248 453	197 858	50 595	26
MET	115 968	93 569	22 399	24
Repair and maintenance	41 897	42 658	-761	-2
Electric power	71 913	63 083	8 830	14
Other taxes	71 638	59 170	12 468	21
Transportation costs	21 988	15 685	6 303	40
Other	176 983	190 948	-13 964	-7
Total	**5 353 492**	**3 704 457**	**1 649 036**	**45**

Consolidated costs for the reporting period have grown by 45% versus 2017.

Basic reasons why the cost figures went up:

- Increased costs for materials and reserves was driven by larger purchases of refined products for resale to the high-demand Asian market. Another factor includes KMG Int.'s growing costs of purchasing oil for refining which resulted from bad weather conditions in Jan-Feb in the reporting period of 2017 so Petromidia Refinery had to operate at minimum capacity (the Midia Sea Terminal was closed with train and highway transportation under limitations). The costs grew because of increase in gasoline and diesel fuel quotations compared to last year;
- Increased costs for crude oil gas and refined products because of larger volumes of oil purchased for resale as well as due to changes in the oil prices (Brent crude in the reporting period reached $71.3 per barrel in 2017 – 54.2 dollars per barrel). The growth in trading operations was driven by the appointment of TH KMG N.V. in July 2017 as an affiliated trader of the Republic of Kazakhstan and KMG to administer sales of Karachaganak oil;
- Depreciation costs were driven upwards by the new plants commissioned at the refineries (as plants were put back into operation after modernization) as well as delivery of investment projects and acquisition of new assets;
- MET expenditure grew due to higher global oil prices (Brent crude in the reporting period reached $71.3 per barrel in 2017 – 54.2 dollars per barrel);
- Electric power expenditure showed an increase driven by higher consumption as newly commissioned facilities at the AR and PR stepped in and average rates went up;
- Other taxes increased because commercial discovery bonus costs were accrued for Uzen-Karamandybas as a result of recalculation of reserves for this field. The increase in property tax expenses was driven by KTG, AR and PR investment projects commissioned in 2018. Emission fees and excise tax costs went up due to growth in production and sales of excisable petroleum products in 2018 vs. 2017;
- Transportation costs increased with larger work volumes and higher fees for transport services.

There is a decline in a payroll costs in the reporting period, in cause of a reduction in the average number of production personnel (from 63,322 units in 2017 to 60,357 units in 2018), mainly due to the reorganization of ANS, as well as integration of EP KMG and Head office KMG

At the same time the other expenditure figures have gone down since compensation payments and social tax payments for staff of oilfield service companies (Oil Services Company LLP, Oil Construction Company LLP, Oil Construction Company LLP, Munaitelecom LLP, Mangistauergomunai LLP) had been postponed due to employment contracts under the 5/50 program terminated by agreement of the parties had been transferred from the cost item "other" to the G&A item "other" as recommended by the audit company. Another factor includes creation of reserves for the EMG Environmental Fund in 2017.

G&A

mln tenge	For 12 months ended Dec 31 2018	For 12 months ended Dec 31 2017	Δ (+/-)	Δ %
Payroll	73 632	77 572	-3 940	-5
Impairment of VAT recoverable	4 215	-24 158	28 373	-117
Advisory services	22 435	19 523	2 911	15
Depreciation and amortization	20 168	23 432	-3 264	-14
Taxes	13 475	13 223	252	2
Charity	1 699	1 225	474	39
Penalties fines and late charges	433	0	433	
Impairment provisions for trade receivables	-1 489	1 056	-2 545	-241
Provisions for taxes fines and late charges	29 836	-4 212	34 048	-808
Impairment provisions for other current assets	1 225	-120	1 345	-1 118
Inventory impairment provision	4 339	345	3 995	1 158
Unoffset VAT (proportional method)	3 031	7 923	-4 892	-62
Non-payroll social benefits (including taxes and pension contributions)	24 095	28 024	-3 930	-14
Other	50 033	56 602	-6 569	-12
Total	**247 128**	**200 434**	**46 694**	**23**

G&A for the reporting period reached 247 billion tenge which is 23% higher than the last year.

The main reasons for growth:

- Provisions for taxes fines and penalties had to grow due to a negative amount in 2017 which built up after OMG made a reversing entry on CIT and sales tax provisions as directed by a positive decision of the Court of the City of Astana to challenge the results of the 2009-2012 tax audit. In addition the audit conducted by the Department of Environment for the period from 11/01/17 to 12/06/18 had resulted in provisions for EMG fines and penalties in relation to environmental violations during the reporting period pursuant to the Code of Administrative Offenses of the Republic of Kazakhstan. Another factor was that in the reporting period KMG O received an additional provision for comprehensive tax audit by tax authorities of Astana covering 2012-2015.
- Increased expenditure for impairment of VAT recoverable is related to a reversing entry on the 30 bln tenge provision for VAT recoverable in 2017.
- Increased inventory impairment provisions is mostly related to KMG Int. business (in 2018 a reversing entry was made on an earlier written off provision for payables for shipments of refined oil products).
- Advisory service expenses mostly for KMG EP went up due to consulting services offered in order to have KMG EP delisted from the London Stock Exchange and to assess reserves while KTG expenses showed an increase driven by higher costs of the Eurobond issue services which were to do with a rating in 2018. Another factor included a delivery of KMG Transformation Program specifically the “Transformation of Core Business Functions and ERP Introduction” project for head office KMG.

Sales costs

mln tenge	For 12 months ended Dec 31 2018	For 12 months ended Dec 31 2017	Δ (+/-)	Δ %
Rent tax	145 523	83 183	62 340	75
Customs duties	131 128	105 302	25 826	25
Shipping (transportation)	317 402	189 949	127 453	67
Payroll	16 180	16 103	77	0
Depreciation and amortization	12 019	14 020	-2 001	-14
other	37 195	32 011	5 184	16
Total	**659 447**	**440 568**	**218 879**	**50**

Consolidated transportation and sales expenditure for the reporting period grew by 50% primarily in response to higher transportation costs. This growth was driven by a higher volume of gas shipped to China through the Beineu-Shymkent trunk line and an increase in the costs of transporting petroleum products which was mainly triggered by higher railway tariffs in force from August 1 2017. Another factor was rent tax and ECD costs due to world oil price increase (in the reporting period Brent Crude reached $71 per barrel and $54 per barrel in 2017). Pursuant to the laws of the Republic of Kazakhstan ECD and rent tax rates vary with the Brent price. In addition in 2018 a higher volume of exports of refined products resulted in higher ECD costs.

4.3. Share in JCEs’ and associates’ profits

mln tenge	For 12 months ended Dec 31 2018	For 12 months ended Dec 31 2017	Δ (+/-)	Δ %
Tengizchevroil LLP	439 149	289 980	149 169	51
Mangystau Investments B.V.	95 510	49 605	45 905	93
“JV “Kazgermunai” LLP	27 915	17 713	10 201	58
PetroKazakhstan Inc.	14 591	7 234	7 357	102
"KazRosGas" LLP	5 254	8 622	-3 368	-39
KazakhOil Aktobe LLP	9 057	-16 788	25 845	-154
Ural Group Limited	-18 822	-1 877	-16 945	903
Beineu-Shymkent Trunk Gas Pipeline	16 710	-669	17 379	-2 599
CPC	57 965	54 666	3 299	6

mln tenge	For 12 months ended Dec 31 2018	For 12 months ended Dec 31 2017	Δ (+/-)	Δ %
KMG Kashagan B.V.	34 034	-10 208	44 242	-433
Valsera Holding B.V.	-7 989	9 751	-17 740	-182
Teniz Service	13 897	1 653	12 243	740
other	10 056	4 883	5 173	106
Total	**697 326**	**414 565**	**282 761**	**68**

At 2018 year-end the share of JVs' and associates' profit versus 2017 increased by KZT 283 billion or 68%.

The main reasons for growth:

- of share in TCO, MMG, KOA is increase in average price of oil in 2018;
- of share in the BSGP was driven by the full recovery of the accumulated unrecognized share in the loss of the BSGP at 2017 year-end;
- of share of KMG Kashagan B.V. went up in response to higher production in the reporting period as production was under limitation until August 2017 with limits imposed on gas flaring volumes and absence of gas re-injection/utilization;
- of share in TS produced more profit because the Cargo Transportation Route project commissioned more facilities services were launched and volumes for other projects went up.

Among other things the shares in UGL and Valsera's was decreased due to the adjustment of capitalized costs of loans issued by the parent company.

For 2018 KMG received KZT 160 061 million in dividends from joint ventures and associated companies which is by KZT 111702 million or by 41% less than the same period last year. The main reason for the decline is the payment of dividends for 2017 in December 2017 by MMG.

mln tenge	For 12 months ended Dec 31 2018	For 12 months ended Dec 31 2017	Δ (+/-)	Δ %
Dividends received from JVs and Associates net value	160 061	271 783	-111 722	-41

4.4. Income tax expenditure

mln tenge	For 12 months ended Dec 31 2018	For 12 months ended Dec 31 2017	Δ (+/-)	Δ %
Current income tax:				
Corporate income tax	160 010	110 916	49 094	-31%
Excess profit tax	-1 128	5 137	-6 264	-556%
Tax at source for dividends received	25 517	21 967	3 550	-14%
Deferred income tax:				
Corporate income tax	10 093	25 449	-15 357	152%
Excess profit tax	-7 850	-1 275	-6 575	-84%
Tax at source for dividends received	92 617	29 835	62 782	-68%
Total	**279 260**	**192 030**	**87 230**	**-31%**

For the year ended December 31 2018 the Company's income tax expenditure reached KZT 279 billion which is 31% higher than 2017. This is due to an increase in taxable income as average world prices for oil (in the reporting period Brent Crude reached $71.3 per barrel and $54.19 per barrel in 2017) and exports of gas went up. As EMG offset the value of fixed assets it reversed an earlier accrued EPT of 4 411 million tenge for 2017. In the reporting period head office KMG's was charged 23815 million tenge in withholding taxes which also included TCO dividends, deposit interests, loans issued as well as capital rewards and additional tax on CPC-K (6 781 million tenge). The resulting effect of temporary differences in the assessment of assets and liabilities led to changes in a deferred income tax which also includes a recalculated deferred withholding tax on TCO dividends at the consolidation level. Modification in EPT calculation practices - as it relates to an application of Tax Code requirement of a one-time deduction of accumulated costs amount from January 1 2009 to January 1 2018 – led to the recalculation of a deferred EPT.

4.5. Revenue/(loss) from discontinuing operations

This article reflects the indicators of KMG Ustyurt LLP, Kazakhstan-British Technical University LLP less intra-group transactions with the Group's companies. The profit from discontinued activities at year-end 2018 amounted to 3.5 billion tenge which is growth by 7.1 billion tenge versus 2017. The primary reason is that a 50% interest in the authorized capital of KMG Ustyurt LLP was sold to Union Field Group Ltd (British Virgin Islands) in January 2018.

4.6. Liquidity and capex

Debt liabilities

Group's net debt was 2167 billion tenge as of December 31 2018 versus 1344 billion tenge as of December 31 2017. The increase in net debt was due to a decrease in short-term portion of bank cash deposits in response to the redemption of KMG EP's own shares and the servicing of TCO's oil advance payment liabilities.

Group's total debt was KZT 4153.2 billion at the end of the reporting period versus KZT 4301.3 billion as of the beginning of the reporting period. Total debt as of December 31 2018 decreased by 3.4% versus the figure as of December 31 2017 and reached KZT 4153.2 billion. Debt was reduced primarily due to the redemption of 1.6 billion US dollars in Eurobonds (equivalent to 545.7 billion tenge) and the repayment of SB Sberbank of Russia JSC loan in full which is 400 million US dollars equivalent to 145.8 billion tenge. That being said we should note that despite debt reduction we also attracted some loans including those needed to refinance Eurobonds a syndicated loan of KTG drawdown of existing facilities for plant modernization and regional gasification projects plus there was the effect of exchange rate differences.

In the mid-run the debt may organically be reduced thanks to free cash flows generated depending on the oil price dynamics.

mln tenge	As of 31/12/2018	As 31/12/2017
Long term portion	3 822 648	3 417 112
Short-term portion	330 590	884 140
Total debts	**4 153 238**	**4 301 252**
Cash and cash equivalents	1 545 848	1 266 605
Short-term bank deposits and portion of long-term bank deposits	440 867	1 690 402
Net debt (Total debt – Cash and Short-Term financial Assets)	**2 166 522**	**1 344 245**

Liquidity

During the reporting period the Group's cash balance decreased from 2960 billion tenge (as of December 31 2017) to 1987 billion tenge (as of 31 December 2018). Primary reasons were the redemption of KMG EP's own shares and the scheduled redemption of KMG's Eurobonds for a total amount of more than 1.2 trillion tenge.

Liquidity and trend outlooks

The company expects that the forecast consolidated liquidity will decrease by the end of 2019 but will still remain adequate to cover current expenses and liabilities. At the same time if the price of oil is reduced significantly or decisions are made to deliver new investment projects and/or there are other significant events that are not foreseen in the Company's current plans the forecast liquidity may tend to drop.

Capex

Group's capex include expenditures on investment projects maintenance of the current production levels and other expenses (administrative and social). In the reporting period capex figures were 628 billion tenge which is 40 billion tenge less than in 2017.

Capex by basic business areas:

mln tenge	For 12 months ended Dec 31 2018	For 12 months ended Dec 31 2017	Δ (+/-)	Δ %
Oil and gas exploration and production	180 033	145 761	34 272	24
Oil transportation	65 106	74 817	-9 711	-13
Gas transportation	156 897	140 487	16 410	12
Refining and sale of crude oil and refined products	203 702	291 487	-87 785	-30
Other	22 338	16 089	6 249	39
Total	**628 075**	**668 641**	**-40 566**	**-6**

- In 2018 oil and gas exploration and production capex amounted to 180 billion tenge which is 34 billion tenge more than in 2017. Excess expenditures resulted from bulk purchases of fixed assets used in operating and exploratory drilling for EMG and OMG. There was an increase in the costs of maintaining business assets as drilling and construction workload got higher with some volumes carried over from 2017 and costs accrued on wells in drilling;
- Oil Transportation segment showed less costs as such projects as Construction of Three Flat Top Barges of the MSV class for TCO FGP and Construction of Three Tugboats for TCO by KMTF were launched early 2017. Expenditures on these projects in the reporting period were less versus 2017;
- Gas Transportation segment showed higher capex figures as there was an increase in KTG expenditure for the investment project “Construction of three compressor stations at main gas pipeline Beineu-Bozoi-Shymkent” due to early completion construction and commissioning of two out of three compressor stations (CS Aral and CS Turkestan);
- Costs of Refining and Sale of Crude Oil and Refined Products went down mostly because AR and PR Modernization Projects were completed and primary commissioning and construction activities were delivered in 2017.

GLOSSARY

KMG INT.nt.– KMG INT.nternational N.V. an integrated Romanian oil and gas company
Fund - JSC "National Welfare Fund "Samruk-Kazyna"
ANS - Aktaunefteservis (ANS group: Oil Service Company LLP Oil Construction Company LLP Oil Transport Corporation LLP Mangistauenergomunai LLP Munaitelecom LLP)
AGP - Asia Gas Pipeline (trunk gas pipeline for transportation of the Central Asian gas to China)
AR - Atyrau Refinery
BGR-TBA - Bukhara Gas-bearing area–Tashkent–Bishkek–Almaty
BBS – "Beineu-Bozoi-Shymkent" trunk line
Group - JSC "National Company "KazMunayGas" and the legal entities where fifty or more percent of the voting shares (interest) are directly or indirectly owned or beneficially owned by JSC "National Company "KazMunayGas" and the legal entities whose operation KMG Int.s entitled to control.
SDE - subsidiary dependent entity
SGI/SGP - Sour Gas Injection/Second Generation Plant
KTM - Kazakhturkmunay LLP
KTG – KazTransGas LLP
KRG - KazRosGas LLP
KMG the Company - JSC "National Company "KazMunayGas"
KMG Karachaganak - KMG Karachaganak LLP
APC - aromatics production center
KPIs - key performance indicators
KTG - "KazTransGas" JSC
KMTF - "NMSK" Kazmotransflot "LLP
KOA - KazakhOil Aktobe LLP
CPC - Caspian Pipeline Consortium (trunk oil pipeline from transporting oil from the Tengiz field to the port of Novorossiysk)
KTO - JSC "KazTransOil"
KMG O - KMG-Onimderi JSC
KMG Aero - KazMunayGas-Aero LLP
Head office KMG - corporate central office of JSC NC "KazMunayGas"
TOP – trunk oil pipeline
TGP – trunk gas pipeline
MoE RK - Ministry of Energy of the Republic of Kazakhstan
MET - minerals extraction tax
MMG – Mangystaumunaygas JSC
OPEs – oil-producing entities
EPT – excess profit tax
EMG - Embamunaygas JSC
OMG - Ozenmunaigas JSC
Refineries – oil refineries
WPCP/FGP - well-head pressure control project/future growth project of the Tengiz field
SUF – start-up facility
PKOP - PetroKazakhstan Oil Products JSC the owner of the Shymkent Refinery
PR - Pavlodar Refinery
DED - design-and-estimate documentation
KMG EP - KazMunaiGas Exploration Production JSC
JCE – jointly-controlled entity
NCP - The North Caspian Project
CIW - construction-and-installation works
JV - joint venture
SEFDR - self-elevating floating drilling rig
PSA - production sharing agreement
TCO – Tengizchevroil LLP
HCs - hydrocarbons
RWCs - raw hydrocarbons
ECD – Export customs duty
CaspiBitum - JV CaspiBitum LLP
BSGP - Beineu-Shymkent Gas Pipeline LLP