

## ANNEX 2 KEY SUSTAINABLE DEVELOPMENT INDICATORS

### Environmental Indicators

	Upstream			Midstream			Downstream		
	2016	2017	2018	2016	2017	2018	2016	2017	2018
<b>Greenhouse gas emissions</b>									
Greenhouse gases direct emissions (CO <sub>2</sub> , mln ton) <sup>1</sup>	2.8	2.7	2.5	0.7	1.6	2.4	4.1	4.2	4.4
Greenhouse emissions intensity (ton CO <sub>2</sub> per 1,000 ton HCS)	115	110	101	–	–	–	219	221	–
<b>APG combustion</b>									
Flame combustion (mln ton CO <sub>2</sub> )	0.7	0.7	0.3	–	–	–	–	–	–
Number of combusted gas per unit of extracted HCS (ton per 1,000 ton of extracted HCS)	12.0	11.0	6.0	–	–	–	–	–	–
Flame combustion (mln m <sup>3</sup> )	332.9	315.8	148.9	–	–	–	–	–	–
<b>Energy consumption (mln gigajoule)</b>									
Power capacity	40.7	39.1	55.2	32.3	37.4	55.6	40.2	43.0	56.8
<b>Pollutant emissions</b>									
Sulfur oxides (SO <sub>x</sub> ) (thousand ton SO <sub>2</sub> )	9.0	7.8	6.7	0.4	0.2	0.2	7.5	6.8	6.5
Nitrogen oxides (NO <sub>x</sub> ) (thousand ton NO <sub>2</sub> )	5.8	5.9	4.8	3.2	3.5	5.5	3.5	3.9	5.9
<b>Spillages</b>									
Illegal tapping – volume (thousand ton)	–	–	–	–	–	–	–	–	–
Illegal tapping – quantity	1	–	–	3	6	1	–	–	–
Oil spillages – volume (ground) (thousand ton)	1.6	1.7	0.78	–	–	0.005	–	–	0.063
<b>Water</b>									
Total amount of water withdrawal (mln m <sup>3</sup> )	49.6	49.4	52.2	29.2	30.9	33.5	10.7	12.2	16.2
Water discharge – volume (mln m <sup>3</sup> )	0.8	1.1	1.1	1.2	1.4	1.0	6.8	6.5	8.8
<b>Wastes</b>									
Hazardous (thousand ton)	195	273	220.6	8.8	8.9	2.9	38	41.2	39.1
Unhazardous (thousand ton)	6.7	2.7	5.9	6.6	3.4	5.2	11	6.6	8.0
Total wastes (thousand ton)	201.7	275.7	226.5	15	15.4	8.1	49	47.8	47.1
* among them drilling wastes, ground (thousand ton)	151	186	174.2	–	–	–	–	–	–
* among them drilling wastes, sea (thousand ton)	0	2.05	2.2	–	–	–	–	–	–

<sup>1</sup> Direct GHG emissions by Company business areas were rounded to decimal places. In this regard, the amount of emissions by areas slightly differs from the total values of emissions presented in the section "Greenhouse gas emissions"

\* Values by indicators in this table are presented by KMG business areas and their summation may not correspond to the total volumes / values relevant indicators presented in the text of the Report, since this breakdown does not take into account the reallocation of resources within the KMG group of companies and does not provide data in the "Service" business area.

## Environmental expenses\*

	Expenses	2015		2016		2017		2018	
		mln KZT	mln USD	mln KZT	mln USD	mln KZT	mln USD	mln KZT	mln USD
<b>1</b>	<b>Expenses related to waste management, emission and discharges clearing, total</b>	<b>4,719.8</b>	<b>21.2</b>	<b>6,682.8</b>	<b>19.5</b>	<b>10,929.4</b>	<b>33.5</b>	<b>11,844.6</b>	<b>34.3</b>
1.1	Waste disposal and processing	1,858.1	8.4	2,330.6	6.8	5,285.1	16.2	5,833.9	16.9
1.2	Emissions and discharges clearing	2,515.1	11.3	3,778.3	11.0	5,398.4	16.5	4,531.5	13.1
1.3	Expenses for development and confirmation of document package on greenhouse gas emissions	79.9	0.4	52.6	0.15	91.5	0.3	104.4	0.3
1.4	Ecological insurance	238.0	1.0	365.5	1.1	97.2	0.3	58.6	0.2
1.5	Expenses for liquidation of environmental damage, including expenses for oil spill response	27.8	0.1	152.1	0.45	1.3	0.004	1,278.8	3.7
1.6	Expenses for compensatory measures in the area of environment protection	n/a	n/a	n/a	n/a	55.8	0.17	34.3	0.1
<b>2</b>	<b>Expenses for prevention of environmental impact and Environmental management, total</b>	<b>1,367.2</b>	<b>6.2</b>	<b>1,394.7</b>	<b>4.08</b>	<b>1,398.7</b>	<b>4.3</b>	<b>1,035.8</b>	<b>3</b>
2.1	Staff for employees education and training	9.7	0.04	246.3	0.7	76.4	0.2	58.6	0.17
2.2	Management systems external certification	62.9	0.25	47.2	0.11	50.7	0.2	47.8	0.14
2.3	Staff for general activity in the area of Environmental management	4.3	0.02	2.1	0.006	3.7	0.01	2.6	0.008
2.4	Research and developments	376.1	1.7	263.1	0.76	839	2.6	548.5	1.6
2.5	Additional expenses for introduction of cleaner technologies	6.5	0.03	0.0	0.0	0	0	158.4	0.5
2.6	Additional expenses for “green purchases”	5.1	0.02	6.1	0.01	68.7	0.2	2.3	0.007
2.7	Other expenses related to environmental management	902.9	4.0	835.7	2.4	360	1.1	217.6	0.6

\* Disaggregated indicators may differ slightly from aggregate indicators due to rounding to decimal places

## Environmental payments (standard)

	2015		2016		2017		2018	
	mIn KZT	USD	mIn KZT	USD	mIn KZT	USD	mIn KZT	USD
Atmospheric emissions due to APG flame combustion	3,340	15,063,365	4,325	12,655,820	3,886	11,917,244	1,998	5,795,192
Atmospheric emissions (without APG flame combustion)	1,087	4,902,359	1,064	3,113,478	1,217	3,733,852	1,424	4,133,201
Water pollution	38	171,379	40	117,048	43	131,125	47	135,858
Waste disposal	514	2,318,135	412	1,205,595	178	547,228	259	753,902

## Affected kinds of flora and fauna on specially protected natural reservations

Kind of flora and fauna	Kenderli-Sayanskaya state conservation area	Ustyurt state nature reserve	Novinskiy reserve	Conservation area of the North part of the Caspian Sea	State integrated nature reserve "Kokzhide-Kumzhargan"
Vegetation	20 (13)	336 (5)	4	229 (54)	94
Birds	10	166 (18)	27	466 (63)	75
Animals, including	18		3		
Mammals	17	29 (8)		125 (41)	44
Reptiles		15 (1)		20 (9)	8
Fish				133 (27)	

\* In brackets: number of species, listed in the Red Book of the RoK.

## Indicators of social aspects

	2016	2017	2018
Actual number of employees, people	90,267	84,061	78,933
Employees, detailed by gender, including:			
women, %	21	19.2	18.8
men, %	79	80.8	81.2
Employee turnover rate, %	13.8	14	14
Lost time injury rate (LTIR)	0.49	0.42	0.32
Fatality rate (FAR)	4.5	3.25	0.65

## Actual number of employees at the end of 2018

Indicators	men			women			Total	Share of each category in total number of employees, %
	under 30 years	from 30 to 50 years	older than 50 years	under 30 years	from 30 to 50 years	older than 50 years		
KMG								
Total in organization, including:	11,013	36,801	16,280	2,189	9,199	3,451	78,933	100%
managers of all levels	421	4,129	1,667	54	896	283	7,450	9%
experts	2,062	6,021	2,086	1,371	4,108	1,051	16,699	21%
workers	8,530	26,651	12,527	764	4,195	2,117	54,784	69%

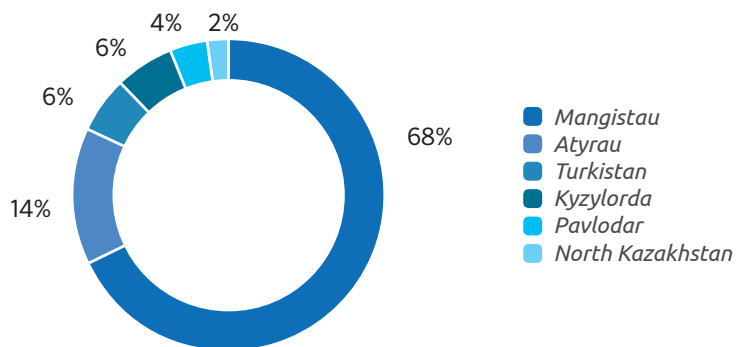
## Actual number of KMG Group of companies' employees in Kazakhstan by regions and city of republican significance (Almaty and Nur-Sultan)

Mangistau	31,296
Atyrau	12,990
Aktobe	3,330
Pavlodar	2,381
Karaganda	1,426
Turkistan	4,178
Kyzylorda	1,919
Zhambyl	1,356
West Kazakhstan	2,331
Kostanay	734
East Kazakhstan	29
North Kazakhstan	131
Nur-Sultan city	6,294
Almaty city	3,577
<b>Total</b>	<b>71,972</b>

## Actual number of KMG Group of companies' employees by countries

Kazakhstan	71,972
Romana	5,581
Georgia	1,253
United Kingdom	13
China	39
Russia	75
<b>Total</b>	<b>78,933</b>

### Number of injured in industrial accidents by region, %



### Indicators of economic aspects

	2016	2017	2018
Profit, billion tenge	360,1	525.4	693.5
Purchases, billion tenge	1,871	2,553	2,428
Social support expenses, billion tenge	19	18.9	22
Expenses for personnel development, billion tenge	4.5	5.6	5.7
Charity, billion tenge	1.5	1.2	1.7