

# *ENERGY OF ELEMENTS*



INTEGRATED

# ANNUAL REPORT 2018

Volume 1

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## MESSAGE OF THE CHAIRMAN OF "SAMRUK-ENERGY" JSC BOARD OF DIRECTORS



### Dear reader!

2018 was marked by an important event for "Samruk-Energy" JSC – the Company approved the new Development Strategy for 2018–2028.

The Strategy is based on current positions of "Samruk-Energy" JSC and takes into consideration the key trends of the external environment and power sector, which influence the Company's operating conditions.

Over the coming years the Company will put its greatest energies into creating value for shareholders, meeting growing demand through reliable power supplies, high-tech development based on sustainability principles.

"Samruk-Energy" JSC group of companies maintained the dominant share in the electricity market of Kazakhstan in 2018 – 29.7% of the total generation in the country and produced 31.7 bln. kWh of electricity. The record volume of coal – 44.9 mln. tons was mined at coal mines.

In 2018, along with production figures, "Samruk-Energy" JSC strengthened its financial stability by reducing the consolidated debt burden of 53 bln. tenge during 2018 and increasing EBITDA indicators. This contributed to the improvement of fi-

"Samruk-Energy" JSC group of companies maintained the dominant share in the electricity market of Kazakhstan in 2018 – 29.7% of the total generation in the country and produced 31.7 bln. Revenues from the core business of "Samruk – Energy" JSC group of companies amount to 260.4 bln. tenge

financial leverage. Actions taken enabled the power Holding Company to move out of red zone of financial risk.

Total consolidated revenues of the Company for 2018 amounted to – 268.08 bln. tenge, while revenues from the core business of "Samruk – Energy" JSC group of companies amount to 260.4 bln. tenge.

In 2018 "Samruk-Energy" JSC concluded agreements with Asian Development Bank in the amount equivalent to \$ 120 million as part of loan portfolio optimization. The deal officially consolidated a long-term and strong partnership between the largest Kazakhstan energy holding and a reputable international financial institution for development. An Agreement with "Samruk-Energy" JSC is the first and unique experience in the Republic of Kazakhstan for Asian Development Bank, since loans are provided in national currency. The share of international financial institutions in the structure of "Samruk-Energy" JSC loan portfolio is 30%, which exerts a considerable influence on "Samruk-Energy" JSC Group's credit rating.

The Company will intensify measures to maintain and strengthen financial sustainability in the medium term. This will allow "Samruk-Energy" JSC to manage its debt in an efficient way and achieve an optimal capital structure.

The Company implemented a number of investment projects in 2018. 1 MW Solar Power Plant and 5 MW Wind Power Plant were commissioned, built in Almaty city and Almaty region under the Agreement between the Governments of Kazakhstan and China, these RES facilities have the potential to generate 18 mln. kWh of green electricity annually.

Today, both "Samruk-Energy" JSC and the country's power industry are gearing up for the new event – the launch of the common electricity market of the EEU, which involves the establishment of relations system between entities of the wholesale electricity markets of the Union member states on the basis of parallel operating electricity systems linked with capacity sale and purchase. Owing to establishment of the EEU common electricity market, the Republic of Kazakhstan will not only gain a simplified access to the markets of the Union member countries, but also increase the openness of the internal market for external electricity suppliers. This means that new opportunities are emerging for "Samruk-Energy" JSC. I believe that a good experience and practice of the Company's implemented projects give confidence that all strategic goals will be accomplished.

**Beibit Karymsakov**

## MESSAGE OF THE CHAIRMAN OF THE MANAGEMENT BOARD OF "SAMRUK-ENERGY" JSC



### Dear reader!

Under conditions of growing competition in the domestic market and external challenges, the Company achieved important success in accomplishing production performance and financial results improvement in 2018. The dynamics of electricity and coal output of power holding companies has shown a stable performance improvement.

Today, the Company faces the challenge of creating a balanced development model that includes the optimal ratio of energy supply to domestic consumers and exports, while combining high economic efficiency, innovative development and advanced standards of social responsibility.

At present, coal-fired condensing power units are the cornerstone of the Company's generating facilities. In this regard, the main emphasis in the development of generation is placed on the operating performance of existing facilities, including: reduction of input costs, efficient operation and repair of equipment, innovative development and successful implementation of investment programs.

As part of the implementation of the Development Strategy for 2018–2028, it is worth mentioning the implementation of energy re-equipment program of Almaty city and Almaty region is among the significant events of the reporting period. 110/10/6kV substation No.170A "Zhas Kanat" with a transformer capacity of 80MVA was commissioned. The "Turksib" substation will increase the transformer capacity by 30 MVA and supply electricity to the central part of Turksib district of the country's megalopolis and its new micro district "Zhas Kanat". The project on transferring of load from "Gorny Gigant" substation to the upgraded "Yermensay" substation via 110kV grids was completed. Repair of hydraulic unit No. 3 was successfully completed at the Kapshagay hydropower plant, which will improve the reliability of the equipment and reduce the possible occurrence of workplace disasters and accidents risk. Other regions of the country have not gone unnoticed. Thus, the first of four hydroelectric units was installed and commissioned at "Shardarinsk HPP" JSC as part of the plant's modernization. A large-scale retrofit will allow increasing the capacity of the HPP by 26 percent – from the current 100 to 126 MW. 57 mln. kWh/year will be produced additionally every year. In order to implement power industry upgrading and development program, 5 MW wind power

plant in the vicinity of Nurly village, Enbekshikazakh district of Almaty region was completed. The plant includes two innovative power installations with a direct drive generator, 2.5 MW each, which will produce 17 mln. kWh of alternative electricity annually.

The operation of capacity market along with introduction of the Single Buyer model has become a landmark in Kazakhstani power market. The first electric capacity bidding for the Northern and Southern zones took place at the end of 2018 on the "KEPMO" JSC trading platform, where the Company's power plants sold 2148.7 MW at a price of 590 thousand tenge / MW \* month. Trading activities of "Samruk-Energy" JSC six subsidiaries are planned to be completely centralized for the purpose of development of sales and commercial dispatching function, which will allow releasing the full capacity of generating companies, prompt making of best management decisions enabling to maximize earnings of each subsidiary, as well as increase their involvement in the power market.

Along with the modernization and commissioning of electricity facilities, the Company continues to give priority attention to environmental issues and the efficient use of resources. Expenditures and investments in environmental protection across "Samruk-Energy" JSC group of companies in 2018 increased by 33%, amounting to 6.63 bln. tenge. 2018 was the year of environment in the Pavlodar region, – the region where the largest subsidiaries of the group: "Ekibastuz SDPP-1" LLP, "Ekibastuz SDPP-2 Plant" JSC and "Bogatyr Komir" LLP are concentrated, which participated actively in the local environmental department's activities aimed at improving the quality of environmental components. As part of the work on energy conservation and energy efficiency, actions on reduction of fuel and energy resources consumption were taken, they allowed saving 35 thousand tons of standard fuel.

To achieve strategic goals in the future and provide a competitive advantage in the market, the Company identified development priorities for staff management system, having approved Personnel Policy of "Samruk-Energy" JSC group of companies for 2018–2028.

The Company's activities also aim to improve the corporate governance system in line with the best practices. According to the results of the independent corporate governance diagnostics, which was conducted in 2018, "Samruk-Energy" JSC was assigned a corporate governance rating of "BB" that evidences the compliance with the majority of established criteria of the best corporate governance practices in all essential aspects.

In 2018, the project SKE-03 "Introduction of the new corporate finance model" was successfully implemented, aimed at centralizing cash, management, which corresponds to the best international practices. As part of the transformation of the treasury functions of the power holding company, payment operations department was set up, business processes were established, and the first financial and qualitative benefits were obtained. For the purpose of execution of the Decree of the Republic of Kazakhstan President "Third Modernization of Kazakhstan: Global Competitiveness" and "Digital Kazakhstan" state program, transformation projects on Digitization and Information Security are implemented. In general, the results of the Transformation Program will be both specific financial benefits and qualitative achievements, allowing to increase the value of the Company's assets.

Aware of the responsibility, the Company intends to continue the implementation of initiatives, and directions of development to ensure the sustainability and stable operation of "Samruk-Energy" JSC group of companies, as well as reliable energy supply to the regions of operation.

**Bakitzhan Zhulamanov**

# 01 COMPANY PROFILE

*“Samruk-Energy” JSC – is the largest diversified energy holding company that has successfully integrated into the international power balance, creating a highly efficient power supply system and ensuring sustainability of all sectors of Kazakhstan.*

“Samruk-Energy” Joint-Stock Company was established on April 18, 2007 by the resolution of the general meeting of founders with a view to implement a long-term state policy on retrofitting of existing generating facilities and commissioning of new ones. The founders of the Company at the time of its establishment were “Kazakhstan Holding for Management of State Assets “Samruk” JSC and “KazTransGas” JSC. The Company was registered in Almaty on May 10, 2007.

On November 3, 2008, as a result of reorganization effected by the merger of Kazakhstan Holding for Management of State Assets “Samruk” JSC and “Kazyna” Sustainable Development Fund” JSC, “Samruk-Kazyna” Sovereign Wealth Fund” JSC, which is the legal successor of “Kazakhstan Holding on Management of State Assets “Samruk” JSC, became the Company’s shareholder.

The “Samruk-Energy” JCS group of company is primarily engaged in production of electricity, heat and hot water by using coal, hydrocarbons and water resources and sales to the public and industrial entities, electricity transportation and technical distribution through grids, construction of hydropower plants and combined heat and power plants, building and operation of renewable energy facilities, coal mining, as well as the rent of hydropower plants’ property complexes.

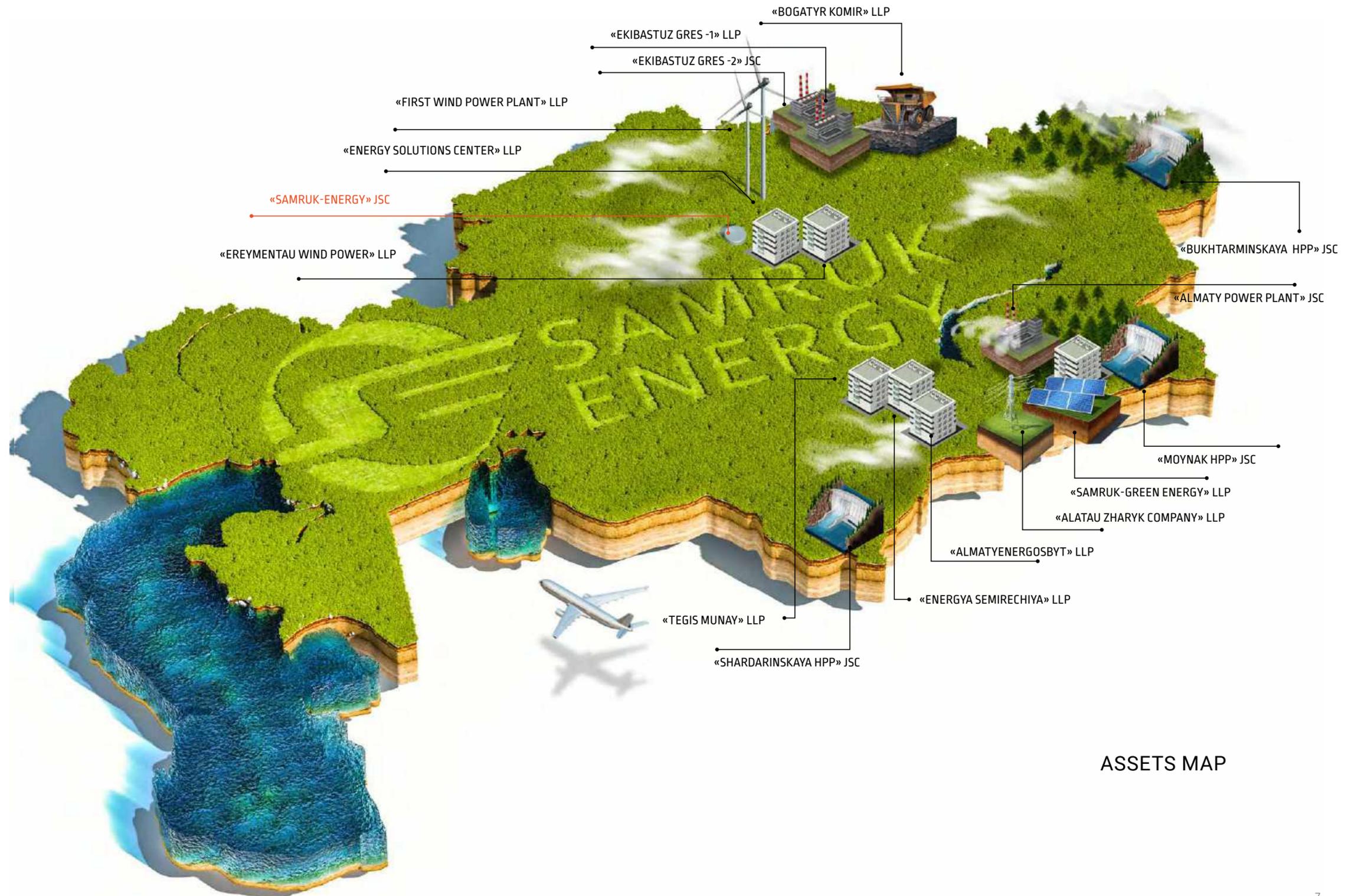
The Company’s assets include the largest generating companies, including power plants of national importance, such as Ekibastuz SDPP-1 and SDPP-2, as well as the power plant of regional importance in the Almaty region which produces heat and electricity, the main hydropower plants of the Republic that are part of Irtysk cascade of hydropower plants, as well as hydropower plants located in the southern regions of the country (Shardarinsk and Moynak hydropower plants).

Moreover, regional distribution grids, a distribution company in Almaty region and the largest coal-mining enterprise in Kazakhstan “Bogatyr Komir” LLP are among the Company’s assets. The company supplies coal to the generating facilities of the “Samruk-Energy” JCS group of company and third parties located both in Kazakhstan and in the Russian Federation.

In accordance with the Decree of the Government of the Republic of Kazakhstan dated December 30, 2015 No. 1141 “On some matters of privatization for 2016–2020,” the work on transfer of the Company’s certain assets to the competitive environment is currently underway.

26% of shares of “Energiya Semirechya” LLP was sold in 2018. Alloyal Limited and Crouch Estate Ltd companies registered in Cyprus, which were a part of “Samruk-Energy” JSC, were dissolved.

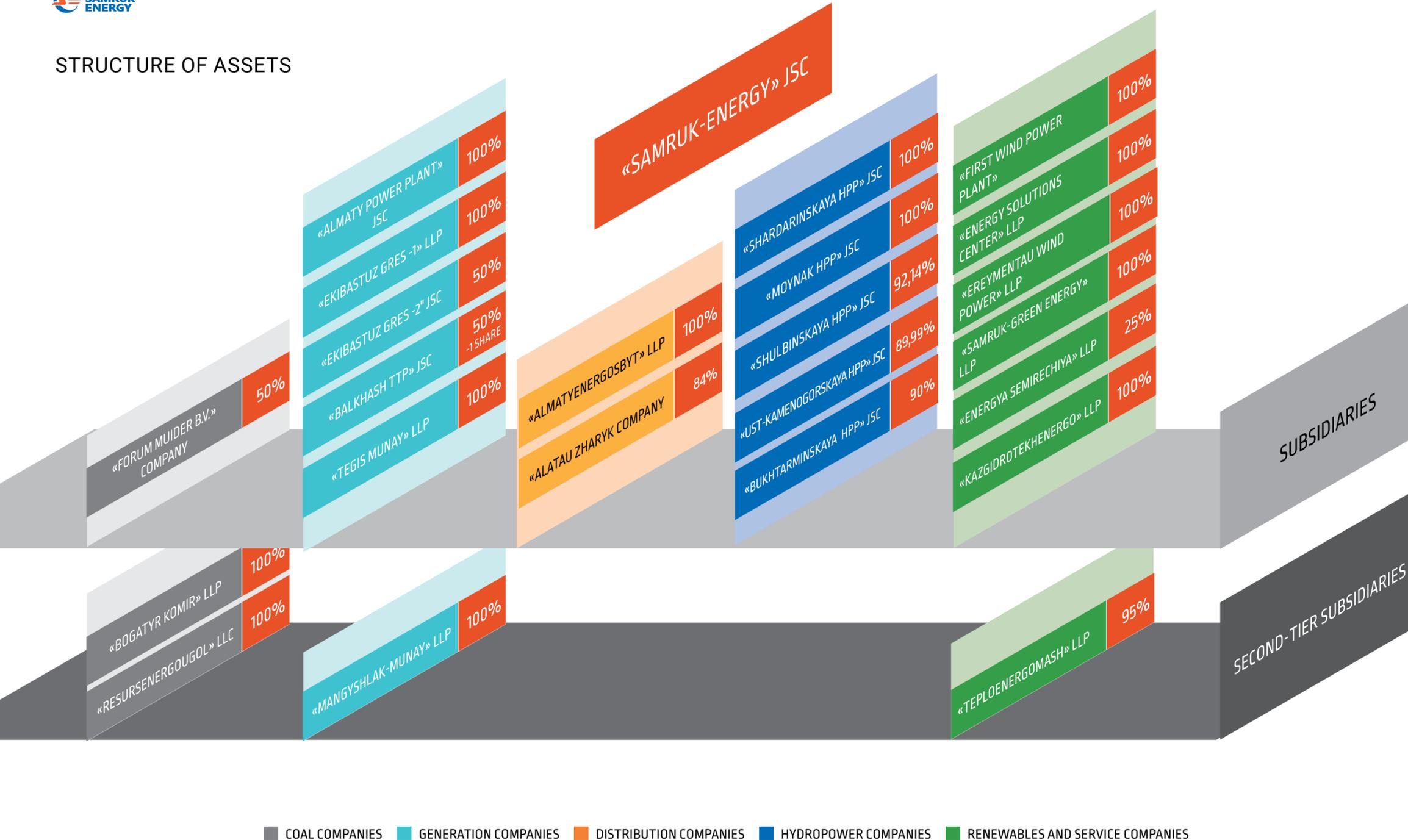
Plans for 2019 include the continuation of works on privatization of “Samruk-Energy” JSC, carrying out activities aimed at privatization of Almaty energy complex assets (“AZHC” JSC, “APP” JSC and “AES” LLP) as well as possibility of privatization within “Samruk-Energy” JSC group. Activities on privatization of “Tegis Munay” LLP including “Mangyshlak Munay” LLP are planned to be completed as well as the completion of Mettlera Corporation dissolution procedures have been scheduled.



ASSETS MAP



## STRUCTURE OF ASSETS



■ COAL COMPANIES ■ GENERATION COMPANIES ■ DISTRIBUTION COMPANIES ■ HYDROPOWER COMPANIES ■ RENEWABLES AND SERVICE COMPANIES

## BUSINESS MODEL

## COAL PRODUCTION AND SALES



"Samruk-Energy" JSC is one of the leading coal producers in the Republic of Kazakhstan. The Company's asset "Bogatyr-Komir" LLP (operated jointly with "RUSAL" OC) accounts for about 40% of the market. Most of the coal produced by the company is supplied to power plants that are part of "Samruk-Energy" JSC group of companies. In addition, coal is supplied to other power plants of the Republic of Kazakhstan and the Russian Federation, as well as municipal utilities of the region.

## GENERATION



The group of companies owns 28% of installed capacity of the Republic of Kazakhstan. "Samruk-Energy" JSC group of companies comprises such generating assets as "Ekibastuz SDPP-1" LLP, "Ekibastuz SDPP-2 Plant" JSC, "Almaty Power Plants" JSC, "Moynak HPP" JSC, "Shardarinsk HPP" JSC and other generating companies, which in aggregate produced more than 29.7% of the total electricity produced in the Republic of Kazakhstan.

## Renewable Energy



"Samruk-Energy" JSC also have RE facilities as 45 MW wind power plant located in Ereymentau city, which is considered a first large-scale industrial power plant in the Republic of Kazakhstan, as well as 2 MW solar power plant nearby Kapshagay city. In 2018, the Company actively continued its activities aimed at development of promising RE projects, in light of this, 5 MW wind power plant and 1 MW SPP in Almaty region were put into operation; these projects were implemented as part of an intergovernmental agreement between Kazakhstan and the PRC.

## TRANSMISSION, DISTRIBUTION



Electricity is mainly transmitted and distributed through main power grids of "KEGOC" JSC and grids of regional energy companies. "Samruk-Energy" JSC group of companies includes a regional distribution company "Alatau Zharyk Company" JSC. "Alatau Zharyk Company" JSC electricity transmission volume was 6,796 mln. kWh in 2018.

## WHOLESALE



Generating companies of national importance as well as a number of major consumers represent the wholesale electricity market.

## RETAIL



"Samruk-Energy" JSC aims to expand considerably the electricity sales in the domestic market by improving performance and changing of electricity market model in the future. Increasing competitiveness and flexibility of the sales policy allows increasing the market share both owing to its organic growth and owing to the growing number of customers – major electricity consumers with which the Company establishes long-term cooperation.

"Samruk-Energy" JSC group includes "AlmatyEnergoSbyt" LLP energy supply company, which provides electricity to more than three million residents of Almaty region.

"AlmatyEnergoSbyt" LLP electricity sales volume for 2018 amounted to 5,904 mln. kWh.

## EXPORT

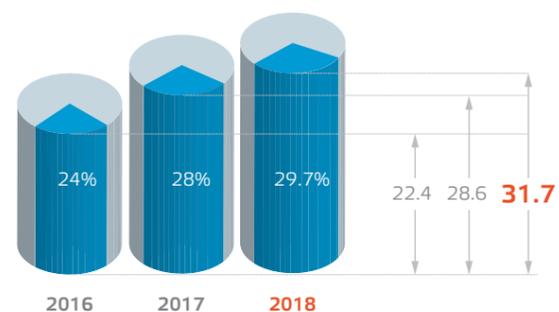


The presence of competences allows "Samruk-Energy" JSC to expand its export activities substantially. The favorable economic and geographical position of the Republic of Kazakhstan and the availability of efficient generating facilities in combination with abundant energy resources taken together provide the potential for export in the traditional northern and in the promising southern direction.

In 2018 3.7 bln. kWh of electricity and 9.6 mln. tons of coal were exported to the Russian Federation.

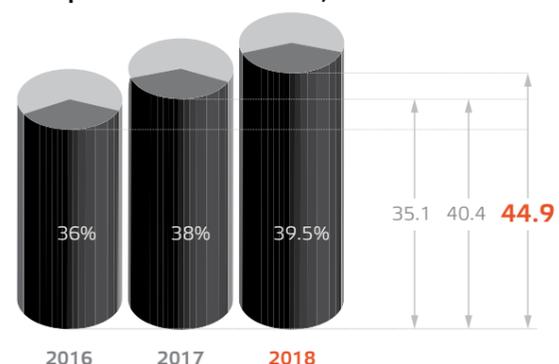
## THE COMPANY IN FIGURES

Electricity production volume and the share, bln. kWh



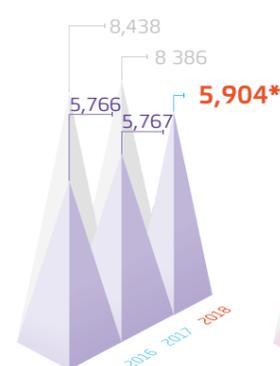
In 2018 was produced **31,703** mln. kWh of **ELECTRICITY** which is **29.7%** of the total output across the Republic of Kazakhstan

Coal production and the share, mln. tons

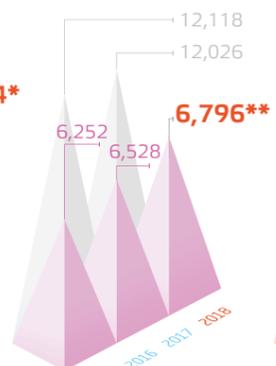


COAL output is **44.9** mln. tons which is **39.5%** of the total coal output across the Republic of Kazakhstan

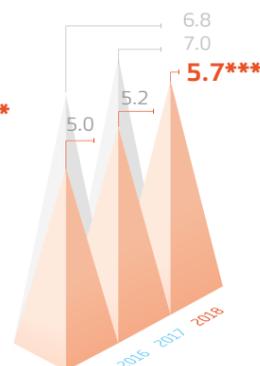
Electricity sales volume, mln. kWh



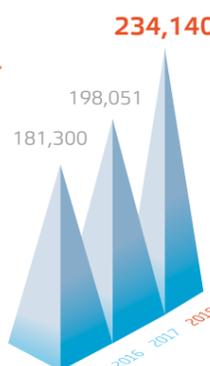
Electricity transmission volume, mln. kWh



Heat production volume, mln. Gcal



Dynamics of average wage, tenge



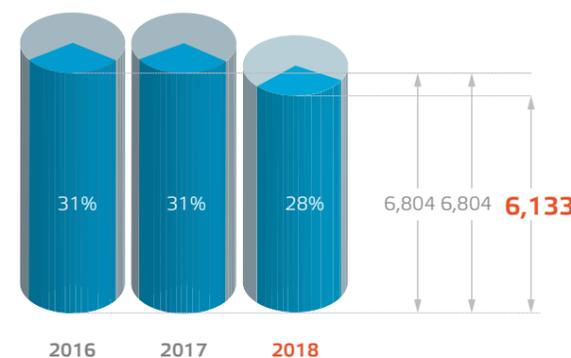
Investments in environmental protection, thous. tenge



Dynamics of transmission volume, electricity realization and heat supply excluding sold assets

\* "Shygysenergotrade" LLP  
 \*\* "MDPGC" JSC and "EK REC" JSC  
 \*\*\* "Aktobe CHP" JSC

Dynamics of changes in the installed capacity, MW



"Samruk-Energy" JSC installed capacity was **6,133** MW which is **28%** of the installed capacity in the Republic of Kazakhstan **21,901** MW

The reasons for the decline compared with the previous year:

- 1) Reduction of "Shardarinsk HPP" JSC capacity from 100 to 50 MW during retrofit activities;
- 2) Reduction of capacity from 4,000 to 3,500 MW at "ESDPP-1" LLP until completion of power unit No. 1 rehabilitation activities;
- 3) The sale of two assets – "Aktobe CHP" JSC and "Talgarskaya HPP" of "APP" JSC to a competitive environment.

## GENERATION

TPP capacity **5,328** MW

RES capacity (SPP and WPP) **47** MW

HPP capacity **758** MW

## TRANSMISSION AND DISTRIBUTION

Capacity of substations **9,808.2** MVA  
 Number of substations **7,104**

Key financial and economic figures

Description	Measurement unit	2016 actual	2017 actual	2018 actual	2019 forecast
Net income/loss due to shareholders	mln. tenge	17,759	-27,884	3,241	6,779
Net income, net of exchange rate difference, impairment and loss from sale of assets	mln. tenge	11,947	14,438	20,654	7,292
EBITDA	mln. tenge	71,581	77,328	97,825	80,061
EBITDA Margin	%	39	35	38	31

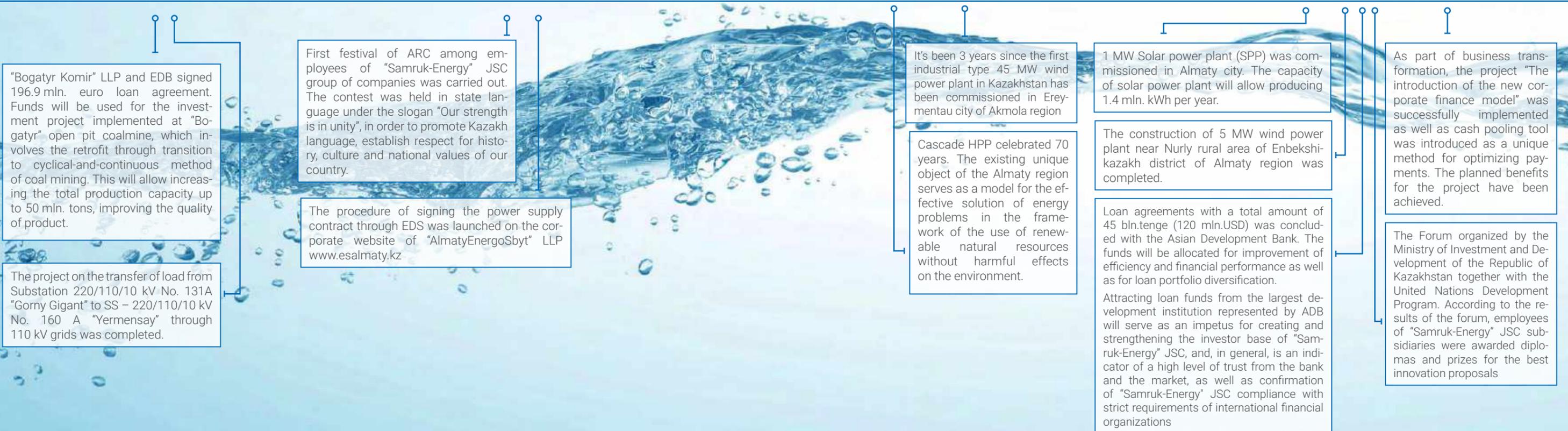
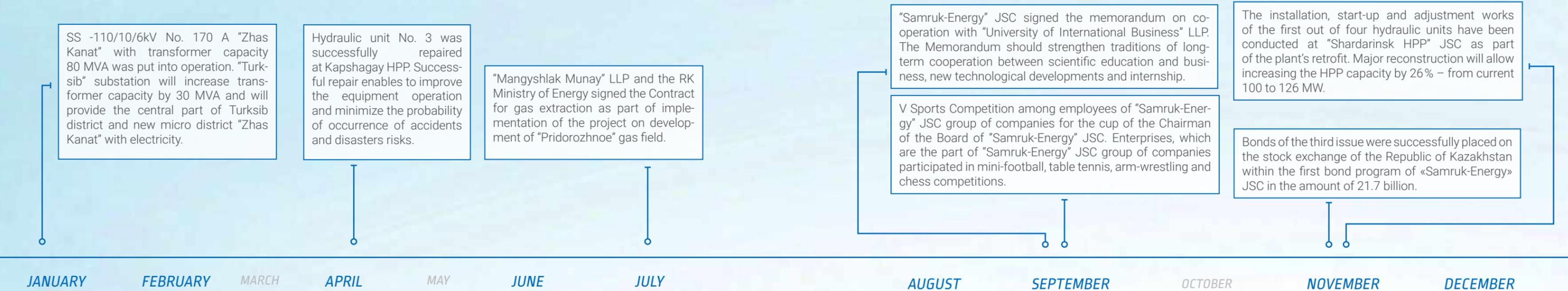
Social indicators

Description	Measurement unit	2016	2017	2018
Annual staff turnover	%	13	11.2	12
The number (rate) of accidents at work per thousand people	Number /1 000 pers. in cond.units	0.59	0.34	0.59
The share of local content in the procurement of goods, works, services	%	79	78	85

THE LENGTH of 220-0.4 kV overhead and cable transmissions lines

**29,530.62** km

## KEY EVENTS IN 2018



# “SAMRUK-ENERGY” JSC DEVELOPMENT STRATEGY FOR 2018-2028

## “SAMRUK-ENERGY” JSC VALUES

- ▶ We are always ready to help and support
- ▶ We act openly to create a trust-based relationship with workmates and partners
- ▶ We are ready for mentorship, maintaining and sharing the experience

- ▶ We show proper attitude towards objectives set and enjoy what we do
- ▶ We are professionals, improve ourselves and achieve results
- ▶ We search for different views and apply diverse approaches to ensure greater efficiency

- ▶ We are responsible for trouble-free and quality operation
- ▶ We are accountable to future generations and take care of the environment and ecology
- ▶ We are responsible for widespread creation of safe, comfortable and competitive working environment
- ▶ We are faithful to commitments undertaken

- ▶ We assess fairly the situation and act impartially in resolving any issues
- ▶ We apply equal requirements and provide equal opportunities
- ▶ We value opinions of others, providing an opportunity to express themselves and to be heard



## “SAMRUK-ENERGY” JSC PRINCIPLES

High professionalism of the Company's employees is a guarantee of its successful performance. Therefore, the Company strives to create all necessary conditions for comfortable work and unlock the potential of each employee, providing equal opportunities for personal and professional development. Each employee seeks to improve competence using the opportunities provided by the Company, as well as independently.

We are open to meetings, discussions and dialogue; we strive to build long-term cooperation with stakeholders, based on mutual interests, respect for rights and balance between the interests of the Company and stakeholders.

Observance of rules allows us to remain a team of professionals united by common goals, a culture of behavior and traditions, and helps to maintain a good level of mutual understanding both within the Company and with business partners and customers.

In our operations, we strive to protect the environment and respect the communities with which we interact. Our goals in the area of occupational health and safety and environmental protection, and general safety are the absence of accidents, harm to health and damage to the environment.

We provide the world with energy and strive to do it safely.

We recognize the importance of risk management as a key component of the corporate governance system and take all required actions aimed at the timely identification and mitigation of risks that may adversely affect the value and reputation of the Company.



## STRATEGY

Power industry is the basic infrastructure branch of the economy, which influence on the operation of industrial sector, services sector, and the quality of life of the population of the Republic of Kazakhstan.

The Company faces the challenge of creating a balanced development model that includes the optimal ratio of energy supply to domestic consumers and exports, combining high economic efficiency, innovative improvement and advanced standards of social responsibility. The Company officials, employees and bodies take decisions in compliance with the development strategy.

In 2018 "Samruk-Energy" JSC approved the new Development Strategy for 2018–2028 in connection with changes in the internal and external environment, including: the postponement of introduction of capacity market in Kazakhstan to 2019, the change in the regulatory environment in renewable energy sector, the adjustment of the state program on privatization, the change in the list and key criteria of investment projects,

the postponement of commissioning of energy-intensive production facilities, the new trend in digitization of production and operational processes.

The Strategy takes into account the state policy in the field of strategic planning of the national energy security system, meets the main strategic directions, goals and objectives of the Fund and is developed in accordance with the Corporate Standard for Strategic and Business Planning at "Samruk-Kazyna" JSC group of companies.

When preparing the Strategy, "Samruk-Energy" adheres to, but is not limited to, the principles of sustainable development set out in the United Nations Global Compact.

**To create value for shareholders, to meet the growing demand through reliable supplies of energy resources, high-tech development, guided by the principles of sustainable development.**

**An efficient high-tech operating energy company – leader of Kazakhstan's power industry.**

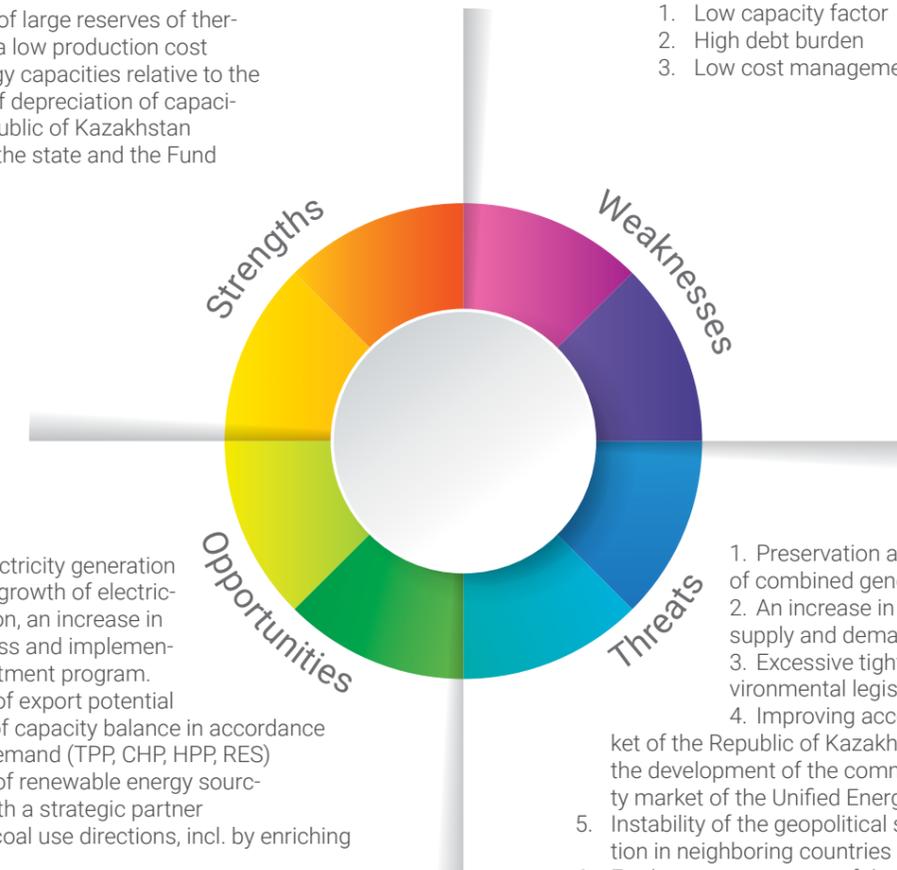
MISSION

VISION

### SWOT-analysis of "Samruk-Energy" JSC standing

- Strengths**
1. The presence of large reserves of thermal coal with a low production cost
  2. Effective energy capacities relative to the general level of depreciation of capacities in the Republic of Kazakhstan
  3. Support from the state and the Fund

- Weaknesses**
1. Low capacity factor
  2. High debt burden
  3. Low cost management opportunities



- Opportunities**
1. Increase in electricity generation due to annual growth of electricity consumption, an increase in competitiveness and implementation of investment program.
  2. Development of export potential
  3. Optimization of capacity balance in accordance with market demand (TPP, CHP, HPP, RES)
  4. Development of renewable energy sources together with a strategic partner
  5. Expansion of coal use directions, incl. by enriching

- Threats**
1. Preservation and expansion of combined generation
  2. An increase in the gap between the supply and demand of generating facilities
  3. Excessive tightening of environmental legislation
  4. Improving access to the market of the Republic of Kazakhstan through the development of the common electricity market of the Unified Energy System
  5. Instability of the geopolitical situation in neighboring countries
  6. Further postponement of the capacity market
  7. Increase in the cost of large investment projects as a result of the weakening of the national currency

## Key challenges

Today the Company faces a number of key external and internal challenges, which are a consequence of the current situation of the Company, the characteristics of the external environment and trends in its development.

### KEY EXTERNAL CHALLENGES

#### 1. Introduction of the capacity market

According to the data of the System Operator, as of January 1, 2018, the total installed capacity of thermal power plants was 18,845 MW, of which 10,052 MW or 53.3% are over 30 years old, the installed capacity of hydropower plants is 2,671.1 MW, of which 1,840 MW or about 69.1% are more than 30 years old.

To reduce the level of depreciation of the generating equipment, it is necessary to introduce capacity market, which will allow the construction of new and modernization, reconstruction of existing facilities. With the introduction of the capacity market, the existing tariff for electricity will be divided into two parts:

- 1) the tariff for electricity – a variable part, which ensures the recoupment of costs for the production of electricity;
- 2) capacity tariff is a constant part that ensures the return of investments in the construction of new and renewal, modernization, reconstruction, expansion of existing power facilities.

The Single Buyer will be introduced in the capacity market, which will carry out a centralized purchase of the service for maintaining the readiness of electric capacity and centralized provision of services to ensure the readiness of capacity to carry the load.

#### 2. Establishment of the EEU common electricity market

The introduction of common electricity market of EEU involves the creation of a system of relations between the entities of the wholesale electricity markets of the member states of the Union based on the parallel operating power systems associated with the purchase and sale of electricity (capacity).

The introduction of the common market is expected from July 1, 2019 after the signing of the International Treaty. However, until the creation of a common gas market (2025), the common electricity market will be operated by parties, which will be authorized by the member states of the Union.

As a result of the establishment of the common electricity market of the EEU, the Republic of Kazakhstan will not only have simplified access to the markets of the member coun-

tries of the Union, but will also increase the openness of the domestic market for external electricity suppliers.

#### 3. Availability of free capacities

There has been a steady increase in demand for electricity, about 5–7% since 2016. The current excess capacity is about 4 GW.

The main excess is concentrated in the Northern energy zone – the key area of the Company's operations. This leads to increased competition and an increased role of competencies for work in a competitive environment, currently limited at "Samruk-Energy" JSC.

#### 4. Decrease in coal sales volumes

The decrease in loads of own stations operating on Ekibastuz coal negatively affects the volumes of coal sales. The potential for an increase in Ekibastuz coal consumption by Kazakhstani third-party consumers is little, and the volumes of supplies to Russia are declining, including due to the partial transfer of Russian coal-fired power plants to domestic coal or natural gas.

#### 5. Tougher environmental requirements

Currently, there is a steady trend in the world to reduce the level of environmental pollution. The commitments made by the Republic of Kazakhstan, as an active participant in international relations in environment field, and Samruk-Energy, as an environmentally and socially responsible company, determine the need for a proactive response to trends in the field of environmental protection.

#### 6. Changes in the regulatory environment for the development of renewable energy sources

In 2017, the state policy in supporting the use of renewable energy has been dramatically changed. The mechanism of auction tenders for the construction of renewable energy facilities was introduced. Auction are held on the principle of reducing the price of electricity, starting from the established ceiling auction prices, for participation in which it is necessary to provide a collateral.

## 7. Digitization of business

Currently, there is a trend in the world for digitization of production and operational processes, which contributes to opti-

### KEY INTERNAL CHALLENGES

1. Implementation of the RK Government plans for privatization of the Company's assets.  
As part of a comprehensive privatization plan for 2016–2020, a part of the assets across "Samruk-Energy" JSC group of companies is planned to be privatized. To maintain the value of the Company, it is necessary to take a number of actions on ensuring the sale of these assets at a fair market price.
2. The need for significant improvement of the Company's operations and growth of the ROACE indicator.
3. High level of debt burden on the Company, due to the implementation of the investment program.
4. Lack of portfolio / project management at "Samruk-Energy" JSC.

Achievement of the mission and vision of the company will be secured through the implementation of three **STRATEGIC GOALS**:



Following the achievement of three strategic goals, it is planned to ensure the achievement of **STRATEGIC RESULTS**:

1. Sustainable leadership in the electricity and power generating coal market of the Republic of Kazakhstan.
2. Entry and gain a foothold in the new export markets.
3. Increase income flow and improve financial standing.
4. Creation of a sound basis for effective management of various types of generation facilities.

mization of time costs, increase of operational efficiency and development of analytical data obtained in automated mode.

5. The status of the leader of innovation, sustainable development, corporate governance and a responsible employer.

To achieve the Company's vision and achieve its strategic goals, the Company will focus on the implementation of four **STRATEGIC INITIATIVES**:



"Samruk-Energy" JSC regularly monitors the achievement of goals by generating reports on the implementation of strategic initiatives and strategic key performance indicators.

combine KPI cascaded to the level of "Samruk-Energy" JSC by the Shareholder.

Fulfillment of the specified values of KPI will allow the Company to achieve its goals in terms of accomplishment of its mission and vision. KPI are formed on consistency principle and

The target values of strategic indicators were calculated in accordance with the method of calculating indicators, as well as taking into account macroeconomic and industry trends.

## ACHIEVEMENT OF STRATEGIC KPI

No.	Description	2016 r. actual	2017 r. actual	2018 r. actual	2019 forecast	2020 forecast
1	Economic value added (EVA), mln. tenge*	(44,355)	(47,130)	(31,791)	-	-
2	Debt/EBITDA (ratio)	5.41	4.64	3.18	3.82	2.56
3	Available funds for development and dividends, mln.tenge*	24,201	36,742	57,203	-	-
4	NAV, mln. tenge	412,874	382,946	385,304	397,228	421,374
5	Implementation of transformation program (as per projects), in %*	94.1	65	76.5	-	-
6	Corporate governance rating	-	B	BB	-	BBB
7	Electricity market share in the Republic of Kazakhstan	23.9%	28.0%	29.7%	29.0%	30.0%
8	Net profit, mln.tenge**	17,759	(27,884)	3,241	6,779	24,147
9	ROACE**	3.87%	-1.20%	2.99%	4.02%	6.2%
10	LTIFR**	0.23	0.17	0.28	0.24	0.23

\* was removed from the list of Strategic KPI from 2019

\*\* was included into the list of Strategic KPI from 2019

In general, the Company's strategic indicators tend to improve from 2016 to 2020. An increase in sales of electricity and capacity in the domestic market, obtaining individual capacity tariffs, reducing unit consumption of fuel and water for process needs, optimizing the cost of energy efficiency, as well as reducing debt load are the main growth drivers.

At the same time, negative factors influencing the strategic indicators are negative exchange difference, the rise of prices for production works and services, as well as a decrease in the weighted average tariff for electricity from 2019.

## MAIN DIRECTIONS OF THE COMPANY DEVELOPMENT

At present, the basis of the Company's generating capacity consists of coal-fired condensing units. In the near future, despite the Company's involvement in renewable energy projects, coal generation will remain the main competence of "Samruk-Energy" JCS.

To this end, as part of development of generation, the focus will be on performance improvement of existing facilities, including: reduction of production costs, efficient operation and repair of equipment, innovative development and effective implementation of investment programs.

### Improving the performance of existing facilities

As regards reduction of cost of electricity produced by power plants, the work aimed at reducing costs for fuel used is underway and will be performed in the future as well. The Company addresses this objective by implementing a number of events, including:

1. Optimization of power units' optimization modes.
2. Reducing the cost of water for process needs.
3. Implementation of energy conservation and energy efficiency program.
4. Other activities.

### Innovation development and digitization

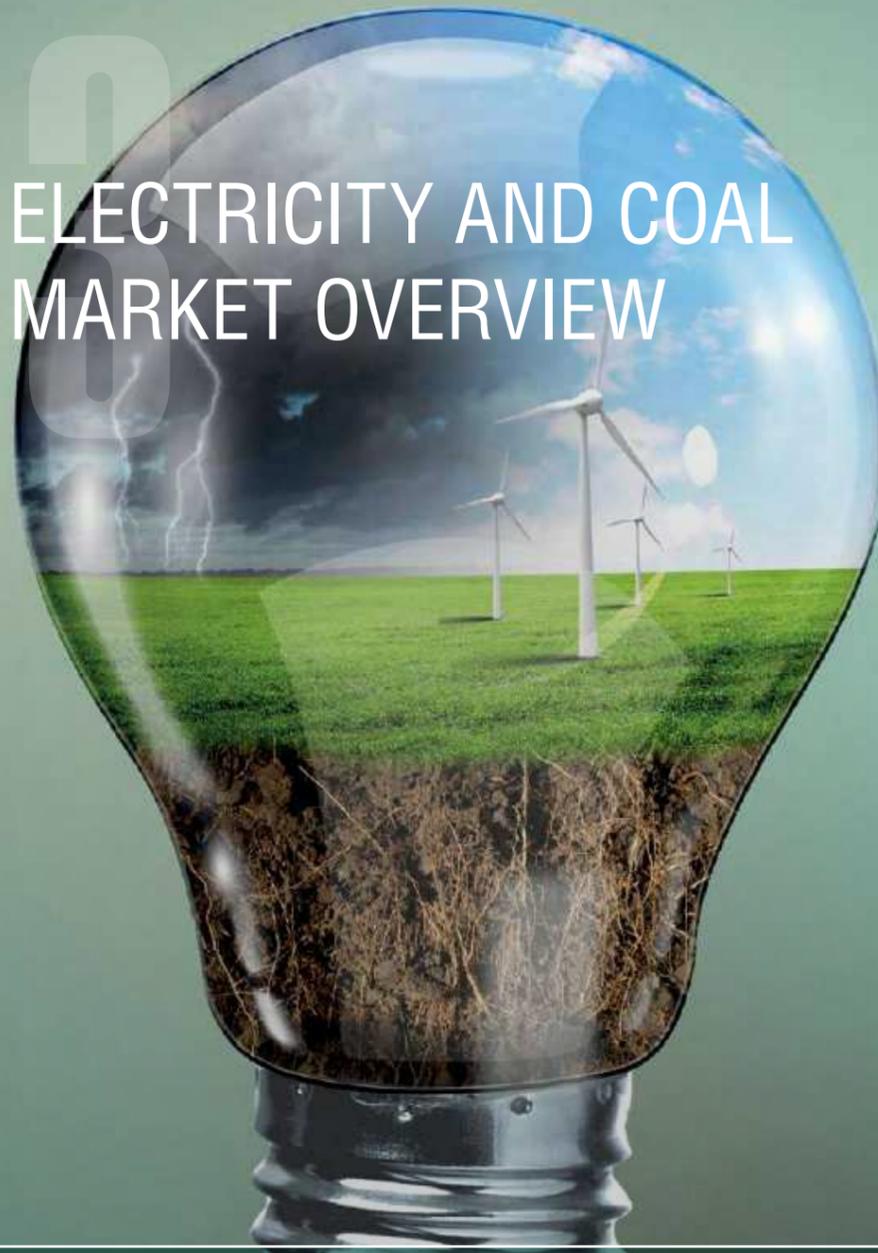
As part of the Company's innovative development program, several projects, which aim to improve performance, are implemented at present, including:

- 1) Digital power plant. The project involves the possible introduction of a centralized collection of production and technological data, remote monitoring and forecasting of production processes and the technical condition of components, assemblies, equipment and systems for monitoring production processes of "Samruk-Energy" JSC group of companies (digital control room) based on production and technical platforms. This will allow receiving reliable data and ensuring the autonomy of processes, excluding the human factor in production.
- 2) Studies on the possibility of using fluidized bed and circulating fluidized bed technologies for firing high-ash coal (50% ash or more coal – layer No. 3 of the Ekibastuz deposit and depleted coal / coal by-products) are conducted in conjunction with Nazarbayev University.
- 3) The system of oil-free starting up of boiler units implies the equipping of a plasma-fuel system. People's Republic of China, the Russian Federation, and Indonesia successfully use this technology at power units with capacity from 200 to 1,000 MW.
- 4) The implementation of "Digital coal mine" project involves automatic monitoring of operating characteristics of mining and mining transport equipment of a coal mine (weight of the cargo being transported, location, technological condition, speed, pressure and temperature in tires, etc.), automation and analytics of daily performance of dump trucks: number of trips, freight turnover, engine hours, mileage, fuel consumption, automatic control and analysis of drivers' and operators of mining and mining transport equipment discipline in the workplace: downtime, the beginning and end of work.

### Financial sustainability improvement

In the medium term, the Company will strengthen measures to preserve and strengthen financial sustainability. This strategic initiative will allow effectively manage its debt and achieve an optimal capital structure.

# ELECTRICITY AND COAL MARKET OVERVIEW



*Power industry plays a pivotal role in economic and social areas of the Republic of Kazakhstan. Further development of the industry, small and medium business, improvement of the population's quality of life is greatly dependent on reliable and high-quality power supply to consumers.*



Power industry is regulated by government agencies.

The authorized body represented by the Ministry of Energy of the Republic of Kazakhstan manages power industry on the basis of the Republic of Kazakhstan Law No. 588-II dated July 9, 2004 "On Power Industry".

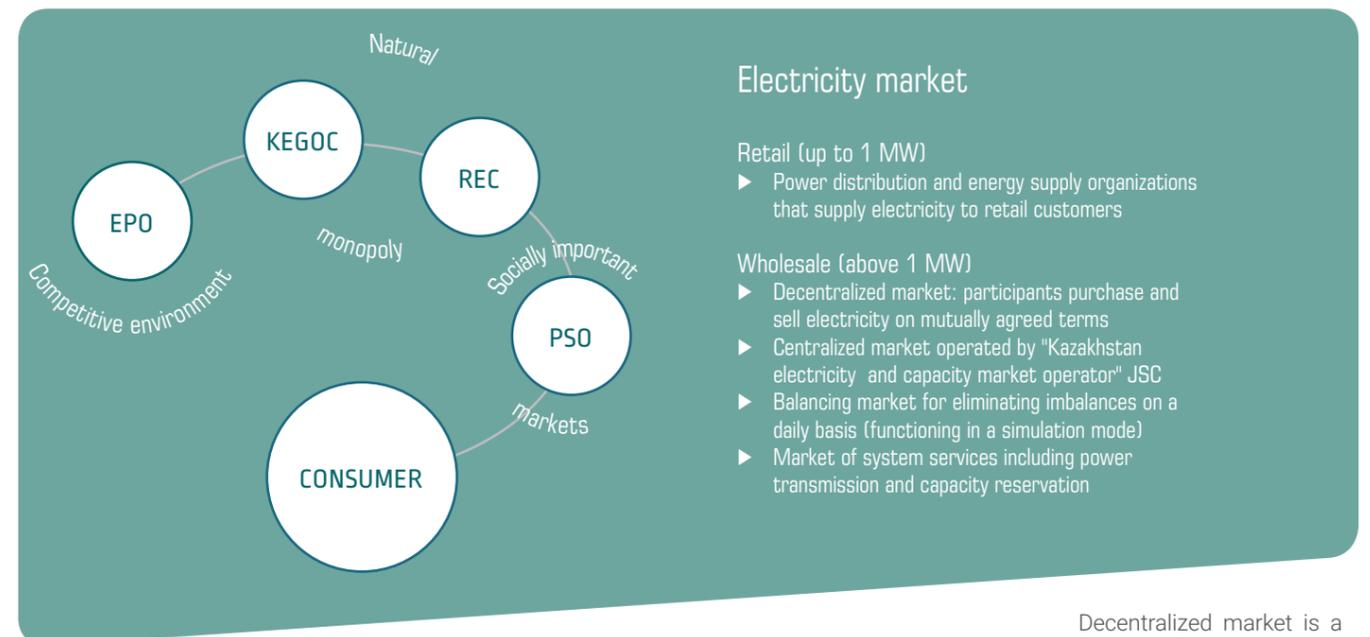
The authorized body represented by the Ministry of Energy of the Republic of Kazakhstan manages renewable energy sources area on the basis of the Law of the Republic of Kazakhstan No. 165 dated July 4, 2009 "On Supporting the Use of Renewable Energy Sources".

The state body represented by the Committee for Regulation of Natural Monopolies, Protection of Competition and

Consumer Rights of the Ministry of National Economy of the Republic of Kazakhstan implements the state policy in the areas of natural monopolies, including on regulated services for electricity transmission, heat production, transmission, distribution and supply in line with the Republic of Kazakhstan Law dated December 27, 2018 No. 204-VI "On Natural Monopolies".

The Ministry of Industry and Infrastructure Development of the Republic of Kazakhstan is the state agency that manages coal industry in accordance with the Republic of Kazakhstan Code No. 125-VI dated December 27, 2017 "On subsurface and subsurface use"

## KAZAKHSTAN ELECTRICITY MARKET MODEL



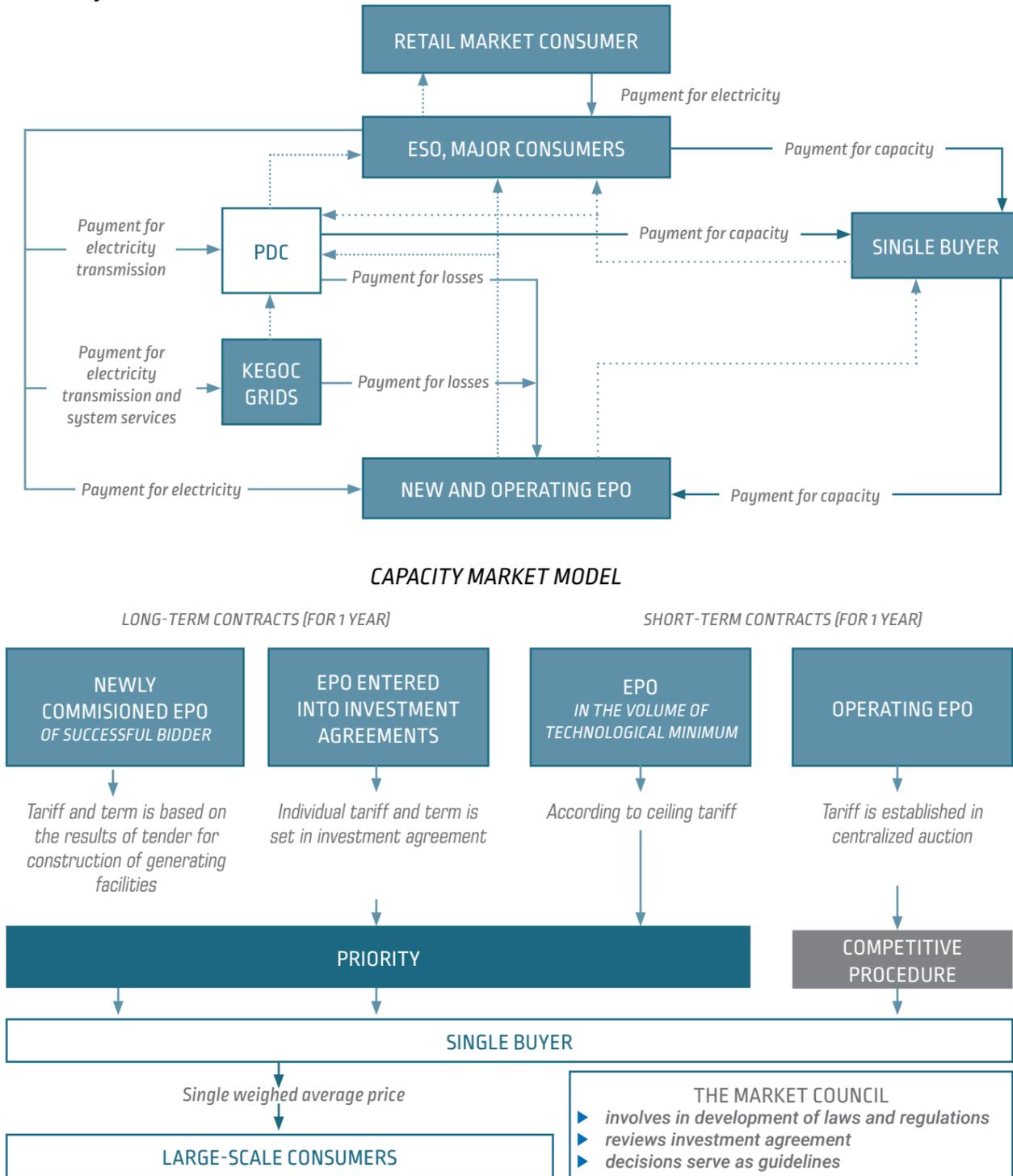
Kazakhstan has introduced the Single Buyer model from January 1, 2019, which includes the operating capacity market, that aim to create favorable conditions for attracting investments in the power industry, construction of generating facilities so as to fully meet the demand for electricity, maintain the required level of energy supply reliability and develop export potential of the industry.

It is expected that electricity market (centralized and decentralized trading of electricity) and capacity (short-term and long-term) of the balancing market will operate.

Decentralized market is a market where power plants enter into contracts for the sale and purchase of electricity directly with consumers. A centralized market involves the sale of electricity on a single platform in order to conclude contracts for the sale and purchase of electricity. The role of the balancing market is the regulation of deviations of the actual volumes of supply and consumption of electricity from the planned ones in real time mode by the system operator.

Social and political issues significantly affect tariff decisions. Economic, social and other policies of the RK Government may have a significant impact on the Group's operations.

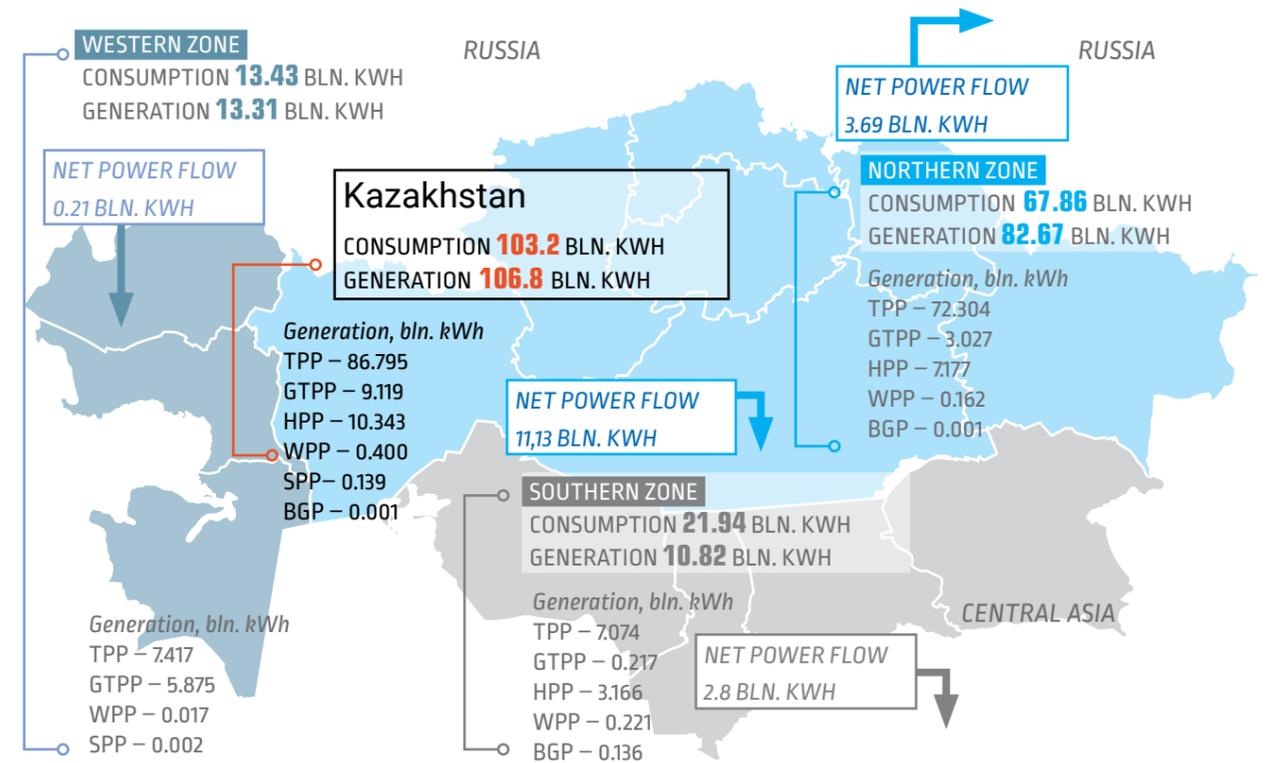
### The model of electricity and capacity market of Kazakhstan from January 1, 2019



Since the introduction of capacity market, tariffs of energy-producing organizations have been divided into 2 components: the electricity tariff and the tariff for maintaining the

availability of electric capacity. Electricity tariffs include variable operating costs. The tariff for maintaining the availability of electric capacity includes investment costs.

### Electricity balance of Kazakhstan



The installed capacity of Kazakhstan's power plants in 2018 amounted to 21,902 MW, which is 220 MW more in comparison with the last year.

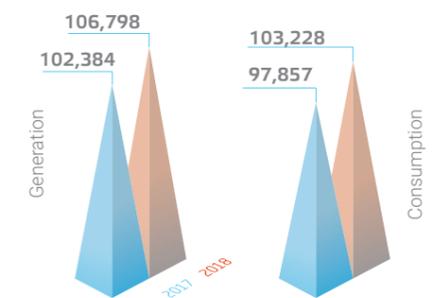
**The Southern zone** is characterized by a shortage of electricity covered owing to supplies from the northern zone.

The available capacity of the RK power plants made 18,894.9 MW, which is 103.5 MW more than last year, incl. an increase in the Northern zone – 38.7 MW, the Western zone – 21.3 MW, the southern zone – 43.5 MW.

**The Western zone** – A significant share of electricity consumption is made by oil and gas companies with their own generating sources. There are no electrical connections of the

Electricity was mainly produced at thermal power plants – 87%, the share of hydropower plants accounted for 12%, and the share of renewable energy sources was about 1.3%.

Electricity generation and consumption in the RoK, mln. kWh



**The Northern zone** produced 77% of electricity of the country's overall production. Main coal deposits and water and energy resources are located in the northern zone. Excess electricity is transferred to the southern zone experiencing power shortages and is exported to the Russian Federation.

West with the North and South of Kazakhstan through the territory of the country.

According to the data from System Operator, Kazakhstan's power plants produced 106,798 mln. kWh of electricity in 2018, which is 4.3% more than 2017 figure. Production growth was observed in the North and West zones of Kazakhstan.

Electricity production and consumption in Kazakhstan has increased over the past three years.

An increase in electricity production was driven by the growth in production of TPP and GTPP, commissioned RE facilities also influenced.

There was a 5% increase in the dynamics of electricity consumption in comparison with the figures for 2017. Thus, in the northern zone of the Republic of Kazakhstan, consumption increased by 4.6%, in the western zone by 8.1% and in the southern zone by 6,8%.

During the reporting period of 2018, compared to the same period of 2017, the maximum increase in electricity consumption was in Almaty region by 532 mln. kWh (5.1%), Zhambyl region – by 519 mln. kWh (13.6%), Pavlodar region – by 779 ln. kWh (4.2%), Karaganda region – by 621 mln. kWh (3.7%).

#### Electricity indicators across the Republic of Kazakhstan

mln. kWh

No.	Indicators across the RK	2016	2017	Δ 2017/ 2016, %	2018	Δ 2018/ 2017,%
<b>1.</b>	<b>Electricity consumption</b>	<b>92,311.6</b>	<b>97,856.7</b>	<b>6</b>	<b>103,228.3</b>	<b>5</b>
<b>2.</b>	<b>Electricity production, incl.:</b>	<b>94,076.5</b>	<b>102,383.6</b>	<b>9</b>	<b>106,797.1</b>	<b>4.3</b>
	TPP	74,702.8	82,424.8	10	86,795.1	5
	GTPP	7,407.5	8,372.6	13	9,119.3	9
	HPP	11,605.9	11,157.9	0.9	10,343.0	7.3
	WPP	274.1	338.5	23	400.5	18
	SPP	86.1	89.8	4	137.9	54
	BP	0	0	-	1.3	-
<b>3.</b>	<b>Net power flow «+» shortage, «-» excess precisely:</b>	<b>-1,764.9</b>	<b>-4,527</b>	<b>157</b>	<b>-3,568.8</b>	<b>0.8</b>
	- Russia	-1,640.1	-4,528.2	176	-3,566	0.8
	- Central Asia	-124.7	1.2	-0.01	-2.8	-126

The volume of electricity production by facilities using renewable energy sources in Kazakhstan amounted to

1,335.2 mln. kWh in 2018 or an increase of 20.4% as compared with 2017 figures.

#### Indicators of Renewable electricity across the Republic of Kazakhstan

mln. kWh

No.	Description	2017	Share in the RK, %	2018	Share in the RK, %	Deviation 2018/2017	
						mln. kWh	%
<b>I</b>	<b>Renewable electricity production in the RK, including by zones</b>	<b>1,109</b>	<b>1.1</b>	<b>1,335.2</b>	<b>1.3</b>	<b>226.2</b>	<b>20.4</b>
1.	Northern zone	304.8	27.5	326.8	24.5	22.0	7.2
2.	Southern zone	804.2	72.5	988.0	74.0	183.8	22.9
3.	Western zone	0	0.0	19.2	5.9	19.2	0.0
<b>II</b>	<b>Renewable electricity production in the RK, including by types</b>	<b>1,109</b>	<b>100.0</b>	<b>1,335.2</b>	<b>99.9</b>	<b>226.2</b>	<b>20.4</b>

No.	Description	2017	Share in the RK, %	2018	Share in the RK, %	Deviation 2018/2017	
						mln. kWh	%
1.	SPP	89.8	8.1	138.6	10.4	48.8	54.3
2.	WPP	338.5	30.5	400.5	30.0	62.0	18.3
3.	Small HPP	680.7	61.4	793.6	59.4	112.9	16.6
4.	BioGasPlants	0	0.0	1.3	0.1	1.3	0.0

In comparison with 2017, electricity production by large and small hydropower plants have decreased over 2018, while the production of electricity by WPP and SPP has increased.

#### Export and import of electricity of Republic of Kazakhstan

Russia became the key direction of the Republic of Kazakhstan electricity export-import (exports to the Russian Federation – 4.8 bln. kWh, imports from the Russian Federation – 1.3 bln. kWh).

Electricity exports amounted to 4,882.4 mln. kWh, which is 15% lower than in 2017. The decline in exports has occurred because the Russian party suspended the purchase of electricity from "Ekibastuz SDPP-1" LLP from August 2, 2018.

"Ekibastuz SDPP-1" LLP exported 3.76 bln. kWh to the Russian Federation, "KEGOC" JSC – 1.05 bln. kWh in order to balance electricity production and consumption.

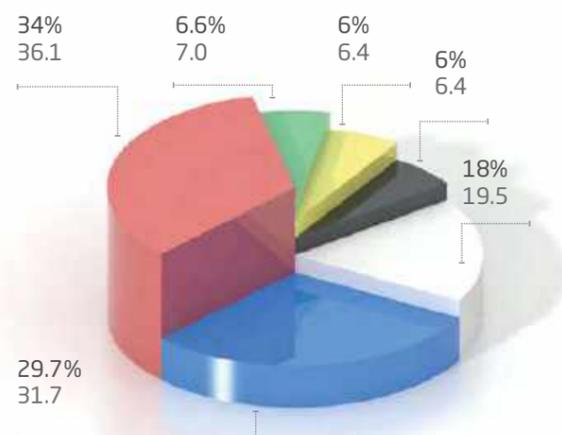
Electricity imports amounted to 1,313 or 3.5% higher than in 2017. An increase in electricity imports of the Republic of Kazakhstan in relation to 2017 was due to an increase in the volumes of balancing electricity from the Russian Federation.

mln. kWh

Description	2017	2018	Δ 2018/2017	
			mln. kWh	%
<b>Export of Kazakhstan</b>	<b>5,795.8</b>	<b>4,882.4</b>	<b>-913.5</b>	<b>-15.8</b>
<b>to Russia</b>	<b>5,788.1</b>	<b>4,876.3</b>	<b>-911.9</b>	<b>-15.8</b>
"ESDPP-1" LLP	4,705.5	3,758.0	-947.6	-20.1
"SevKazEnergo" JSC	62.2	68.7	6.5	10.5
"KEGOC" JSC (balancing market)	1,020.4	1,049.6	29.2	2.9
<b>to UES of Central Asia</b>	<b>7.7</b>	<b>6.1</b>	<b>-1.6</b>	<b>-20.8</b>
"KEGOC" JSC for "NPS of Kyrgyzstan" OJSC	7.7	6.1	-1.6	-20.8
<b>Import of Kazakhstan</b>	<b>1,268.9</b>	<b>1,313.6</b>	<b>44.7</b>	<b>3.5</b>
<b>from Russia</b>	<b>1,259.9</b>	<b>1,310.2</b>	<b>50.3</b>	<b>4.0</b>
"INTER RAO" PJSC	283.3	291.7	8.4	3.0
"INTER RAO" PJSC (purchase agreement) (balancing market)	976.6	1,018.6	42.0	4.3
<b>from UES of Central Asia</b>	<b>8.9</b>	<b>3.3</b>	<b>-5.6</b>	<b>-62.6</b>
"NPS of Kyrgyzstan" OJSC for "KEGOC" JSC	8.9	3.3	-5.6	-62.6

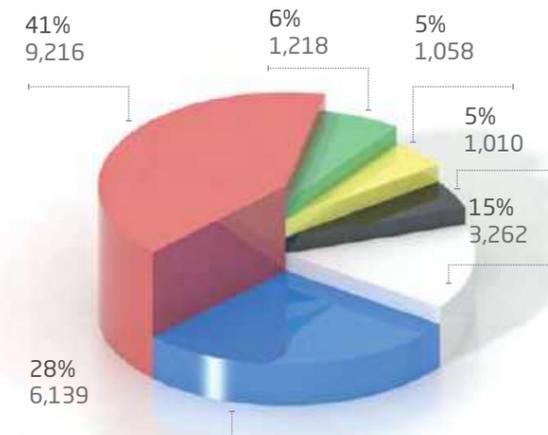
## COMPETITIVE ENVIRONMENT IN THE ELECTRICITY MARKET

The share of electricity production of Samruk-Energy's major competitors in the wholesale market in 2018 (bln. kWh)



■ "Samruk-Energy" JSC  
■ "Eurasian Resources Group" LLP  
■ "Kazakhmys Energy" LLP

The share of installed capacity of "Samruk-Energy" JSC major competitors in 2018 (MW)



■ TOO "Kazakhstan Utility Systems" LLP  
■ "Central-Asian Electric Power Corporation" JSC  
■ Others

Electricity output of energy-producing organizations-competitors of "Samruk-Energy" JSC in 2018 amounted to 51.7 bln. kWh, which is 1.2 bln. kWh less compared to 2017 (52.9 bln. kWh).

Over 12 months of 2018, the growth of electricity production across "Samruk-Energy" JSC group amounted to 14%

(across operating Samruk-Energy groups of companies) in comparison with the same period of last year.

At the same time, this indicator of main competitors such as "Kazakhmys Energy" LLP amounted to -4.7%, KUS: 4.5%, ERG: 1.6%

Production of electricity by major Kazakhstani producers

No.	Company name	2017*	2018	Deviation	%
1	"Samruk-Energy" JSC, total:	27,760.3	31,703	3,942.7	14
2	"Eurasian Resources Group" LLP	19,264.6	19,573.9	309.3	1.6
3	"Central-Asian Electric Power Corporation" LLP	7,299.9	7,025.7	-274.2	-3.8
4	Irtys HPP, total	7,437.1	7,013.6	-423.5	-5.7
5	"Kazakhmys Energy" LLP, total:	6,756.3	6,437.0	-319.3	-4.7
6	"Kazakhstan Utility Systems" LLP, total	6,102.5	6,376.8	274.3	4.5
7	"Zhambyl SDPP" LLP	2,552.3	1,792.4	-759.9	-29.8

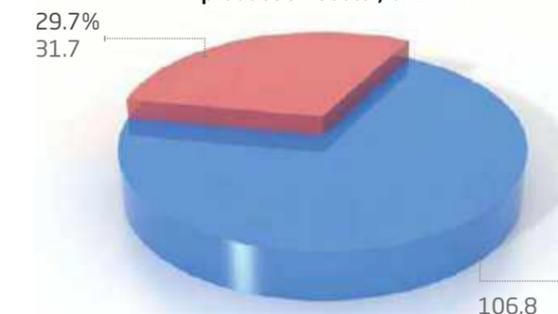
\* without Aktobe CHP

## "SAMRUK-ENERGY" JSC IN ELECTRIC ENERGY PRODUCTION SECTOR

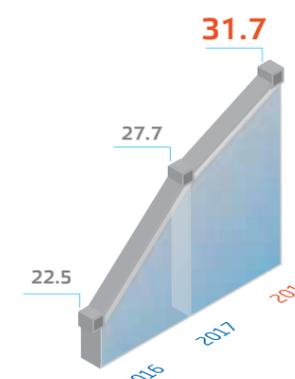
**Electricity output** by energy-producing organizations of "Samruk-Energy" JSC in 2018 amounted to 31.7 bln. kWh. The share of electricity generation by power plants of "Samruk-Energy" JSC amounted to 29.7% of the total electricity production in the UES of Kazakhstan.

The share of electricity production by energy-producing organizations of "Samruk-Energy" JSC using renewable energy sources amounted to 1.1% of the total electricity generated by "Samruk-Energy" JSC and 26.6% of the total volume of renewable energy electricity in the Republic of Kazakhstan (renewable electricity production by "Samruk-Energy" JSC amounted to 355.4 mln. kWh).

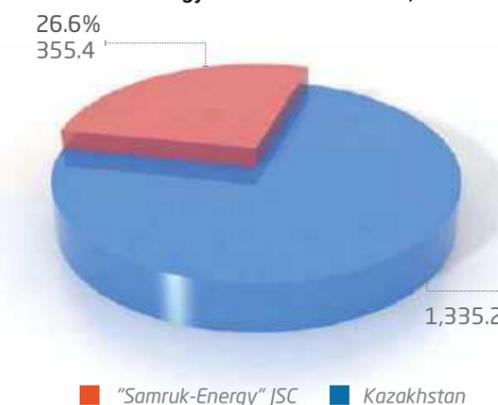
"Samruk-Energy" JSC in electric energy production sector, bln. kWh



Dynamics of electricity production by energy producing organizations of "Samruk-Energy" JSC, bln. kWh



The share of renewable electricity production by "Samruk-Energy" JSC in Kazakhstan, mln. kWh



Description	2017	Share in the RK, %	2018	Share in the RK, %	Δ 2018/2017rr,	
					Mln. kWh	%
<b>Production of renewable electricity by "Samruk-Energy" JSC</b>	<b>367.8</b>	<b>33.2</b>	<b>355.5</b>	<b>26.6</b>	<b>-12.3</b>	<b>-3.3</b>
Cascade of small HPP of "APP" JSC	198.2	17.9	194.4	14.6	-3.8	-1.9
"Samruk-Green Energy" LLP	3.2	0.3	3.2	0.2	0.0	0.0
"First Wind Power Plant" LLP	166.4	15.0	157.9	11.8	-8.5	-5.1

The decrease in "Samruk-Energy" JSC renewable electricity production indicators was driven by an increase in electricity production volumes by other renewable energy facilities in

connection with the commissioning of new renewable energy facilities in Kazakhstan.

## "Samruk-Energy" JSC production figures (broken down by producers)

Subsidiary and affiliate name	2016 (actual)	2017 (actual)	2018 (actual)	2018 deviation from 2017, %	2019 (forecast)	2020 (forecast)
<b>Electricity production volume, mln. kWh<sup>1</sup></b>						
"Almaty Power Plants" JSC	5,911.4	5,712.4	5,599.1	98	5,382.4	5,382.4
Basic capacity, MW	-	-	-	-	670.0	670.0
"Ekibastuz SDPP-1" LLP	9,037.3	14,797.0	19,121.6	129	18,975.3	20,315.1
Incl.export	133.2	4,705.5	3,757.9	80	-	-
Basic capacity, MW	-	-	-	-	2,596.3	2,596.3
"Ekibastuz SDPP-2 Plant" JSC	4,976.1	5,495.5	5,436.5	99	5,884.8	6,011.3
Basic capacity, MW	-	-	-	-	800.0	800.0
"Shardarinsk HPP" JSC	334.0	359.4	348.7	97	378.0	550.6
Basic capacity, MW	-	-	-	-	43.2	62.9
"Moynak HPP" JSC	1,165.5	1,226.5	1 036	84	906.0	906.0
Basic capacity, MW	-	-	-	-	298.0	298.0
"Samruk-Green Energy" LLP	3.2	3.2	3.2	100	21.9	22.2
"FWPP" LLP	151.8	166.4	157.9	95	167.2	172.2
<b>Total</b>	<b>21,579.4</b>	<b>27,760.3</b>	<b>31,703.1</b>	<b>114</b>	<b>31,715.6</b>	<b>33,359.8</b>
<b>Electricity transmission volumes, mln. kWh<sup>2</sup></b>						
"Alatau Zharyk Company" JSC	6,252.0	6,527.9	6,795.9	104	6,945.9	7,120
<b>Total</b>	<b>6,252.0</b>	<b>6,527.9</b>	<b>6,795.9</b>	<b>104</b>	<b>6,945.9</b>	<b>7,120</b>
<b>Electricity sales volumes, mln. kWh<sup>3</sup></b>						
"AlmatyEnergoSbyt" LLP	5,766.8	5,767.5	5,904.3	102	5,745.0	5,854.1
<b>Total</b>	<b>5,766.8</b>	<b>5,767.5</b>	<b>5,904.3</b>	<b>102</b>	<b>5,745.0</b>	<b>5,854.1</b>
<b>Heat production volumes, thous.Gcal<sup>1</sup></b>						
"Almaty Power Plants" JSC	4,970.5	5,223.3	5 616.8	108	5,142.5	5,142.5
"Ekibastuz SDPP-2 Plant" JSC	70.8	66.5	78.6	118	76	76
"Ekibastuz SDPP-1" LLP	-	8.2	59.9	734	307.3	307.3
<b>Total</b>	<b>5,041.4</b>	<b>5,298.0</b>	<b>5 755.3</b>	<b>109</b>	<b>5,525.8</b>	<b>5,525.8</b>
<b>Coal sales volumes, mln. tons</b>						
	<b>35.1</b>	<b>40.9</b>	<b>45.2</b>	<b>110</b>	<b>42.3</b>	<b>42.9</b>

**Note:**
<sup>1</sup> for comparison reasons. electricity and heat outputs in 2017 do not include "Aktobe CHP" JSC. which was sold in 2017.

<sup>2</sup> for comparison reasons. electricity transmission volumes in 2017 do not include "EK REC" JSC and "MDPGC" JSC. which were sold in 2017.

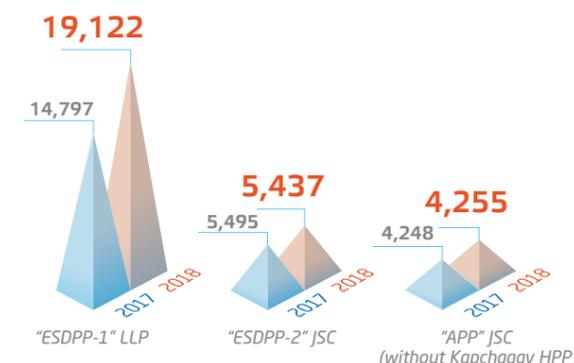
<sup>3</sup> for comparison reasons. electricity sales volumes in 2017 do not include "ShET" LLP. which was sold in 2017.

The main increase in electricity production was owing to an increase in the "Ekibastuz SDPP-1" LLP output by 4,325 mln. kWh.

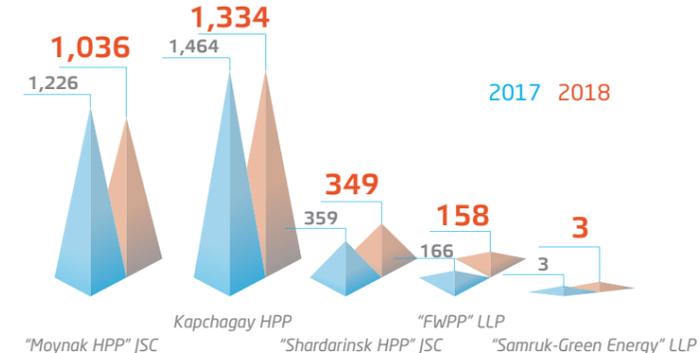
The decrease in output of HPP by 320 mln. kWh was driven by the decrease in water inflow at the Moynak hydro power

plant. Kapchagai hydro power plant and the Shardara hydro power plant. Decrease in the sale of FWPP electricity by 8 million kWh occurred due to a decrease in the average wind speed.

## Electricity production volumes (mln.kWh) at TPP, CHP



## Electricity production volumes (mln.kWh) at HPP, WPP, SPP



## FORECAST FOR THE FUTURE PERIOD:

The **volume of electricity production** in the forecast for 2019 is projected with a gradual increase in relation to the actual figure of 2018. The increase in the volume of electricity production in 2019 by 12.5 mln. kWh is mainly driven by the growth in the volumes of electricity production by "Ekibastuz SDPP-2 Plant" JSC. At the same time, "Ekibastuz SDPP-1" LLP plans to replace electricity supplies from exports to the Russian Federation to the domestic market in 2019.

**Heat production volumes** in 2018 amounted to 5,775 thous. Gcal; it increased as compared to the volume of 2017 (an increase of 457 thousand Gcal or 9%) mainly due to an increase in heat production by 394 thous. Gcal or 7.5% at "Almaty Power Plants" JSC.

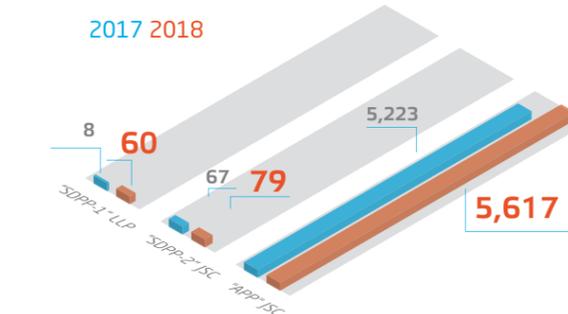
## FORECAST FOR THE FUTURE PERIOD:

**Heat production volumes** in the plan for 2019 is expected to decrease by 4% against the actual figure of 2018 mainly due to reduction of heat production volumes at "Almaty Power Plants" JSC.

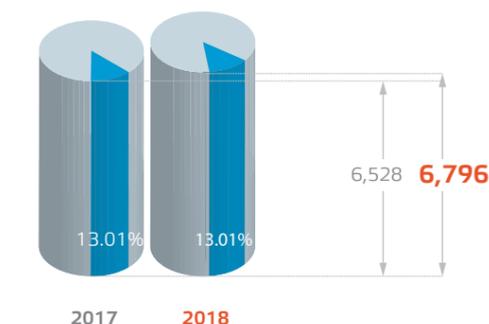
**Electricity transmission volumes** amounted to – 6,796 mln. kWh. increased as compared to 2017 volumes (a 268 mln. kWh increase). The increase in the volume of electricity transmission at "Alatau Zharyk Company" JSC was driven by the growth of consumption of Almaty region in connection with lower temperatures in January–February. December 2018 and higher temperatures in August 2018.

**Grid losses** according to results of 2018 remained at the same level as compared with the same period of 2017. As a whole. loss rate of "Alatau Zharyk Company" JSC is lower than the standard established by CRNM and PC.

## Dynamics of changes in heat production volumes, thous.Gcal



## Electricity transmission volumes (mln. kWh) and grid losses (in%)



**FORECAST FOR THE FUTURE PERIOD:**

The volume of transmission and distribution of electricity in 2019 is expected to increase by 2.4% compared with the actual figure of 2018 mainly due to the growth of electricity transmission volumes at "Alatau Zharyk Company" JSC.

The volume of electricity sales volume at power supply organizations for the reporting period amounted to 5,904 mln. kWh, which is 137 mln. kWh higher than 2017 or 2% compared with 2017 in connection with the growing number of consumers at "AlmatyEnergoSbyt" LLP.

Description	Actual 2016	Actual 2017	Actual 2018	Deviation	%
<b>AlmatyEnergoSbyt</b>					
<b>Number of consumers, incl.:</b>	<b>781,734</b>	<b>800,448</b>	<b>817,025</b>	16,577	2.1
Population	752,711	770,245	785,393	15,148	2.0
Corporate entities	29,023	30,203	31,632	1,429	4.7
<b>Sales volume, mln. kWh</b>	<b>5,767</b>	<b>5,767</b>	<b>5,904</b>	137	2.4

**FORECAST FOR THE FUTURE PERIOD:**

Electricity sales volume in the forecast for 2019 decreases by 3% from the actual figure of 2018. In the forecast for 2020,

the volume of electricity sales increases by 2% compared with the forecast for 2019.

**An increase in total sales of electricity of "Samruk-Energy" JSC**

In 2018 the volume of electricity supply from power plants of Samruk-Energy JSC amounted to 29.936 mln. kWh, which is 12% more than in 2017. Including:

- To in-house consumers which are members of "Samruk-Energy" JSC group ("Bogatyr Komir" LLP, "AlmatyEnergoSbyt" LLP, "Alatau Zharyk Company" JSC) – 6,705.4 ln. kWh;

- To third party distributors that are not members of "Samruk-Energy" JSC group – 23,230.6 mln. kWh which is 16% more than 2017.

**Electricity sale**

Indicators	2017	share. % own/ third-p. cons	2018	share. % own/ third-p.cons	Δ. mln. kWh	Δ. %
"Samruk-Energy" JSC	26,784.6		29,936		3 151.4	112
To own consumers	6,734	25	6,705.4	23	-28.6	99
Third party consumers	20,050.6	75	23,230.6	77	3 180	116

As can be seen from the table above, "Samruk-Energy" JSC power plants sold 77% of the electricity to third-party consumers, competing with other power plants.

In the context of deteriorating market conditions and surplus of capacities one of the strategic objectives of Company is to increase electricity sales volumes. The Trade house directly communicates with entities in the electricity market of Kazakhstan and neighboring countries and also performs commercial dispatching – the distribution of company's group electricity volumes to consumers in Kazakhstan. Based on the feasibility of subsidiaries and associated power plants' loads

produces daily schedules of "Samruk-Energy" JSC group appropriately distributes the volumes reported at their power plants. The Trade house also controls issues associated with power supply to consumers during emergency shutdowns of power units by replacing emergency retired assets from other energy sources.

With the direct involvement of the Trade House in the implementation of the flexible pricing policy under conditions of capacity surplus in the market and load optimization at generating enterprises, "ESDPP-1" LLP, "ESDPP-2 Plant" JSC, "APP" JSC, electricity was successfully sold at centralized

auction to everyone who wanted to purchase electricity at competitive market prices.

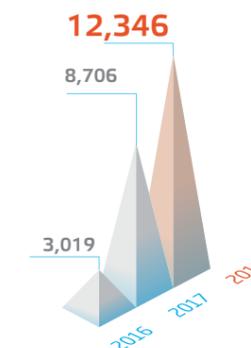
In 2018 "ESDPP-1" LLP and "ESDPP-2 Plant" JSC attracted **25 wholesale market entities** ("Silk Way Energy" LLP, "Energy Innovations" LLP, "Altyn-Energo-Service" LLP, "DHT Neftegaz-mash-Service" LLP, "Samga Development" LLP, "Zhambyl Electric Networks" LLP, "Taraz Electrosnab" LLP, "Zharyk 65" LLP, "Pavlodarenergosbyt" LLP, etc.), which were supplied with 893 mln. kWh.

"Ekibastuz SDPP-1" LLP exported **3,757.98 mln. kWh** in 2018 to the Russian Federation.

The successful result of sales activities of the largest power plants ESDPP-1 and ESDPP-2 is the increase of electricity sales volumes:

Description	Plant	2016	2017	2018
Generation	ESDPP-1 and ESDPP-2	14,013,464	20,292,465	24,558,117
Sales (with export), kWh	ESDPP-1 and ESDPP-2	13,228,707	19,320,907	23,500,927
Sales (without export), kWh	ESDPP-1 and ESDPP-2	11,237,032	14,615,371	19,742,947

The volume of electricity sales at centralized auctions, mln. kWh


**"Samruk-Energy" JSC participation in the capacity market**

"Samruk-Energy" JSC power plants took part in the simulated trades of electric capacity held on the trading platform of "KEPMO" JSC during 2018.

Real auction of electric capacity for the Northern and Southern zones was held on December 5, 2018, at which the Company's power plants sold their volumes of services for maintaining the availability of electric capacity.

According to the results of centralized auction of capacity, which took place on the trading platform of "KEPMO" JSC, the power plants of the Company sold 2,148.7 MW at a price of 590 thousand tenge / MW \* month.

As part of the introduction of the capacity market, "Samruk-Energy" JSC implements a project, which is scheduled to be completed by 2021. The establishment of a sales department and a commercial dispatching department based on the Trade house, thus a complete centralization of trading activity of "Samruk-Energy" JSC's six subsidiaries is expected. According to the new operating model, modes and daily schedules, export deliveries, interaction with "KEGOC" JSC, "KEPMO" JSC and other entities will be managed at the level of the Head Office.

The Company believes that centralization of management will enable to achieve optimal loads of electricity producing companies, while the old model did not consider the possibility of competition between them.

The centralized participation in online capacity trades provides for the prompt adoption of correct management decisions, which contribute to maximize the profitability, as well as increase the effectiveness of participation in the capacity market.

## COAL MARKET

The coal industry is one of the most important resource industries in the Republic of Kazakhstan. According to the BP Statistical Review of World Energy, as of 2018, Kazakhstan ranks eighth in the world in terms of proven coal reserves – 25.6 bln. tons or 2.5% of the world total.

According to the Statistics Committee of the RK MNE, the country's coal production amounted to 113.7 mln. tons of

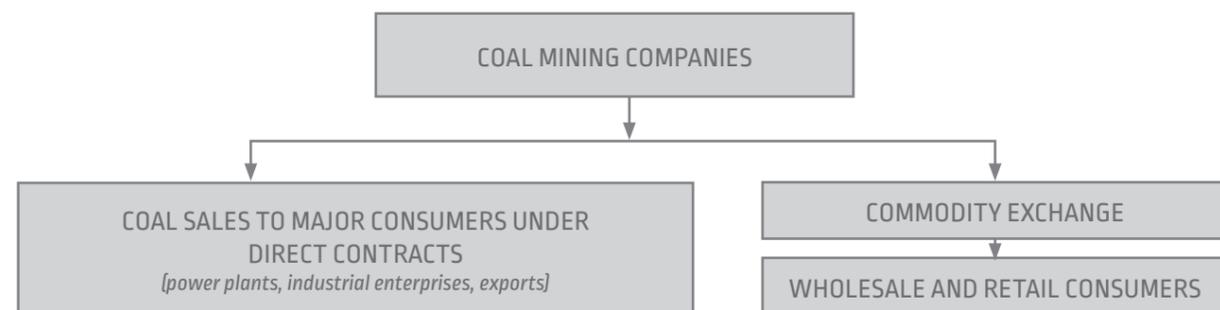
coal in 2018 (excluding coal concentrate) or 105% against the same indicator in 2017 (107.9 mln. tons of coal).

Power generating coal market in Kazakhstan is relatively fragmented – the major players are "Bogatyr Komir" LLP ("Samruk-Energy" JSC and "RUSAL" UC), "EEC" JSC ("ERG" LLP), "Shubarkol Komir" JSC ("ERG" LLP), "Kazakhmys Corporation" LLP, "Karazhyra" JSC, "Angrenor Energy" LLP.

thous. tons

No.	Region	2017	2018	Δ. %
1	Pavlodar	62,467.9	70,325.2	13
2	Karaganda	35,909	34,987.3	-3
3	East-Kazakhstan	6,867	8,290	21
4	Others	721	100.9	-86
<b>Total for the RK</b>		<b>105,964.9</b>	<b>113,703.4</b>	<b>7</b>

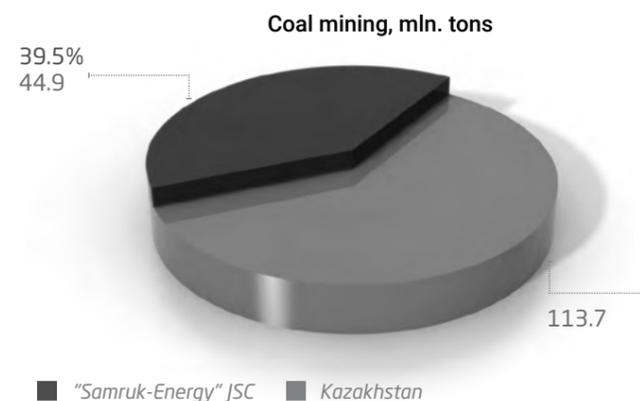
### GENERAL SCHEME OF COAL SALES



Power systems of Nur-Sultan, Almaty, Karaganda, Petropavlovsk, Pavlodar, Stepnogorsk cities and Ekibastuz SDPP-1, SDPP-2 are among the major consumers of "Bogatyr Komir" LLP in Kazakhstan.

To receive coal, the power plants of Kazakhstan arrange on their own the transportation of coal from Ekibastuz station ("Bogatyr Komir" LLP) to the destination station.

Following the results of transactions on the stock exchange, municipal coal is shipped in two ways: by railway and motor transport. Boiler coal houses in rural areas are the consumers; Ekibastuz coal is a fuel specified on their nameplates.



According to results of 2018, the Company's share of the total coal produced in Kazakhstan amounted to 39.5% and 59% of the coal mined in Ekibastuz coal deposit.

According to results of 2018, 45,158 thous.tons were sold by "Bogatyr Komir" LLP, including:

- to the domestic market of the Republic of Kazakhstan – 35,572 thous. tons, which is 11% more than in 2017 (30,693 thous. tons), including for household needs – 1,519 thous. tons;
- for exports (RF) – 9,587 mln. tons, which is 5.7% less than in 2017 (10,166 thous. tons).

The increase in coal sales in the domestic market amounted to 4,879 thous. tons, which is driven by the growth in demand of Kazakhstan energy producing organizations and shipment to new consumers.

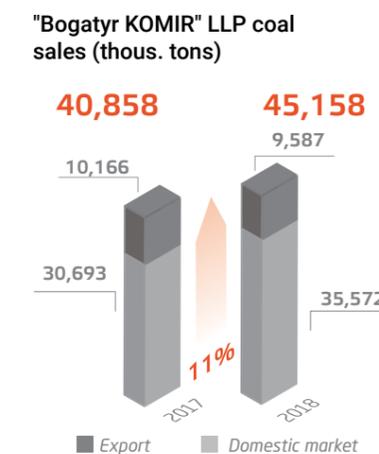
### Coal sales to consumers in 2017–2018

No.	Region	Volume of sales. thous.tons		Δ. % 2018/2017
		2017	2018	
1	"APP" JSC	3,256	3,299	101.3
2	"Karaganda Energocenter" LLP	3,301	3,521	106.6
3	"Astana –Energia" JSC	3,525	3,640	103.2
4	"Pavlodarenergo" JSC PCHP-2.3	1,895	3,289	173.6
5	"Stepnogorsk CHP" LLP	869	984	113.3
6	"ESDPP-1" LLP	8,850	11,559	130.6
7	"ESDPP-2 Plant" JSC	3,456	3,285	95.0
8	"Bassel Group LLS» LLP	544	605	111.2
9	"SevKazEnergo" JSC	2,806	2,672	95.2
10	"Pavlodarenergo" JSC ECHP	505	513	101.6
11	SE based on the REM "Kokshetau Zhylu"	295	323	109.5
12	"GRES Topar" LLP	0	359	
13	"Sogrinsk CHP" LLP	0	5	
14	Household	1,390	1,519	108.6
<b>Total for the domestic market of the RK</b>		<b>30,693</b>	<b>35,573</b>	<b>115.9</b>
15	Reftinsk GRES (RF)	9,936	9,564	96.3
16	Serovsk GRES (RF)	41	0	0.0
17	Troitsk GRES (RF)	143	9	6.4
18	Kurgan CHP (RF)	37	0	0.0
19	Yarvoe CHP (RF)	0	14	0.0
20	Kyrgystan	9	0	0.0
<b>Total for export to the RF</b>		<b>10,166</b>	<b>9,587</b>	<b>94.3</b>

The decrease in coal sales for export by 579 thous. tons or 6% is connected with the decrease in demand by the Russian enterprises.

### FORECAST FOR THE FUTURE PERIOD:

**Coal sales volume** in the forecast for 2019 will decrease by 2.9 mln. tons or by 6.4% as compared to the actual figure of 2018. In the forecast for 2020, coal sales will increase by 1.5% or by 0.6 mln. tons against 2019.



# 04

## “SAMRUK-ENERGY” JSC GROUP OF COMPANIES

### CONVENTIONAL GENERATION

#### “Almaty Power Plants” JSC

[“Samruk-Energy” JSC – 100%]

“Almaty Power Plants” JSC (“APP” JSC) is an energy-producing organization engaged in heat and electricity production in Almaty city and Almaty region. “APP” JSC provides electricity and heat to the population, industrial and agricultural enterprises, and is a natural monopoly entity in heat production.

To date, the generated heat and electricity covers about 70% of demand of Almaty city and Almaty region.

The structure of the company includes thermal plants – CHP-1, CHP-2, CHP-3; Western Thermal Complex; hydropower plants – Kapshagai and Cascade of Hydro power plants; Industrial repair enterprise “Energoremont”, Center for receiving and discharge of fuel

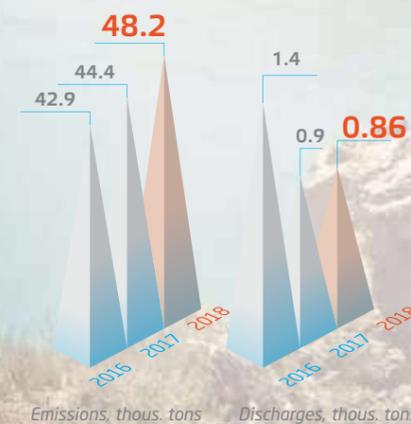
#### FINANCIAL PERFORMANCE

Indicator	Measurement unit	2016	2017	2018
Net income/loss	mln. tenge	5,927	1,522	(1,620)
EBITDA	mln. tenge	14,354	12,290	11,147
EBITDA Margin	%	24	20	17

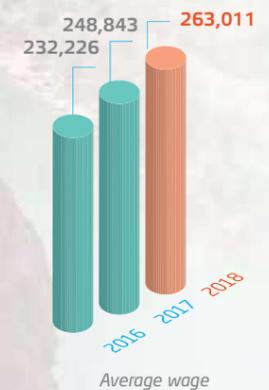
#### RESULTS OF OPERATING ACTIVITIES

Indicator	Measurement unit	2016	2017	2018
Installed electric capacity	MW	1,239	1,239	1,235.7
Electricity production volume	mln. kWh	5,911	5,712	5,599
Electricity sales volume	mln. kWh	5,214	5,072	4,893
Heat production volume	thous. Gcal	4,971	5,507	5,916
Heat sales volume	thous. Gcal	4,970.5	5,223	5,617

#### ENVIRONMENTAL INDICATORS



#### SOCIAL INDICATORS



More information available on the website: [www.ales.kz](http://www.ales.kz)



## "Ekibastuz SDPP-1 named after Bulat Nurzhanov"

["Samruk-Energy" JSC – 100%]

"Ekibastuz SDPP-1" LLP is the largest thermal power plant in Kazakhstan, which operates on coal-fired, located in Ekibastuz city, Pavlodar region of Kazakhstan. Operating capacity of SDPP-1 is 3500 MW. The main fuel of power plant is Ekibastuz deposits' coal. The complex consists of 8 power units with a capacity of 500 MW each and the building itself has very impressive dimensions: the length of the main building is 500 meters, the width is 132 meters, and the height is 64 meters. Two chimneys of 310 and 330 meters each.

The company provides electricity to the northern, eastern and southern regions of Kazakhstan, part of the electricity (20%) is exported to Russia.

### FINANCIAL PERFORMANCE

Indicator	Measurement unit	2016	2017	2018
Net income/loss	mln. tenge	5,217	3,859	18,072
EBITDA	mln. tenge	33,978	36,826	58,979
EBITDA Margin	%	54	41	47

### RESULTS OF OPERATING ACTIVITIES

Indicator	Measurement unit	2016	2017	2018
Installed electric capacity	MW	4,000	4,000	3,500
Electricity production volume	mln., kWh	9,037	14,797	19,121
Electricity sales volume	mln. kWh	8,523	14,022	18,180
Electricity transmission volume	Gcal	–	27,275	175,072
Heat production volume		–	4,153	37,562
Heat sales volume		64	72	72

## "Ekibastuz SDPP-2 Plant" JSC

["Samruk-Energy" JSC – 50%. "Inter RAO" PJSC – 50%]

"Ekibastuz SDPP-2 Plant" JSC is the second, after the Ekibastuz SDPP-1, thermal power plant in Ekibastuz city of Pavlodar region of Kazakhstan with a capacity of 1000 MW. The joint-stock company represents the interests of the two largest participants of the Russian and Kazakhstan power markets: "INTER RAO UES" JSC (Russia) and "Samruk-Energy" JSC (Kazakhstan), which owns 50% of shares.

Ekibastuz SDPP-2 was designed with an installed capacity of 4,000 MW (eight power units of 500 MW each). At this time, the installed capacity of the existing SDPP is 1,000 MW, and the available – 940 MW. Reinforced concrete chimney, built in 1987, having a height of 420 m, is the highest in the world and it is listed in the Guinness Book of Records, SDPP-2 operates on high-ash coals of Ekibastuz coal basin.

Ekibastuz SDPP-2 plant was one of the first to install the highly efficient Alstom electrostatic precipitators, which allowed the plant to reduce its emissions to the atmosphere and thereby significantly improve the environmental situation in Pavlodar region.

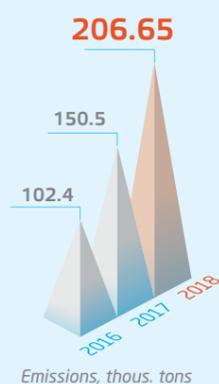
### FINANCIAL PERFORMANCE

Indicator	Measurement unit	2016	2017	2018
Net income /loss	mln. tenge	1,575	(19,092)	(6,823)
EBITDA	mln. tenge	13,138	12,594	16,250
EBITDA margin	%	42	37	42

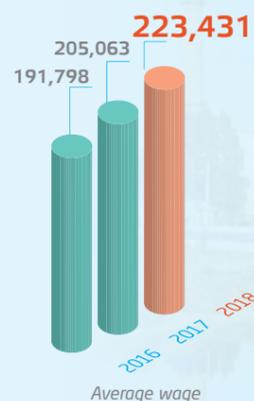
### RESULTS OF OPERATING ACTIVITIES

Indicator	Measurement unit	2016	2017	2018
Installed electric capacity	MW	1,000	1,000	1,000
electricity production volume	mln. kWh	4,976	5,495	5,436.5
electricity sales volume	mln. kWh	4,707	5,208	5,161
<b>volume of heat sales</b>	<b>thous. Gcal</b>	<b>70.837</b>	<b>66.515</b>	<b>78.622</b>

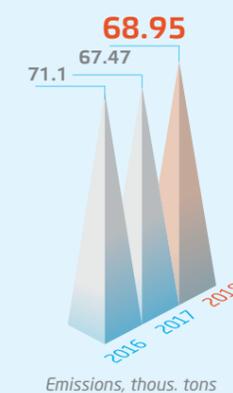
### ENVIRONMENTAL INDICATORS



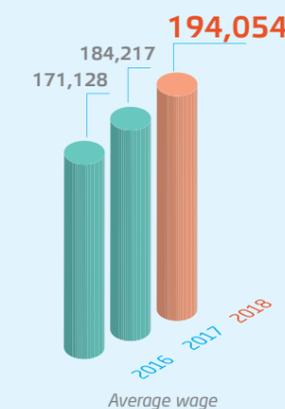
### SOCIAL INDICATORS



### ENVIRONMENTAL INDICATORS



### SOCIAL INDICATORS



## ELECTRICITY DISTRIBUTION

### "Alatau Zharyk Company" JSC

["Samruk-Energy" JSC – 84%]

"Alatau Zharyk Company" JSC is one of the largest regional power grid companies in the south of the republic that is engaged in electricity transmission and distribution for the population, industrial and agricultural enterprises in the area of its operation – Almaty city and the Almaty region. Service radius of "Alatau Zharyk Company" JSC extends geographically from the shores of Lake Balkhash to the borders with China.

In the "Doing Business" rating conducted by the World Bank, "Alatau Zharyk Company" JSC optimized the process of issuing technical specifications through the efficient use of information technology, and took the 1<sup>st</sup> place. Thus, from January 2018, each consumer has the opportunity to receive technical specifications online within the shortest possible time subject to availability of an electronic digital signature.

The priority directions of "Alatau Zharyk Company" JSC investment policy is the reconstruction and retrofit of distribution grids and power equipment in order to ensure the reliability of power supply, improve the quality of services and reduce regulatory and technical losses.

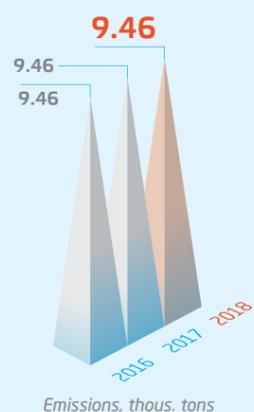
#### FINANCIAL PERFORMANCE

Indicators	Measurement unit	2016	2017	2018
Net income /loss	mln. tenge	3,725	5,436	5,860
EBITDA	mln. tenge	11,652	15,023	15,980
EBITDA Margin	%	34	39	40

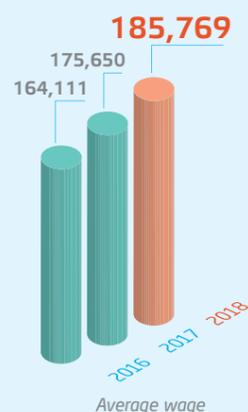
#### RESULTS OF OPERATING ACTIVITIES

Description	Measurement unit	2016	2017	2018
PTL-220 kV	km	472.57	469.64	457.79
PTL-110 kV	km	2,876.21	2,878.02	2,898.21
PTL-35 kV	km	2,592.72	2,593.75	2,602.87
PTL-10 kV	km	10,900.82	10,910.57	10,854.8
PTL-6 kV	km	1,730.8	1,744.31	1,744.9
PTL-0.4 kV	km	11,080.5	10,934.98	10,972.05
SS-220 kV	pcs.	9	9	9
SS-110 kV	pcs.	94	94	95
SS-35 kV	pcs.	105	104	105
Electricity transmission	mln. kWh	6,252	6,528	6,796
Number of consumers (commercial and others)	pcs.	14	17	21

#### ENVIRONMENTAL INDICATORS



#### SOCIAL INDICATORS



### "AlmatyEnergoSbyt" LLP

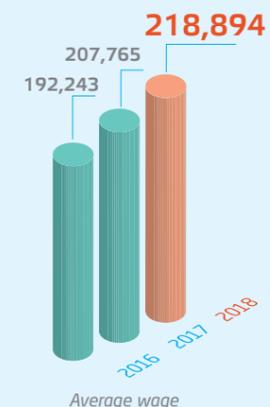
["Samruk-Energy" JSC – 100%]

"AlmatyEnergoSbyt" LLP is the largest electricity in the territory of Kazakhstan, supplies power to more than 3 million residents and 29 thousand enterprises of Almaty city and Almaty region.

"AlmatyEnergoSbyt" LLP is one of the first sales organizations in the Republic, which obtained the international quality management system certificate ISO 9001: 2008 in the field of services for electricity purchases for the purposes of power supply.

"AlmatyEnergoSbyt" LLP launched the procedure for signing an electricity supply contract through EDS on the corporate website.

#### SOCIAL INDICATORS



More information available on the website: [www.esalmaty.kz](http://www.esalmaty.kz)



#### FINANCIAL PERFORMANCE

Indicator	Measurement unit	2016	2017	2018
Net income /loss	mln. tenge	857	1,374	42
EBITDA	mln. tenge	1,035	2,002	361
EBITDA Margin	%	1.15	2.12	0.37

#### RESULTS OF OPERATING ACTIVITIES

Indicator	Measurement unit	2016	2017	2018
Electricity sales volume	mln. kWh	5,766.8	5,767.5	5,904.3
Revenues from electricity sold	mln. kWh	90,284.2	94,458.1	96,955.4
Average electricity tariff	tenge/kWh	15.66	16.38	16.42
Labor productivity in the field of electricity sales	mln. kWh/person	10.986	10.957	11.237

Consumers groups	2016	2017	2018
<b>Population</b>	<b>752,711</b>	<b>770,245</b>	<b>785,393</b>
<b>Commercial users, including:</b>	<b>29,023</b>	<b>30,203</b>	<b>31,632</b>
- industrial consumers and similar to them consumers	1,865	1,866	1,932
- budget organizations	1,230	1,238	1,234
- other consumers	25,928	27,099	28,466
<b>TOTAL:</b>	<b>781,734</b>	<b>800,448</b>	<b>817,025</b>

More information available on the website: [www.azhk.kz](http://www.azhk.kz)



## GREEN ENERGY

### "Shardarinsk HPP" JSC

["Samruk-Energy" JSC – 100%]

"Shardarinsk HPP" JSC is a hydropower plant on the Syrdarya River, near the town of Shardara in the South Kazakhstan region, which aims include irrigation, energy, flood control, fish farming. This is the last stage of the Naryn – Syr Darya HPP cascade. The hydroelectric dam forms a large Shardara reservoir, mainly for the purposes of irrigation and flood control, with an area of 900 km<sup>2</sup>.

HPP capacity is 100 MW with long-term annual average generation of 377 million kW. Upon completion of the equipment retrofit project in February 2020, the installed capacity of hydropower plant will be 126 MW, the average annual output is 537 mln. kWh.

#### FINANCIAL PERFORMANCE

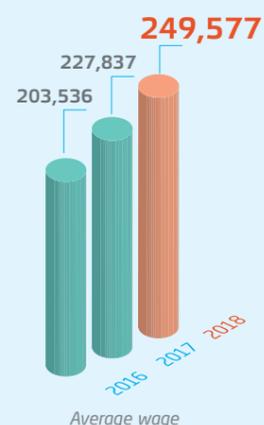
Indicator	Measurement unit	2016	2017	2018
Net income /loss	mln. tenge	1,376	1,706	1,526
EBITDA	mln. tenge	2,194	2,330	2,174
EBITDA Margin	%	69	68	66

#### RESULTS OF OPERATING ACTIVITIES

Indicator	Measurement unit	2016	2017	2018
Installed electric capacity	MW	100	100	100/50* MW from 01.03.2018
Electricity production volumes	mln. kWh	334.0	359.4	348.7
Electricity sales volumes	mln. kWh	329.352	354.752	344.6

\* a decrease until the retrofit of hydraulic units is completed

#### SOCIAL INDICATORS



### "Moynak HPP" JSC

["Samruk-Energy" JSC – 100%]

The Moynak HPP is the first high-pressure diversion hydroelectric power plant in Kazakhstan, built on the Charyn River in Raimbek district of Almaty region and the most high-pressure in the CIS. The main purpose of Moynak hydropower plant is to use hydropower plants as a maneuverable source of electricity to cover peak loads in the southern zone of the Republic of Kazakhstan.

Since the start of operation, the station generated more than 5 billion kWh of electricity; the company today is the most highly efficient hydropower plant in Kazakhstan.

The commissioning of Moynak HPP gave a strong impetus to the development of Almaty region, especially to the development of Raimbek region. The construction of HPP transformed the region, gave it new features. The district received an additional source of income, an industrial enterprise and permanent jobs.

#### FINANCIAL PERFORMANCE

Indicator	Measurement unit	2016	2017	2018
Net income /loss	mln. tenge	4,740	3,076	(5,296)
EBITDA	mln. tenge	8,434	9,118	8,060
EBITDA Margin	%	85	84	79

#### RESULTS OF OPERATING ACTIVITIES

Indicator	Measurement unit	2016	2017	2018
Installed electric capacity	MW	300	300	300
Electricity production volume	mln. kWh	1,166	1,226	1,036
Electricity sales volume	mln. kWh	1,160	1,221	1,034

#### SOCIAL INDICATORS



More information available on the website: [www.shardarinsk.kz](http://www.shardarinsk.kz)



More information available on the website: [www.moynak.kz](http://www.moynak.kz)



## "Ust-Kamenogorsk HPP" JSC

["Samruk-Energy" JSC – 89.99]

In October 2017, the concession agreement with AES Suntry Power Limited was terminated and assets transferred to Republican ownership of the Republic of Kazakhstan.

**Core business:** Organizational and managerial activity

## "Bukhtarminsk HPP" JSC

["Samruk-Energy" JSC – 90%]

Bukhtarminsk hydropower plant solves many issues of energy sector, transport and fisheries. The working conditions of water transport after the construction of the hydroelectric power plant have improved dramatically due to the formation of a deep-sea track at a distance of 500 km and the passage of regulated flow through waterworks facility.

Bukhtarminsk HPP is a cost-efficient hydropower plant both in terms of the specific volume of work and in terms of cost parameters of electricity production.

The installed capacity of hydropower plants is 675 MW, the average annual production is 2.77 bln. kWh. HPP covers

## "Shulbinsk HPP" JSC

["Samruk-Energy" JSC – 92.14%]

In October 2017, the concession agreement with AES Suntry Power Limited was terminated and assets transferred to Republican ownership of the Republic of Kazakhstan.

**Core business:** organizational and management activity

**Location: registered addresses:** Ust-Kamenogorsk, Ablaketka village. Location of the executive body Ust-Kamenogorsk city, 27, Kazakhstan str.

ers peak loads in the power system of Kazakhstan. In 2002, Bukhtarminsk dam was recognized as the best in the world as the quality of concrete exceeds all expected parameters

**Core business:** Rental and management of own property, rent of other machinery, equipment and supplies.

**Location:** the Republic of Kazakhstan, 070825, East-Kazakhstan region, Zyrianovsky district, Serebryansk city, 5, Graftio street.

*The company is in concession*

**Location:** the Republic of Kazakhstan. Ust-Kamenogorsk c. Ablaketka village. Location of the executive bodies – Ust-Kamenogorsk, 27, Kazakhstan street.

## "First Wind Power Plant" LLP

["Samruk-Energy" JSC- 100%]

"First Wind Power Plant" LLP is the first large-scale wind farm operating on an industrial scale in the Republic of Kazakhstan.

The wind farm of the company is located in Akmola region, nearby Ereymentau city, consists of 22 wind turbines, with unit capacity of 2,05 MW, operating safely for the environment. Since commissioning, the power plant has generated over 550 million kWh of electricity. 100% of all generated electricity goes to the National Power Grid of Kazakhstan – "KEGOC" JSC.

As of today, "First Wind Power Plant" LLP has implemented its first project "Construction of 45 MW Wind Power Plant nearby Ereymentau city including a possible increase in capacity up to 300 MW".

**Location:** 12A. Kerey, Zhanibek Khandar str., Nur-Sultan c. (the location of the Partnership's wind power plant – Akmola region, Ereymentau district, Taibas rural district, #041 block of houses, section # 95)

### FINANCIAL PERFORMANCE

Indicator	Measurement unit	2016	2017	2018
Net income /loss	mln. tenge	(444)	(23)	436
EBITDA	mln. tenge	2,131	3,421	3,201
EBITDA Margin	%	62	78	72

### RESULTS OF OPERATING ACTIVITIES

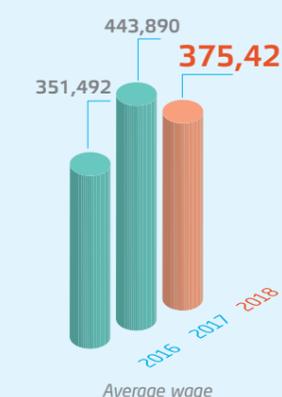
Indicator	Measurement unit	2016	2017	2018
Installed electric capacity	MW	45	45	45
Electricity production volume	mln. kWh	152	166	158
Electricity sales volume	mln. kWh	151	166	157



More information available on the website: [www.pves.kz](http://www.pves.kz)



### SOCIAL INDICATORS



## “Ereymentau Wind Power” LLP

[“Samruk-Energy” JSC – 100%]

The main activity of “Ereymentau Wind Power” LLP is the implementation of “Construction of 50 MW wind power plant near Ereymentau city” project and further production of electricity.

The project represents of a maximum of 20 wind turbines, bases for cranes adjacent to each turbine, internal roads, an internal power grid, an electrical substation including control room and connection to power grid.

The construction of a wind power plant is planned in the south-east of Ereymentau on 1,242 ha site. The site includes hilltops, sloping slopes, small streams, mostly flowing to the north. The upper part and the tops of the hills are typical steppe pastures, and the lower part and valleys contain forest areas and hydrophilic vegetation. The flatter adjacent territory is an open steppe with dispersed water bodies.

### FINANCIAL PERFORMANCE

Indicator	Measurement unit	2016	2017	2018
Net income/loss	mln. tenge	(220)	(207)	(167)
EBITDA	mln. tenge	(212)	(141)	(161)
EBITDA Margin	%	–	–	–

### SOCIAL INDICATORS



More information available on the website: [www.ewp.kz](http://www.ewp.kz)

## “Samruk-Green Energy” LLP

[“Samruk-Energy” JSC – 100%]

“Samruk-Green Energy” LLP is a company whose main activity is the implementation of renewable energy projects. The first project of “Samruk-Green Energy” LLP was the 2 MW Solar Power Plant, which was launched in Kapshagay city, Almaty region, in 2013.

1 MW solar power plant and 5 MW wind power plant were put into operation in November 2018; these projects were implemented under the Agreement between the Governments of the Republic of Kazakhstan and the People’s Republic of China.

At present, “Samruk-Green Energy” LLP is working on a project for the construction of 50 MW solar power plant in the area of Kapshagay city with possible increase in the capacity up to 100 MW. The implementation of project involves the production of about 140 million kWh of electricity per year, reduction of greenhouse gas emissions by more than 116 thousand tons / year and the saving of fossil fuels more than 39,000 tons of coal per year.

### FINANCIAL PERFORMANCE

Indicator	Measurement unit	2016	2017	2018
Net income/loss	mln. tenge	(65)	(21)	(4)
EBITDA	mln. tenge	(28)	15	20
EBITDA Margin	%	–25	10	14

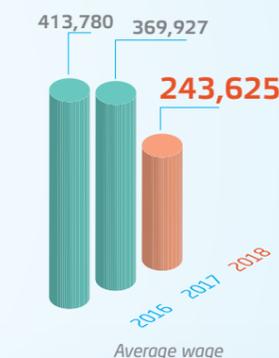
### RESULTS OF OPERATING ACTIVITIES

Indicator	Measurement unit	2016	2017	2018
Installed electric capacity	MW	2	2	2
Electricity production volume	mln. kWh	3.228	3.215	3.232
Electricity sales volume	mln. kWh	3.109	3.101	3.117

More information available on the website: [www.samruk-green.kz](http://www.samruk-green.kz)



### SOCIAL INDICATORS



## "Energia Semirechya" LLP

["Samruk-Energy" JSC – 25%,  
Zenith Global FZE – 75%]

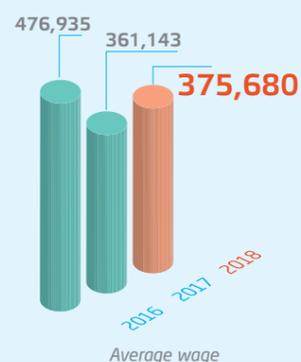
"Energia Semirechya" LLP is an enterprise that provides services for production and sale of electricity, design and construction of facilities using renewable energy sources. The enterprise was established in 2009 in order to conduct activities in the construction of wind power plant with the capacity of 60 MW to 300 MW in Shelek corridor of Enbekshikazakh district of Almaty region.

Wind monitoring in the Dzhungar gate within the project "Dzhungar Gate 72 MW", as well as the development of Shelek energy center is scheduled to be completed in the nearest time (implementation of the Agreement between the Company and HYDRO-CHINA CORPORATION).

### FINANCIAL PERFORMANCE

Indicator	Measurement unit	2016	2017	2018
Net income/loss	thous. tenge	(49)	(43)	(26)
EBITDA	thous. tenge	(93)	(81)	(83)

### SOCIAL INDICATORS



## "Tegis Munay" LLP

["Samruk-Energy" JSC – 100%]

The purpose of "Tegis Munay" LLP is to build ground infrastructure and equip the "Pridorozhnoe" deposit in the South Kazakhstan region of the Republic of Kazakhstan, to build a gas pipeline from "Pridorozhnoe" deposit to the Beineu – Bozoi – Shymkent gas pipeline, to produce, process and sell gas.

Creating safe working environment, ensuring environmental protection and environmental safety, the Company cooper-

ates with research and development institutes for the implementation of energy-efficient technologies at the designed facilities of the field and energy-producing parts of the project.

"Tegis Munay" LLP is an investment project of "Samruk-Energy" JSC, the profit is expected to be received from 2020–2021.

## "Mangyshlak Munay" LLP

["Tegis Munay" LLP – 100%]

"Mangyshlak-Munay" LLP is the holder of the subsoil use right to conduct gas exploration at the Pridorozhnoe field in the South Kazakhstan region. The project involves the development of a gas field to ensure the planned construction of combined-cycle gas turbine unit with a capacity of 175.6 MW.

Its main task is the commercial exploitation of the field in order to make up the gas deficit in the region, create new jobs, develop infrastructure, and increase social assistance and tax deductions to the budget.

The field was discovered in 1978. As a result of drilling and testing, 13 exploration wells discovered and confirmed by the State Commission for Reserves, the presence of natural gas at depths of 1,100 meters and 2,400 meters in the amount of 16.5 billion cubic meters.

"Mangyshlak-Munay" LLP is an investment project of "Samruk-Energy" JSC, the profit is planned from 2020–2021.



More information available on the website: [www.mangyshlak-munay.kz](http://www.mangyshlak-munay.kz)



## "Energy Solutions Center" LLP

["Samruk-Energy" JSC – 100%]

"Energy Solutions Center" LLP is a service organization for providing administrative support to "Samruk-Energy" JSC group of companies. The company was established in March 16, 2016.

The list of services includes:

- ▶ IT infrastructure maintenance services;
- ▶ Services for the maintenance of Internet resources;
- ▶ Provision of transportation services;
- ▶ Real estate management services (rent, purchase, construction).

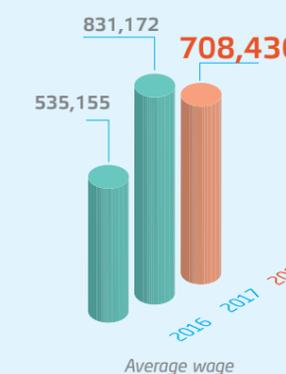
**Core business:** special office services (staff outsourcing), IT services, transportation services.

**Location:** the Republic of Kazakhstan, 010000, Nur-Sultan, Esil district, 15 A, Kabanbay batyr ave., block B, 2<sup>nd</sup> floor.

### FINANCIAL PERFORMANCE

Indicator	Measurement unit	2016	2017	2018
Net income/loss	mln. tenge	55	51	89
EBITDA	mln. tenge	72	72	122
EBITDA Margin	%	22	11	13

### SOCIAL INDICATORS



More information available on the website: [www.e-s-center.kz](http://www.e-s-center.kz)



## COAL PRODUCTION

### "Bogatyr Komir" LLP

[Forum Muider B.V. – 100%]

"Bogatyr Komir" LLP is one of the largest companies in the world engaged in extraction of coal by opencast mining method. The company accounts for 59 percent of all coal mined in the Ekibastuz coal basin and about 39.5 percent of the total coal production in the RK.

"Bogatyr Komir" LLP approved coal reserves amount to circa 2.9 bln. tons. Coal reserves at "Bogatyr Komir" LLP were approved up to minus 200 m horizon (depth from the surface is 400 m). With the current capacity of the enterprise coal reserves will be enough for no less than 70 years of operations.

"Bogatyr" coal mine, commissioned in 1970, exploits coal reserves in the fields (sections) 5, 6, 9, 10. The depth of the coalmine reached 280m from the surface (mark: the horizon is minus 80m according to the Baltic measurement system).

"Severnyi" coalmine commissioned in 1954, coal is mined in the fields (sections) 1, 2, 3, 4. The depth of the mine reached 230 m from the surface (mark: the horizon is minus 30 m according to Baltic measurement system from Baltic sea level).

The main industrial layers of Ekibastuz field are layers 1, 2, 3, 4 with an average thickness of 160 m and a depth of up to 670 m. The total coal reserves of the field are more than 9 bln. tons.

The company supplies coal to generating facilities of "Samruk-Energy" JSC group of companies and third parties located both in Kazakhstan and in the Russian Federation.

Coal of "Bogatyr Komir" LLP has a number of advantageous consumer properties that exclude slagging of boilers when it is fired and freezing in railway cars in the winter. Coal is intended

for pulverized combustion at thermal power plants, as well as for household needs.

"Bogatyr Komir" LLP extracts KSN grade (coking caking slightly metamorphosed) coal with an average calorific value of ~ 4.000 kcal / kg, ash content ~ 43%. moisture ~ 5%.

At the same time, the company by making commitments, allocates funds required for the implementation of the environmental protection program, the amount of funds allocated for the implementation of environmental protection actions amounted to 2.808–2.852 bln. tenge during 2017–2018, which is 2.3 times higher than the planned financing. At year-end 2018, more than 30 mln. tons of emissions to the environment were reduced.

Main expenditures of 2.6 bln. tenge resulted from placement of overburden in the internal disposal areas of "Severnyi" and "Bogatyr" open-pit mines, with the aim of goaf stowing. This allowed the company to reduce the placement of overburden on external waste dumps by 30 million tons.

An important action aimed at maintaining the quality of the environment and the state of the work site was the implementation of dust suppression activities at the excavation of coal in pit face, on the roads in sections, which are carried out with the use of mining water. Repair and maintenance of dust collectors of drilling machines made it possible to maintain the capture efficiency at design level – about 90% of all drilling products extracted from the well. The cost of these activities amounted to about 89 mln. tenge. Owing to the work conducted in 2018, dust generation was reduced by 40 tons.

As in previous years continuous monitoring of redox processes at disposal areas was conducted, strict observance

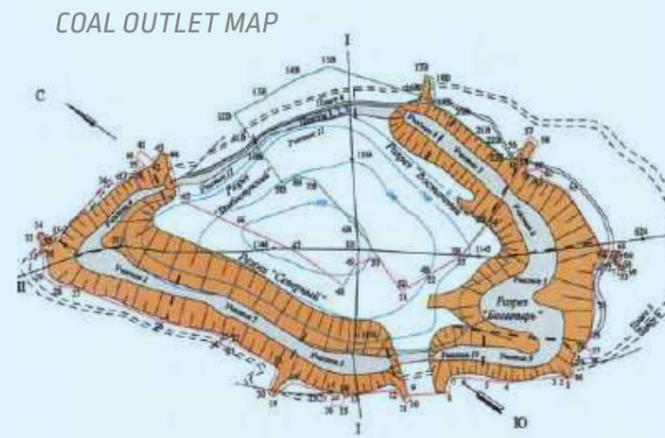
of technological schemes of dumping, sealing of excavator dumps and roofs of dumps by inert rock within terms not exceeding the incubation period of the emergence of a new redox process of coal-bearing rocks, enabled to reduce the intensity of the process/development and reduce the volume of work on the area planning with a bulldozer and compacting using a vibrating roller.

With the help of a network of observation wells, the quality of groundwater was under the constant control in order to research the impact of external rock dumps of near-by territory on it.

Moreover the company continuously monitored the quality of its products – coal and crushed rock – for compliance with regulatory requirements, including the specific activity of natural radionuclides and the class of radioactive hazard.

This year, "Bogatyr Komir" LLP has continued supporting the green economy as regards the energy conservation and waste reuse, their reduction by supplying it to third-party organizations and enterprises engaged in their processing, detoxification, recycling, safe disposal and beneficial use. Contracts with the owners of landfills were concluded in order to dispose production and consumption waste.

"Bogatyr Komir" LLP plans are connected with major projects of Kazakhstani power sector, such as reconstruction and commissioning of new power facilities of "Ekibastuz SDPP-1" LLP, "Ekibastuz SDPP-2 Plant" JSC, "Karaganda CHP-3", Nur-Sultan city's energy system, as well as with building of Balkhash TPP and CHP in Taldykorgan city.



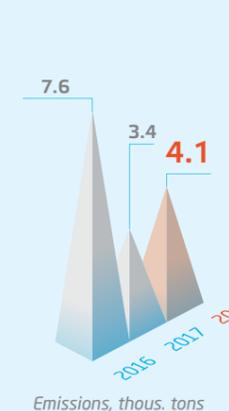
### FINANCIAL PERFORMANCE

Indicator	Measurement unit	2016	2017	2018
Net income/loss	mln. tenge	11,191	21,960	28,334
EBITDA	mln. tenge	22,785	34,506	41,441
EBITDA Margin	%	36.4	43.3	45.5

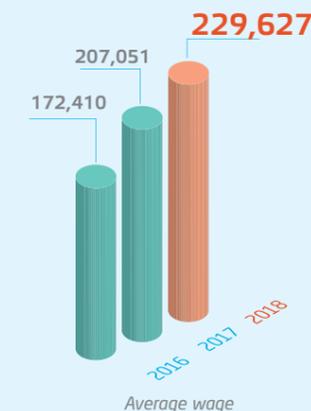
### RESULTS OF OPERATING ACTIVITIES

Indicator	Measurement unit	2016	2017	2018
Coal production volume	mln. tons	35.1	40.4	44.9
The volume of coal sales in the RK	mln. tons	25.9	30.7	35.6
to own PP	mln. tons	11.5	15.6	18.1
third party PP	mln. tons	14.4	15.1	15.9
Coal export volume	mln. tons	9.2	10.2	9.6

### ENVIRONMENTAL INDICATORS



### SOCIAL INDICATORS



### Confirmed coal reserves of "Bogatyr" and "Severnyi" coal mines of "Bogatyr Komir" LLP

Seam	Confirmed reserves	Seam	Confirmed reserves	Seam	Confirmed reserves
<b>Total for "Bogatyr Komir" LLP</b>		<b>Of "Severnyi" mine (sections 1, 2, 3, 4)</b>		<b>Incl. of "Bogatyr" mine (sections 5, 6, 9, 10)</b>	
1	397.9	1	199.8	1	198.1
2	630.8	2	298.1	2	332.8
3	1,401.7	3	662.2	3	739.4
4	484.6	4	205.9	4	278.7
<b>Total:</b>	<b>2,915.0</b>	<b>Total:</b>	<b>1,366.0</b>	<b>Total:</b>	<b>1,549.0</b>

mln.tons

More information available on the website: [www.bogatyr.kz](http://www.bogatyr.kz)



# 05 FINANCIAL AND ECONOMIC OVERVIEW OF THE COMPANY'S ACTIVITIES

## KEY EVENTS DURING THE REPORTING PERIOD

### AUGUST 2

The import of electricity from "Ekibastuz SDPP-1" LLP was stopped based on the initiative of "Inter RAO" PJSC; at the opinion of the Russian company, this was done because of the need to revise the relationship model under the agreement between "Inter RAO" PJSC and "Ekibastuz SDPP-1" LLP. "Inter RAO" PJSC also initiated the revision of the Regulation on the planning of parallel operation modes of the UES of Kazakhstan and the UES of Russia in terms of synchronizing the results of competitive procedure a day ahead in the export-import section of Russia – North Kazakhstan – Aktobe" and "KEGOC" JSC

### NOVEMBER 28

The RK Ministry of Energy amended the "Rules for approving the ceiling tariff for electricity..." in part of supplementing the composition of costs taken into account at setting ceiling tariffs for electricity

### NOVEMBER 29

The RK Ministry of Energy, in connection with the introduction of the Capacity Market, approved a single ceiling tariff for the service to maintain the availability of electric capacity in the amount of 590 thousand tenge/MW\*month

### NOVEMBER 30

"Samruk-Energy" JSC placed bonds of the third issue as part of the first bond program in the amount of 21.7 bln. tenge

### AUGUST- DECEMBER

In order to fulfill instructions of the RK President and the RK Government's ongoing work aimed at reducing tariffs for housing and utility services for 2019. Tariffs for 2019 for entities regulated by CRNM and PC under MNE were reduced, among such entities: "APP" JSC (heat tariffs), "AlmatyEnergoSbyt" LLP, "Alatau Zharyk Company" LLP, the reasons for a decrease were cutting costs and the exclusion of entities' profits, the decrease in gas prices, the introduction of compensating tariffs

### NOVEMBER 8 AND DECEMBER 5

"Samruk-Energy" JSC signed loan agreements with the Asian Development Bank for a total amount of 120 mln. USD in tenge equivalent

### DECEMBER 14

In connection with the introduction of the Capacity market, the RK Ministry of Energy approved the ceiling capacity tariffs for 43 groups of EPO for the period of 2019–2025. Tariffs are approved for the period 2019–2025.

The RK Ministry of Energy amended the "Methodology for determining fixed profit taken into account when approving ceiling tariffs for electricity..." in terms of eliminating previously fixed profits taken into consideration when calculating ceiling tariffs for electricity for EPO (previously the fixed profit level in the approved Methodology was 12%)

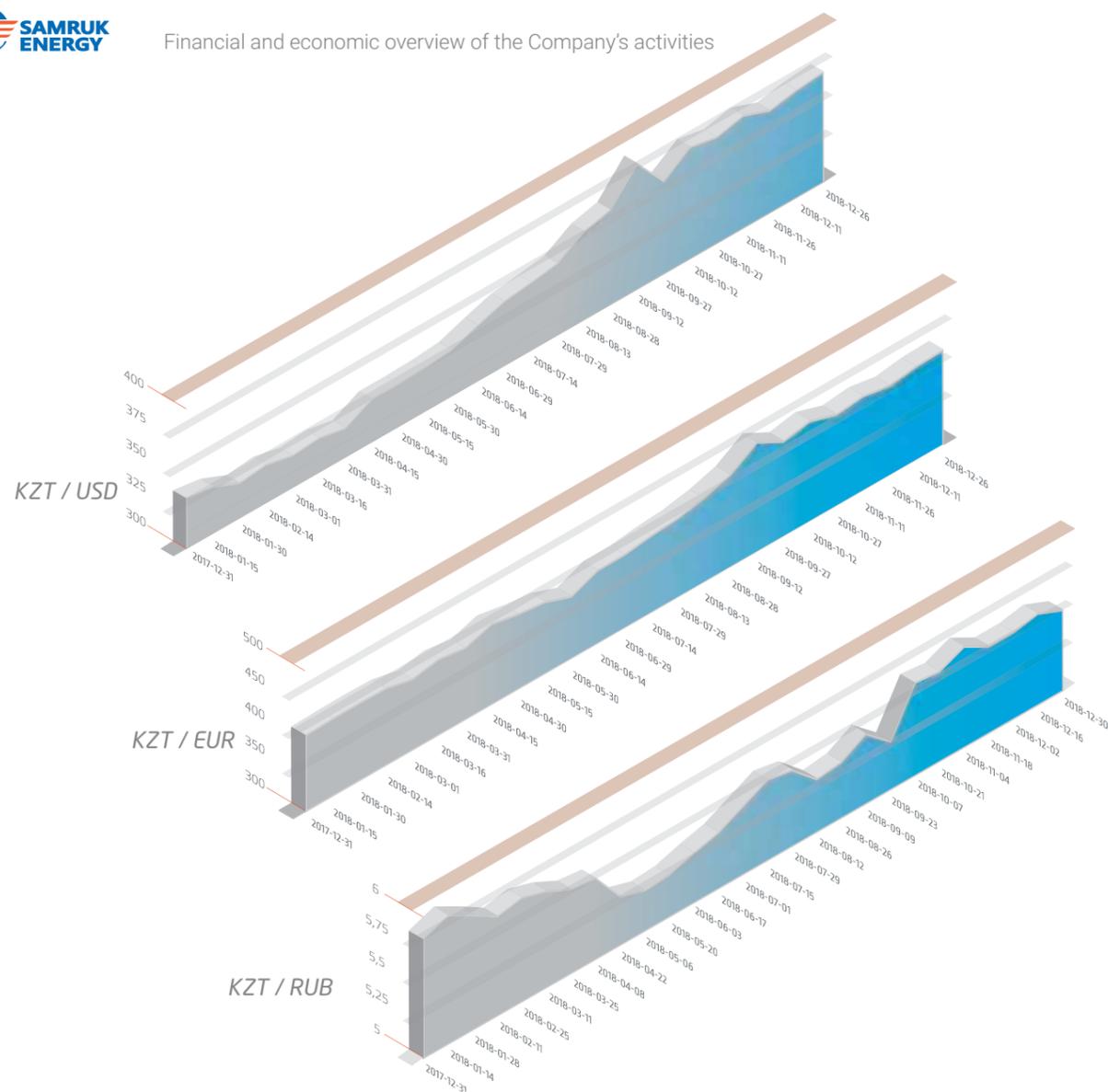
## MACROECONOMIC FACTORS

According to the data from Statistics Committee, consumer inflation slowed down in December 2018 compared with the previous month and amounted to 0.7% (0.9% in November), reaching a minimum of 5 years in annual terms and amounted to 5.3% (7.1% in 2017). Food and non-food products + 1.9% provided the main contribution to the annual increase in prices separately, as well as services + 1.5%. (source NB RK).

### Dynamics of currency exchange rates:

	31.12.2017	31.12.2018	%
KZT/USD	332.33	384.2	116
KZT/EUR	398.23	439.37	110
KZT/RUB	5.77	5.52	96





## PRINCIPLES OF ACCOUNTING POLICY

The Company's operations in 2018 in power and coal sectors were carried out in accordance with the approved plans.

For the purposes of a single approach to preparing a report on business and financial performance, "Samruk-Energy" JSC group of companies uses the equity method in consolidation. In addition, in accordance with existing accounting policies. Property, plant and equipment and intangible assets are recognized at initial cost. i.e., without taking into account revaluation. Subsidiaries are included in the consolidated financial statements using the acquisition method. Acquired identifiable assets, as well as liabilities and contingent liabilities received at a business combination are recognized

at fair value at the date of acquisition, regardless of the size of the non-controlling interest.

Based on the foregoing, when using the equity method in the consolidated balance sheet, turnovers of such big companies as "Ekibastuzs SDPP-2 Plant" JSC, coal assets company Forum Muider B.V., 50% of interest of which belong to "Samruk-Energy" JSC, were excluded.

When forming the consolidated financial result of "Samruk-Energy" JSC, the share of profit on these companies is presented in the item "share of profit / loss of organizations accounted for using the equity method and investments impairment".

## FINANCIAL AND ECONOMIC INDICATORS

No.	Indicator, mln. tenge	2016 (actual)	2017 (actual)	2018 (actual)	2019 (forecast)	2020 (forecast)
<b>1</b>	<b>Income from sales of goods and services delivered</b>	<b>181,310</b>	<b>219,892</b>	<b>260,400</b>	<b>255,094</b>	<b>286,085</b>
1.1.	Electricity production	124,085	151,861	185,355	170,870	195,569
1.2.	Sale of electricity by energy supplying organizations	90,284	94,458	96,955	95,854	103,327
1.3.	Heat production	13,991	17,370	21,674	20,015	20,005
1.4.	Transmission and distribution of electricity	33,448	38,058	40,020	38,384	42,364
1.5.	Sale of chemically purified water	1,662	1,672	1,824	1,790	1,827
1.6.	Lease	3,504	3,289	3,542	3,502	3,502
1.7.	other	778	1,701	1,597	3,790	3,865
<b>2</b>	<b>Cost of goods sold</b>	<b>(136,127)</b>	<b>(159,611)</b>	<b>(188,356)</b>	<b>(205,395)</b>	<b>(219,707)</b>
2.1.	Cost of electricity production	(91,658)	(107,795)	(129,110)	(132,047)	(142,070)
2.2.	Cost of electricity sales by energy supplying organizations	(88,644)	(91,817)	(95,938)	(95,014)	(102,133)
2.3.	Cost of heat production	(13,699)	(17,122)	(20,023)	(20,036)	(21,039)
2.4.	Cost of electricity transmission	(26,506)	(28,337)	(30,068)	(33,181)	(34,601)
2.5.	Cost of sale of chemically purified water	(1,614)	(1,644)	(1,736)	(1,766)	(1,823)
2.6.	Cost of other types of core business	(215)	(443)	(640)	(977)	(965)
	<i>Amortization of fixed and intangible assets</i>	<i>(41,053)</i>	<i>(43,824)</i>	<i>(52,364)</i>	<i>(50,868)</i>	<i>(54,474)</i>
<b>3</b>	<b>Gross profit</b>	<b>45,184</b>	<b>60,281</b>	<b>72,044</b>	<b>49,699</b>	<b>66,378</b>
4	Financing income <sup>(1)</sup>	3,396	2,805	2,333	341	794
5	Other income	6,061	3,224	5,347	787	760
6	Expenses for sale of products and services	(3,017)	(15,145)	(14,340)	(6,316)	(8,005)
7	General administrative expenses	(12,826)	(12,709)	(13,018)	(15,274)	(13,385)
<b>8</b>	<b>Operating profit</b>	<b>29,341</b>	<b>32,427</b>	<b>44,686</b>	<b>28,109</b>	<b>44,987</b>
<b>9</b>	<b>Earnings before amortization, interest and CIT (EBITDA)</b>	<b>71,581</b>	<b>77,328</b>	<b>97,825</b>	<b>80,061</b>	<b>100,575</b>
10	Finance costs <sup>(2) (3)</sup>	(19,218)	(29,182)	(33,129)	(30,804)	(28,032)
11	Other expenses from non-core operations <sup>(4)</sup>	(2,056)	(5,959)	(16,549)	(692)	(362)
12	Share of profit / loss of organizations accounted for using the equity method and investments impairment	4,895	(26,636)	9,752	12,981	13,992
13	Profit (loss) from discontinued operations	2,494	1,670	(1,584)	2,292	0
	<i>Profit (loss) from disposal of subsidiaries</i>			287		
<b>14</b>	<b>Profit (loss) before tax</b>	<b>24,912</b>	<b>(21,650)</b>	<b>11,143</b>	<b>13,014</b>	<b>32,139</b>
15	Corporate income tax expenses	(6,521)	(5,553)	(7,718)	(5,953)	(7,710)
<b>16</b>	<b>Total profit before minority interest</b>	<b>18,391</b>	<b>(27,203)</b>	<b>3,425</b>	<b>7,061</b>	<b>24,429</b>
17	Minority interest	632	681	184	282	282
<b>18</b>	<b>Total profit attributable to the Group's Shareholders</b>	<b>17,759</b>	<b>(27,884)</b>	<b>3,241</b>	<b>6,779</b>	<b>24,147</b>

<sup>1</sup> in FS forex gains for 2018 were reported in "other income" section

<sup>2</sup> in FS balance from the exchange rate difference of 2017 was reported in "financial expenses" section

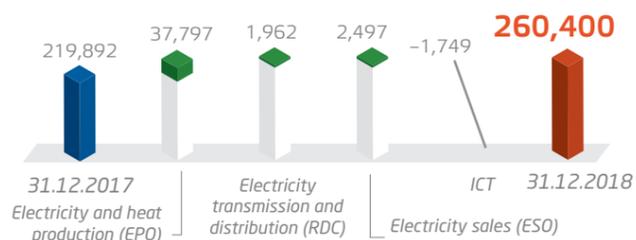
<sup>3</sup> in FS forex loss for 2018 was reported in "finance costs" section

<sup>4</sup> in FS impairment loss (NET) was recognized in "other expenses" item

**Note:** interpretation of income and cogs was presented with a breakdown by types of activities (not by segments) and was mentioned without elimination.

**Revenues from sales of products and services provided** across "Samruk-Energy" JSC group of companies in 2018 amounted to 260 400 mln. tenge:

Consolidated revenues, mln. tenge

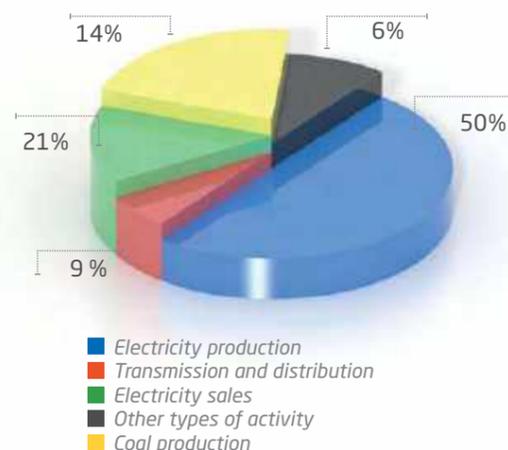


The growth of consolidated revenue occurred in the segment of electricity generation owing to the growth in electricity sales volumes and tariffs. The main increase occurred at "Ekibastuz SDPP-1" LLP owing to an increase in electricity sales from 14,113 mln. kWh to 18,340 mln. kWh and an increase in the weighted average tariff from 6.39 tenge/kWh to 6.8 tenge/kWh.

As regards distribution and sales segments, the revenue growth is driven by an increase in volumes and tariffs.

**Forecast for future period:** in the forecast for 2019, revenue from sales is planned at 255,094 mln. tenge, which is

Structure of 2018 income by main types of activity



5,306 mln. tenge or 2% lower than 2018 actual figure. The decrease was caused by reduction of tariff for electricity transmission and production.

Revenue increases in the forecast for 2020 compared to the forecast for 2019, this is because of growth of revenues from electricity production mainly owing to "Ekibastuz SDPP-1" LLP. Also, the growth in revenues from electricity transmission and sale are expected because of an increase in volumes and tariffs.

Revenues from sales of products and services rendered detailed per producer

Indicator. mln.tenge	2016 (actual)	2017 (actual)	2018 (actual)	2019 (forecast)	2020 (forecast)
<b>Income from sales of products and services rendered</b>	<b>181,310</b>	<b>219,892</b>	<b>260,400</b>	<b>255,094</b>	<b>286,085</b>
"ESDPP-1" LLP	62,729	90,177	125,598	114,861	125,812
"AlmatyEnergoSbyt" LLP	90,284	94,458	96,955	95,854	103,327
"Almaty Power Plants" JSC	60,761	62,349	65,542	68,114	72,892
"Alatau Zharyk Company" JSC	33,848	38,658	40,258	38,572	42,555
"Moynak HPP" JSC	9,919	10,889	10,217	8,842	14,647
"FWPP" LLP <sup>1</sup>	3,435	4,388	4,460	0	0
"Shardarinsk HPP" JSC	3,157	3,405	3,318	2,731	5,924
"Bukhtarminsk HPP" JSC	3,503	3,288	3,541	3,502	3,503
Energy Solution center	334	666	937	1,391	1,391
"Green Energy" LLP	113	131	141	339	409
<b>Intercompany turnover (elimination)</b>	<b>-86,773</b>	<b>-88,517</b>	<b>-90,567</b>	<b>-79,112</b>	<b>-84,374</b>

<sup>1</sup> The sale of 75% interest in "FWPP" LLP is expected in 2019

The major share in the Company's operating income comes from "Ekibastuz SDPP-1" LLP, "Almaty Power Plants" JSC, "Alatau Zharyk Company" JSC, "AlmatyEnergoSbyt" LLP.

At the same time, at consolidation of revenues, intercompany turnover mainly in respect of energy producing and distribution companies is excluded from total amount.

Cost of goods and services

Indicator. mln.tenge	2016 (actual)	2017 (actual)	2018 (actual)	2019 (forecast)	2020 (forecast)
Fuel	31,626	43,363	56,768	56,684	61,043
Remuneration of labor and related expenses	22,316	24,035	25,231	26,331	27,268
Cost of purchased electricity	4,679	7,256	10,178	12,770	13,841
Depreciation of property, plant and equipment and amortization of intangible assets	41,053	43,824	52,364	50,868	54,474
Maintenance & repair	6,416	6,517	6,344	9,191	9,599
Services for electricity transmission and other services	7,444	8,506	10,019	10,769	12,417
Materials	1,880	1,762	1,773	2,510	2,629
Water supply	3,835	4,455	4,664	4,758	5,651
Grid losses	198	205	193	1,317	1,363
Taxes other than income tax	3,971	4,143	4,876	5,687	5,948
Emission charges	1,984	2,909	4,036	4,468	4,976
Outsourced services	7,528	7,394	8,219	17,048	17,416
Other	3,198	5,241	3,690	2,993	3,083
<b>TOTAL</b>	<b>136,127</b>	<b>159,611</b>	<b>188,356</b>	<b>205,395</b>	<b>219,707</b>

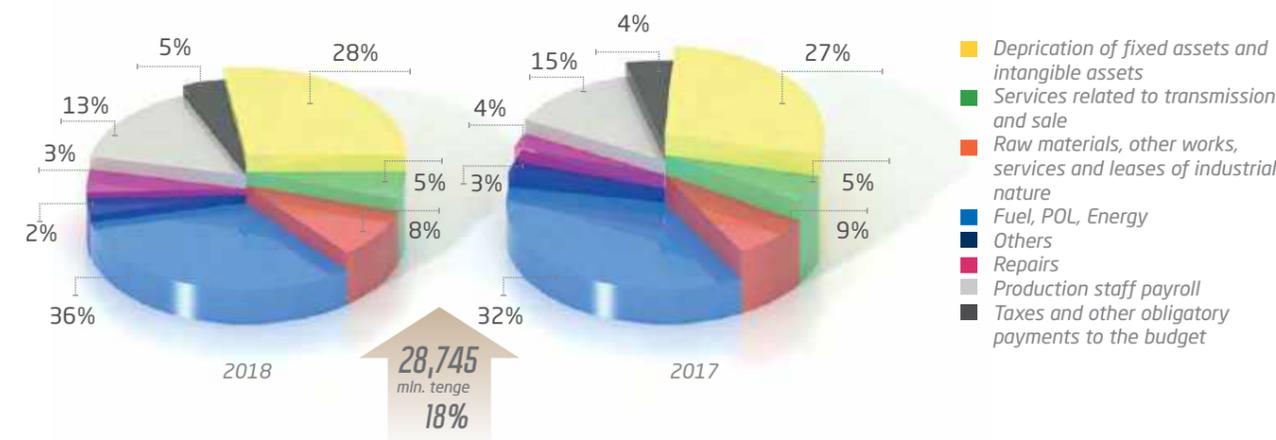
<sup>1</sup> in FS emission charges for 2017 were recorded in "Others" item

<sup>2</sup> in FS emission charges for 2018 were recorded "Taxes other than income tax" item

According to results of 2018, **Cost of goods sold** amounted to 188,356 mln. tenge, which is 18% higher than 2017 actual figure. Mainly variable costs grew due to an increase in production and sales volumes, as well as due to an increase in prices

for goods and services. There is also an increase in depreciation by 19% due to a revision of property, plant and equipment service life (mainly at "Ekibastuz SDPP-1" LLP).

The structure of cost of goods sold by main types of activity

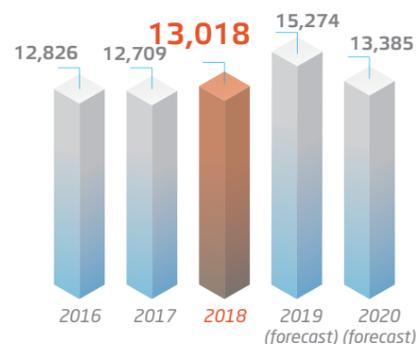


**Forecast for the future period:** in the forecast for 2019, the cost of goods sold and services rendered increases due to an increase in prices for goods and services. In particular, there is a significant increase in costs for third-party services and grid losses due to the emergence of services for maintaining the availability of electric capacity to bear the load caused

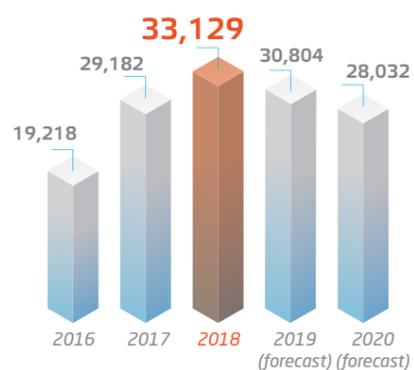
#### Sales costs, mln. tenge



#### Administrative expenses, mln. tenge



#### Finance costs, mln. tenge



by the introduction of a capacity market (the single operator is a third party and therefore the Company's intercompany turnover will decrease). In the forecast for 2020, costs for goods sold increases in connection with the growth of variable costs, which is driven by increase in output and sales, as well as because of goods and services' prices escalation.

Sales costs in 2018 decreased by 805 mln. tenge compared with 2017 and amounted to 14,340 mln. tenge. This deviation is caused by the introduction of a temporarily decreasing coefficient at the level of 0.87 for the transfer of exported electricity, as well as a decrease in Ekibastuz SDPP-1's volume of electricity exports to the Russian Federation.

**In the forecast for 2019**, sales costs reduction compared to the actual figure of 2018 is 56% due to the lack of electricity exports to the Russian Federation.

At the end of 2018, administrative expenses amounted to 13,018 mln. tenge, which is 309 mln. tenge or 2% more in comparison with the same period in 2017.

**Forecast for the future period:** Administrative expenses in the forecast for 2019 are higher than in 2018 and amount to 15,274 mln. tenge. The increase is mainly caused by the planned transformation costs and the annual indexation of inflation. In the forecast for 2020, administrative expenses reduce by 1,888 mln. tenge compared with the forecast for 2019 and amount to 13,385 mln. tenge because transformation costs reduce.

According to 2018 results, finance costs amounted to 33,129 mln. tenge, which is 3,947 mln. tenge higher than 2017 actual figure. Finance costs increased mainly due to refinancing of a portion of dollar Eurobonds during 2017 by using borrowed funds denominated in tenge with higher borrowing rate.

**Forecast for the future period:** In the forecast for 2019–2020, finance costs decreases owing to annual repayment of loans.

#### Share of profits of joint ventures and associates and impairment of investments

Indicator mln. tenge	2016 (actual)	2017 (actual)	2018 (actual)	2019 (forecast)	2020 (forecast)
Share of profits of joint ventures and associates	4,895	(26,636)	9,752	12,981	13,992

Share income for 2018 amounted to 9 752 mln. tenge, having increased by 36,388 mln. tenge compared to the same period.

#### The main changes occurred with respect to the following assets:

"Ekibastuz SDPP-2 Plant" JSC – loss reduction by 6,134 mln. tenge in comparison with the previous year was caused because of the below factors:

- increase in operating profit by 1,841 mln. tenge (an increase in the weighted average tariff for electricity from 6.6 tenge / kWh to 7.53 tenge / kWh);
- assets impairment losses were not available (losses from impairment of assets in the amount of 5,844 mln. tenge were recognized in 2017);
- an increase in foreign exchange losses in the amount of 2,997 mln. tenge.

Forum Muider – an increase in profit by 2,682 mln. tenge was mainly driven by an growth of coal sales volumes at "Bogaty-Komir" LLP in the domestic market by 4,859 thous. tons (16%) and an increase in export prices by 6.7%.

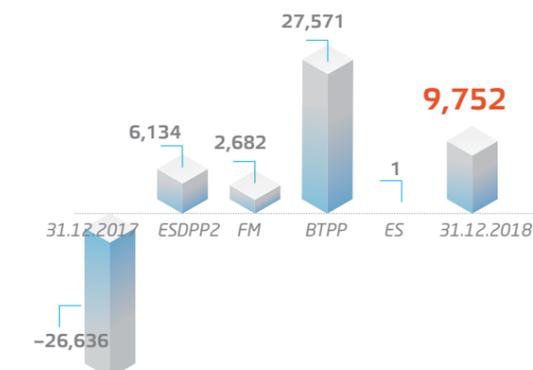
"Balkhash TPP" JSC – loss reduction by 27,571 mln. tenge in 2018 is because in 2017 "Samruk-Energy" JSC recognized

#### Profit/ (loss) from discontinued operations

Indicator. mln.tenge	2016 (actual)	2017 (actual)	2018 (actual)	2019 (forecast)	2020 (forecast)
Profit from discontinued operations	2,494	1,670	(1,584)	2,292	–

According to results of 2018, the loss from discontinued operations for 1,000 mln. tenge occurred due to adjusting the value of "Mangyshlak Munay" LLP and "Tegis Munay" LLP assets to market value. In addition, payments liabilities for the social and economic development of the region were accrued in "Mangyshlak Munay" LLP under IFRS 37.

#### Dynamics of change in share income, mln. tenge



the loss of impairment in investments in the BTTP under IAS 36 "Assets impairment".

In the plan for 2019, the share of profit is 12,981 mln. tenge, 13,992 mln. tenge in 2020.

## STATE TARIFF REGULATION OF THE COMPANY'S LINES OF BUSINESSES

The laws of the Republic of Kazakhstan "On Electricity", "On Natural Monopolies and Regulated Markets" and "On Competition" govern operations of the "Samruk-Energy" JSC group of companies subsidiaries and its joint ventures that are entities of a natural monopoly and regulated markets and entities that dominate the competitive market. Tariff regulation, depend-

ing on the type of activity of energy companies, falls within the competence of the Committee on Regulation of Natural Monopolies and Protection of Competition under the RK Ministry of National Economy or sector ministry – the Ministry of Energy.

### Weighted average tariffs for electricity generation

Description	Measurement unit	2016 Actual	2017 Actual	2018 Actual	2019 Forecast	2020 Forecast
"Ekibastuz SDPP-1" LLP	tenge/kWh	7.33	6.39	6.85	6.27	6.42
Electricity tariff, kWh					5.25	5.43
Capacity tariff, thous. tenge/MW*month					590	611
"Ekibastuz SDPP-2 Plant" JSC	tenge/kWh	6.68	6.60	7.53	7.08	7.29
Electricity tariff, tenge/kWh					6.07	6.27
Capacity tariff, thous. tenge/MW*month					590	611
"Almaty Power Plants" JSC	tenge/kWh	8.60			9.90	10.87
Electricity tariff, tenge/kWh			8.60	8.60	8.89	9.20
Capacity tariff, thous. tenge/MW*month					590	980
"Shardarinsk HPP" JSC	tenge/kWh	9.50	9.50	9.50	7.35	10.92
Electricity tariff, tenge/kWh					6.52	6.74
Capacity tariff, thous. tenge/MW*month					590	3,000
"Moynak HPP" JSC	tenge/kWh	8.25	8.65	9.51	9.46	15.96
Electricity tariff, tenge/kWh					7.10	7.35
Capacity tariff, thous. tenge/MW*month					590	2,151
"Samruk-Green Energy" LLP	tenge/kWh	36.13	42.12	45.11	47.37	49.02
"First Wind Power Plant" LLP	tenge/kWh	22.68	26.44	28.31	29.73	30.77

The following tariffs were in effect during the reporting period: — for energy producing organizations (EPOs), after expiration of the term of ceiling tariffs established for 2009–2015, tariffs for power plants for 2016 to 2018 are maintained at the level of 2015 tariffs. Taking into account the instruction of the Government of the Republic of Kazakhstan on supporting the national economy, "Ekibastuz SDPP-1" LLP and "Ekibastuz SDPP-2

Plant" JSC have sold electricity at tariffs not exceeding 8.42 KZT/kWh during 2017 and up to the present time. Actual tariffs of 1<sup>st</sup> group EPO, which includes subsidiaries such as "Ekibastuz SDPP-1" LLP and "Ekibastuz SDPP-2 Plant" JSC, are way below than those approved because of electricity sales in centralized auction and electricity exports to the Russian Federation.

The average weighted tariff of "Ekibastuz SDPP-1" LLP for 2018 was 6.85 KZT / kWh, which is lower than 2017 level (6.85 KZT / kWh) by 0.46 KZT / kWh. The weighted average tariff was reduced because of electricity sales at centralized auction at market prices.

The average weighted tariff of "Ekibastuz SDPP-2" JSC for 2018 was 7.53 tenge / kWh, which is higher than 2017 level (6.60 tenge / kWh) by 0.93 tenge / kWh. The weighted average tariff was reduced as a result of electricity sales at centralized auction.

The individual and estimated tariffs in the amount of 9.50 KZT/kWh were approved for "Moynak HPP" JSC and "Shardarinsk HPP" JSC taking into account the implementation of large-scale investment programs, however the actual tariffs of "Moynak HPP" JSC for 2017 and 2018 were below approved, due to the sale of part of electricity through centralized auction.

The Capacity market was introduced in 2019 based on the Concept of Development of the Fuel and Energy Sector of Kazakhstan until 2030, which was adopted in 2014. The introduction

### Tariffs for heat production

Company name	Measurement unit	2016 Actual	2017 Actual	2018 Actual	2019 Forecast	2020 Forecast
"Almaty Power Plants" JSC	tenge/Gcal	2,872	3,363	3,917	3,871	3,869
"Ekibastuz SDPP-2 Plant" JSC	tenge/Gcal	683	740	816	831	849
"Ekibastuz SDPP-1" LLP	tenge/Gcal	–	352	446	555	555

The legislation envisages the approval of long-term (5+ years) ceiling tariff levels for organizations producing heat, with the inclusion of the investment component and annual cost indexation. The Committee for the Regulation of Natural Mo-

opolies and the Protection of Competition approves ceiling tariffs. However, an increase in tariffs is made no more than once a year and there are risks that tariffs remain unincreased in case a power plant's costs grow for objective reasons.

of a capacity market changes the structure of tariffs for energy producing organizations. Ceiling electricity tariffs for EPO (for 43 groups) were approved, and a single ceiling tariff for all EPO in the amount of 590 thousand tenge/MW\* month was approved for the service for maintaining the availability of capacity. Tariffs were approved for 2019–2025. However, the approved tariffs do not provide for profitability and indexation by years. At the same time, in accordance with paragraph 2 of Article 12-1 of the RK Law "On Power Industry", electricity tariffs are adjusted annually when needed. Because the approved ceiling tariff for electricity does not cover all the expenses of the Company, management plans to adjust the tariff from 2020 in accordance with the specified methodology. From 2021 and onwards tariffs are forecasted relying upon on consumer price index. In addition, it is planned to receive an individual capacity tariff from 2020 for "Moynak HPP" JSC, "Almaty Power Plants" JSC and "Shardarinsk HPP" JSC.

Tariffs for the supply of electricity, which is produced by entities using renewable energy sources, are set and approved by the resolution of the RK Government depending on renewable energy technology (separately for wind, solar and other sources) and are subject to annual indexation.

### Tariffs for electricity transmission services

Company name	Measurement unit	2016 Actual	2017 Actual	2018 Actual	2019 Forecast	2020 Forecast
"Alatau Zharyk Company" JSC	tenge/kWh	5.35	5.83	5.89	5.53	5.95

Approved ceiling long-term tariffs based on tariff estimates with investment component for 2016–2020 for regional power transmission companies (RPTC) are adjusted by the authorized body when necessary. However, tariffs are increased

no more than once a year, in the event of an increase in expenses of PDZ (power distribution zones) due to objective reasons (recognition of ownerless power grids and equipment, etc.). Risks that tariffs remain unincreased are also available.

**Tariffs for selling electricity by ESO**

Company name	Measurement unit	2016 Actual	2017 Actual	2018 Actual	2019 Forecast	2020 Forecast
"AlmatyEnergSbyt" LLP	tenge/kWh	15.66	16.38	16.42	16.68	17.65

Energy supplying organizations are also subject to monopoly regulation. The tariff calculation includes operating, financial and investment components. There are risks that the Regulator may artificially restrain the growth of tariffs in order to maintain the social stability of the population in regions.

In 2017, taking into account changes in legislation. ESO cancelled differentiated tariffs for the zones of the day. Differentiation for individuals according to consumption rates was preserved, electricity to corporate entities is supplied according to average selling tariffs.

**Tariffs for coal mining**

Company name	Measurement unit	2016 Actual	2017 Actual	2018 Actual	2019 Forecast	2020 Forecast
"Bogatyr Komir" LLP	tenge/tons	1,779	1,944	2,013	2,019	2,081

Coal mining tariffs of "Bogatyr Komir" LLP are approved independently by a price list for the RK consumers for 3 consumer groups (power sector at KTZh connecting station, power sector at the coal collecting station, public utility needs). Regulation is performed on the basis of the Entrepreneur Code of CRNM PC under MNE.

**ANALYSIS OF CAPITAL EXPENDITURES**
*mln. tenge*

No.	"Samruk Energy" JSC group of companies	2016 Actual	2017 Actual	2018 Actual	2019 Forecast	2020 Forecast
<b>TOTAL</b>		<b>79,061</b>	<b>72,418</b>	<b>41,689</b>	<b>69,998</b>	<b>105,527</b>
1	Investment projects, including	41,810	25,177	8,075	31,587	55,026
1.1	Rehabilitation of Power unit#1 with installation of new ESP	5,296	3,962	2,156	3,802	
1.2	Retrofit of 500 kV open switchgear	9,805				
1.3	Expansion and reconstruction of Ekibastuz SDPP-2 with installation of power unit No. 2 (50%)	4,008	-36		14,228	27,440
1.4	Transition to cyclical-and-continuous method of mining, transportation, blending and loading of coal at the "Bogatyr" open-pit coal mine (50%)	30	30	113	4,798	23,607
1.5	Transfer of load of 220/110/10kV SS # 131A "Gorny Gigant" to 220-kV 110 / 10kV Substation # 160A "Yermensay" via 110kV grids followed by dismantling of SS-131A	340	5,079	137		
1.6	Expansion of CHP-1 with installation of the new power source based on gas turbine technologies		492			
1.7	Reconstruction of heat main of Almaty CHP-2 – WHC				80	
1.8	Construction of Moynak HPP	79	2			
1.9	Modernization of Shardarinsk HPP	8,988	11,263	4,482	4,280	3,979
1.10	Construction of 50 MW Ereymentau WPP (2 <sup>nd</sup> stage)	145	100	21	2,006	
1.11	Construction of a gas turbine power plant based on Pridorozhnoe gas field	426	140	758	986	
1.12	Other projects	12,693	4,146	408	1,407	
<b>2</b>	<b>Maintenance of production assets</b>	<b>35,731</b>	<b>46,042</b>	<b>31,534</b>	<b>33,853</b>	<b>47,542</b>
2.1	"Bogatyr Komir" LLP (50%)	1,439	3,508	4,242	4,690	6,454
2.2	"ESDPP-2 Plant" JSC (50%)	17	224	439	967	1,220
2.3	"ESDPP-1" LLP	16,787	17,919	10,238	12,318	18,914
2.4	"Alatau Zharyk Company" JSC	9,312	13,580	11,501	11,541	12,251
2.5	"Almaty Power Plants" JSC	1,681	4,848	4,411	3,179	7,877
2.6	"Aktobe CHP" JSC	392	374			
2.7	"Moynak HPP" JSC	1,084	304	369	848	717
2.8	"Shardarinsk HPP" JSC	124	120	251	8	30
2.9	"Mangistau REC" JSC	2,027	2,251			
2.10	"AlmatyEnergSbyt" LLP	68	35	75	81	77
2.11	"Samruk-Green Energy» LLP	3	0.3	1	2	1
2.12	"First Wind Power Plant" LLP	24	3	8	219	
2.13	"EK REC" JSC	2,740	2 861			
2.14	"Shygysenergotrade" LLP	33	16			
<b>3</b>	<b>Maintenance of administrative assets</b>	<b>1,411</b>	<b>1,145</b>	<b>1,307</b>	<b>2,126</b>	<b>954</b>
<b>4</b>	<b>Other</b>	<b>109</b>	<b>54</b>	<b>773</b>	<b>2,431</b>	<b>2,005</b>



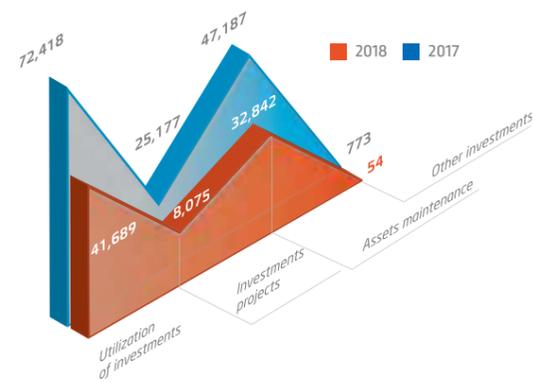
## INVESTMENT ACTIVITY

The implementation of a large-scale "Samruk-Energy" JSC assets development program, as well as relatively recent dates of commissioning of generating facilities, determine the high technological level of the equipment used, with high total deterioration in the Republic of Kazakhstan. Subject to an increase in the level of load and the continuation of implementing the investment program, "Samruk-Energy" JSC may become the leader in the operational efficiency of the Republic of Kazakhstan's power sector.

Simultaneous development of advanced coal-fired power units, maneuvering facilities, cogeneration and future energy (RES) allows the Company to establish itself firmly as a market leader, while implementing RES projects together with a strategic partner.

The investment program of "Samruk-Energy" JSC is aimed at modernization, reconstruction and construction of generating facilities, as well as ensuring reliable energy supply and meeting the needs for electricity and heat.

### Investment costs, mln. tenge



The Company uses various tools, such as external loans and bonds, to finance the Investment Program, and raises funds from State budget for financing socially important projects.

In accordance with "Samruk-Energy" JSC mission, in order to ensure reliable and competitive energy supplies in the territory of the Republic of Kazakhstan, increase the shareholder value and ensure social responsibility of "Samruk-Energy" JSC business, the following investment projects were **implemented** during 2018.

### The project "Construction of 1 MW SPP and 5 MW WPP under the Agreement between the RK Government and PRC Government"

The project was implemented as part of provision of technical assistance as a grant assistance to the RK Government by PRC Government. The project aims to produce 18 mln. kWh of electricity per year using renewable energy sources (5 MW WPP annual output is circa – 17 mln. kWh; 1 MW SPP annual output is circa – 1.4 mln. kWh). An opening ceremony was held on the territory of the FEZ "PIT Alatau" near the village of Nurly of Almaty region on November 30, 2018

### The project "Transfer of 220 kV "Gorny Gigant" substation's load to 220 kV "Yermansay" substation through 110 kV grids followed by dismantling of "Gorny Gigant" substation"

The project provides for the elimination of threat of the existing substation damage, the reliability of power supply to the central part of Almaty city. Due to the threat of an emergency at Gorny Gigant substation because of landslides and soil destruction at the base of the substation, it is planned to connect all 110 kV outgoing lines from "Gorny Gigant" SS to existing "Yermansay" SS, followed by dismantling of "Gorny Gigant" SS.

December 22, 2018, the transfer of "Gorny Gigant" SS load through a 110 kV grid to "Yermansay" SS was fully completed. The project's goals were accomplished.

The portfolio of **ongoing** investment projects of the Company includes 9 investment projects, the implementation of which will enable to make up the deficit of Kazakhstan in electricity and capacity by increasing the installed capacity of available plants and establishing new facilities.

### The project "Transition to cyclical-and-continuous method (CCM) for extraction, transportation, blending and loading of coal at "Bogatyr" open-pit coal mine of Ekibastuz coal field"

CCM project assumes a step-by-step transition of the "Bogatyr" mine to the cyclical-continuous technology of coal mining and delivery by conveyor transport to the blending warehouses with subsequent loading on the surface loading units. The need to implement the project is related to the achievement of the depth of mine works, at which the use of rail transport becomes less effective.

The implementation of the project will allow increasing the production capacity of "Bogatyr" open-pit coal mine from

32 to 40 mln. tons of coal per year, improving labor productivity, reducing cost of coal mining and upgrading premises and equipment relating to transportation and unloading of coal.

### The project "Development of the gas field "Pridorozhnoe"

The project provides for the construction of infrastructure for the production of natural gas for sale to domestic and foreign markets. The project also plans to build a high-pressure gas pipeline from Pridorozhnoe field to the Beineu – Bozoy – Shymkent gas pipeline.

The aim of the project is to cover the deficit of gas demand in the South Kazakhstan region of the Republic of Kazakhstan, with the maximum annual gas production amounting to about 290 million m<sup>3</sup>.

On July 30, 2018, the Contract for gas extraction was signed with the RK Ministry of Energy.

### The project "Modernization of Shardarinsk HPP"

The project involves the replacement of obsolete and worn-out equipment to improve performance and operational safety of the plant, which will increase the installed capacity to 126 MW and produce an additional 57 million kWh of electricity per year. The project equipment was supplied, installation works are underway

### The project "Construction of SES 416 kW in Kapshagay"

The project involves the construction of a 416 kW solar power plant in Kapshagay city using photovoltaic modules based on Kazakhstan silicon produced by "Astana Solar" LLP. The project will produce an additional 0.5 million kWh of electricity per year. The goal of the project is to produce electricity using renewable energy sources to provide electricity to South zone of Kazakhstan that experiences power shortages.

Design and estimate documentation of the project was developed, it is planned to carry out construction and installation works.

### The project "Expansion and reconstruction of Ekibastuz SDPP-2 with the installation of power unit No. 3"

The project provides for construction of power unit No. 3 with an increase in the installed capacity of the plant by 636 MW and the production of an additional 4.8 billion kWh of electricity per year.

### The project "Reconstruction and expansion of the capacity of Ekibastuz SDPP-1 (Restoration of power unit No. 1)"

The project involves the restoration of 500 MW power unit No. 1 at Ekibastuz SDPP-1 to meet the growing demand for electricity in Kazakhstan and Russia.

### The project "Construction of 50 MW wind power plant near Ereymentau city"

The project provides for construction of 50 MW wind power plant near Ereymentau city with the prospect of expanding up to 300 MW. The implementation of the Project will additionally produce 180 million kWh of electricity per year.

The project aims to use renewable energy sources to reduce the level of use of hydrocarbon energy carriers in production of electricity. Feasibility project of the Project was developed, design and estimate documentation is planned to be developed.

### The project "Construction of 60 WPP in Shelek corridor with possible increase in capacity up to 300 MW"

The project involves the construction of 60 MW wind power plant in Shelek corridor of Almaty region, Enbekshikazakh district including a possible expansion of capacity up to 300 MW. The project implementation will allow producing additional 225.7 mln. kWh of electricity per year.

The project aims to use renewable energy sources to reduce the level of use of hydrocarbon energy resources in electricity production.

The project's feasibility study was developed and design estimates are under development.

### Gasification of Almaty CHP-1, 2, 3 of "APP" JSC

The main goal of implementing modernization projects of existing Almaty CHP plants is to reduce the negative impact on Almaty city and Almaty region environment from energy sources of "APP" JSC.

#### Regarding the transfer of Almaty CHP-2 to gas:

In 2018, a pre-feasibility study of the project was developed, wherein the construction of the new gas-fired power plant with the same capacity as the existing plant's capacity was considered as the main option.

#### Expansion of Almaty CHP-1 with the installation of the new energy source based on gas turbine technologies:

An investment proposal for the project was developed.

## LIQUIDITY AND FINANCIAL SUSTAINABILITY INDICATORS

### Fulfillment of external lenders' covenants:

Covenant	Standard	2018 Actual	Deviation actual 2018/standard	Note
Debt/EBITDA (EBRD, HBK)	No more than 4.5	3.18	-1.32	Is met
EBITDA/interest (EBRD)	No less than 3	2.95	-0.05	Is met * According to the lender's methodology of calculation the value of the covenant is - 3.77
Debt/Equity (EDB and KDB)	No more than 2	0.65	-1.35	Is met

Description	2016 Actual	2017 Actual	2018 Actual	2019 Forecast	2020 Forecast
Debt/EBITDA	5.41	4.64	3.18	3.82	2.56
Debt/Equity	0.75	0.75	0.65	0.65	0.53
Current liquidity	0.66	1.36	1.04	1.21	0.90

The Company's financial stability in 2018 improved because of an increase in production volumes and tariffs, as well as a decrease in the debt burden and asset sales. By the end of 2018, the Company's consolidated debt compared to 2017 decreased by 53 bln. tenge and amounted to 383 bln. tenge.

### Actions taken "Samruk-Energy" JSC group of companies in order to improve financial sustainability

As of December 31, 2018, loans for total amount of 48.7 bln. tenge were early repaid, including:

- ▶ EBRD, 4.4 bln. tenge;
- ▶ "Halyk Bank" JSC, 38.5 bln. tenge;
- ▶ "Sberbank" SB JSC, 5.75 bln. tenge.

As part of work aimed at reducing finance costs, interest rates of existing loans across "Samruk-Energy" JSC group have decreased by 1-1.5%.

Savings on interest expenses resulted from reduction of interest rates and early repayment of loans in 2018 amounted to 3 bln. tenge.

In addition, as required by the Debt and Financial Stability Management Policy of "Samruk-Kazyna" JSC, the Company developed an Action Plan for the Company's entry into the green risk zone. This Action Plan involves the implementation of certain activities from 2017 to 2022, that aim to improve EBITDA, reduce costs and debt burden.

## COMPARATIVE ANALYSIS (BENCHMARKING)

Benchmarking is one of the most important elements of "Samruk-Energy" JSC management. Benchmarking aims to compare operating and financial performance with foreign peer companies to determine the strengths and weaknesses of "Samruk-Energy" JSC. The following indicators were used for benchmarking:

- EBITDA margin;
- Debt/EBITDA

- Ratio of the share of borrowed funds (Debt / Equity)
- Return on invested capital (ROIC).

The following peer companies were used for benchmarking:

- Inter RAO UES PJSC (Russia);
- CEZ Group (Czech Republic);
- Drax Group (Great Britain).

### Benchmarking results:

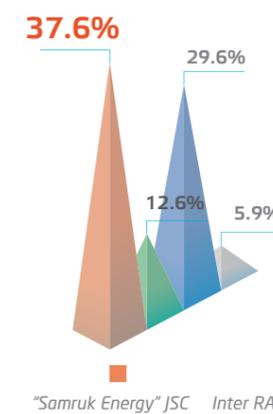
Criteria	Measure	Status	Min	Benchmarking	Max
EBITDA margin	%	<span style="color: green;">■</span>	Drax Group (5.9%)	Inter RAO (12.6%)	CEZ Group (29.6%)
Debt / EBITDA	ratio	<span style="color: red;">■</span>	Inter RAO (0.49)	Drax Group (2.44)	CEZ Group (3.0%)
Debt / Own Capital	ratio	<span style="color: yellow;">■</span>	Inter RAO (0.12)	Drax Group (0.34)	CEZ Group (0.67)
ROIC	%	<span style="color: yellow;">■</span>	Drax Group (3.3%)	CEZ Group (3.5%)	Inter RAO (13%)

■ Better than average value by company peers

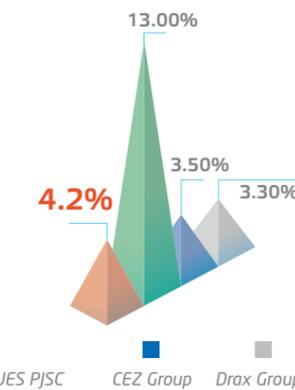
■ Corresponds to the average value for companies peers

■ Worse than average value by company peers

### EBITDA margin for 2018



### Return on Invested Capital (ROIC) for 2018



Source: Bloomberg

At present, in comparison with foreign peer companies, "Samruk-Energy" JSC is inferior in respect to certain indicators.

**Financial stability** indicators show that "Samruk-Energy" JSC fully uses available financial leverage.

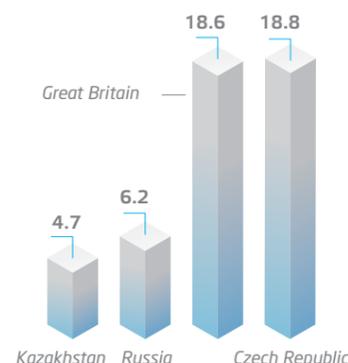
At the same time, according to **EBITDA margin**, "Samruk-Energy" JSC outcompetes its peers. This indicator demonstrates a high profitability of sales.

As regards **ROIC** (return on long-term invested capital), "Samruk-Energy" JSC slightly outcompetes its European counterparts. However, in terms of this indicator, "Samruk-Energy" JSC is significantly inferior to the Russian holding company, characteristics of business of which are identical due to the similarity of economic conditions of operations, which indicates about the need to increase the efficiency (profitability, return) of investments.

"Samruk-Energy" JSC is an agent of the state policy in power sector. Due to a high degree of depreciation of energy sector,

socially significant investment projects (aimed at reliability and continuity of the energy system of the Republic of Kazakhstan) have been implemented since 2009, which led to a significant increase in invested capital and respectively decreased the company's return on investments indicator.

An additional factor that influences on the return on investment indicators is the low level of the electricity tariff in the Republic of Kazakhstan in comparison with the countries of peer companies.

**Tariffs for electricity in 2018, US cents**


Country	Tariff for kWh	In US cents	Average exchange rate of USD over 2018
Kazakhstan	16.25 tenge	4.7	344.8 tenge
Russia	3.9 rouble	6.2	62.7 rouble
Czech Republic	0.16 euro	18.8	0.85 euro
Great Britain	0.14 pound	18.6	0.75 pounds

## PROCUREMENT MANAGEMENT

Procurement procedures at "Samruk-Energy" JSC group of companies are conducted in line with the Rules for Procurement of goods, works and services by "SWF "Samruk-Kazyna" JSC and organizations, fifty or more percent of voting stock (equity stake) of which are directly or indirectly belong to "Samruk-Kazyna" JSC on the right of ownership or trust management, approved by the Decision of the Board of Directors of "Samruk-Kazyna" JSC on January 28, 2016 (Minutes No. 126).

Procurements of goods, works, and services are based on **PRINCIPLES**:

- 1 publicity and transparency of the procurement process
- 2 efficient spending of money used for procurements
- 3 the purchase of high-quality goods, works, services
- 4 increasing the share of local content in the goods, works, services purchased by the Holding company
- 5 providing all potential suppliers with equal opportunities to participate in the procurement process, subject to the support of organizations of persons with disabilities (individuals with disabilities engaged in entrepreneurial activities), organizations of persons with disabilities (individuals with disabilities engaged in entrepreneurial activities) of the Holding company, domestic producers, domestic entrepreneurs
- 6 fair competition among potential suppliers
- 7 facilitating procurement between the organizations that are part of the holding company in order to develop intercompany cooperation
- 8 control over and responsibility for decisions made
- 8 reducing the participation of intermediaries in the procurement process
- 10 effective implementation of investment strategic projects

The Company implemented "Category Procurement Management" project in line with the principles of procurement as part of "Samruk-Energy" JSC Business Transformation Program. The Project provides for the optimization of procurement activities.

The "Category Procurement Management" project's concept is to combine materials with similar technical and other properties, which were purchased into a category. Managing a category involves finding additional value, increasing the economic effect, estimating the total cost of ownership and reducing costs across the supply chain. Changes made enable to reduce purchase prices, improve the quality of goods, works and services purchased, develop local producers by selecting a potential supplier based on the total cost of ownership, which helps determine the optimal approach to the purchase of goods, works, services, based on maximizing the benefits in the long-term or short-term outlook. Moreover, the choice based on the total cost of ownership allows evaluating not only the value of purchase, but also the operating and disposal expenses, which allows selecting the most up-to-date and cost-effective solutions.

Procurement category strategies were developed in 2018 for "Protective Clothing", "Maintenance and repair of special-purpose equipment", "Personal protective clothing" and "Coal transportation" categories. These strategies include conclusions that were made in reliance on the analysis of past expenditures, future needs, supply market and business requirements.

As part of transformations of procurement activities, the Company pays attention to human resources as well. The work on improving the procurement system has commenced in 2018, which, among others things, involves certification of procurement specialists of the Fund and legal entities where the Fund holds directly or indirectly fifty or more percent of voting shares (equity stake) on the right of ownership or trust management. Executives, deputy heads in charge of procurements of "Samruk-Energy" JSC group successfully obtained certification in 2018.

In compliance with procurement principles, the Company continues focusing on developing the share of local content in the procurement of goods, works and services.

### Information on the share of local content. mln. tenge \*

	actual 2016		actual 2017		actual 2018	
	The total amount of actually supplied GWS	% LC	The total amount of actually supplied GWS	% LC	The total amount of actually supplied GWS	% LC
goods	118,986.63	92	122,783.06	75	152,323.77	83
W/S	183,028.05	70	149,580.49	80	153,420.06	88

\* Note: "Samruk-Kazyna Contract" LLP data

Moreover, the Company pays attention to social responsibility.

In 2018, the Company concluded agreements with disabled people organizations, including the Public Association "Association of disabled people Vostok", "Mamai-Astana" LLP, "Hermes 21 Century" LLP, "Megapolis-ASTANA" IE, "Koktem-2016" LLP, "Delta inc" LLP "Ahmanova D.H." IE, "BAYAZIT Life" LLP, "Ar-Rohim association of disabled people" Public Association, "Taraz Educational and Production Enterprise" of Kazakh Society of the Deaf, "GrandCorp" LLP, ABENOV IE, "Kolganat-Karaganda" LLP.

The Company concluded agreements for the amount of 114.8 mln. tenge with disabled people organizations in 2016.

The Company concluded agreements for the amount of 383.3 mln. tenge with disabled people organizations in 2017.

The Company concluded agreements for the amount of 369.3 mln. tenge with disabled people organizations in 2018.

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# TRANSFORMATION



*Primary target of "Samruk-Energy" JSC Transformation program is cutting operating costs, enhancing export potential of the market, environmental protection and introduction of new approaches to asset management.*



"Samruk-Energy" JSC Business transformation program aims to ensure the Company's transformation to a technological, highly profitable and efficient corporate entity, as well as it focuses on creation of reliable platform that will enable "Samruk-Energy" JSC to accomplish its strategic development goals set out in "Samruk-Energy" JSC Development Strategy for 2018–2028.

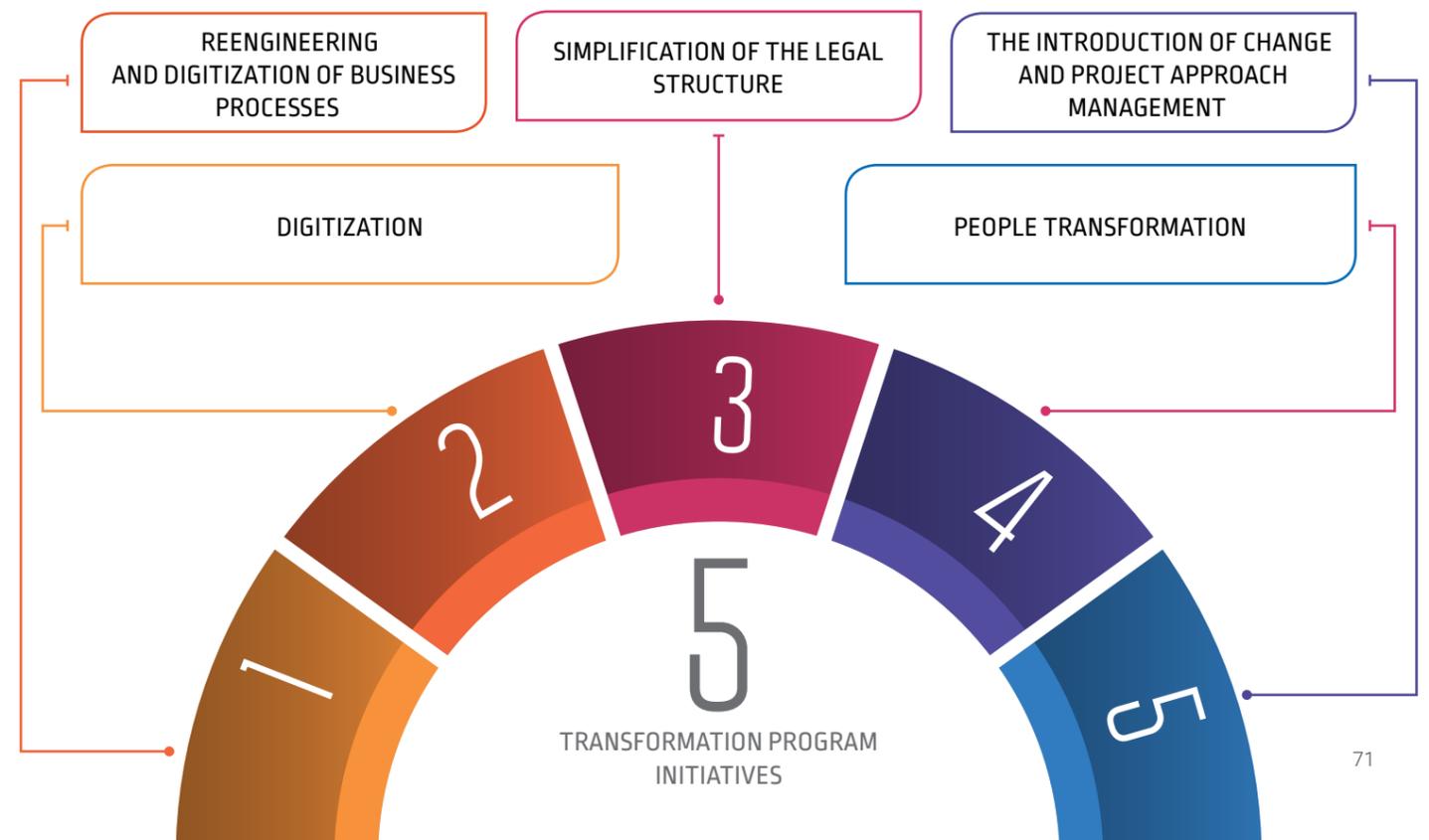
Transformation program is based on concurrent work in five key directions:

- 1) Reengineering of business processes - implementation of integrated systems for resource management, integrated planning and corporate management in all organizations of the perimeter of transformation projects.
- 2) Digitalization - the formation of a digital business model based on automated production and management systems
- 3) Simplification of the legal structure of the Company – assets privatization in line with the Comprehensive Privatization Plan of "Samruk-Kazyna" Fund.
- 4) People transformation – comprehensive development of corporate culture at the Company, the introduction of leadership development program, an employee's compliance assessment system. Implementation of program for succession planning, personnel reserve for key positions, young professionals development program "Zhas Orken". Application of the service model at routine pro-

cesses, the implementation of the program for recognition of employees' outstanding results. Development of up-to-date HR-analytics tools, automated human resource management processes.

- 5) The introduction of change and project approach management – application of project and change management standards; ensuring that every executive of the Company has the competence such as change and project approach management. Development and application of the methodology for change and project approach management are included key performance indicators of the company and key staff of the Company

The results of Transformation Program will be both certain financial performance (benefits, savings) and quality results, which will allow enhancing the value of the Company's assets as a whole.



“Samruk-Energy” JSC Transformation program’s project portfolio comprises 12 projects, two of which were launched this year: “Introduction of portfolio management” and “Introduction of the new risk management model”.

According to the results of 2018, one project of the Transformation Program was completed.

## Effective money and debt management

### *THE PROJECT “IMPLEMENTATION OF THE NEW MODEL OF CORPORATE FINANCE”*

*The project was completed. The new corporate finance model was introduced.*

Cash and debt management processes are among the key for the Company. The project aims to centralize liquidity management, which is consistent with international best practices.

The project introduced cash pooling instrument at the Company as a unique method for payments optimization.

The projected benefits from the project until 2021 are expected to be in the amount of 8,7 bln. tenge. The project is transferred to the Company’s operations.

Not stopping on the achieved results, the Company continues implementing the Transformation Program projects.

## Sales and trading functions centralization

### *THE PROJECT “DEVELOPMENT OF SALES PROCESSES AND IMPLEMENTATION OF TRADING PROCESSES”*

*Phase 4 “Monitoring and Support”. New sales and trading process was introduced*

The process of single center of SA electricity sales functions was launched in 2018 at the premises of the Head Office (Trade house).

The trade house became a profit center, responsible for the income from the sale of subsidiaries and affiliates’ electricity. It is engaged in the sale of electricity to all consumers in Kazakhstan, participation in activities planning of power plants, centralized participation in the Centralized Electricity Auction. Owing to the introduction of sales processes, the financial

benefits from the project for the incomplete 2018 amounted to 3.5 bln. tenge.

## Organizational flexibility for the company’s effective response to changing economic conditions

### *THE PROJECT “BUSINESS INITIATIVES PORTFOLIO MANAGEMENT”*

*The project has started. Phase 0 “Project launch”*

The built business processes in the framework of “Business Initiatives Portfolio Management” project will ensure the passage and coordination of only highly efficient projects and will bring real benefits to the Company by minimizing future costs. To achieve the objectives, it is scheduled to implement the plan for changing the business, including organizational and process changes, development of methodological documentation for managing a portfolio of capital and long-term financial investments.

## Improvement of current risk management system

### *THE PROJECT “INTRODUCTION OF THE NEW RISK MANAGEMENT MODEL”*

*Phase 0 “Project Launch” was completed*

The project on introducing a new risk management model is aimed at achieving an increase in the efficiency rating of the corporate risk management system based on the results of independent diagnostics of corporate governance of the group of companies of “Samruk-Energy” JSC. The organizational perimeter of the first wave until 2019 included the Corporate Center and “Ekibastuz SDPP-1” LLP. In the second wave from 2020 to 2021 – “Shardarinsk HPP” JSC, “Moynak HPP” JSC and “APP” JSC.

## The Company governance improvement by building a clear hierarchy

### *THE PROJECT “TRANSITION TO THE TARGET ORGANIZATIONAL STRUCTURE”*

*Phase 4 “Monitoring and Support” of the project’s 2<sup>nd</sup> wave was completed*

The transition to the target organizational structure at the Head Office, “Ekibastuz SDPP-1” JSC was completed. The work on changing functions in accordance with target business processes being implemented, functional distribution of responsibility areas and introduction of the new vertical of posts was performed. The grading system has been developed as well as Job Matching assessment has been carried out. The project has been implemented in “Almaty Power Stations” JSC since October 2018.

## IT development strategy. ITSM implementation. IT processes automation

### *THE PROJECT “IMPLEMENTATION OF THE NEW IT MANAGEMENT MODEL”*

*Phase 3 “Preparation and processes launch” was completed.*

The project team has developed and described (based on international practice) targeted IT business processes, project documentation and materials on the establishment of an IT SSC (more than 150 documents).

The GLPI software product for the development of the IT Services Management Information System (hereinafter referred to as the System), designed to automate IT management processes was developed.

The IT infrastructure monitoring subsystem was refined and implemented (at «Samruk-Energy» JSC, “APP” JSC, “Energy Solutions Center” LLP, “Ekibastuz SDPP-1 named after B. Nurzhanov”, “Moynak HPP named after Kantaev”, “Shardarinsk HPP” JSC). The IT Service Management information system was put into trial operation at “Samruk-Energy” JSC, “Energy Solutions Center” LLP, “Ekibastuz SDPP-1” LLP.

## Zero tolerance for accidents at work

### *THE PROJECT “INTRODUCTION OF THE NEW INTEGRATED SECURITY MANAGEMENT MODEL”*

*Phase 3 “Preparation and processes launch” was completed*

“Samruk-Energy” JSC declared zero tolerance for accidents at work. The project team conducted a primary audit to determine the current state of the integrated safety management system (“Samruk-Energy” JSC, “Moynak HPP named after Kantayev”, “Ekibastuz SDPP-1 named after B. Nurzhanov” LLP; “Shardarinskaya HPP” JSC).

New standards were developed in accordance with the target model and international standards in the field of integrated security: The Golden Rules of Security; Methods for determining the root causes of accidents; Accounting for potentially dangerous accidents. reports of dangerous / safe behavior; Safety analysis of work in the issuance of work permit; Staff motivation for safe behavior.

Corresponding trainings have been conducted for employees and senior management of the Corporate Center and “Samruk-Energy” JSC group of companies.

## Reduction of the Company’s operating expenses owing to the introduction of category procurement management

### *THE PROJECT “CATEGORY PROCUREMENT MANAGEMENT”*

*Phase 4 “Monitoring and Support” of 5<sup>th</sup> wave of the project was completed*

The project aims to improve the procurement system. The categorization of the purchased goods, works and services has been carried out. 8 purchasing category strategies have been developed and are being implemented. Contracts were concluded in the categories “Rolled metal products”, “OTR”, “Protective clothing”, “Oils and lubricants” and “Spare parts for special equipment and rolling stock”. By 2022, it is planned to implement 20 procurement category strategies covering 80% of the annual costs of managed categories.

Benefits of more than 3,1 bln. tenge are expected to be obtained from the project implementation. In addition to the financial benefit, it is expected to create a broad and reliable supplier base, improve the quality of products, works as well as services delivered.

## IPS is the basis for annual and medium term planning

### *THE PROJECT "INTEGRATED PLANNING SYSTEM"*

Phase 2 "Implementation" is about to complete

Implementation of the IPS tool on IBM software at "Samruk-Energy" JSC and "Samruk-Energy" JSC group of companies ("Ekibastuz SDPP-1" LLP, "Ekibastuz SDPP-2 Plant" JSC, "Moynak HPP" JSC, "Shardarinsk HPP" JSC, "Bogatyr Komir" LLP) will allow to calculate quickly and model multiple scenarios of the Company's development as well as offers the best possible scenario based on the most reliable data (standards, ratios, passport details, etc.)

The actual benefits from the introduction of IPS project during 2018 at Ekibastuz SDPP-1 plant alone amounted to 910.6 mln. tenge. These benefits were obtained as a result of the work of the power units of the station in the optimal mode, calculated from the IPS, as well as the provision of services for regulation of capacity by the power plant.

Planned benefits of IPS project from 2018 through 2021 make 3.3 bln. tenge.

## Information Security

### *THE PROJECT "IMPLEMENTATION OF THE MANAGEMENT SYSTEM AND INFORMATION SECURITY"*

The first wave is completed

In order to implement the Presidential Decree "Third Modernization of Kazakhstan: Global Competitiveness", the country embarked on a course of developing the Cyber Security Concept ("Cybershield of Kazakhstan"), aimed at ensuring the information security of society and the state in the field of information and communications.

The goal of the project is the introduction of new software for monitoring vulnerabilities and threats, improvement of efficiency of protection protection of "Samruk-Energy" JSC data and information in the face of modern threats to information security, increasing the maturity of information security processes, ensuring control and analysis of malicious activity using tools for monitoring vulnerabilities and threats to the Company and "Samruk-Energy" JSC group of companies.

The implementation and introduction of the Project will create a unified Security Operation Center in the future.

Following the results of 2018, a significant reduction in violations of internal regulatory documents in the field of information security of "Samruk-Energy" JSC compared with previous years was achieved and disclosure of confidential information was not allowed.

As part of the implementation of Strategic Initiatives, the Company launched two new projects during the reporting period.

## Digitization

Projects are at the stage of creation

A separate direction of "Samruk-Energy" JSC Transformation Program is participation in the implementation of the State Program "Digital Kazakhstan". The Company's Road Map for 2018-2021 includes digitization activities. A digitization office conducted a preliminary survey at "Ekibastuz SDPP-1" LLP for determining its readiness for the implementation of digitization projects.

At the same time, memorandums on engaging specialists in mathematics and computer science were signed with Kazakhstani universities in order to develop a mathematical model of production data on a gratuitous basis. At present, memoranda are concluded with the University of International Business (UIB) and with the Almaty University of Power Engineering and Communications.

The implementation of digitization projects in the future is aimed at improving the overall performance, competitiveness and value of "Samruk-Energy" JSC group of companies.

## Automation of business processes

### *THE PROJECT "IMPLEMENTATION OF TARGET PROCESSES"*

The project has started. Phase 0 "Project launch"

Introduction of targeted processes in SAP S4 / HANA system, which allows supporting support from 5-6 or more complex business processes simultaneously, providing optimization, control and transparency of processes and costs.

The project started at "APP" JSC.



# 07 CORPORATE GOVERNANCE

As part of corporate governance, the Company adheres to the following principles:

- Strict observance of shareholders, investors and other stakeholders' rights
- Increasing the efficiency of the Board of Directors and its Committees, as well as the Executive Body and its Committees
- Improvement of management reporting system
- Compliance with the principles of information transparency for shareholders and other stakeholders (a formalized and transparent policy and procedure for remunerating directors and executives of the Company, a transparent dividend policy, publishing of annual report with financial statements and a report on sustainable development annually in accordance with GRI and IFRS standards)

- A clear separation of powers and responsibilities between the Company's bodies and structural units
- Avoidance of corporate conflicts and conflicts of interest
- Striving to apply the best world practices of corporate governance, through the further introduction of principles and provisions of the Corporate Governance Code
- Ensuring the existence of effective planning processes, effective internal control systems, compliance and internal audit, an effective risk management system, an effective system for managing sustainable development

**According to the results of "Samruk-Energy" JSC corporate governance diagnostics conducted in 2018, the planned indicator was reached and the corporate governance rating – BB that corresponds to the average level of "maturity", was assigned; this means that the Company's corporate governance system meets in all essential aspects the most of criteria established.**

With a view to improve corporate governance, the new Development Strategy for 2018–2028 was approved, the Committee for Occupational Health and Safety and Environment Protection under the Company's Board of Directors and Human Resources and Remuneration Committee under the Company's Management Board were established, and the procedure for receiving a feedback from all stakeholders of the Company was developed during the reporting period.

A transparent reporting system, motivation systems for identifying and investigating incidents in OHS were introduced

and the Action Plan for management of occupational health and safety and environmental protection issues in "Samruk-Energy" JSC group of companies for 2019 was approved.

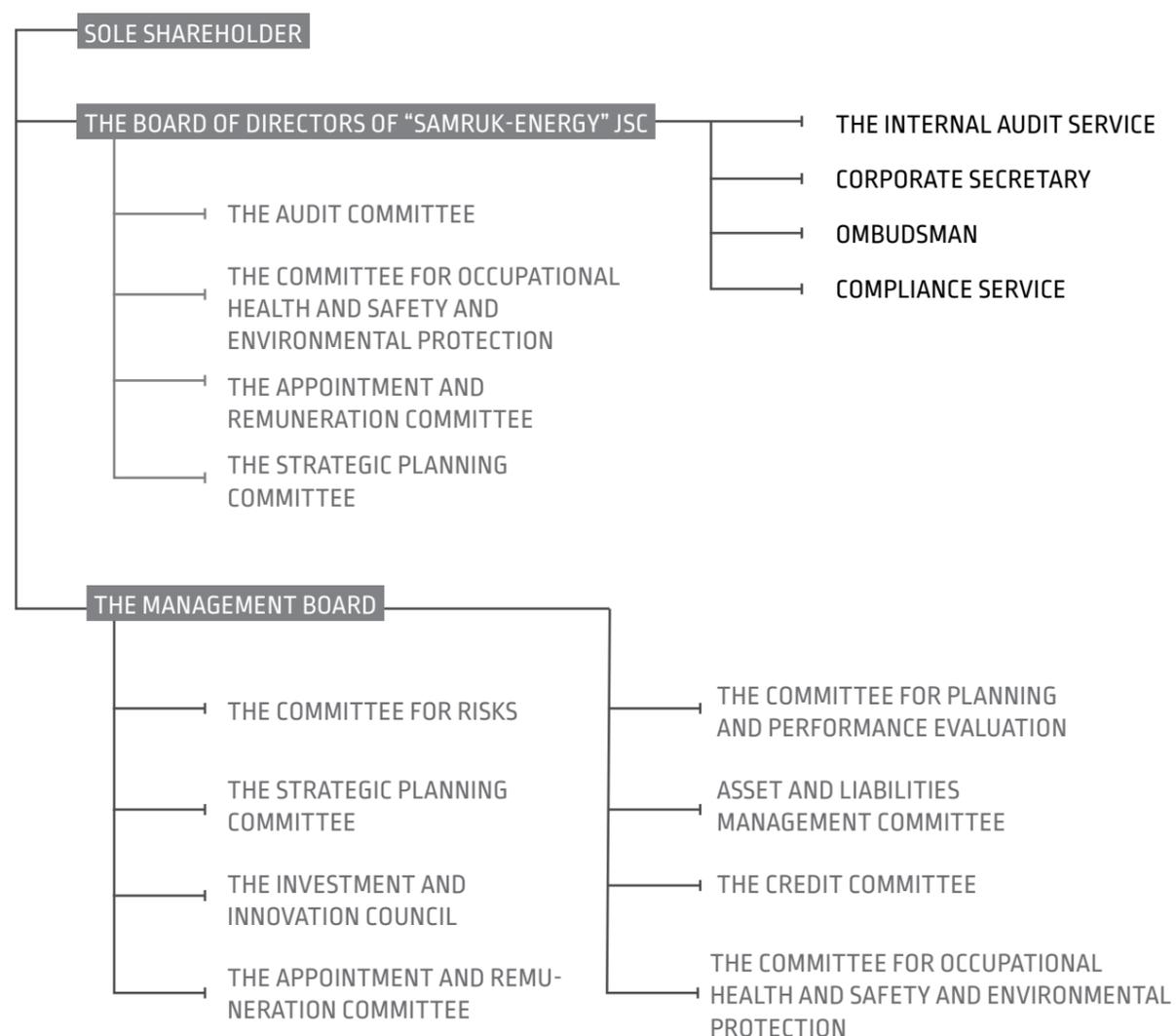
The Company's regulations in the field of sustainable development, corporate governance, occupational health and safety issues, resolution of corporate conflicts and conflicts of interest, information security, etc. were developed and approved. The Compliance Service conducted training on compliance, requirements of the new Code of Conduct and Initiative information sharing policy for employees of the Corporate Center, as well as employees of "Samruk-Energy" JSC group of companies.

Considering the results of diagnostics and recommendations of an independent consultant, the Board of Directors approved an updated Action Plan for corporate governance improvement of "Samruk-Energy" JSC for 2019–2021.

*One of the strategic objectives of "Samruk-Energy" JSC is to increase the efficiency of corporate governance. This is because the Company is well aware of the importance of effective corporate governance, and therefore it strives for long-term sustainability, trust of shareholders and investors, as well as mitigation of investment risks and business's financing cost.*



## “SAMRUK-ENERGY” JSC CORPORATE GOVERNANCE STRUCTURE



## SHAREHOLDER

“Samruk-Kazyna” JSC holds 100% of “Samruk-Energy” JSC shares ([www.sk.kz](http://www.sk.kz)). The Sole shareholder ensures the management of the Company by setting priorities and strategic areas of activities.



The relationship with the Sole Shareholder involves ensuring protection and respect for its rights and legitimate interests and is based on honesty, accountability, responsibility and transparency.

The Company strives to comply with the interests of the Sole Shareholder by ensuring the growth of long-term value and sustainable development of operations.

The Company seeks to comply with the interests of the Sole Shareholder by ensuring the growth of long-term value and sustainable development of activities.

The Company has a Dividend Policy, the main principles of which are:

- 1) the principle of ensuring the payment of dividends in favor of the Sole Shareholder;
- 2) the principle of ensuring the financing of the Company's activities, including the financing of strategic investment projects, as well as assets acquisition;
- 3) the principle of the need for financing investment activities.

According to the Company's operating results, as of December 31, 2018, the number of announced securities reached 8,602,187, placed – 5,601,687. As of December 31, 2018, the book value of one ordinary share was 84,839 tenge. Earnings per share amounted to 861 tenge.

At year-end 2017 dividends on ordinary shares in the amount of 2 041 000 000 tenge were paid in 2018 by the resolution of the Sole Shareholder.

## THE BOARD OF DIRECTORS

The Board of Directors, as a management body, ensures strategic management of the Company and long-term business performance by making informed decisions taking into account the interests of all stakeholders based on the principles of sustainable development.

International experience evidences that the Board of Directors can significantly increase the value of an organization. Therefore, “Samruk-Energy” JSC considers that balanced composition of the Board is important and strives for a high-quality balance in terms of experience, diversity of skills, knowledge and thinking styles, “Samruk-Kazyna” JSC Rules for the formation of the Board of Directors composition govern criteria for quality composition of the Board of Directors.

As of 31.12.2018, the Composition of the Company's Board of Directors was as follows:

- Chairman of the BoD – Aidarbayev Alik Serikovich
- Chairman of the Management Board – Zhulamanov Bak-itizhan Tolevzhanovich
- Representative of the Sole Shareholder – Rakhmetov Nurlan Kusainovich
- Independent director – Luca Sutera
- Independent director – Spitsyn Anatoliy Tikhonovich
- Independent director – Andreas Stoerzel
- Independent director – Joaquin Galindo Velez

Powers of Aidarbayev Alik Serikovich were terminated in 2019 by the Resolution of the Sole Shareholder. Karymsakov Beibit Yerkinbayevich was appointed Chairman of the Board of Directors by the resolution of the Sole Shareholder dated January 28, 2019.

Main information about members of the Board of Directors are provided below. Full resume of each Board of Directors member is available on the website: [www.samruk-energy.kz](http://www.samruk-energy.kz).



**KARYMSAKOV BEIBIT  
YERKINBAYEVICH**

**Chairman of “Samruk-Energy” JSC Board of Directors, representative of the Sole Shareholder’s interests**

Citizenship: the Republic of Kazakhstan  
Date of birth: October 31, 1962  
Date of the first election: January 28, 2019  
Does not hold the company’s as well as suppliers and competitors’ shares

**Managing Director for Economy and Finance, member of “Samruk-Kazyna” JSC Management Board.**

**Expert in strategic and corporate governance, economics, finance and auditing**



**ZHULAMANOV BAKITZHAN  
TOLEVZHANOVICH**

**Member of the Board of Directors, Chairman of the Board**

Citizenship: the Republic of Kazakhstan  
Date of birth: December 23, 1966  
Date of the first election: September 24, 2018  
Does not hold the company’s as well as suppliers and competitors’ shares.

**Expert in strategic planning, corporate governance, finance, market development and law**



**RAKHMETOV NURLAN  
KUSAINOVICH**

**Member of the Board of Directors, representative of the Shareholder’s interests**

Citizenship: the Republic of Kazakhstan  
Date of birth: September 24, 1965  
Date of the first election: January 28, 2017  
Does not hold the company’s as well as suppliers and competitors’ shares.

**Managing Director for transformation, privatization and restructuring of “Samruk-Kazyna” JSC.**

**Expert in strategic management, economics, finance and audit**



**LUCA SUTERA**

**Senior Independent Director of “Samruk-Energy” JSC Board of Directors**

Nationality: the Italian Republic  
Date of birth: July 7, 1971  
Date of the first election: May 8, 2012  
Date of election as Senior Independent Director from October 14, 2016  
Reelected: July 5, 2016  
Does not hold the company’s as well as suppliers and competitors’ shares.

**Chairman of the Audit Committee, member of the Appointment and Remuneration Committee, member of the Strategic Planning Committee, member of the Committee for Occupational Health and Safety and Environmental Protection.**

**Expert in the following areas:**

- Accounting, finance, audit, (holds the CPA certificate)
- Risk management and internal control
- Corporate strategy
- Mergers and acquisitions
- Investment valuation
- HR and organization
- Performance management
- Corporate Governance (Chartered Director of IoD UK)
- Commissioning, integration and turnover of companies.
- Large-scale transformation programs of the company.

**Combining jobs and membership in the BoD:**

Vice President for Finance of the Group. Member of the Executive Board at Nebras Power (Qatar Sovereign International Power Company)  
From April 2011, member of the Russian Association of Independent Directors.  
From April 2014, member of the British Institute of Directors (IoD)  
From August 2015, Group Chief Financial Officer at Nebras Power, Qatar Sovereign International Power Company



**JOAQUIN GALINDO VELEZ**

**Independent Director of “Samruk-Energy” JSC Board of Directors**

Citizenship: The Kingdom of Spain  
Date of birth: August 27, 1957  
Date of the first election: January 28, 2017  
Does not hold the company’s as well as suppliers and competitors’ shares

**Chairman of the Health, Safety, and Environmental Protection Committee, member of the Strategic Planning Committee, member of the Appointment and Remuneration Committee, member of the Audit Committee**

**Expert in the following areas:**

- Conventional and Renewable generation: O&M and Energy Management
- Engineering and Construction
- Strategic Development
- Business Development
- Environmental Matters
- Integration and Transformation Programs

**Combining jobs and membership in the BoD:**

Member of the Spanish Institute of Directors (ICA)  
Member of the Spanish Energy Club



**ANDREAS STOERZEL**

**Independent Director of “Samruk-Energy” JSC Board of Directors**

Citizenship: Federal Republic of Germany  
 Date of birth: October 12, 1963  
 Date of the first election: July 5, 2016  
 Does not hold the company's as well as suppliers and competitors' shares

**Chairman of the Strategic Planning Committee, member of the Appointment and Remuneration Committee, member of the Audit Committee, member of the Health, Safety, and Environmental Protection Committee**

**Expert in business management, strategy, finance, investments, and mergers & acquisitions.**

**Combining jobs and membership in the BOD:**  
 From 2014 to present, Chief Executive Officer of innogy Middle East & North Africa, Dubai, UAE  
 From 2012 to 2014 CEO, RWE Middle East Ltd. Dubai, United Arab Emirates.

**SPITSYN ANATOLY TIKHONOVICH**

**Independent Director of “Samruk-Energy” JSC Board of Directors**

Citizenship: the Russian Federation  
 Date of birth: May 24, 1939  
 Date of the first election: May 8, 2012  
 Reelected: 5 July, 2016  
 Does not hold the company's as well as suppliers and competitors' shares

**Chairman of the Appointment and Remuneration Committee, member of the Audit Committee, member of the Strategic Planning Committee, member of the Health, Safety, and Environmental Protection Committee**

**Expert in economics, finance, management and strategic development.**

Doctor of Economics, Professor, Member of the Presidium of the Russian Academy of Natural Sciences (RANS), a member of the Union of Architects of the USSR and the Russian Federation.

**Combining jobs and membership in the BOD:**  
 Currently, he is a professor of economics and finance of the public sector of the Russian Academy of National Economy and Public Administration under the President of the Russian Federation, Director of the Institute for Strategic Studies of Integration Problems of the Eurasian Economic Community. Vice President of the Russian Academy of Natural Sciences, First Vice President of the International Academy of Investments.

Director's job requires profound practical knowledge, experience and constant improvement. With this aim, «Samruk-Energy» JCS conducts performance appraisal of the Board of Directors as one of key processes in corporate governance.

In 2018, PricewaterhouseCoopers' experts analyzed the effectiveness of “Samruk-Energy” JSC Board of Directors as part of evaluation of corporate governance; according to results of such analysis, the contribution of the Board of Directors and each of its members to the growth of the long-term value and sustainable development of the Company was determined, as well as recommendations for improvement were developed. The results of the assessment are taken into account when re-electing or early termination of powers of the Board of Directors members.

The Board members are personally responsible to the Company for the quality of their job responsibilities in accordance with the Charter, legislation and the Corporate Governance

Code, in particular, emphasizing the duty to promote business success. In making decisions that, in his/her opinion, complies with the Company's mission and vision.

The presence of the Independent Director in the current team is a guarantee of making unbiased decisions that best complies with the Company's interests.

The main criterion for the selection of Independent Directors is to have sufficient professionalism and autonomy to make unbiased decisions free from the influence of any parties. Independent directors actively share their experience and knowledge to apply the best international practice standards at the Company, Independent directors chairs the committees of the board of directors and bring in international management experience.

At the end of 2018, the Independent Directors of the Company fully met the independence criteria.

**Activities of the Board of Directors**

Number of the Board of Directors' meetings			
	2016	2017	2018
Number of meetings	11	11	14
In person	7	9	11
In absentia	4	3	3
Attendance of the Board of Directors' members			
	2016	2017	2018
<b>General statistics</b>	<b>100%</b>	<b>100%</b>	<b>96%</b>
Aidarbayev A.S.	–	–	100%
Luca Sutera	100%	100%	100%

Spitsyn Anatoly Tikhonovich	100%	100%	93%
Andreas Stoerzel	100%	100%	93%
Joaquin Galindo Velez	–	100%	93%
Rakhmetov Nurlan Kusainovich	–	100%	93%
Zhulamanov Bakitzhan Tolevzhanovich	–	–	100%

In 2018 the Board of Directors of the Company held 11 meetings in person. 3 meetings were held in absentia. 222 items were considered during meetings.

**Main items considered**

The Board of Directors reviewed the following reports every quarter: risk management; corporate governance improvement; report on plans for meeting the shareholder's expectations; report on utilization of investments in investment projects; report on the execution of the development plan; report on the action plan for the Company entry into the green risk zone; report on activities in the area of OHS, workplace injuries and environment.

It also approved the Strategy for 2018–2028. Personnel Policy for 2018–2028. Code of Conduct, Innovation and Technology Strategy for 2018–2028. Initiative Information sharing Policy, Corporate Conflict Resolution and Conflict of Interest Policy, Compliance Risk Management Policy, Security. Occupational health and Safety and Environmental protection Committee was established, Sustainable Development Guide. Stakeholder Map and Sustainable Development Initiatives Plan were updated.

## Remuneration of the Board of Directors members

The representatives of the Sole shareholder and the Chairman of the Board as members of the Board of Directors receive no remuneration.

Independent directors receive annual fixed remuneration for performing their duties as members of the Company's Board of Directors and additional remuneration for participating in each meeting in presentia of the Committee of the Company's Board of Directors as members of the committee.

An independent director is reimbursed for expenses (transport, accommodation and daily allowance) related to departure for meetings of the Board of Directors and committees of the Board of Directors held outside the place of his/ her permanent residency.

## Remuneration to independent directors for 2018

Independent directors	Total paid
<b>Spitsyn Anatoly Tikhonovich</b>	
USD	87,502
<b>Sutera Luca</b>	
USD	87,502
<b>Stoerzel Andreas</b>	
USD	87,502
<b>Joaquin Galindo Velez</b>	
USD	86,113

The Board delegates the authority to its committees for performance of certain tasks on its behalf, so that it can perform its roles effectively and pay due attention in order to explore the matters in depth and make sound decisions.

The Company has Committees under the Board of Directors: the Audit Committee, the Appointment and Remuneration Committee and the Strategic Planning Committee, as well as Occupational health and safety and Environmental protection Committee.

## Report on performance results of the Board of Directors' Committees

	Number of items considered at meetings broken down by committees		
	2016	2017	2018
The Audit Committee	43	48	81
The Remuneration and Appointment Committee	37	40	68
The Strategic Planning Committee	19	30	30
Occupational health and safety and Environmental protection Committee	-	-	8

### The Audit Committee

The work of the Committee is aimed at assisting the Board of Directors for in-depth study of matters regarding the creation of an effective system of control over the Company's financial and business operations, including the completeness and accuracy of financial reporting, control over the reliability and effectiveness of internal control and risk management systems, as well as corporate governance documents, as well as monitoring the independence of external and internal audit, as well as the process of ensuring the observance of the Republic of Kazakhstan law.

#### The Committee's composition:

- Luca Sutera – Senior Independent director, Chairman of the Committee;
- Spitsyn Anatoly Tikhonovich – Independent director, member of the Committee;
- Andreas Stoerzel – Independent director, member of the Committee;
- Joaquin Galindo – Independent director, member of the Committee.

	Number of the audit committee meetings		
	2016	2017	2018
Number of meetings	8	9	12
In presentia	8	9	12
In absentia	0	0	0
Attendance of the Committee members with voting rights	100%	100%	91%
Number of items considered in 2018			81

### Main items considered

Meetings with the executive body regarding the preparation of financial statements, meetings with external auditors were held. The issues of the work of the Internal Control Service, the Compliance Service and risks were considered.

The Regulation on the Committee was updated.

## The Appointment and Remuneration Committee

The Nomination and Remuneration Committee is an advisory body of the Board of Directors that provides guidance on the appointment and remuneration of members of the Board of Directors, the Management Board, the Corporate Secretary, as well as other employees in accordance with the internal regulatory documents of the Company.

#### The Committee's composition:

- Spitsyn Anatoly Tikhonovich – Independent director, Chairman of the Committee
- Andreas Stoerzel – Independent director, member of the Committee
- Luca Sutera – Senior independent director, member of the Committee
- Joaquin Galindo – Independent director, member of the Committee

	Number of meetings of the Appointment and Remuneration Committee		
	2016	2017	2018
Number of meetings	11	9	12
In presentia	11	9	12
In absentia	0	0	0
Attendance of the Committee members with voting rights	100%	100%	93%
Number of items considered in 2018			68

### Main items considered

The Board of Directors was provided with recommendations on the election of members of the Supervisory Boards / Boards of Directors for "Samruk-Energy" JSC group of companies. The Sole Shareholder was provided with recommendations on the composition of "Samruk-Energy" JSC Board of Directors.

Recommendations were provided for the following positions: Director General of "Kazhydrotechenergo" LLP, "AlmatyEnergoSbyt" LLP, "Yereymentau Wind Power" LLP, "Energy

Solutions Center" LLP, on the composition of the "Samruk-Energy" JSC Management Board.

The Committee considered the actual values of key performance indicators of the Management Board members, the Head of the Internal Audit Service and the Corporate Secretary of "Samruk-Energy" JSC, the motivational KPIs of the Management Board members, the Head of the Internal Audit Service and the Corporate Secretary of "Samruk-Energy" JSC.

The Regulations on the Committee, the Rules for the management of talents, the Rules for job evaluation were updated.

## The Strategic Planning Committee

The Committee's work is aimed at ensuring the preparation of recommendations to the Board of Directors regarding the development of priority areas of business (development), strategic objectives (development strategy) of the Company, implementation of a sustainable development management system, including occupational health and safety and environmental protection issues, investment projects, a master plan for the Company and activities contributing to the increase of the Company's efficiency in the long term.

#### The Committee's composition:

- Andreas Stoerzel – Independent director, Chairman of the Committee;
- Spitsyn Anatoly Tikhonovich – Independent director, member of the Committee;
- Luca Sutera – Senior Independent director, a member of the Committee;
- Joaquin Galindo – Independent Director, member of the Committee.

	Number of the Strategic Planning Committee meetings		
	2016	2017	2018
Number of meetings	6	7	10
In present	6	7	10
In absentia	0	0	0
Attendance of the Committee members with voting rights	100%	100%	90%
Number of items considered in 2018			30

### Main items considered

Consideration of the following Reports every quarter: on work in the field of occupational safety and health and workplace injuries, on the execution of the Action Plan for improvement of corporate governance and the introduction of the Corporate Governance Code of "Samruk-Energy" JSC for 2016–2017, on the execution of the Roadmap for im-

plementation of “Samruk-Energy” JSC Long-term Development Strategy, on the execution of the Action Plan for meeting expectations of the shareholder, on utilization of investments in the Company’s investment projects, approval and subsequent control over achievement of strategic KPI.

**Consideration** of the Progress Report and submitting to external consultants PricewaterhouseCoopers for independent diagnostics of the Company’s corporate governance, Development Strategy for 2018–2028, Digitization, Innovation and Technology Strategy for 2018–2028.

### The Committee for Occupational health and safety and environmental protection

The Committee was established on March 31, 2018 for the purpose of introduction of sustainable development principles and paying sufficient attention to environmental protection, occupational health and safety issues.

The purpose of the Committee is to ensure the improvement of the Company’s performance through the preparation of recommendations to the Board of Directors. Assessment, analysis and effective work of the Board of Directors on occupational health and safety and environmental protection issues.

**The Committee’s composition:**

- Joaquin Galindo – Independent director, Chairman of the Committee;
- Spitsyn Anatoly Tikhonovich – Independent director, member of the Committee;

- Luca Sutera – Senior Independent director, a member of the Committee;
- Andreas Stoerzel – Independent Director, member of the Committee.

Number of Occupational Health and Safety and Environmental Protection Committee meetings in 2018	
Number of meetings	4
In present	4
In absentia	0
Attendance of the Committee members with voting rights	93%
Number of items considered in 2018	8

**Main considered items**

Quarterly review of the Report on activities carried out in the field of occupational safety and health and workplace injuries.

Consideration of amendments and additions to the Regulation on the Committee for Occupational health and safety and Environmental protection of the Company’s Board of Directors, to the 2019 Action Plan for management of occupational health and safety and environmental protection issues at the Company’s group.

Changes and additions to “Samruk-Energy” JSC occupational health and safety policy were previously approved.

Recommendations on imposing a moratorium on taking disciplinary measures against those responsible for the incidents in the field of occupational health and safety were given.



### “COMPLIANCE” SERVICE

**Akshalov Dauren Esalyuly**  
Head of Compliance Service

ICA International Diploma in Governance, Risk & Compliance - Int.Dip. (GRC)  
Member of International Compliance Association (MICA)  
Master of business administration (MBA)  
Candidate of ICA Professional ICA Postgraduate Diploma in GRC – Prof.PGDip (GRC)

**Hot line**

Email address: sk.hotline@deloitte.kz  
Telephone: 8 800 080 19 94

In line with the best international practice, the “Compliance” Service was established in 2017 at “Samruk-Energy” JSC with aim to reduce and eliminate corruption risks. The Service implements the Compliance Program, determines the policy on anti-corruption issues, and controls over the execution of anti-corruption actions, including the assessment of corruption risks at “Samruk-Energy” JSC and its group of companies.

The Company’s compliance program is fully supported by the Board of Directors and the Management Board and is an integral part of the Company’s culture. In 2018, a Code of Conduct was approved, disclosing values and principles, goals, attitudes towards employees, asset protection, information management, compliance, interaction with the business community and communication with the Company.

As part of creating a corporate culture of “zero tolerance” to the facts of corruption and bribery at premises of the Head Office and at “Samruk-Energy” JSC group of companies, the Service included requirements of “Anti-corruption clauses” into employment contracts, as well as conducted compliance awareness training for employees which was attended by a representative of the Agency of the Republic of Kazakhstan on civil service and anti-corruption.

Information about the best international and national practice on compliance matters is sent to the Company’s employees on an ongoing basis, the “Compliance Service” information page with training material and videos on compliance with anti-corruption legislation is created on the Company’s internal Internet resource. The program of adaptation training includes a course on compliance requirements.

One of the key tools of the Company’s compliance program is to verify the reliability of third parties, partners, and counterparties entering into relations with the Company. The Service checks their reliability before entering into business relations with third parties. In order to extend the provisions of the Code of Conduct on business partners, suppliers and other third parties who work with the Company, rules of “Anti-corruption clauses” were included into the standard business agreements.

Moreover, as part of compliance program, all employees and stakeholders are provided with communication tools like the Initiative Informing Line (Hotline / Speak up) so that they can report their concerns regarding actual and suspected violations of legislation, regulatory requirements and internal ethics documents and compliance. Individuals reporting violations are given the opportunity to send a message on a confidential and anonymous basis, as well as guarantees that they will be prevented from harassment and their rights and interests will be protected. In line with the best international practices, and in order to protect the interests of informers. “Deloitte”, independent company, administers all complaints and appeals received through the hotline, which are recorded and reported to the Compliance Service that ensures anonymous and competent review. In order to review the message most effectively, an option of providing contact information is available; however, individuals may also leave an anonymous message. For anonymous complaints, answers are provided to an independent company for further sending them to those who filed a complaint/appeal.

The service provides the Board of Directors with a Report regarding Initiative Informing Line on a quarterly basis. At the end of 2018, the Company’s hot line received 31 calls, 8 of which were reported anonymously. All received appeals were reviewed / investigated, and applicants were provided with replies. For fair review and decision-making on appeals/complaints, the Company established the Committee for handling complaints / appeals received through initiative informing line.



## INTERNAL AUDIT SERVICE

**Seidigaliyeva Akmaral Kakimovna**  
**Head of the Internal Audit Service**

International Certificate of Internal Auditor CIA (Certified Internal Auditor).  
 Diploma of the International Institute of Auditing and Management IFA "Internal Audit" (DipIFA).  
 Accountant's Certificate – CAP ECCAA Practice (Certified Accounting Practitioner).  
 Executive Master of Business Administration of SBS Swiss Business School.

The service helps the Company to achieve strategic goals and objectives by providing independent and objective guarantees and advice.

In 2018, the Service applied new approaches in performing audits. In previous years, the Service focused on conducting complex audits at subsidiaries and affiliates of the Company, and in 2018 end-to-end audits of business processes were conducted, considering the processes of the head office and its subsidiaries and affiliates as a single process.

With 7 people in the audit team, 21 scheduled and 2 unscheduled audit assignments were completed in 2018.

The priority of audit assignments is determined by selecting the processes with the highest available risks, as well as requests for conducting audits made by the Sole Shareholder and the Board of Directors of the Company are considered as a priority.

One of the important works performed by the Service in 2018 were:

- assessment of the implementation of the Company's Transformation program;
- evaluation of the implementation of investment projects;
- evaluation of human resource management processes.

Following the results of each audit, the Service provided recommendations and held consultations on processes improvement.

Moreover, the Service continued improving its performance in 2018, and developed the following:

- Quality Assurance and Improvement Program, which allows evaluation the efficiency of internal audit and identify opportunities for improving its performance;
- A guarantee map – identifies key risks for a business, the source and level of guarantees in reducing these risks.
- A 3-year plan for the transition to audit checks based on testing of internal controls.

Continuous training and development of professional skills and competencies of the Service's staff continues, since employees of the Service understand the need for professionalism; The Service's employees and head participate in meetings of members of the Institute of Internal Audit, complete trainings in professional certifications on a regular basis. At present, the holders of the international certificate of the internal auditor of the CIA, the Diploma of the International Institute of Audit and Management IFA (DipIFA), the international certificate of CAP of ECCAA, the Diplomas of the Institute of Financial Managers of Great Britain (DipPIA and DipPCPIA) work at the Service.

According to the Service's performance in 2018, the Board of Directors of the Company recognized its work as «Effective».

Also, independent consultants PricewaterhouseCoopers LLP awarded the Service a rating of "BBB" as part of evaluation of corporate governance level in 2018.

## QUALITY MANAGEMENT SYSTEM AUDIT

To ensure the stability of products and services' quality, "Samruk-Energy" JSC has introduced quality management system since 2011, which is audited annually for compliance with the requirements of the ISO 9001 international standard.

The company realizes that the improvement of management systems based on international standards is essential for the dynamic development and strengthening of positions in the country's energy market. Along with the internal audit, in 2018 the Company passed an External Supervision Audit

for compliance with the requirements of the ISO 9001: 2015 international standard. The external Supervisory Audit was conducted in accordance with the procedures of TÜV NORD CERT with confirmation of the scope of the management system in terms of services on corporate energy assets management. According to the results of the External Supervisory Audit, the positive aspects of the development and operation of the corporate management system in the Company are noted.



## OMBUDSMAN

**Bekbas Orazbek Telbayuly**  
**Ombudsman**

Chairman of the Central Committee of public association "Kazakhstan Branch Union of Power Engineers", "Honored Power Engineer" of the Ministry of Energy of the Republic of Kazakhstan, Honored Power Engineer of the Kazakhstan Electricity Association, Member of the Council of public association "Federation of Trade Unions of the Republic of Kazakhstan". Holder of the "Qurmet" Order.

E-mail address: o.bekbas@samruk-energy.kz  
 Telephone: +7 (7172) 69-23-56

The Company established the Ombudsman institute; it performs its work in order to comply with business ethics principles and efficient settlement of emerging social and labor disputes.

Acting as an independent party, the Ombudsman contributes to the establishment and development of corporate values and culture, high standards of professional conduct and business ethics at the Company.

The role of the Ombudsman is to advise the workers who applied to him and assist in resolving labor disputes, conflicts, problematic issues of a social and labor nature, as well as in observing the principles of the Code of Conduct.

Independence, neutrality, impartiality and confidentiality are basic principles of Ombudsman's work.

### 1. Independence:

- 1) The Ombudsman is independent in his activities and independent in his judgments;
- 2) The Ombudsman cannot hold another position in the supervised Company that could compromise his independence and neutrality;

### 2. Neutrality and impartiality:

- 1) The Ombudsman is neutral, impartial and independent when considering an appeal;
- 2) The Ombudsman does not stand with any of the conflicting (arguing) parties;
- 3) The Ombudsman has no personal financial and (or) non-financial interests resulting from consideration of appeals.

### 3. Confidentiality:

- 1) The Ombudsman does not disclose information if he does not receive permission from the person who submitted an appeal, and even in this case, he independently makes the final decision at his own discretion.
- 2) The Ombudsman does not disclose the names of those who addressed an appeal to him at giving recommendations on key trends, identified issues, existing policies and established practice.

Clarifications of the Ombudsman serve as guidelines. Appeal to the Ombudsman is voluntary. In 2018 the Ombudsman received various verbal appeals, in total 39 All persons who submitted an appeal received comprehensive answers. Appeals and responses to them do not have a negative impact on the social stability of the Company as a whole. No case of appeal to the Ombudsman regarding discrimination on racial, religious, national, gender, age, political and other grounds was recorded. Respectively, in this regard, there were no written appeals.

## EXECUTIVE BODY

The Joint Executive body in the form of the Company's Management Board manages daily operations.

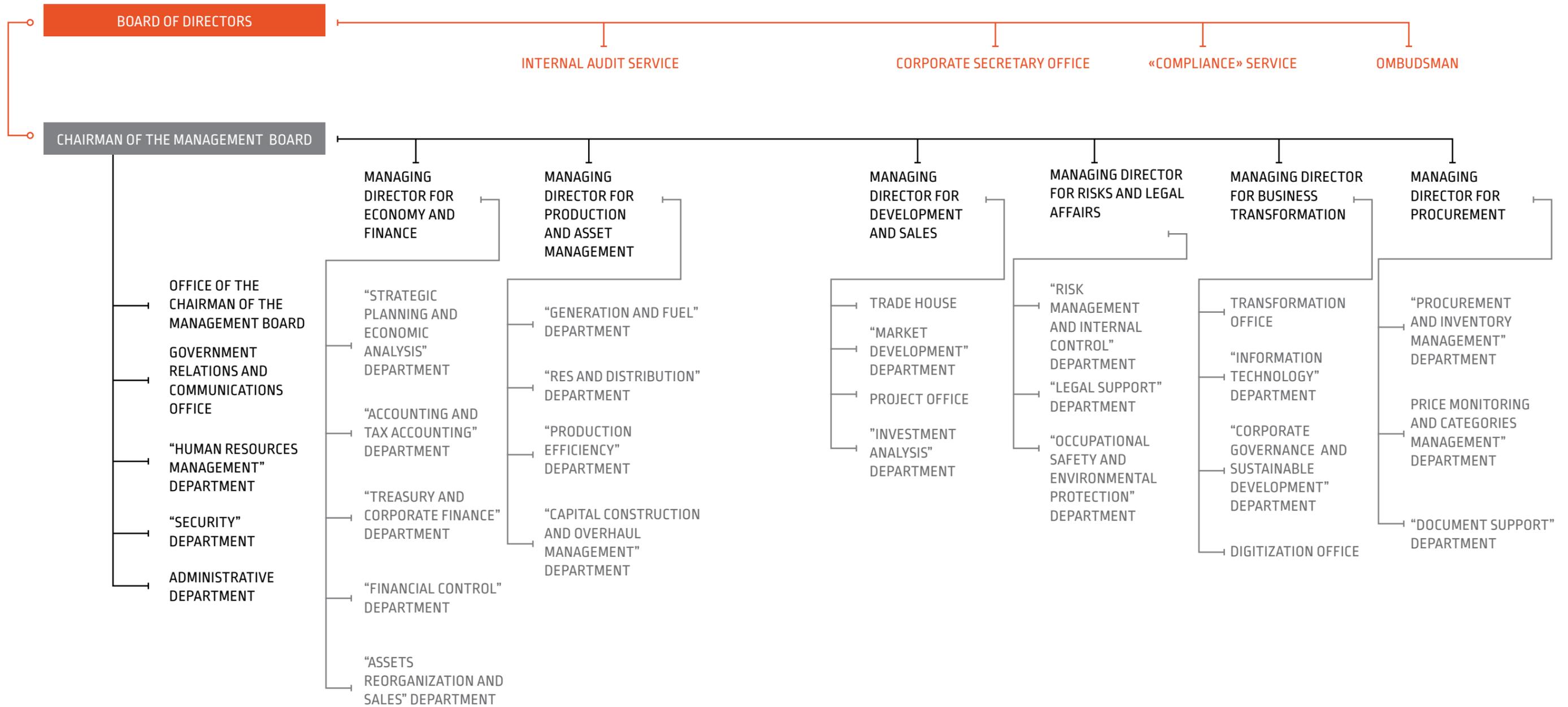
The Management Board ensures the compliance of the Company's operations with the development strategy, business plan and decisions made by the Sole Shareholder and Governing Body in the manner of cooperation with the Board of Directors and interaction with all stakeholders.

The chair and members of the Executive body have sufficient knowledge, skills and experience necessary to perform their

roles and responsibilities, and also have spotless business and personal reputation.

The qualifying criteria for the positions of the Management Board members of the Company were approved by the decision of the Company's Board of Directors and meet the requirements for improving management efficiency, the distribution of strategic goals, business processes, duties and responsibilities in accordance with the organizational structure of the Company.

## ORGANIZATIONAL STRUCTURE OF “SAMRUK-ENERGY” JSC



## Composition of the Management Board



**ZHULAMANOV BAKITZHAN  
TOLEVZHANOVICH**

**Chairman of the Management Board**

Date of birth: December 23, 1966  
Citizenship: the Republic of Kazakhstan

You may learn more about his resume at [www.samruk-energy.kz](http://www.samruk-energy.kz)



**ALIYEV YERLAN ZHENISOVICH**

**Managing Director for Economy and Finance, member of the Management Board**

Date of birth: February 11, 1969  
Citizenship: the Republic of Kazakhstan

You may learn more about his resume at [www.samruk-energy.kz](http://www.samruk-energy.kz)



**TUTEBAYEV SERIK  
SUINBEKOVICH**

**Managing Director for Production and Asset Management, member of the Management Board**

Date of birth: May 27, 1958  
Citizenship: the Republic of Kazakhstan

You may learn more about his resume at [www.samruk-energy.kz](http://www.samruk-energy.kz)

**Composition of the Management Board as of 31.12.2018:**

1. Zhulamanov B.T. - Chairman of the Board;
2. Aliyev Y.Zh. - Managing Director for Economy and Finance, member of the Management Board;
3. Akberdin R.O. - Managing Director for Development and Sales, member of the Management Board;
4. Tutebayev S.S. - Managing Director for Production and Asset Management, member of the Management Board;
5. Saulebay M.O. - Managing Director for Risks and Legal Affairs, member of the Management Board.

In 2019, based on the decision of the BoD of "Samruk-Energy" JSC, members of the Management Board Akberdin Rinat Olegovich and Saulebay Malik Oraluly ceased their powers.

## Remuneration of the Management Board members

In order to determine the conditions and procedure for performance appraisal and the payment of remuneration to the Management Board of the Company, the "Rules for performance appraisal and remuneration of management and executive employees of Samruk-Energy JSC" are available at the Company.

The rules are based on the following principles:

- 1) the interrelation of remuneration with the implementation of tasks that meet the interests of the Company and its shareholder (s);
- 2) the simplicity and transparency of principles for setting the amount of remuneration;

- 3) the dependence of the amount of remuneration on the results of the Company's activities and employee performance.

The Board of Directors assesses the head and members of the executive body. The main evaluation criterion is the achievement of the KPI.

Remuneration of members of "Samruk-Energy" JSC Management Board in 2018 amounted to 104,896,000 tenge, which includes salaries and other short-term rewards of six key positions.

## Management Board Activities

30 in-person meetings of the Company's Management Board were held in 2018, and 381 issues were considered.

**The main issues addressed**

The following documents were approved: Rules for performance appraisal of "Samruk-Energy" JSC employees, "Samruk-Energy" JSC tax accounting policy, the Rules for Professional Skills Training and Adaptation of Employees of "Samruk-Energy" JSC, the Matrix of Risks and Controls for Accounting and Financial Reporting Processes of "Samruk-Energy" JSC, internal regulatory documents of "Samruk-Energy" JSC group of companies, the Charter of "Samruk-Energy" JSC Transformation Program as well as budgets/Development plans, wages schemes, staff list at "Samruk-En-

ergy" JSC group of companies. The investment stages of ongoing projects, issues of IAS, Compliance Services were considered.

Number of meetings of the Company's Management Board			
	2016	2017	2018
Number of meetings	27	19	30
The share of in-person meetings	100%	100%	100%
Attendance	100%	100%	84%
The number of considered items	430	344	381

## Management Board Committees

Currently, the Company's Management Board has the following advisory bodies set up to provide the members of the Management Board with expert assistance in addressing significant challenges.

**THE COMMITTEE FOR RISKS**

The Committee assists the Management Board in making decisions in the area of risk management, the Company's management and internal control system, prepares recommendations and proposals for organization and maintenance of an effective risk management system, internal control, ensuring their operation and development of processes aimed at identification, evaluating, monitoring and controlling risks. The Committee also prepares proposals for controlling over activities in these areas.

All committees report to the Company's Management Board and operate within the competence granted to them by the Management Board in accordance with regulations on these bodies.

**The Committee's composition:**

**Chairman of the Committee** – Managing Director for Risks and Legal Affairs;

**Deputy Chairman of the Committee** – Managing Director for Business Transformation;

**Members of the Committee** – Managing Director for Development and Sales; Managing Director for Economy and Finance;

Managing Director for Production and Asset Management; Managing Director for Procurement; Financial controller; Director of "Risk management and internal control" department;

Head of the Internal Audit Service (without voting right); Head of Compliance Service (without voting right).

Report for 2018	
Number of meetings	4
Number of considered items	11
Attendance, %	94
Key items	<p>On preliminary approval of updating of certain internal regulatory documents on risk management of "Samruk-Energy" JSC</p> <p>On preliminary approval of the Risk Management Report with description and analysis of key risks, as well as information on the implementation of plans and programs for mitigating "Samruk-Energy" JSC risks for the 4<sup>th</sup> quarter of 2017, 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> quarter of 2018</p> <p>On consideration of "Samruk-Energy" JSC risk culture assessment report for 2018</p> <p>On preliminary approval of the consolidated Risk Register, the consolidated Risk Map, Key Risks Management Action Plan with determination of tolerance levels for each key risk, Passports of "Samruk-Energy" JSC Key Risk Indicators for 2019</p> <p>On preliminary approval of risk appetite of "Samruk-Energy" JSC for 2019</p> <p>On consideration of the Report on fulfillment of the Department's Work Plan for 2018</p> <p>On consideration of the Report on execution of 2018 Work Plan of the Committee for Risks and Management System and approval of the Work Plan of the Risk Committee for 2019</p> <p>On approval of the Department's Work Plan for 2019</p>

### COMMITTEE FOR PLANNING AND PERFORMANCE EVALUATION

The main purpose of the Committee is to improve the performance of "Samruk-Energy" JSC group of companies, including optimizing the structure of their assets and expenditures, monitoring of KPI, consideration of Development plans, financial statements.

#### The committee's composition:

**Chairman of the Committee** – Managing Director in charge of economics and finance matters

**Deputy Chairman of the Committee** – Managing Director in charge of development and sales matters

**Committee members** – Managing Director for Production and Asset Management, Managing Director for Business Transformation, Managing Director for Procurement, Managing Director for Risks and Legal Affairs, Head of "Financial Control" Department, Head of "Price Monitoring and Category Management" Department, Auditor of Internal Audit Service (without voting right).

**Secretary of the Committee** – Head of the structural unit responsible for strategic planning and economic analysis.

Report for 2018	
Number of meetings	35
Number of considered items	88
Attendance, %	100
Key items	<p>On results of financial and business operations of "Samruk-Energy" JSC group of companies</p> <p>On consideration of the draft Development plan of "Samruk-Energy" JSC group of companies for 2019–2023</p> <p>On consideration of the draft Annual budget of "Samruk-Energy" JSC group of companies</p> <p>On approval of adjustments of the approved budget</p>

### INVESTMENT AND INNOVATION COUNCIL

The Committee helps to increase the efficiency of investment and innovation activities across "Samruk-Energy" JSC group of companies.

To this end, the Council develops recommendations on investment and innovation activities, the implementation of certain stages of the pre-investment and investment project, the development of recommendations for the transition to the next stage; the acquisition and alienation of shares (equity stakes) of other legal entities by the Company, including as part of the exercise of the priority right to acquire the subsoil use right of an object associated with the subsoil use right, the merger of "Samruk-Energy" JSC group of companies with third-party legal entities, the establishment of legal entities as part of Investment projects

#### The Committee's composition:

**Chairman of the Committee** – Chairman of the Management Board;

**Deputy Chairman of the Committee** – Managing Director for Production and Asset Management;

**Committee members** – Managing Director for Development and Sales; Managing Director for Economy and Finance; Managing Director for Business Transformation; Managing Director for Procurement; Managing Director for Risk and Legal Affairs; Head of the Project Office; Head of the Company's Compliance Service – as an expert without the right to vote; senior auditor of the Internal Audit Service of the Company – as an expert without voting right.

**Independent expert** – Representative of "Almaty University of Power Engineering and Telecommunications" NJSC.

Report for 2018	
Number of meetings	7
Number of items considered	23
Attendance, %	90
Key items	<p>On approval of pre-investment stage of the project "Gasification of Almaty Energy Complex. Modernization of Almaty CHP-2 with minimization of environmental impact"</p> <p>Transfer of Kensu river flow to the Bestyubinsk reservoir of Moynak HPP</p> <p>On the implementation of the investment stage of the project "Construction of a 416 kW solar power plant in Kapshagay city"</p>

### ASSET AND LIABILITY MANAGEMENT COMMITTEE

The purpose of the Committee is to ensure timely and quality decision-making on matters related to the preliminary approval of the investment decision on placement of the Company's temporarily available cash. The Committee makes recommendations on financial assets, including the investment of money in financial instruments, controls over the compliance with the planned and the state of the actual standards when placing funds. In addition, the Committee analyzes the investment portfolio to determine whether it is in line with the current and projected market situation, develops recommendations for risk hedging with a view to minimizing them, and develops recommendations for reinvesting, diversifying and classifying the treasury portfolio.

#### The Committee's composition:

**Chairman of the Committee** – Managing Director for Economy and Finance;

**The Committee members** – Director of "Risk management and Internal Control" Department, Director of "Treasury and Corporate Finance" Department, Director of "Accounting and Tax accounting" Department, Director of "Strategic Planning and Economic Analysis" Department.

Report for 2018	
Number of meetings	2
Number of items considered	2
Attendance, %	100
Key items	On opening of the new bank deposit On approval of consolidated limits of "Samruk-Energy" JSC for balance sheet and off-balance sheet obligations to counterparty banks

The Management Board of "Samruk-Energy" JSC made the decision No. 15 dated August 13, 2018, where it decided to merge

the Asset and Liability Management Committee with the Credit Committee of "Samruk-Energy" JSC.

### CREDIT COMMITTEE

The main tasks of Credit Committee is to ensure timely and high-quality decision-making on issues related to attracting, granting loans, financial assistance and issuing guarantees, minimizing risks as well as providing recommendations on the effective management of structural assets and liabilities of "Samruk-Energy" JSC.

**Chairman of the Committee** – Managing Director for Economy and Finance;

**Committee members** – Managing Director for Risk and Legal Affairs; Director of Treasury and Corporate Finance Department; Director of Risk Management and Internal Control Department; Head of the Project Office; Financial Controller;

**Independent expert** – Head of Compliance Service.

### The Committee's composition:

Report for 2018	
Number of meetings	8
Number of items considered	8
Attendance, %	94%
Key items	"On signing the supplementary agreement No. 4 to the Agreement on opening a credit line No. 16-14285-01-KL (installments) dated June 16, 2016 with "Sberbank" SB JSC" "On increasing "Samruk-Energy" JSC obligations by an amount ranging from two (inclusive) to ten percent of its own capital by entering into Credit Agreements with the Asian Development Bank"

### STRATEGIC PLANNING COMMITTEE

The Committee was established in 2018.

The Committee was established to develop recommendations in the field of strategic development, including matters on the development of actions that will improve the Company's performance in the long term.

### The committee's composition:

**Chairman of the Committee** – Chairman of the Board;

**Deputy Chairman of the Committee** – Managing Director for Economics and Finance;

**Committee members** – Managing Director for Production and Asset Management; Managing Director for Develop-

ment and Sales; Managing Director for Risk and Legal Affairs; Managing Director for Business Transformation; Director of Strategic Planning and Economic Analysis Department; Director of Treasury and Corporate Finance Department; Director of Asset Reorganization and Sales Department; Director of Generation and Fuel Department; Director of Renewable Energy Sources and Distribution Department; Director of Digitization and Production Efficiency Department; Head of the Trade House; Director of Market Development Department; Head of the Project Office; Director of Investment Analysis Department; Director of Human Resources Department; Head of Transformation Office; Director of Corporate Governance and Sustainable Development Department; Director of Information Technologies Department; Head of Strategic Planning section. Secretary of the Committee; Senior manager of Strategic Planning section.

Report for 2018	
Number of meetings	4
Number of items considered	17
Attendance, %	100
Key items	On the volumes of electricity production and sale, including export destinations (CASA-1000. RF. Kyrgyzstan, Uzbekistan, PRC, etc.) On the volumes of coal production and sale, including export destinations On the development of the portfolio of new products relating to electricity sales On the list of promising investment projects Analysis of potential challenges and risks associated with the external environment (PESTEL analysis) About 1 <sup>st</sup> and 2 <sup>nd</sup> level mission, vision, strategic objectives of the Company About forecasts on electricity and coal sales volumes in the domestic and foreign markets On strategic initiatives broken down by business areas

### PERSONNEL AND REMUNERATION COMMITTEE

The Committee was established in 2018.

The purpose of the Committee's activities is to develop recommendations on human resource management, analysis, evaluation and monitoring of compliance of personnel policy with the Company's Strategy, consideration of the list of senior and management employees of the Company's subsidiaries and affiliates, whom the Management Board appoints or approves.

### The Committee's composition:

**Chairman of the Committee** – Managing Director for Business Transformation;

**Deputy Chairman of the Committee** – Head of the Office of the Chairman of the Board;

**Committee members** – Managing Director for Production and Asset Management; Managing Director for Risk and Legal Affairs; Advisor to the Chairman of the Board (for security matters); Director of Human Resources Department.

Report for 2018	
Number of meetings	10
Number of items considered	57
Attendance, %	100
Key items	Development of recommendations on human resource management (provision of recommendations on the approval of staff lists / wages schemes, personnel policy) Appointment or approval of appointments made by the Management Board

### THE COMMITTEE FOR OCCUPATIONAL HEALTH AND SAFETY AND ENVIRONMENTAL PROTECTION

The Committee was established in 2018.

The purpose of the Committee is to ensure effective work in addressing issues related to OHS and environmental protection of the Company by providing relevant recommendations on evaluation the effectiveness of policies and systems for identifying and managing risks associated with occupational health and safety and environmental protection; analysis of all fatal accidents, as well as serious incidents, and actions taken as a result of such incidents and incidents; examining the results of any independent OHS audits, a review of any strategies and action plans developed in response to the issues raised. And, if possible, providing the Board of Directors with advices with respect to these issues.

#### The Committee's composition:

**Chairman of the Committee** – Managing Director for Risks and Legal Affairs;

**Deputy Chairman of the Committee** – Managing Director for Business Transformation;

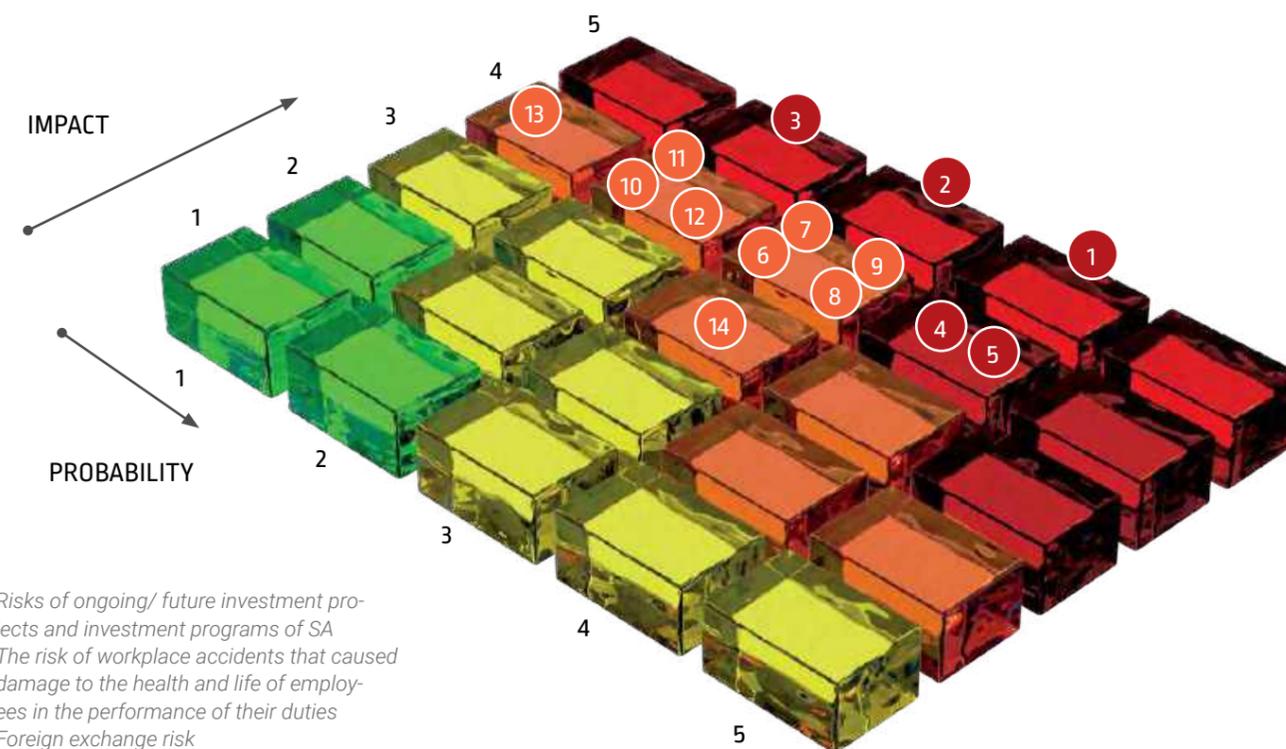
**Committee members** – Director of Generation and Fuel Department; Director of RES and Distribution Distribution; Senior manager of Occupational health and safety and environmental protection Department; Senior manager of Corporate governance and sustainable development Department.

Report for 2018	
Number of meetings	4
Number of items considered	9
Attendance, %	95
Key items	Consideration the item about the need to impose a moratorium on taking disciplinary actions for occurred incidents (except for fatal accidents and other incidents with serious consequences) Consideration of the item about the approval of standards developed as part of SKE.06 project "Implementation of the new model for managing integrated security of "Samruk-Energy" JSC"

## RISK MANAGEMENT SYSTEM

The slowdown in the rates of the Republic of Kazakhstan's economic growth, the weakening of the national currency, the change in the structure of the electricity market and the optimization of tariff have a key impact on the operating conditions of the Company. At the same time, availability of large reserves of thermal coal with low cost of production, effective power generating facilities and support from the state and the Sole Shareholder, provide an opportunity to develop export potential and improve competitiveness in the domestic market.

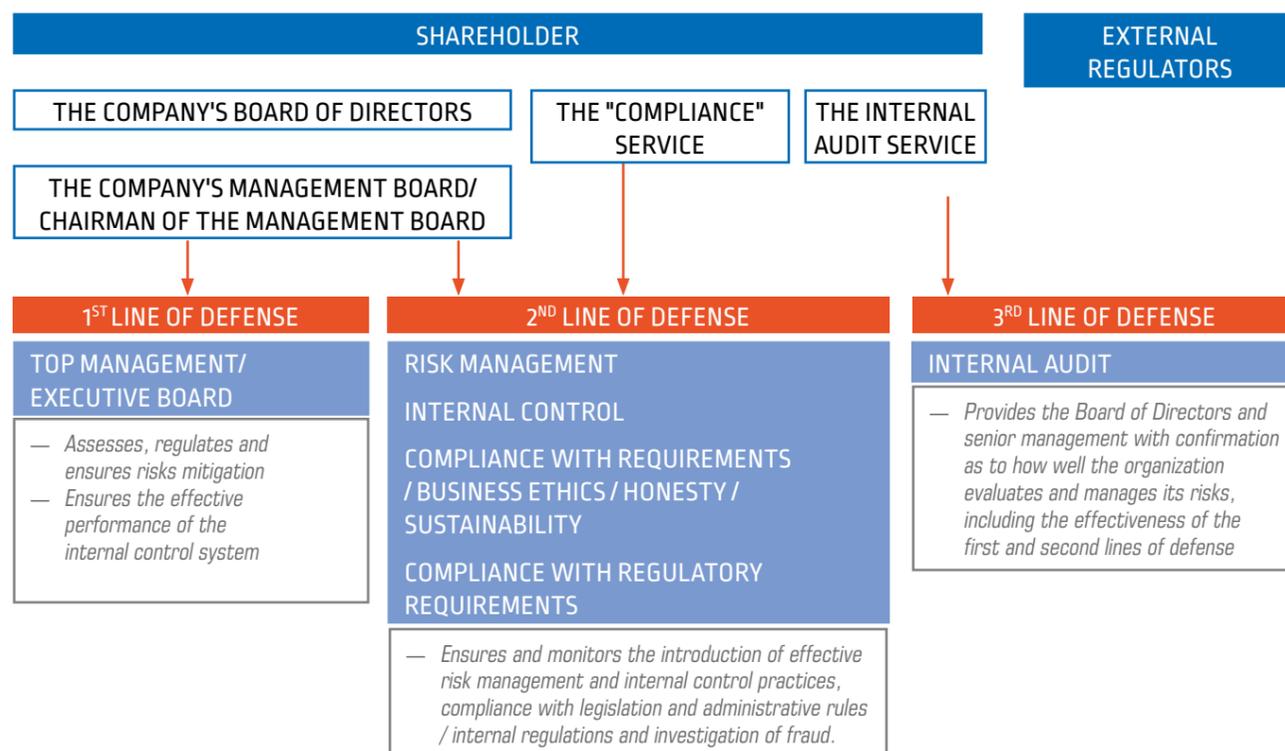
According to the results of work in 2018, 32 risks inherent in the activities of the group of companies of "Samruk-Energy" JSC were identified and assessed, the efficiency thresholds were updated, the risk factors and measures for reduce them. In connection with some of the events that took place in 2017, as well as on the basis of reports on the results of audits of the Company's Internal Audit Service, risks were re-evaluated from the Risk Register. 14 risks fell into the key area of the Risk Map for 2018:



1. Risks of ongoing/ future investment projects and investment programs of SA
2. The risk of workplace accidents that caused damage to the health and life of employees in the performance of their duties
3. Foreign exchange risk
4. Credit risk
5. The risk of non-fulfillment/untimely update of the Company's long-term development strategy
6. The risk of violation of covenants of external creditors and listing requirements
7. The risk of failure to fulfill the electricity sales plan
8. Risks associated with implementation of Transformation Program
9. The risk of impairment of assets
10. The risk of liquidity shortage for operating, investment, financial activities
11. The risk of accidents and disasters
12. The risks associated with acquisition, reorganization and sale of assets
13. The risk of tariff setting.
14. Risks of human resources of the Company's group

The introduction and improvement of the corporate risk management system is the condition that needs to be met in order to achieve strategic and operational goals of the company's group, and one of the most important tasks in the near future.

The Company adheres to the COSO standard using the "Three lines of defense" model:



### Key changes in 2018 (key risks mitigation)

<p><b>Risks of ongoing/ future investment projects and investment programs of "Samruk-Energy" JSC group of companies (without changes)</b></p> <ul style="list-style-type: none"> <li>▶ The main deviation in the underspending with regard to investment projects occurred at "Bogatyr Komir" LLP due to the suspension of access to debt financing by EDB for the implementation of the project on transition to cyclical-and-continuous method due to US sanctions against the Russian UC RUSAL (50% co-shareholder "Bogatyr Komir" LLP).</li> <li>▶ <i>Actions:</i> an alternative debt financing for the project implementation is sought.</li> </ul>
<p><b>The risk of workplace accidents that caused damage to the health and life of employees in the performance of their duties (no changes)</b></p> <ul style="list-style-type: none"> <li>▶ 10 work-related accidents have been recorded since the beginning of 2018, including 2 fatal accidents.</li> <li>▶ <i>Actions:</i> in accordance with the work plan "Occupational health and safety and environmental protection" department.</li> </ul>
<p><b>Foreign exchange risk (mitigation towards orange zone)</b></p> <ul style="list-style-type: none"> <li>▶ reduction of currency commitments.</li> <li>▶ <i>Actions:</i> monitoring changes in foreign exchange quotations, activities on refinancing of current loan.</li> </ul>

<p><b>Credit risk (without changes)</b></p> <ul style="list-style-type: none"> <li>▶ Unstable situation in second tier banks.</li> <li>▶ <i>Actions:</i> monitoring of compliance with limits on counterparty banks, implementation of the RK Government Resolution dated September 19, 2018.</li> </ul>
<p><b>The risk of non-fulfillment/untimely update of the Company's long-term development strategy (mitigation towards orange zone)</b></p> <ul style="list-style-type: none"> <li>▶ Updating of the Company's long-term development strategy for 2018-2028.</li> <li>▶ <i>Actions:</i> monitoring the execution of the action plan for the implementation of the Company's Development Strategy and KPI set.</li> </ul>
<p><b>The risk of violation of covenants of external creditors and listing requirements</b></p> <ul style="list-style-type: none"> <li>▶ <i>Actions:</i> monitoring compliance with covenants, as well as financial sustainability ratios, actions aimed at reducing the level of debt burden and interest payments.</li> </ul>
<p><b>The risk of failure to fulfill the electricity sales plan (reduction by probability)</b></p> <ul style="list-style-type: none"> <li>▶ The electricity sales plan for 2018 - 28,7 bln. kWh. Actual sales of electricity in 2018 - 29,9 bln. kWh. Execution of the plan in quantitative terms - 104%.</li> <li>▶ <i>Actions:</i> daily participation in preparation of daily schedules of electricity supply to the wholesale market and participation in centralized auctions, attracting consumers of Kazakhstani wholesale market.</li> </ul>
<p><b>The risk associated with transformation program implementation (without changes)</b></p> <ul style="list-style-type: none"> <li>▶ falling behind with the Roadmap of Business Transformation Program, due to occurrence of the risk of contractual obligations with contracting company.</li> <li>▶ <i>Actions:</i> the Roadmap with extended deadlines was approved, monitoring the execution of the Roadmap.</li> </ul>
<p><b>The risk of assets impairment (mitigation toward yellow zone)</b></p> <ul style="list-style-type: none"> <li>▶ Because of improvement of the company's financial sustainability, factors of impairment of the Company's assets were reduced.</li> <li>▶ <i>Actions:</i> reduction of capital expenditures, analysis of relevance of scheduled capital repairs, conducting of an impairment test (in case of availability of impairment signs).</li> </ul>
<p><b>The risk of liquidity shortage for operating, investment, financial activities (mitigation towards yellow zone)</b></p> <ul style="list-style-type: none"> <li>▶ <i>Actions:</i> in line with the Company's entry into the green risk zone.</li> </ul>
<p><b>The risk of occupational accidents and disasters (reduction by probability)</b></p> <ul style="list-style-type: none"> <li>▶ absence of occupational accidents and disasters.</li> <li>▶ <i>Actions:</i> conducting major and current repairs, periodic inspections of equipment's technical condition, provision of briefings and emergency training for operating staff of an enterprise</li> </ul>
<p><b>The risk of liquidity shortage for operating, investment, financial activities (mitigation towards yellow zone)</b></p> <ul style="list-style-type: none"> <li>▶ there are no delays in the implementation of activities on privatization.</li> <li>▶ <i>Actions:</i> monitoring of risks associated with acquisition, reorganization and sale of assets.</li> </ul>
<p><b>The risk of tariff setting (an increase by probability)</b></p> <ul style="list-style-type: none"> <li>▶ <i>Actions:</i> monitoring the tariff policy of subsidiaries and affiliates, monitoring (obtaining approval) tariff levels in the authorized bodies, participation in working groups on legislation amendments.</li> </ul>
<p><b>Risks of human resources of the Company's group (an increase by influence and the decrease by probability)</b></p> <ul style="list-style-type: none"> <li>▶ <i>Actions:</i> Personnel reserve relations, cooperation with educational organizations on training of specialists in priority areas for power and coal sectors, arrange workshops and and trainings for the Company's employees, introducing the principles of meritocracy, motivation system development.</li> </ul>

## ON COMPLIANCE OF CORPORATE GOVERNANCE PRACTICES WITH THE PRINCIPLES OF THE CORPORATE GOVERNANCE CODE

The Company is guided Corporate Governance Code, the provisions of which are binding upon all bodies, officials and employees. In view of this, the Corporate Secretary advises the Board of Directors and the Executive Body on matters regarding the appropriate compliance with the Code, monitors the compliance with the Code, and annually prepares a report on compliance / non-compliance with its principles and provisions.

The Company conducted a self-assessment for compliance with the principles and provisions of the Code in 2018, based on which it prepared the Report. The Company's Internal Audit Service evaluated the GAP analysis and verification of the Report.

The Company in its activities fulfils the requirements and recommendations of the Corporate Governance Code, except:

### № PRINCIPLES OF "SAMRUK-ENERGY" JSC CORPORATE GOVERNANCE CODE

#### CHAPTER 1. GOVERNMENT AS THE SHAREHOLDER OF THE FUND

2 The Government of the Republic of Kazakhstan is the Sole Shareholder of the Fund. The main strategic objective of the Fund and Organizations is the growth of long-term value and Sustainable development of the Fund and Organizations that is reflected in the Development Strategy of the Fund and the Companies. All decisions and actions must conform to the Development Strategy. The optimal assets structure must be designed in the Fund and Companies. The Fund and the Companies should seek to simplify as much as possible the structure of their assets and their organizational and legal forms. Organizations perform their activities within its core (main) activities. Implementation of new activities is permitted if there is no competition in this market or participation of the Fund and Organizations will contribute to the development of small and medium-sized businesses. It is recommended to have and keep the controlling share (interest) in the Organizations of the Fund.

15 The Ombudsman is appointed in order to comply with the principles of business ethics and optimal regulation of social and labor disputes arising in the Fund and Organizations. A candidate for the position of Ombudsman should have an impeccable reputation, high authority and have the ability in making impartial decisions. The Ombudsman is appointed by the Board of Directors of the Fund and shall be reelected every two years. The role of the Ombudsman is to advise employees who referred to him, participants of labor disputes and conflict. The Ombudsman assists them in developing a mutually constructive and workable solution based on compliance with the laws of the Republic of Kazakhstan (including confidentiality if necessary). in solving the problem of social and labor questions of workers and the Fund and Organizations, as well as in complying with the principles of business ethics by employees of the Fund and Organizations. The Ombudsman shall submit to the relevant authorities and an official of the Fund and/or the organizations identified problematic issues which are systemic in nature and require appropriate solutions (integrated measures), puts forward constructive suggestions for their solution. The Ombudsman at least once a year submits a report on the results of the work to the Appointment and Remuneration Committee and the Audit Committee of the Board of Directors of the Fund, which evaluate his/her performance results. The Board of Directors of the Fund assesses the performance of the Ombudsman and makes a decision on the extension or termination of office of the incumbent Ombudsman. Place of work, working conditions of the Ombudsman are determined by the decision of the Fund's Management Board.

5 It is necessary to provide a variety of experience, personal characteristics and gender composition in the composition of the Board of Directors. The Board of Directors shall consist of independent directors, in an amount sufficient to ensure the independence of decision-making and equitable treatment of all shareholders. Recommended number of independent directors on the Board of Directors of the Company is in the amounts up to fifty percent of the total number of Board members.

Compliance / Non-compliance/ Partially compliance	Information on compliance /non-compliance of provisions of the Code
<b>CHAPTER 1. GOVERNMENT AS THE SHAREHOLDER OF THE FUND</b>	
Partially complied	<p>The Board of Directors approved "Samruk-Energy" JSC Development Strategy until 2028 on August 28, 2018. Strategic objectives of which are: to ensure reliable competitive energy supplies in the markets where the Company operates, shareholder value maximization and and sustainable development. All decisions and actions taken are consistent with the Strategy. In order to monitor the implementation of the Strategy, the Board of Directors and the Management Board of the Company hold strategic sessions (during the review of reports on the implementation of the Strategy), during which the main activities, tasks, issues, risks, corrective actions are discussed. The Company's investment activity is performed as part of implementation of the Strategy.</p> <p>The group of companies of the Company includes subsidiaries and affiliates of various organizational and legal forms: joint-stock companies and limited partnerships. The Code recommends that "The Fund and companies should create an appropriate asset structure. The Fund and companies should seek to simplify the structure of their assets and their organizational and legal forms to the fullest extent "</p> <p>At the moment, the Company sells 3 assets in accordance with the Resolution of the Republic of Kazakhstan Government dated December 30, 2015 No. 1141 "On some matters of privatization for 2016–2020": "Tegis-Munay" LLP, which includes "Mangyshlak-Munay" LLP, and 26% of equity stake in "Energiya Semirechya" LLP. Activities on holding the tender for sale of "Tegis-Munay" LLP, which includes "Mangyshlak-Munay" LLP were carried out repeatedly in 2018. The tender failed due to the absence of bids. As regards the sale of "Energiya Semirechya" LLP. the agreement on sale and purchase of 26% equity stake was concluded. Re-registration procedures in justice agencies are nearing completion.</p> <p>"Ust-Kamenogorsk HPP" JSC. "Shulbinsk HPP" JSC and "Bukhtarminskaya HPP" JSC are not engaged in production activities; "Moynak HPP" JSC and "Shardarinskaya HPP" JSC have long-term loan agreements, which were executed as part of implementation investment projects, changing of a legal form to limited liability partnerships (hereinafter – LLP) will lead to the risk of early repayment requirements, possible loss of first-class state guarantees that may result in rise in borrowing costs, tightening of current covenant package and other terms of a loan and the emergence of additional costs for engaging consultants in connection with the reapproval of current credit and pledge documentation. In this regard, it would make sense to negotiate changing of these companies' legal forms to LLP with lenders after optimization of the debt portfolio or after full repayment of existing loans.</p>
Partially complied	<p>In order to comply with the principles of business ethics and an appropriate settlement of social and labor disputes arising at the Company, on June 16, 2017, the Company's Board of Directors (Minutes No. 07/17) elected and appointed Bekbas O.T. – Chairman of "Samruk-Energy Local Trade Union", which has an spotless business reputation, high authority and has the ability to make unbiased decisions. On November 20. 2015, the Company's Board of Directors (Minutes No. 07/15) approved the Regulation on the Company's Ombudsman (hereinafter – the Regulation). The Regulations clearly sets out the tasks, roles and responsibilities, rights and obligations of the Ombudsman. The Ombudsman sends a report on the work performed to the members of the Board of Directors every quarter. The Company's Annual Report includes the report of the Ombudsman. The Ombudsman does not submit the report to the ARC and the AC. he submits the report on the work performed only to the Board of Directors members.</p>
<b>SECTION 5. EFFECTIVENESS OF THE BOARD OF DIRECTORS AND EXECUTIVE BODY</b>	
Partially complied	The Board of Directors lacks gender diversity.

The No. of the Code's provision

**№ PRINCIPLES OF "SAMRUK-ENERGY" JSC CORPORATE GOVERNANCE CODE**

- 7 The Board of Directors approves the induction program for newly elected members of the Board of Directors and a professional development program for each member of the Board of Directors. Corporate Secretary shall ensure the implementation of this program.
- 12 The preparation and holding of meetings of the Board of Directors should promote maximum effectiveness of its activities. In order to perform their duties, members of the Board of Directors shall have access to the complete, relevant and timely information. The Board of Directors meets regularly to perform its functions effectively. Board of Directors meeting held in accordance with the work plan approved before the start of the calendar year. Meetings of the Board of Directors and its committees is carried out by a full-time or part-time (absentia meeting) forms of voting, the number of meetings with voting in absentia should be minimized. Consideration and adoption of decisions on important and strategic character is only at meetings of the Board of Directors with voting. In special cases a combination of both forms the meeting of the Board of Directors and its committees might be possible. Meetings of the Board of Directors and its committees properly minutes by Corporate Secretary by indicating sufficient outcome of the discussions and decisions.

**CHAPTER 7. TRANSPARENCY**

- 2 The Fund and Organizations timely disclose information prescribed by law of the Republic of Kazakhstan and internal documents. Internal documents determining the principles and approaches to disclose and protection of the information as well as a list of information to be disclosed to the Stakeholders should be approved in the Fund and Organizations. The Fund and Organizations determine the procedure for classifying information (assigning a category of access), terms of storage and use of information, including a group of persons who has right of free access to information of commercial and official secret and take measures to protect its confidentiality.

Compliance / Non-compliance/ Partially compliance	Information on compliance /non-compliance of provisions of the Code
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Partially complied	The Company has an induction program for newly elected members of the Board of Directors. In addition, in order to implement a mechanism for monitoring the implementation of this program, in 2016 it was updated with a view to formalizing this procedure. The Corporate Secretary ensured the completion of the Induction Program by elected new members of the Board of Directors. The program of professional development was approved for certain members of the Board of Directors.
Partially complied	The Board of Directors approves the Work Plan indicating the expected dates of meetings for the coming year. All meetings of the Board of Directors and its Committees are detailed by the Corporate Secretary and the Secretary of the Audit Committee. Materials and information on the upcoming meeting of the Board of Directors are sent in advance (10 days prior to the meeting) by the corporate secretary to the members of the Board of Directors. However, there have been cases of additional issues on the agenda during meetings of the Board of Directors (minutes of the Board of Directors dated January 25, 2018, April 27, 2018, May 25, 2018, June 29, 2018), respectively, the deadline for submission of materials is not met. There are cases when the members of the BD pay attention to the need to improve the quality of the materials to the issues submitted for the consideration of the BD.

**CHAPTER 7. TRANSPARENCY**

Partially complied	The Company approved regulatory documents, which govern principles and approaches to information disclosure and protection. The Company has the following documents: The list of information that is disclosed to stakeholders The rules for the preparation and posting of information on the Company's website, which describes reporting formats. officials and business units responsible for the disclosure and provision of information Information Security Policy. Instruction on protection of "Samruk-Energy" JSC confidential information. Rules for the preparation and posting of information on the Internet resources of the depository of financial statements and the stock exchange. The Company also has an Information Policy, which determines the principles and approaches to information disclosure, but currently requires updating.
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To learn full report on the compliance with principles and provisions of the Corporate Governance Code, please follow the link <https://www.samruk-energy.kz/ru/shareholder/other-statements>.

# SUSTAINABLE DEVELOPMENT



*In a contemporary world, it is not enough for a company to focus only on financial well-being in order to be successful, but also it is necessary to remember that we live in a society and we must take care of the environment and future generations, because operations of our Company are directly associated with the development of the country's economy and ensuring reliable electricity and heat supplies.*



The Company is aware of the importance of its influence on the economy, environment and society, and in an attempts to increase a long-term value, ensures its sustainable development in the long term, while balancing the interests of stakeholders.

**The principles of sustainable development:**

- |   |  |
|---|--|
| 1 openness                                  | 6 legality                                 |
| 2 accountability                            | 7 respect for human rights                 |
| 3 transparency                              | 8 intolerance to corruption                |
| 4 ethical behavior                          | 9 inadmissibility of conflicts of interest |
| 5 respect for the interests of stakeholders | 10 personal example                        |

**Sustainable development principles were introduced by three levels:**

1. Strategic integration – principles of sustainable development were introduced in the Strategy (mission, values and strategic goals);
2. Operational integration – all corporate decisions are made by the Company's management based on the criteria of compliance with the principles and goals of sustainable development;
3. Cultural integration is implemented as part of conducting training at the Company, publishing articles on the Company's corporate portal, as well as within the Code of Business Conduct.

While integrating the principles of sustainable development into its operations, the Company states its adherence to the 10 principles of the UN Global Compact in its strategy and daily activities:

**The Company assumed the following principles:**

- 1) In the area of respect for human rights: to support and respect the observance of human rights proclaimed by the international community; ensure its non-involvement in human rights violations.
- 2) In the area of labor relations: to support freedom of association and recognition of the right for collective bargaining in practice; stand for the destruction of all forms of forced labor; advocate for the complete elimination of child labor; advocate for the elimination of discrimination in labor and employment.
- 3) In the area of environmental protection: to contribute to the prevention of negative environmental impacts; take

initiatives to increase responsibility for the environment; promote the development and dissemination of environmentally friendly technologies.

- 4) In the area of fight against corruption: to resist all forms of corruption, including extortion and bribery.

In view of joining to the UN Global Compact, the Company annually publishes Progress Report, which it posts on <https://www.unglobalcompact.org/> and on the Company's corporate website <https://www.samruk-energy.kz/ru/sustainability/soobshchenie-o-dostignutomprogresse-v-2018-godu-ao-samruk-energo>

All information about the principles, programs of the Company, reports and new projects in the social, economic and environmental areas is posted on the corporate website in the section "sustainable development" <https://www.samruk-energy.kz/ru/sustainability>

The Company's sustainable development activities are based on the practice of the best international standards.

The economic component of the Company's sustainable development is aimed at increasing long-term value, ensuring the interests of shareholders and investors, increasing the efficiency of processes, growth of investments in the creation and development of more advanced technologies, and an increase in labor productivity.

The environmental component is aimed at minimizing the impact on biological and physical natural systems, efficient use of limited resources, the use of environmentally-friendly, energy- and material-saving technologies, the creation of environmentally acceptable products, minimization, processing and disposal of waste.

The social component is focused on the principles of social responsibility, which among others include ensuring occupational safety and preserving the health of employees, fair remuneration and respect for employees' rights, individual development of personnel, and implementation of social programs for personnel, creation of new jobs, sponsorship and charity, conducting environmental and educational campaigns.

The Company analyzes its performance and risks in these three aspects, and strives to prevent or reduce the negative impact of its operations' results on stakeholders.

The Company is aware that global factors affecting sustainable development will inevitably lead to restrictions, difficul-

ties and risks in the process of doing business as a whole. The Company's main task is not only to ensure survival in high-risk conditions with the help of proper forecasting and planning, but also to turn risks into opportunities and prepare for an unforeseen future.

The Company, applying a risk-oriented approach in its operations, strives to achieve a sustainable increase in value and competitiveness in the long term.

To this end, a comprehensive risk assessment is conducted regularly through the use of risk management tools and a systematic approach to sustainable development:

- 1) an assessment of current and future risks associated with the action of global factors of sustainable development;
- 2) forecasting of economic, social and demographic and environmental trends;
- 3) analysis of social, environmental and economic aspects of the Company's current impact on the region where it operates;
- 4) development of actions aimed at managing the Company's impact on the region where it operates, risk reduction and implementation of opportunities;
- 5) improvement of risk culture in general, analyzing the effectiveness of risk management actions, identifying opportunities associated with current and future risks.

### Key trends and risks for the Company in the area of sustainable development

Trends	Risks	Opportunities
<b>Economic aspect</b>		
Slowdown in electricity consumption growth rate	The deterioration of macroeconomic situation. the slowdown in demand for electricity; High planned rates of commissioning of new capacities exceeding the actual growth in demand	Effective use of the existing assets portfolio
Increasing instability of economic system due to resource-extracting industries' exposure to crises resulted from global price volatility	Increase in the likelihood of crises occurrence that hinder access to financing of new projects	Improvement of production efficiency, modernization of existing assets
Increasing energy conservation and increasing the energy efficiency of the economy	Reduced demand for electricity from conventional generation	The use of coal in combination with advanced "clean coal" technologies
<b>Environmental aspect</b>		
Trend for economy decarbonisation	Deterioration of competitive positions of coal generation against gas, HPP, NPP, RES	Obtaining loans on favorable terms for development of new projects ("clean coal", underground gasification of coal, methane extraction. Development of renewable energy sources); Improvement of quality of used fuel
Introduction of more stringent environmental regulations	Toughening of the maximum permissible concentration of harmful substances; Increase in the rates of payment for emissions; Stricter requirements for water consumption – transition to recycling water supply. tightening of temperature regimes; Waste disposal expenditures	Expansion of "green" technologies use
Increase in environmental requirements of local communities	Environmental activity of mass media, incl. at the absence of sufficiently professional analysis, the creation of a negative image of the company	PR as a "green" leader and the company that manages natural resources in a responsible manner, enhance the loyalty of community of the company

Trends	Risks	Opportunities
<b>Social aspect</b>		
Slowdown in population growth rate	Slowdown in demand for electricity	If feasible, development of export potential
Increase in demand for highly qualified specialists	Lack of qualified specialists. "outstripping" the increase in the cost of labor and the increase in the share of payroll in costs	Performance improvement; Improving the quality of production; Improving the quality of education and training of specialists
Reduction of attractiveness of job in the industrial sector	Increasing difficulty of filling the Company's vacancy	Development of personnel reserve, continuity of positions within the Company

For efficient and successful management of economic, environmental and social aspects, the Company implements sustainable development initiatives in the below areas relying on mentioned principles, external and internal appraisal of the Company's performance, risks in sustainable development:

- 1) the introduction of high ethical standards and building a corporate culture based on trust;
- 2) introduction of sustainable development principles and application of a risk-based approach in the practice of project management at all investment stages: assessment and management of the impact on the social, environmental and economic areas (forced relocation. biodiversity, cultural heritage. etc.) in accordance with Sustainable development guidelines of the Company;
- 3) an increase in financial sustainability;
- 4) facilitate responsible procurement based on principles of fair and free competition, mutual benefit. transparency and full responsibility for the commitments made, as well as the introduction of requirements for suppliers to comply with ethical standards and guidelines for suppliers of the Company, set out in the Guidelines for sustainable development of the Company;
- 5) improving the safety culture through the involvement of employees in occupational safety management system and increasing the effectiveness of control over the occupational health and safety management system through application of international standards;
- 6) increasing the level of social responsibility, following the principles of the UN Global Compact, investment in human assets;

- 7) ensuring environmental sustainability, including the search and implementation of technologies, which are considered as the best from an environmental and economic point of view, streamlining of production processes, implementation of projects using renewable energy sources, identification and prevention of potential emergencies.

The Company is focused on adherence to the "green" economy principles. thus, it implements activities and achieves indicators specified in the Concept for the transition of the Republic of Kazakhstan to a "green economy".

The initiatives that were first implemented in 2018 were prioritized based on the importance of a particular initiative for all key stakeholders. Key performance indicators of sustainable development initiatives are integrated into the system of strategic, medium-term planning and the KPI tree of subsidiaries. Key performance indicators were developed based on specifics of each subsidiary's operations, the emphasis was placed, and threshold values were set respectively.

The Report below shows that the overall ratio of achievement of indicators according to the plan reached 80%. Regarding non-executed activities, based on the factors contributing to non-achievement of a key indicator, measures for 2019 have been developed and implemented to improve them.

#	KPI/activities	Calculation of KPI	Link with strategic objectives of the Company	Key aspects	Target value	Actual value 2018	
Economic category	1	Economic value generated and distributed	Operating expenses + salary and other payments and benefits to employees + payments to capital providers (Dividends to all categories of shareholders, interests paid to lenders) + payments to the state + investments in local communities	Increase profitability, sustainable development: strengthening of reputation	Economic efficiency	Cons: 221,602,240 thous. tenge JV: BK: 31, 244, 904 thous. tenge SDPP-2: 18 053 969 thous. tenge	Executed Unaudited FS: Cons. – 257,892,987 thous.tenge JV: BK: 31,368,756 thous. tenge SDPP-2: 18,974,282 thous. tenge
	2	The share of top executives in significant areas of organization's operation hired from among the representatives of local population	The number of top executives hired from the local population / Number of top executives vacancies	Social responsibility	Presence in markets	Not less than 40%	Executed 98%
	3	The ratio of the standard entry-level wage of employees of different gender to the established minimum wage in significant regions of organization's operation	Standard entry-level salary for employees of different gender / established minimum salary in significant areas of organization's operation	Social responsibility, human capital development	Presence in markets	Not lower than the minimum wage of the Republic of Kazakhstan	Executed The entry-level wage of employees of different gender across the Company's group is 140,667 tenge
	4	To add the requirement concerning the observance of Labor and Environmental Codes of the RK by suppliers to the Standard agreement.	–	Promotion of responsible procurements	Procurement practices	Standard agreement including the RK Labor and Environmental Codes' observance requirements	Executed Approved by the Management Board resolution dated 27.07.2018 (Minutes No. 14)
	5	Maintaining the Company's long-term credit rating	–	Increase in financial stability	Economic efficiency	B+ S&P BB FITCH	Executed BB FITCH Due to reduction of expenses, the lack of feasibility and the need to assign a rating from two agencies when issuing bonds / raising debt in foreign markets (one is enough), as well as a higher rating from FITCH and more transparent assessment methodology, the rating from S & P was revoked at the Company's initiative
Environmental category	6	Energy consumption within organization	The volume of electricity used for plant use (mln. KWh) / volume of generated electricity (mln. KW / h) * 100%	Improving the profitability of companies: improvement of operating performance	Energy	6.4%	Executed 6.12%
	7	Energy intensity	Reduction of specific energy consumption in relation to the basic 2014 year, %	Improving the profitability of companies: improvement of operating performance	Energy	1%	Executed 2.7%
	8	The share of recycled and reused water	The volume of water recycled and reused / total water intake (%)	Improving the profitability of companies: improvement of operating performance Ensuring sustainability	Water	No less than 15%	Executed 28%
	9	GHG emission reduction	Specific greenhouse gas emission ratio received as a result of emission reduction initiatives	Ensuring sustainability	Emissions	Coal-fired pl. – 0.985 t CO2/MWh; 0.484t CO2/Gcal Gas pp.– 0.621 t CO2/MWh; 0.310 t CO2/Gcal	Executed Coal-fired pl. – 0.983 t CO2/MWh 0.371 t CO2/Gcal Gas pp.– 0.228 t CO2/MWh; 0.282 t CO2/Gcal (current data)

	#	KPI/activities	Calculation of KPI	Link with strategic objectives of the Company	Key aspects	Target value	Actual value 2018
Environmental category	10	Reduction of NO <sub>x</sub> , SO <sub>x</sub> and other significant pollutants emissions	The volume of emission of pollutants into the atmosphere per unit of output	Ensuring sustainability	Emissions	9.5 g/kWh	Not executed 10.2 g/kWh Reasons for exceeding the planned values: - an increase in the share of production at fuel stations; - increase of sulfur content in coal at SDPP-1 from 0.48% in 2017 to 0.57% in 2018; - firing of residual coal at CHP-1 of "APP" JSC in connection with the liquidation of coal warehouse (in 2017 natural gas was fired); - increase in specific fuel consumption; - reduction of the share of hydropower generation and renewable energy.
	11	Total volume of planned wastewater discharge	Emissions of pollutants specified in emission permits	Ensuring sustainability	Discharges and waste	7,415 tons	Executed 3197.06 tons
	12	Waste disposal	The volume of consumer wastes transferred for disposal	Ensuring sustainability	Discharges and waste	100% of waste according to the art.301 of the RK EC	Executed 100% of waste according to the art.301 of the RK EC
	13	Investments in environmental protection	Expenses for environmental protection activities in accordance with the Action Plans for Environmental protection (relating to SA with a shareholding of more than 50%)	Ensuring sustainability	General information	2,993.5 mln. tenge	Executed all planned activities were carried out (2,767.2 mln. tenge)
	14	Number of complaints regarding environmental impact, which were filed and confirmed, processed and resolved through official filing mechanisms	–	Ensuring sustainability, an increase in transparency	Environmental grievance mechanism	0	Executed 0
Social category	15	Staff turnover	Number of employees who terminated labor relations terminating labor because of turnover / Actual headcount	Development of human capital	employment	10%	Executed 8%
	16	Social stability rating	According to the methodology of the Center for Social Interaction and Communications	Development of human capital	Relationship between employees and management	65%	Not executed 64% Changes in the social stability rating could have resulted in changes in the management of "Samruk-Energy" JSC. which created a sense of uncertainty. At the same time, the unstable level of social and economic development in the country over the past year cannot be disregarded.
	17	Workplace injuries rate	1. LTIFR = (Nacc.) * 1.000.000 / T, where: – ΣNacc. – The number of accidents that led to disability for a period of more than 24 hours; – T – the total actual number of working hours of staff (in hours)  2. (Number of fatal accidents associated with production activities) * 1.000.000 / Total actual number of working hours of staff	Creation and promotion of health and safety culture	Health and safety at workplace	0.23  0	Not executed 0.28 in connection with the implementation of activities on transparent system of workplace accidents' registration, where all accidents, including light ones. began to be recorded, Increased responsibility for concealing accidents. In December 2018, the fact of concealing an accident was revealed; disciplinary actions were taken against 3 employees.  Not executed 0.06 FIFR indicator was not achieved. due to the following reasons: - poor organization of work; - gross negligence of the suffered

#	KPI/activities	Calculation of KPI	Link with strategic objectives of the Company	Key aspects	Target value	Actual value 2018
18	Number of complaints about labor practices filed, processed and confirmed, resolved through official complaint mechanisms	–	An increase in transparency	Labor practices grievance mechanisms	0	Not executed To state agencies – 1 To law enforcement and court authorities – 15 TOTAL: Filed – 16 Processed – 16 Confirmed – 2 Settled – 7 Under consideration – 6
19	Total number of incidents of discrimination	–	Ensuring social stability	Human rights	0	Executed 0
20		–	Ensuring social stability	Human rights	0	Executed 0
21	Number of complaints about the impact on the observance of human rights, which were filed. Confirmed, processed and resolved through official complaint mechanisms	–	An increase in transparency	Human rights	0	Executed 0
22	Effective interaction with local communities during implementation of new projects	–	Ensuring social stability, compliance with stakeholders' interests	Local communities	If and when initiated, projects are implemented	Executed The information on ongoing projects was published as follows: In the media: 15 materials; On the Internet resources (news, regulatory bodies, website of SE) – 28 materials; In social networks: 16 materials
23	Confirmed cases of corruption	–	Introduction of high ethical standards	Fight against corruption	0	Executed 0
24	The number of other complaints (corruption, ethics, etc.), which were filed, confirmed, processed and resolved through official complaint mechanisms	–	Introduction of high ethical standards, an increase in transparency	Fight against corruption	0	Executed Filed – 22 processed – 22 confirmed – 3 settled – 22 unsettled – 0

Social category

## Interaction with Stakeholders

Stakeholder engagement plays an important role in activities of any Company.

The approach of responsible, thought-out and efficient interaction with stakeholders contributes to the sustainable development of the Company.

The goal of stakeholder engagement is to choose the right strategic development of the Company and ways for im-

provement of its operations, as well as to assist it in achieving a level of sustainable development that benefits everyone, including the Company, its stakeholders and society as they have opportunity to learn, define and analyze: needs, expectations and opinions of internal and external stakeholders; challenges and perspectives from the stakeholders point of view; the most significant issues of concern to internal and external stakeholders.

**The principles of the Company's interaction with stakeholders**

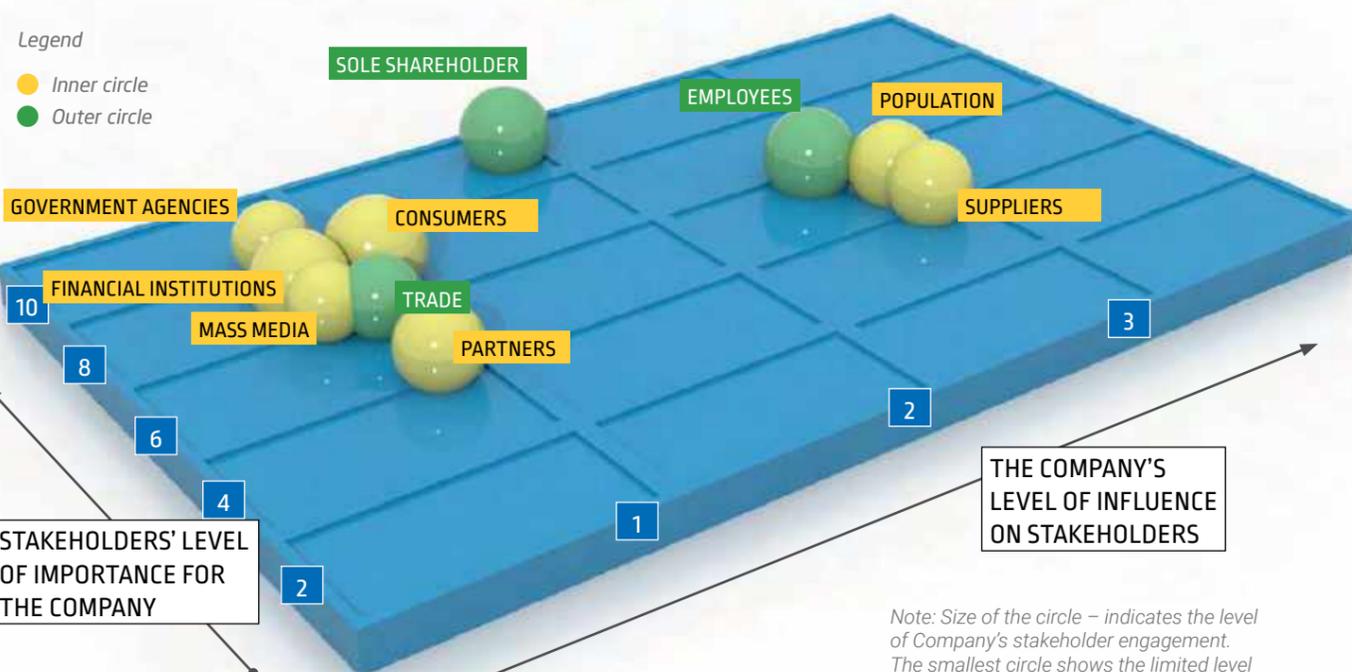
1. Respect and consideration of interests, opinions and preferences of stakeholders;
2. Timely and regular provision of information to stakeholders;
3. Responsible performance of assumed obligations.

The basis of stakeholder engagement is the identification of stakeholders that have a significant impact on the Company and the degree of stakeholders' dependence on the Company, the creation of materiality matrix and Stakeholder engagement plan. The Company updated the Stakeholder Map in 2018, having identified a complete list of potential stakeholders with whom it interacts in the course of its operations; the map describes the contribution of stakeholders and their interests. After that, the Company ranked the stakeholders by importance for the Company using the Mitchell, Agle and Wood model.

When developing the Stakeholder Map, the Company followed the Methodology, which includes 4 stages:



**"Samruk-Energy" JSC Stakeholders map**



*Note: Size of the circle – indicates the level of Company's stakeholder engagement. The smallest circle shows the limited level of engagement. Engagement level increases along with increase of circle size.*

To date, the Company's stakeholders are the population, employees, shareholders, Suppliers, "Samruk-Energy" JSC group of companies, trade unions, partners, consumers, government agencies, competitors, financial institutions, public associations, media, affiliates, rating and audit firms.

The Company, as part of its activities, is a member in the following national and international organizations, associations/ organizations:



**The CIS Electric Power Council** (hereinafter – CIS EPC). Participation as an observer since 2012.

The Executive Committee is a permanent interstate coordinating body of the CIS Electric Power Council. Membership in the CIS EPC allows participating in the processes of integration of the CIS member states' energy systems, including ensuring collective energy security; Provision of parallel operation of power systems; Creation of a common electric power market, involvement in preparation of international agreements in power sector; Technical regulations. unification and harmonization of laws and regulations in power industry, etc. The company can participate in public meetings. meetings of working groups, seminars conducted by the CIS EPC.



**Kazakhstan Electricity Association** (hereinafter – KEA), Membership since 2011. Membership in KEA allows exchanging information and participation in development of a regulatory legal framework in power sector, as well as conferences. Seminars, forums and other events held under the auspices of the KEA.



**KAZENERGY** Association (since 2009), Membership in KAZENERGY Association allows participating in government initiatives and activities aimed at improving the investment climate in the Republic of Kazakhstan, in developing and implementing measures to increase production and scientific and technical potential; as well as the Company may receive assistance in legal, economic, organizational and management matters. The Company provides substantial financing for a variety of events hosted by KAZENERGY Association, including forums, the publication of national reports on the prospects for the development of the fuel and energy sector of the Republic of Kazakhstan.



**The National Chamber of Entrepreneurs of the Republic of Kazakhstan** (hereinafter referred to as the RK NCE), Membership from 2013, Membership in the RK NCE helps to strengthen ties with business environment, effective development of electricity business, including as part of improvement of RK regulatory framework.

**Coordination Electric Power Council of Central Asia** (hereinafter – CEPC CA), Participation as an observer since 2014. Membership in CEPC CA contributes to strengthening business ties between the countries of Central Asia, provides an

opportunity to participate in activities in power industry held by CEPC CA.



**World Energy Council** (hereinafter – WEC). Membership since 2008. Membership in WEC represents a program for a limited number of the world's leading energy

companies interested in working with WEC on projects and issues of a global and regional nature. The WEC program allows Samruk-Energy to participate in exclusive events and round tables that promote the development of cooperation with international organizations.



**UN Global Compact**. Membership since 2011. In the context of joining the UN Global Compact, the Company declares its commitment to following the ten principles of the Global Compact in its strategy and day-to-day operations.

The Company interacts with all stakeholder on an ongoing basis in order to obtain feedback and take into account their opinions when formulating topics that are especially important for them.

The Company interacts with all stakeholder on an ongoing basis in order to obtain feedback and take into account their opinions when formulating topics that are especially important for them.

In order to hold an effective dialogue between the Company and all its stakeholders, in November 2018. Stakeholder Engagement Plan for 2019 was developed and approved, which sets out the principles and requirements for interaction, the procedure for identifying and analyzing stakeholders, interaction and information sharing activities. The stakeholder engagement plan is posted on the Company's website ([https://www.samruk-energy.kz/images/2019/korp-upravlenie/plan\\_stekholder\\_28\\_11\\_18.pdf](https://www.samruk-energy.kz/images/2019/korp-upravlenie/plan_stekholder_28_11_18.pdf)).

In 2018, the Company had the Plan of communications with stakeholders. published in the Annual Report following the results of 2017 (to learn more, please click on the link: <https://www.samruk-energy.kz/ru/shareholder/annual-reports>). The main objective of the Plan is to create a mechanism for timely and high-quality provision of information to stakeholders. Monitoring stakeholder engagement during the reporting period allowed the Company to effectively interact with the shareholder, investors and other stakeholders based on a clear understanding of their priorities.

In order to identify material topics (aspects) for the Company's operations and stakeholders, as well as their ranking, in 2018 internal and external stakeholders were surveyed by completing a specially developed questionnaire, in which the shareholder, key employees, subsidiaries, partners, financial institutions, professional communities, associations, etc. were surveyed. Moreover, in an attempt to cover all stakeholders, the Company posted an online questionnaire for all stakeholders (<https://www.samruk-energy.kz/ru/shareholder/>)

annual-reports) in the published interactive version of the Annual Report on the Company's results for 2017.

In the course of a survey, stakeholders evaluated the significance of each of the topics proposed in the questionnaire on a five-point scale for disclosure in the annual report, and could also supplement the list with aspects that were not included, but were significant in the opinion of the stakeholder.

To evaluate the identified relevant aspects for their completeness and balance, discussions with the participation of the Company's management were held and a materiality matrix was created, which gives a visual representation of sus-

tainable development topics that are important for the Company and stakeholders.

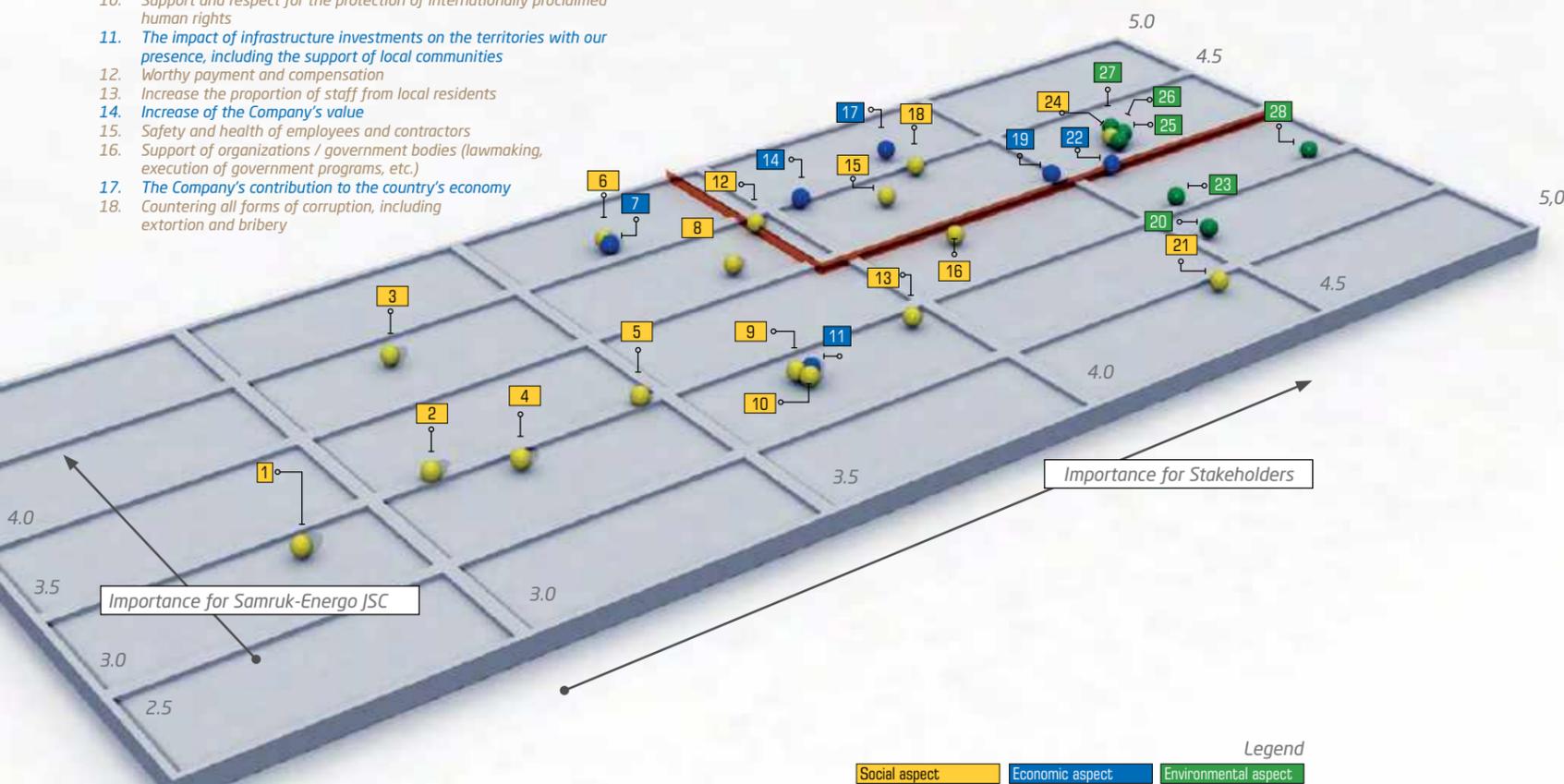
The horizontal axis provides an assessment of the materiality of aspects for stakeholders, and the vertical one – an assessment of the materiality of aspects for the Company.

Topics that received an assessment of significance above 4 points for stakeholders and for the Company were recognized as the most significant and were shown in the text of the annual report. They are located at the top of materiality matrix.

**Matrix of materiality of «Samruk-Energy» JSC**

1. Elimination of all forms of forced and compulsory labor
2. Complaint mechanisms
3. Diversity and equal opportunity
4. Elimination of discrimination in the field of labor and employment
5. Share of costs to local suppliers in significant regions of operations / responsible procurement
6. Professional and personal growth of staff
7. Increase of reputation and positive attitude to the company in the regions of presence
8. Safety and health of residents of the regions of presence
9. Interaction with open local communities, assessment and mitigation methods
10. Support and respect for the protection of internationally proclaimed human rights
11. The impact of infrastructure investments on the territories with our presence, including the support of local communities
12. Worthy payment and compensation
13. Increase the proportion of staff from local residents
14. Increase of the Company's value
15. Safety and health of employees and contractors
16. Support of organizations / government bodies (lawmaking, execution of government programs, etc.)
17. The Company's contribution to the country's economy
18. Countering all forms of corruption, including extortion and bribery

19. Energy Efficiency
20. Waste management
21. Emergency preparedness, community engagement mechanisms
22. Development of innovation and operational efficiency
23. Total costs and investments in environmental protection, by type
24. Safety and health protection of residents of the regions of presence
25. Reduction of GHG emissions and other pollutants (NO<sub>x</sub>, SO<sub>x</sub> and other significant pollutants)
26. Compliance with environmental obligations
27. Efficient use of materials, energy and water
28. Investments in renewable energy



Legend  
Social aspect
Economic aspect
Environmental aspect

The following topics were considered as significant:

- The company's contribution to the country's economy;
- Increase in company value;
- Decent wages and compensation;
- Safety and health of employees and contractors;
- Energy efficiency;
- Fight against all types of corruption, including extortion and bribery;
- Reducing GHG emissions and other pollutants (NO<sub>x</sub>, SO<sub>x</sub> and other significant pollutants);
- Compliance with environmental obligations;
- Efficient use of resources, energy and water;
- Safety and health protection of residents of the regions of operation;
- Development of innovation and operating efficiency.

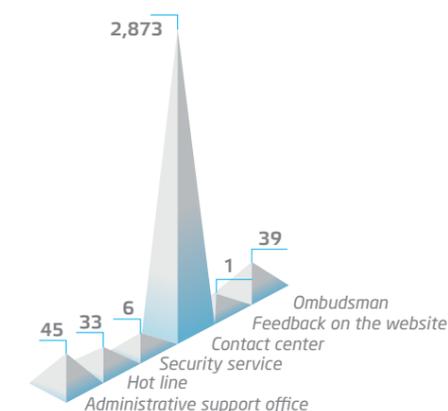
Analysis of the current materiality matrix and the new materiality matrix shows that the Company and its stakeholders consider issues related to the development of innovation and operating efficiency, energy efficiency, ensuring safe working conditions not only for employees of "Samruk-Energy" JSC group of companies but also for employees of contracting organizations. Issues of decent wages and compensation, etc. as significant.

This Report discloses all significant aspects for the stakeholders and the Company (high importance zone).

The Company pursues high standards of social responsibility; therefore, it improves interaction with stakeholders. Maintaining mutually beneficial relationships with stakeholders is utmost important for it. For effective interaction with the shareholder, potential investors, consumers of products and other stakeholders, relying on the principles of transparency and openness, the Information Policy is available at the Company. The policy determines the information, which is subject to disclosure to all stakeholders, the principles, terms for publishing and communicating information to all stakeholders.

As part of interaction with stakeholders, in 2018 the Company introduced a single feedback mechanism with stakeholders, having created a Base of complaints and suggestions across "Samruk-Energy" JSC group of companies with a purpose of examining the concerns of all stakeholders. The analysis was carried out by consolidating of requests (complaints and suggestions) across "Samruk-Energy" JSC group of companies, and was conducted to identify systemic issues, determine the effectiveness of existing mechanisms for interaction with stakeholders for addressing concerns of stakeholders in the future. As part of research conduct-

ed, for completeness of the analysis, the Company additionally introduced "Feedback" forms on the corporate website <https://www.samruk-energy.kz/ru/feedback-all>. Feedback is intended for any stakeholders who may ask for advice, leave feedback, suggestions and any other concerns within the scope of the group of Companies' operations. In addition, a feedback form was created on the Company's website for the category of persons associated with the investment projects being implemented, where local communities, employees of contractors, or persons related to the project may express their opinion.



These appeals were analyzed in terms of the aspects concerned, the identification of regions with the highest number of appeals, the category of persons who sent their appeals to the group of companies, statistics on the subject of appeals and analysis of complaints. Each complaint was assigned a category.

COMPLAINTS			
Reasonable	Partially reasonable	Unreasonable	withdrawn
3	12	28	2
<b>Total: 45</b>			

The conclusions based on requests from stakeholders were informed at the meeting of the Company's Board of Directors, where recommendations were made and actions aimed at improvement of stakeholders' interaction quality were developed.

## “ECONOMIC” CATEGORY

### Created and distributed economic value

Economic performance of the Company is shown in created and distributed economic value table.

The created economic value present the main sources of the Company’s income, namely, income from electricity

production, transmission and sale, as well as from the sale of coal and obtained remuneration.

The created value is distributed between suppliers and contractors, employees of the Company, shareholders and lenders, the state, as well as local communities.

Distributed economic value	
Payments to suppliers and contractors	Operating expenses – payments to counterparties for materials, product components, equipment and services, rental payments
Payments to employees	Payroll, social taxes and contributions, pension and insurance payments. expenses for medical services for employees and other forms of employee support
Payments to capital suppliers	Dividends to all categories shareholders and interest paid to lenders
Payments to the Government	Tax payments
Investments to local communities	Donations to charitable and non-governmental organizations and research institutions, expenses for supporting public infrastructure, as well as direct funding for social programs. cultural and educational activities

According to results of 2018, the created economic value amounted to 353 bln. tenge and the distributed economic value amounted to 273 bln. tenge, as a result, the undistributed economic value amounted to 80 bln. tenge. According

to the approved Development Plan for 2019–2023, the created and distributed economic value is planned to be increased in 2019 and 2020.

*mln. tenge*

Indicator*	2017	2018	2019	2020
	Actual	Actual	Forecast	Forecast
<b>Created economic value</b>	<b>349,242</b>	<b>352,681</b>	<b>366,548</b>	<b>370,773</b>
Sales proceeds	346,563	351,100	366,209	369,586
Interest received	2,679	1,581	338	1,187
<b>Distributed economic value</b>	<b>280,258</b>	<b>272,860</b>	<b>319,526</b>	<b>325,656</b>
Payments to suppliers and contractors	174,610	161,571	186,122	201,408
Payments to employees	40,964	37,210	36,652	37,415
Payments to capital suppliers	31,033	34,047	45,967	34,884
Payments to the government	33,531	39,617	50,497	51,768
Investments in local communities	121	415	289	181
<b>Undistributed economic value</b>	<b>68,984</b>	<b>79,822</b>	<b>47,021</b>	<b>45,117</b>

\* Previously indicators were calculated on an accrual basis. In order to exclude non-cash transactions and depreciation, current indicators were calculated using the data of the cash flow statement. Ownership interests in joint ventures were taken into account in the figures.

### Aspect “Development of innovation and operating efficiency”

As of today, several projects aimed at increasing the efficiency of operations are implemented as part of fulfillment of the Company’s innovative development program, those include:

- 1) Digital power plant. The project provides for the possibility of introducing a centralized collection of production and technological data, remote monitoring and forecasting of production processes and the technical condition of components, assemblies, equipment and systems for monitoring production processes of subsidiaries and affiliates (digital control room) based on production and technical platforms. This will allow obtaining reliable data and ensuring the autonomy of processes, excluding the human factor in production. The pilot project will be implemented at “Ekibastuz SDPP-1” LPP.
- 2) Research on the possibility of using fluidized bed and circulating fluidized bed technologies for firing high-ash coal (50% ash or more coal – coal seam No. 3 of the Ekibastuz deposit and depleted coal / coal by products) is conducted jointly with Nazarbayev University.  
Expected outcome:
  - development of technology and analysis of the prospects of the use of fluidized bed technologies for burning of high-ash coal;
  - reduction of fuel consumption and air emissions compared with conventional coal combustion;
  - complete firing of fuel, without leaving the combustion process in the gas space above the fluidized bed and the loss of significant amount of heat with unreasonably overheated flue gases.
- 3) The system of fuel oil free start-up of boiler implies the equipping of a plasma-fuel system (PFS), which will allow solving the following tasks:
  - stabilization of the combustion of a pulverized coal torch at reduced loads of boiler units;

- elimination of fuel oil consumption in the flame combustion of low-grade coals;
  - elimination of the negative effects of co-firing of coal and fuel oil in one furnace volume, which lead to a decrease in the efficiency and reliability of the boiler.
- This technology is successfully used in the People’s Republic of China, the Russian Federation, Indonesia, etc. at power units from 200 to 1000 MW.
- 4) In the context of its Development Strategy, “Samruk-Energy” JSC plans to increase coal business of “Bogatyr Komir” LLP through the introduction of coal preparation technology. R & D was conducted in 2016 by the order of “Samruk-Energy” JSC, in the course of which an analysis of the technical feasibility and investment feasibility of work in this area was carried out. As a result, it was determined that the promising project will have positive investment indicators for the enrichment of Ekibastuz coal to a calorific value of 5 500 kcal / kg.
  - 5) The implementation of the “Digital coal mine” project provides for automatic monitoring of the operating parameters of the mining equipment of an open-pit coal mine (weight of the cargo being transported, location, technological condition, speed. pressure and temperature in tires. etc.), automation and analytics of the daily change of dump trucks: the number of trips, freight turnover, engine hours, mileage, fuel consumption, automatic control and analysis of the production discipline of drivers and operators of mining and mining transport equipment: downtime, start and finish time. As well as the creation of a unified automated system for managing the production and shipment of coal, processing and analyzing digital coal mine data in real time: using drones for visual, thermal, radiation monitoring; topographic and geodetic surveys and mine-surveying works; 3D modeling and data access; integration of all subsystems in a single data center.

### Aspect “Energy Efficiency”

The Company’s Management Board approved the Energy Conservation and Energy Efficiency Program. The program is a fundamental document for planning and implementing activities in the field of energy conservation and energy efficiency.

The purpose of this program is to develop measures for rational and economically feasible use of fuel and energy resources based on the use of innovative technologies.

As part of ongoing work on energy conservation and energy efficiency, 75 activities aimed at reducing consumption of fuel and energy resources were implemented last year, which allowed saving 35 thousand tons of reference fuel.

### ENERGY CONSUMPTION WITHIN THE ORGANIZATION

There is a decrease in total fuel consumption in 2015–2016 compared to base 2014. In 2017 and according to results of 2018, the growth of fuel (coal) consumption is associated with an increase in the production of electricity by “Ekibastuz SDPP-1” LLP for export supplies to the RF.

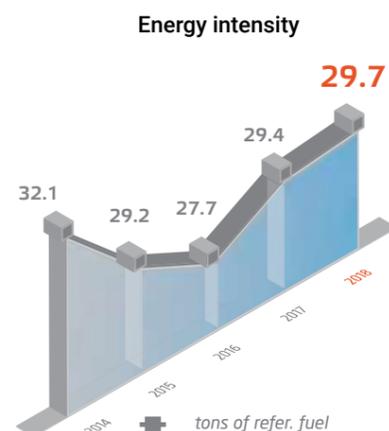
The total energy consumption has a steady decline during 2015–2018, in terms of both electricity consumption and heat consumption.

Consumption within the organization	2014	2015	2016	2017	2018
Total fuel consumption, 10 <sup>6</sup> GJ, incl:	272.6	225.4	225.5	285.2	310.5
Coal	244.4	199.1	196.1	254.8	298.1
Gas	24.7	23.6	27.3	28.4	10.0
Fuel oil	2.0	1.3	0.8	0.7	1.2
Petroleum	0.3	0.3	0.3	0.2	0.2
Diesel	1.3	1.1	1.0	1.1	1.2
Total electricity consumption, 10 <sup>6</sup> GJ	14.0	12.8	12.5	13.0	11.8
Total heat consumption, 10 <sup>6</sup> GJ	3.7	3.0	2.7	2.6	2.7
Total electricity consumption, 10 <sup>6</sup> GJ	17.7	15.8	15.3	15.6	14.5

### ENERGY INTENSITY

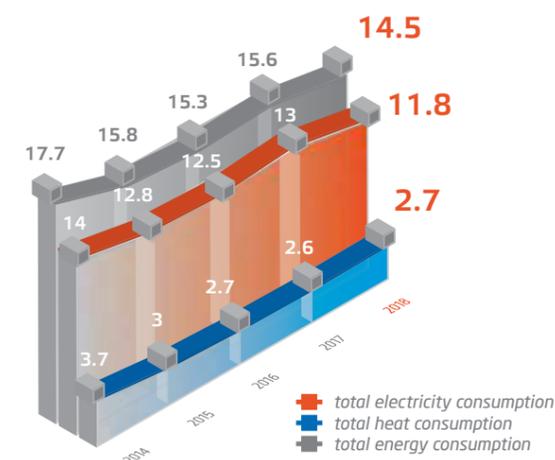
The volumes of fuel and energy resources consumption within the organization, as well as the volumes of electricity and heat produced, electricity transmitted and coal produced were used in this indicator.

The energy intensity of the gross commercial product across “Samruk-Energy” JSC group of companies as of the end of 2018 amounted to 29.7 tons of reference fuel/mln. tenge.



### THE REDUCTION OF ENERGY CONSUMPTION

Total energy consumption, 10<sup>6</sup> GJ



There is a decrease in total energy consumption over years in relation to base 2014.

Consumption of electricity decreased both in relation to the base and in relation to last year and amounted to 11.8\*10<sup>6</sup> GJ.

Heat consumption also decreased in relation to the base year and amounted to 2.7\*10<sup>6</sup> GJ.

The reduction in total energy consumption was driven by reduction of energy use for power plant needs.

## “ENVIRONMENTAL” CATEGORY

2018 was the year of the start of a major environmental reform in Kazakhstan – the new Environmental Code is planned to be released in 2020.

As you know, Kazakhstan has chosen the path to sustainable development and joining the 30 most developed countries of the world, respectively, the issue of environmental safety is a priority for us. We recognize that the achievement of environmental safety in the regions where our production enterprises operate is largely dependent on the economic development strategy implemented by the Company.

A responsible attitude towards environmental issues has developed for many years of work at the Company and its subsidiaries. Given the complexity and seriousness of the technologies used, we cannot but recognize the importance of each of the many environmental risk factors typical for power sector, especially from the perspective of well-being of present and future generations, plant and animal life in the regions of operation.

Guided by current legislation, the concept of sustainable development, as well as the best international practices. “Samruk-Energy” JSC has determined an environmental policy for itself. The goals and objectives specified in the Environmental Policy of “Samruk-Energy” JSC are taken into account in the Company’s Long-Term Development Strategy.

The Company has established an environmental management system (EMS) for managing environmental aspects. All

subsidiaries and affiliates of the Company engaged in production activities adopted the ISO 14001 standard “Environmental Management”. We consider environmental care as a contribution to the social development of Kazakhstan’s society, therefore, the Company has commenced integrating EMS with the social management system in 2018. Owing to our experience in working with ADB and EBRD, we are planning to improve our management systems taking into account the requirements of the International Finance Corporation.

Environmental assessment of the efficiency of production processes is carried out within the framework of industrial environmental monitoring based on measurements and calculations of the level of emissions into the environment, harmful production factors, as well as the actual volume of consumption of natural, energy and other resources. Industrial environmental monitoring is carried out with the involvement of independent laboratories accredited in the manner established by the legislation of the Republic of Kazakhstan in the field of technical regulation. The objects of production monitoring are atmospheric air, surface and groundwater, soil.

2018 was the year of ecology in Pavlodar region, the region where the largest subsidiaries of the group such as ESDPP-1, ESDPP-2 and Bogatyr Komir are concentrated; these enterprises were actively involved in the activities aimed at improvement of the quality of environmental components, which were developed by the local environmental department.

## Financial aspects and other risks and opportunities for the company’s activities related to climate change

The issue of changes in the global climate have been addressed for several decades. The United Nations Framework Convention on Climate Change (UNFCCC) signed in 1992 by more than 180 countries, is an official confirmation of world community’s concern about this issue.

Governments of member countries reviewed the implementation of Paris Agreement on climate change at a regular meeting of parties to the UNFCCC, which was held in Katowice, Poland in December 2018. The scientific basis of this conference was the IPCC<sup>1</sup> Special Report on Global Warming of 1.5°C, which was published the day before the meeting.

The report contains a very alarming conclusion that in order to prevent irreversible climate change, it is necessary to limit global warming to one and a half degrees Celsius compared to the pre-industrial era, for which it is necessary to reduce to zero the net balance between greenhouse gas emissions and the absorption capacity of the terrestrial ecosystem by 2050. Kazakhstan is still striving for a goal of –15% by 2030 relative to 1990, declared as a voluntary contribution in Paris.

Taking into account experts’ opinion, “Samruk-Energy” JSC takes the climate change issue seriously. Therefore, the Company pays considerable attention to the development of renewable energy sources and hydropower plants, implemented energy management systems everywhere, developed com-

<sup>1</sup> Intergovernmental Panel on Climate Change

prehensive programs aimed at increasing energy efficiency and energy conservation, and plans to launch a serious project on gasification of Almaty power plants.

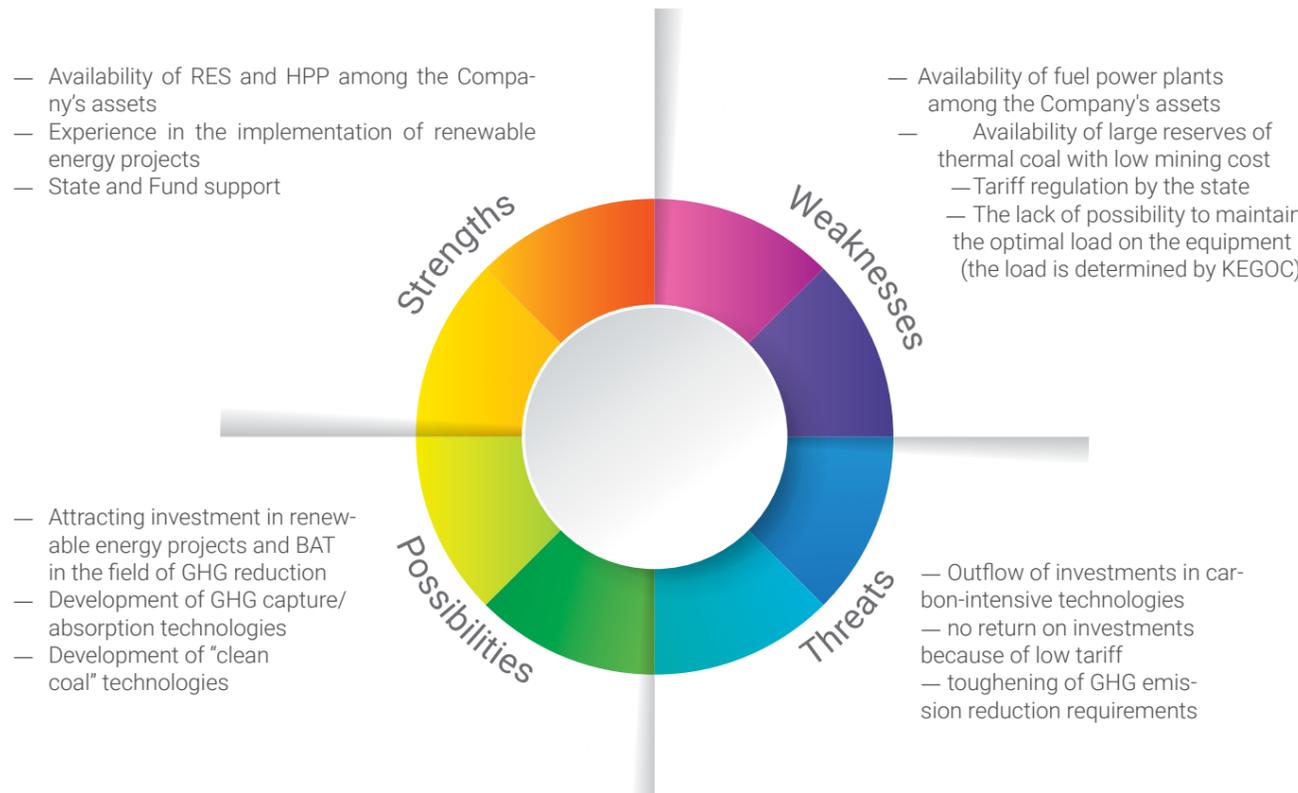
Moreover, such subsidiaries and affiliates of "Samruk-Energy" JSC such as "Ekibastuz SDPP-1" LLP, "Ekibastuz SDPP-2 Plant" JSC, "APP" JSC and "Bogatyr Komir" LLP are facilities which are limited by quota installations and have obligations on reduction of GHG emissions in framework of the national GHG emissions trading system.

Particular attention is paid to the new technologies: "Clean coal technologies" research laboratory was established

at the premises of "Nazarbayev University" on request of "Samruk-Energy" JSC; a pilot project for the conversion of flue gas CO2 to microalgae biomass using various types of soda solutions is implemented in conjunction with "Microalgae Biotechnology" LLP at "GRES-1" LLP; Energy service agreement for replacement of more than 1.5 thousand of industrial lamps available today with LED ones was signed at "Bogatyr Komir" LLP.

The main directions and goals for reducing the carbon intensity of the Company's processes and products are described in the long-term Development Strategy and the Company's Environmental Policy.

**SWOT analysis of Samruk-Energy's standing in terms of the matter of state regulation of greenhouse gas emissions**



It should be noted that if some technologies are actively progressing owing to the global spread sustainability ideology (for example, renewable energy), then it is feasible to treat other technologies, which encourage the same principles of sustainability, patiently and excitedly. This explains the modest pace of retrofit and reconstruction of conventional generation in Kazakhstan.

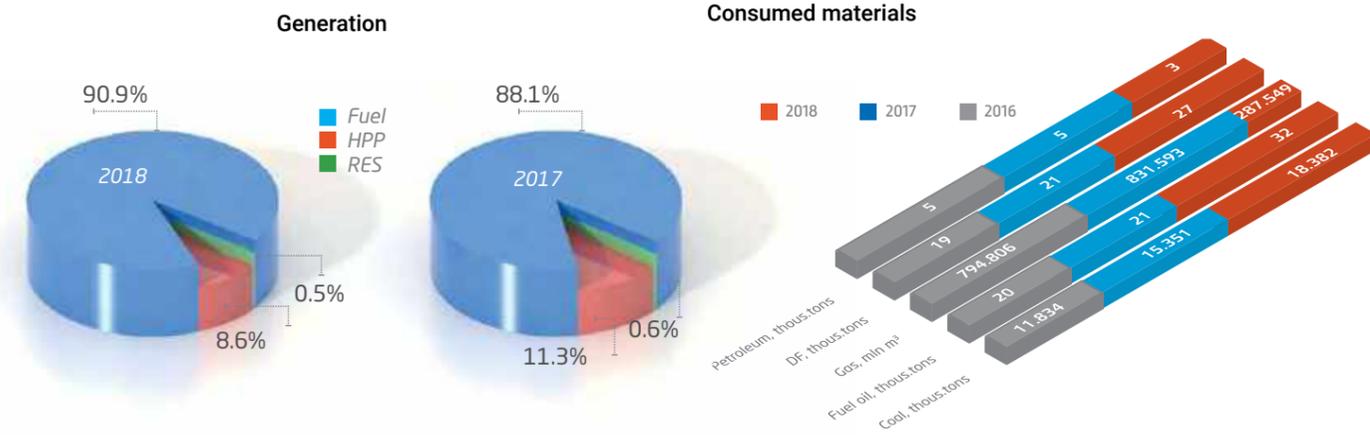
**Materials used**

As of year-end 2018, distribution by types of generation (conventional, HPP and RES) was as follows:

- conventional generation accounted for 91% of the total power generation of the group of companies, which is 3% more than in 2017.
- the share of "clean" energy sources accounted for 9%, of which 8.5% is produced by HPP and 0.5% – RES, in other words, in 2018, the share of output from HPPs

decreased by 2%, while the share of renewable energy remained approximately at the same level.

The volume of electricity generated at fuel plants increased by 13% in 2018 as compared to 2017, so the consumption of materials such as coal and fuel oil considerably increased. Along with this, the Aktope power plant was withdrawn from the Company's asset portfolio, which led to an almost three-fold decrease in gas consumption.



**Water use and water consumption**

Water is a renewable natural resource, which has a potential energy that we convert into electricity.

We use the energy of water mass as a source of energy in hydropower plants, and also use water as a heat carrier

at thermal power plants, for recharge of reservoirs, irrigation of ash beaches, for maintaining water levels in ash dumps, for household needs.

**Total volume of water withdrawn broken down by sources**

Measurement unit	Volume			
	2016	2017	2018	
Total volume of water withdrawn	thous. m³	9,671,594	10,313,409	10,546,314
From surface water bodies	thous. m³	9,619,606	10,261,611	10,498,150
From underground sources	thous. m³	6,817	6,858	7,341
Waste water from other organizations	thous. m³	406	399	274
From municipal and other systems	thous. m³	44,765	44,940	40,577

Water is consumed and used in accordance with the current legislation of the Republic of Kazakhstan: "Samruk-Energy" JSC subsidiaries collect water in accordance with the available permits: 98% of the volume of water taken is classi-

fied as water use at hydropower plants, and 2% as water consumption.

	Measure-ment unit	volume		
		2016	2017	2018
Total volume of water withdrawn, incl.	thous. m <sup>3</sup>	9,671,594	10,313,409	10,546,314
Water use (HPP)	thous. m <sup>3</sup>	9,497,020	10,121,167	10,345,085
The share of water use	%	98.2	98.14	98.1
Water consumption	thous. m <sup>3</sup>	174,574	192,242	201,229
The share of water consumption	%	1.8	1.86	1.9

Water use and water consumption



### Recycled and reused water

Circulating water supply systems are used at all fuel power plants of the Company in order to reduce water consumption.

	Measure-ment unit	Volume		
		2016	2017	2018
The volume of recycled and reused water	thous. m <sup>3</sup>	2,921,806	2,663,002	2,959,034

### Discharge of sewage water

Wastewater is not discharged into natural objects at first category industrial facilities; wastewater is used in hydraulic ash disposal systems and goes together with ash and slag wastes

to ash dumps. At the same time, the volume of wastewater is insignificant relative to the volume of water taken.

	2016	2017	2018	
The volume of sewage water	thous. m <sup>3</sup>	64,842.095	60,144.078	77,001.4

"Samruk-Energy" JSC group of companies conduct analytical monitoring of surface water environments, sewage water monitoring, monitoring of changes in the water and tempera-

ture regimes of groundwater on a regular basis through a network of observation wells, repair of equipment and pipelines in HAR system.

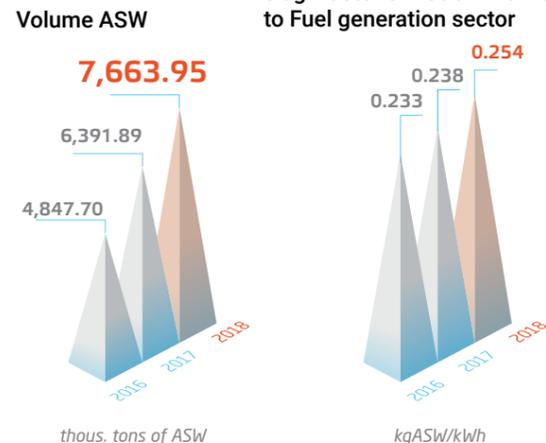
### Waste

The volume of ash and slag waste (ASW) in 2018 amounted to 7,663.95 thous. tons (while the standard is 9,166.9 thous. tons), which is almost 20% more than in 2017 due to an increase in coal production volume and specific fuel equivalent.

The work on the disposal of accumulated ASW is underway, but still at a slow pace. Dry ash handling plant (hereinafter – DAHP) was put into operation at Ekibastuz SDPP-2. According to updated information, circa 10 thous. tons of dry ash was shipped in 2018. ASW of Ekibastuz SDPP-1, 2 power plants are used in the construction of roads in Pavlodar region.

At the same time, the annual reclamation covers more than 30 hectares of the waste areas of the ash dumps

Specific indicator of ash and slag waste formation with regard to Fuel generation sector



### Emissions into the atmosphere

At year-end 2018 compared with 2017, the volume of electricity generated at fuel plants increased by 13%, and accordingly, the total emissions of pollutants increased. Gross emissions across the group of companies amounted to 323.8 thous. tons, which is 23% more than in 2017.

Monitoring of emissions into the atmosphere includes pollutants such as nitrogen oxides, sulfur oxides, carbon monoxide, fly ash.

Following the results of 2018, the specific emission of pollutants amounted to 10.2 g/kWh, which is 7% higher than 2017 figure. As regards "Generation" sector, specific emissions of nitrogen oxides were reduced owing to maintenance activities after installation of low-emission burners, which led to a decrease in the concentration of nitrogen oxides in flue gases to 650 mg / nm<sup>3</sup> at some power units. However, specific emissions of sulfur dioxide increased for a variety of objective reasons.

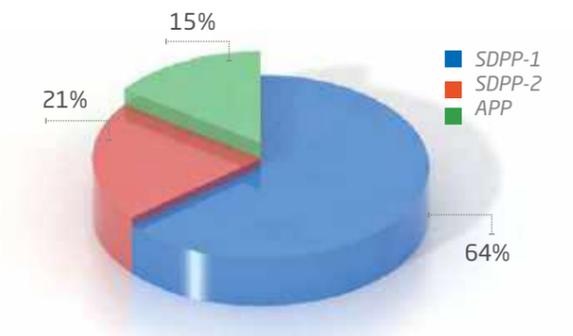
- The main reasons for an increase in specific emissions of SO<sub>2</sub>:
- an increase of sulfur content in coal at "SDPP-1" LLP and "SDPP-2" JSC from 0.48% in 2017 to 0.57% in 2018;
  - firing of residual coal at CHP-1 of "Almaty Power Plants" JSC in connection with liquidation of coal warehouse, as well as an increase in the consumption of fuel oil due to limitations in the supply of natural gas;
  - an increase in the share of output at fuel plants (from 88% in 2017 to 91% in 2018);
  - a decrease in the share of hydropower generation (from 11.3% in 2017 to 8.6% in 2018).

There is a positive trend towards reducing ash emissions after the commissioning of advanced electrostatic precipitators at all power units of ESDPP-1 and ESDPP-2, as well as wet ash trap emulsifiers at APP plants.

The volume of gross emissions across "Samruk-Energy" JSC group of companies

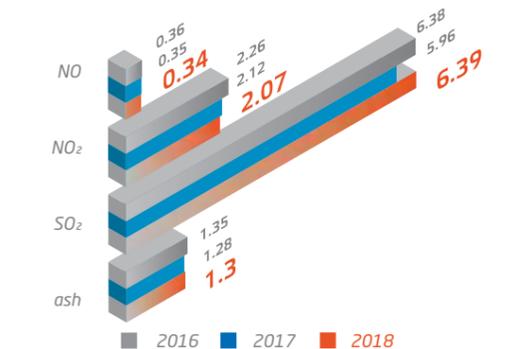


Total emissions of SA of "Samruk-Energy" JSC



Specific emissions of pollutants across "Samruk-Energy" JSC group of companies, g/kWh

	Measure-ment unit	Volume		
		2016	2017	2018
NO <sub>x</sub>	thous. tons	54.7	66.4	76.11
SO <sub>2</sub>		132.9	160.4	202.4
Dust (ash)		28.0	34.4	41.4
POP	tons	–	–	–
VOC	tons	115.4	245.6	297.2
CO <sub>2</sub>	thous. tons	24 150.66	29 839.62	33 743.68



At the end of the year, an analysis was conducted of the effectiveness of existing programs to reduce specific emissions of pollutants and greenhouse gases; corrective meas-

ures were developed to improve energy efficiency: repair of burners, maintaining nominal temperatures and pressures of steam and industrial reheat, eliminating suction cups, etc.

## The monetary value of significant fines and the total number of non-financial sanctions

State inspections for compliance with the requirements of environmental legislation were conducted in 2018. The amount of significant fines made 722 thousand tenge.

	Payments, thous. tenge		
	2016	2017	2018
Significant fines. amount of money	10,587	12,596	721.5
The number of cases of non-financial sanctions application	0	0	0

## Total expenses and investments in Environmental Protection broken down by types

In accordance with current legislation of the Republic of Kazakhstan, each 1<sup>st</sup> category company of "Samruk-Energy" JSC ("Ekibastuz SDPP-1" LLP, "Ekibastuz SDPP-2 Plant" JSC, "APP" JSC, "Aktobe CHP" JSC and "Bogatyr Komir" LLP) has an environmental protection action plan approved by the authorized

body, the implementation of which is an obligatory condition for special nature management.

Expenses and investments in environmental protection across "Samruk-Energy" JSC group of companies amounted to 6.63 bln. tenge in 2018.

	Expenses, thous. tenge		
	2016	2017	2018
Total	1,197,259.2	2,213,407.5	6,629,260.84
expenses associated with waste management and emissions purification, as well as the elimination of environmental damage	825,732.8	1,825,147	6,556,645.24
Expenses for prevention of environmental impact and environment management system	371,526.4	388,260	72,615.6

## Biodiversity

The Company operations and proposed projects may affect local biological diversity. We strive to minimize any impact on the biosphere.

In this vein, 1,346.7 km of "AZhC" JSC power grids were reconstructed over a period of 2009–2018 by equipping them with self-supporting insulated wires (SIW) in order to prevent birds from electric shock.

To mitigate the impact on aquatic ecosystems, the modes of hydropower plant operations are agreed with city mayor

administrations, water resources committees of the Ministry of Agriculture of the Republic of Kazakhstan, as well as with the management of Specially Protected Natural Areas (for example, in the case of "Moynak HPP" JSC).

"Moynak HPP" JSC cooperates with UNDP experts in Kazakhstan on the project for preservation of relic aspen grove, which is located downstream of the Charyn River in the territory of the Charyn National Park.

## "SOCIAL" CATEGORY

### Section "Our employees"

Human resources management represents an integral system of personnel management actions, which is implemented in line with the Personnel Policy of "Samruk-Energy" JSC for 2018–2028, and includes rules and regulations that set out key directions, ways and methods of staff relations, aimed at creating a strong, committed and responsible team.

#### PERSONNEL STRUCTURE

"Samruk-Energy" JSC is one of the largest employers in the Republic of Kazakhstan. As of December 31, 2018, the Company's headcount amounted to 17,719 people.

The share of full-time employees in the reporting period was 100%.

The structure of the Company's staff over the past years has remained stable. In connection with the production specifics of the Company's operations, male employees are involved in the main production areas, whose share of the total staff in 2018 was 73%. The main share of the Company's staff consists of employees aged from 30 to 50 years (50%). The average age of staff in 2018 was 43 years. The average work experience is 11 years. In 2018, the turnover rate was 8%. The number of top executives hired from among local population is 98%.

The procedure for employment is conducted in line with requirements of the RK Labor Code and internal regulations.

The Company's Collective Agreement provides for the minimum period of one month for notifying employees upon termination of employment contracts in connection with a reduction in headcount or number of employees in accordance with the Labor Code of the Republic of Kazakhstan.

The main goal of human resources management is the development of human potential, improvement of staff management and motivation system, creation of a social protection system.

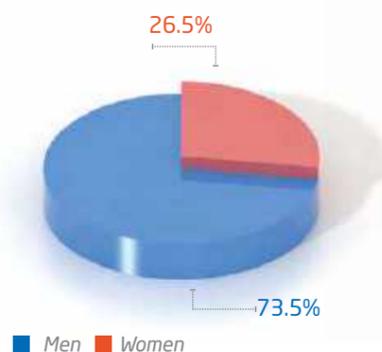
The Company does not discriminate its employees based on gender and adheres to an equal approach in obtaining access to training and development programs, career advancement and employment at the enterprise of "Samruk-Energy" JSC group.

In 2018, the Company in conjunction with the European Bank for Reconstruction and Development launched a project on introducing the best international practices in providing equal opportunities in the energy and power sector.

As part of this project, in 2018, the EBRD consultant analyzed the national legislation, local equal opportunities initiatives, the Company's statistical data as well as the annual admission / graduation of specialists from higher education and vocational schools in the energy professions in the context of men and women. The best international practices in the field of equal opportunities, etc. As a result of these activities, recommendations and an Action Plan for the development of equal opportunities practices were developed. In 2019, the Company plans to sign a Statement of Support for the Women's Empowerment Principles, developed as part of UN-Women and the United Nations Global Compact.

As of December 31, 2018, the number of women who work at "Samruk-Energy" JSC group of companies was **4,699** people.

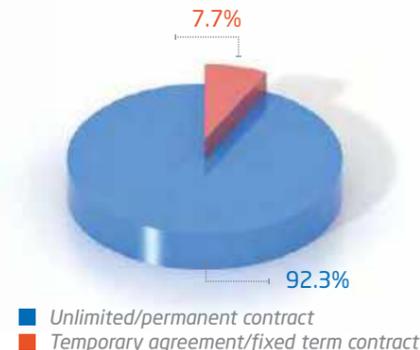
Total workforce by gender for 2018



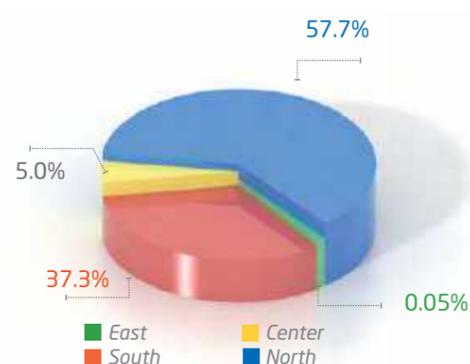
Total workforce by employment type for 2018



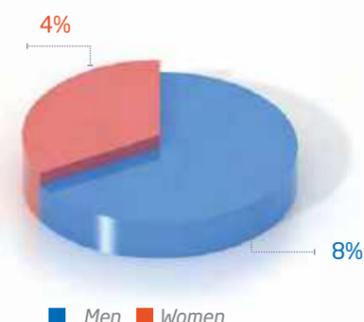
Total number of employees by type of employment contract



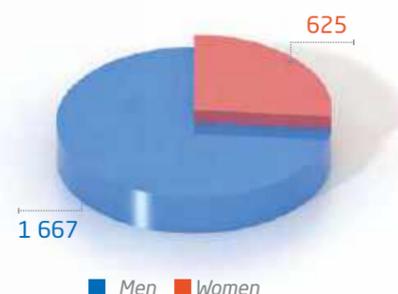
Total workforce by region for 2018



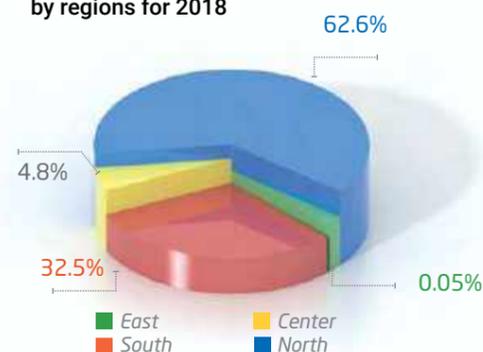
Staff turnover by gender for 2018



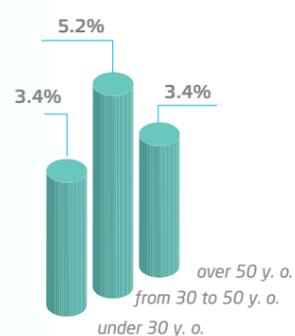
Newly hired employees by gender for 2018



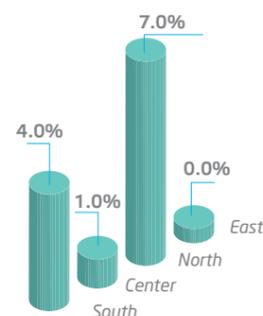
Newly hired employees by regions for 2018



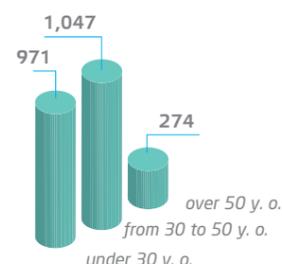
Staff turnover by age for 2018



Staff turnover by regions for 2018



Newly hired employees by age for 2018



The composition of the organization's employees broken down by gender age group and indicating minority representation

No.	Indicator	Employees	Share, %
<b>1.</b>	<b>Gender</b>	<b>17,719</b>	
1.1.	Men	13,020	73
1.2.	Women	4,699	27
<b>2.</b>	<b>Minority groups (racial / ethnic, religious, with disabilities)</b>	<b>17,719</b>	
2.1.	Kazakhs	10,485	59
2.2.	Russians	5,003	28
2.3.	Ukrainians	705	4
2.4.	Uyghurs	344	2
2.5.	Tatars	344	2
2.6.	Germans	253	1
2.7.	Byelorussians	129	1
2.8.	Koreans	60	0.3
2.9.	Others	396	2
<b>3.</b>	<b>Age groups</b>	<b>17,719</b>	
3.1.	Under 30 years	3,233	18
3.2.	From 30 to 50 years	9,113	51
3.3.	Over 50 years	5,373	30

## Development and career growth

"Samruk-Energy" JSC group of companies seeks to constantly develop and train employees. Personnel training and development is a key success factor in ensuring economical, trouble-free and efficient operation of equipment and the Company as a whole.

The Company's key directions in the field of professional training are:

- 1) training aimed at the development of professional skills and competencies for the successful solution of managerial tasks, the development of leadership competencies and change management;
- 2) training in OHS-related matters, electrical safety, industrial and fire safety, environment, which is conducted as required by the RK legislation.

Thus, in 2018, as part of the leadership program, the project "Change Management – Project Sponsor" was organized for employees of 1<sup>st</sup> level CEOs, and training on change man-

agement and coaching skills was conducted for CEO-2 level employees.

"Samruk-Energy" JSC group of companies has systematized the processes of preparation, retraining and advancing of employees qualification. Employees complete various trainings on personal efficiency management, effective communication skills, successful presentation, effective negotiations, analytical thinking, time management, effective reporting, and more. The programs is implemented both at the workplace and outside the workplace, with the issuance of a certificate or certificate of competence. There are also programs aimed at the professional growth of executives and specialists, and at preparation of a reserve for higher positions.

642 activities on staff training and development programs were carried out in 2018. The total cost of education in 2018 was 358,127 thousand tenge.

**Average number of training hours per employee per year, by employee and gender category**

Staff category	Total number at the end of 2018		The number of training hours for 2018		Average number of training hours per employee per year
	men	women	men	women	
Top management	53	9	1 631	277	31
Administrative and managerial staff	815	544	23 270	15 513	29
Production personnel	12 835	3 209	567 353	141 838	44
Service	48	206	1 013	4 321	21

Staff category	Total number at the end of 2017		The number of training hours for 2017		Average number of training hours per employee per year
	men	women	men	women	
Top management	54	9	1 833	306	34
Administrative and managerial staff	814	542	19 675	13 116	24
Production personnel	12 663	3 166	535 284	133 821	42
Service	50	215	883	3 763	18

**Occupational health and safety**

In line with 2018 Action plan for management of occupational health and safety and environmental protection issues at the group of companies, all SA have developed and, according to the established procedure, approved work plans for occupational health and safety, as well as carried out a number of organizational and preventive measures.

In accordance with Article 203 of the Labor Code of the Republic of Kazakhstan, production councils (formerly committees) for occupational health and safety were established at all SA of the Company. It comprises representatives of an employer, representatives of employees, including technical inspectors for labor protection on a parity basis.

The international standard "Occupational health and safety management system OHSAS-18001" was introduced.

"All the Company subsidiaries and affiliates' workplaces were assessed for working conditions. In accordance with the assessment of workplaces, workplaces with harmful and dangerous working conditions have been identified. At the same time, all employees are provided with the appropriate privileges, including personal protective equipment and protective clothing in compliance with the RK legislation.

All companies of "Samruk-Energy" JSC developed action plans for improvement of working conditions of employees who work under harmful and dangerous working conditions.

The Company has introduced the practice of conducting planned and unscheduled (sudden) inspections to comply with the requirements of international standards, regulatory and legal acts of the Republic of Kazakhstan, and internal regulatory documents of the Company in the field of occupational safety and health. During the reporting period, 10 scheduled inspections were conducted. 9 unscheduled (sudden inspections).

An extended meeting on occupational safety and health-related matters was held at the Company. The reports of CEOs of group of companies on the work performed in the area of occupational safety and health were heard, based on results of which the policy documents on subsidiaries' development strategies relating to the prevention of industrial accidents were adopted.

An on-site seminar with executives who are in charge of occupational health and safety matters at the Company's subsidiaries and affiliates was held during the reporting period in order to maintain occupational safety. According to the results of the meeting, a protocol was signed, actions on analyzing incidents that did not lead to accidents and on decreasing occupational injuries rate have been developed and are implemented.

A memorandum with national company "KMG" JSC on cooperation and exchange of experience in OHS field was signed. As part of the memorandum of cooperation, executives and specialists of the Company visited "Petro Kazakhstan



Oil Products" LLP (Shymkent city). Written agreements with the authorized labor agencies of Almaty, Pavlodar and Turkistan regions on cooperation in the field of OHS were signed.

In order to increase the transparency of "Samruk-Energy" JSC and its subsidiaries reports about the incidents occurred in order to prevent cases with more serious consequences (deaths, accidents), the Company's Board of Directors approved and put into force a "Moratorium on taking disciplinary actions against those responsible for incidents occurred in the field of occupational safety and health for 2019".

The purpose of the moratorium: increasing the transparency of the reports of "Samruk-Energy" JSC and its subsidiaries and affiliates on the incidents occurred in order to prevent cases with more serious consequences (deaths, accidents). Moratorium covers near miss, group accidents, and accidents with light and severe outcomes.

As part of the implementation of business transformation project SKE.06 "the introduction of the new model for managing integrated security of "Samruk-Energy" JSC", the following corporate standards were approved:

- 1) Evaluation of OHS and environmental protection management system by executives
- 2) Carrying out of leadership behavioral security audit;
- 3) OHS and EP risks assessment;
- 4) Golden safety rules;
- 5) Registration and investigation of incidents;
- 6) Motivation of staff for safe behavior.

As part of ongoing work, risks in the area of OHS were identified, their impact and ways of managing them were analyzed.

Moreover, a vertical model of control over the Company's contractors (customer-general customer-contractor-subcontractor) has been established.

In addition, all "Samruk-Energy" JSC companies' standard contracts for the procurement of goods, works and services include requirements set for contractors / suppliers / responsible parties regarding their responsibility to ensure safe working environment and living conditions for their employees, as well as to conduct regular audit of observance of the Republic Kazakhstan laws in the field of occupational health and safety.

Requirements for employees of contracting and subcontracting organizations are set out in industry regulations on occupational safety and health, in contracts concluded with contracting / subcontracting organizations, as well as in internal regulatory documents of the "Samruk-Energy" JSC groups of companies. The company checks the availability of documents confirming the training and admission to work in the profession, the presence of qualification certificates; Carries out verification of compliance with the above requirements upon admission to work, as well as in the process of performing work, in accordance with the contract.

Consequently, 100% training of employees of contracting / subcontracting organizations in safety and labor protection is provided. Also, in accordance with the requirements of the legislation of the Republic of Kazakhstan, an introductory briefing is conducted to visitors and employees of contracting organ-

izations producing work in the territory of the organization's hazardous production facility.

Registration, the procedure for reporting of workplace accidents was carried out in accordance with Chapter 20 of the Labor Code of the Republic of Kazakhstan "Investiga-

tion and accounting of workplace accidents" and other regulations of the Republic of Kazakhstan.

Nonetheless, despite of many preventive and corrective actions taken, 10 work-related accidents were registered in 2018: 2 of them fatal accidents, 5 with serious and 3 with light outcome.

Injury description	2016	2017	2018
Chemical burn	–	–	1
Bruise	1	–	1
Traumatic amputation	–	–	–
Electric injury (thermal burn)	4	2	–
Fracture	5	4	5
Combined injuries (fracture, bruises, tears of internal organs)	4	1	1
Eye injury	1	–	–
Traumatic brain injury, brain concussion	–	–	2
<b>Total</b>	<b>15</b>	<b>7</b>	<b>10</b>

The growth of occupational injuries in the reporting period was due to the introduction of a system of transparency in the registration of industrial accidents.

### ACTIONS TAKEN TO ELIMINATE WORKPLACE ACCIDENTS

The following measures are taken in order to reduce the industrial injury rate at all "Samruk-Energy" JSC group of companies:

- All employees are informed about circumstances and causes of accidents.
- All production personnel receive unplanned instructions.
- Unscheduled test of employees for OR, occupational safety rules knowledge is held at business units at which an accident took place.
- Occupational safety days with participation of CEOs of companies are organized on a monthly basis. Actions aimed at elimination of identified violations are taken according to the results of the occupational safety days.
- Occupational health and safety services organize comprehensive inspections of equipment, buildings, facilities and workplaces. Action plans with deadlines and persons in charge based on results of comprehensive inspections are developed.

- All production personnel are trained according to the Rules for training, instruction, and testing of employees' knowledge of occupational safety.
- Before the repair campaign, all the SA hold seminars and meetings with engineers and technicians of structural subdivisions authorized to give assignments, manage and perform works, with practical trainings on the correct access for teams to perform works and formalize assignments.
- At least once every five years, enterprises are certified for workplaces according to working conditions.
- Scheduled replacement of equipment that exhausted its service life and posing a serious threat to production personnel is carried out.
- The practice of conducting leadership behavioral safety audits is implemented.
- The risk maps / registers at workplaces are updated, and additional trainings on identification of hazards and risk assessment for staff are held.

## Personnel assessment

In compliance with existing Rules for performance appraisal of Company's employees, the following is assessed:

- a comprehensive (final) assessment of goals and competencies, which includes: self-assessment, review meetings, review of skills, potential assessment and provision of employees with directions on performance improvement and opportunities for development.
- an interim review of employees performance, which is carried out every quarter with a view to monitor the degree of achievement of goals during the reporting period.

According to final assessment of administrative employees conducted on the basis of performance during 2018 (calibration session), talent grid was made, as well as recommendations for the development of knowledge, skills, competencies of employees, inclusion in the Personnel Reserve Company, as well as the revision of wage levels were made.

## Our youth

The Company implements a comprehensive approach to working with young employees and engaging young professionals to work at the Company, which is confirmed by "Samruk-Energy" JSC Youth Policy for professional and personal development, development of leadership, professional and managerial competencies.

There is Young Professionals Board at the Company, which aims to create and implement a unified youth policy at the Company, build an active life position among young professionals, unite them to realize their own potential and ensure the leading position of the Company.

This youth movement strengthens its position every year. Young activists take part in production and public life. There are many creatively gifted people among them, holidays and corporate events are organized owing to their efforts. Power Engineer's Day celebrations, leisure activities for young people, parades, club of the cheerful and sharp-witted, professional competitions "Best in Profession", creative competition "Light Your Star" are organized with the participation of members of the youth movement.

KVN game (the game of the club of the cheerful and sharp-witted) was held among the employees of "Samruk-Energy" JSC group of companies for the first time in Astana city in 2018. The game was held in the state language under the slogan "Our strength is in unity."

The youth asset of the Company's group amounted to **3,813** people in 2018.

In compliance with the resolution of "Samruk-Energy" JSC Management Board dated 10.09.2018 (Minutes No.17) and as part of the project "Transition to the target organizational structure" 436 employees from among administrative and management staff of "Ekibastuz SDPP-1" LLP were evaluated for compliance with the requirements of positions in 2018.

In order to establish compliance of employees qualifications with positions held, evaluate the level of professional training, staff the structural units with highly qualified specialists, increase the moral and material interest of employees, evaluation activities are carried out on a regular basis. In 2018, the regular certification of employees was held at "Ekibastuz SDPP-2 plant" JSC and an extraordinary certification at "Alatau Zharyk Company" JSC.

In 2018 the Company took 7 young specialists for internships as part of the implementation of "Zhas Orken" program and in order to provide young specialists with conditions for completing internships.

Almaty University of Power Engineering and Telecommunications held the Republican Olympiad (contest) in Physics and Mathematics with the support of "Samruk-Energy" JSC.

More than 60 people participated in the contest, students from nine technical universities of the country and schoolchildren were among them. Students competed in two subjects: "Power industry" and "Thermal Engineering". High school students demonstrated knowledge in physics and mathematics.

At present, the Company cooperates with leading domestic universities for completion of pre-graduation internship. During the reporting period, 372 students completed undergraduate internship at the Company.

Also, the agreement on completion of internships with elements of dual training was signed between Almaty University of Power Engineering and Telecommunications and "Almaty Power Plants" JSC. The dual system of education today remains one of the most effective forms of training of employees and technical specialists in Kazakhstan. The principles of dual education have already been introduced at many universities and colleges.

As part of the social partnership, "Bogatyr Komir" LLP signed the agreement on employment of young specialists under "Young employee's internship" program with Employment

and Social Programs Department of Ekibastuz city Mayor's Office and Ekibastuz city Employment Center.

Bogatyr Komir company's social development department together with volunteers of the united youth movement arranged a team building for young specialists of "Samruk-Energy" JSC group of companies' subsidiaries such as "AZhC" JSC, "Almaty Power Plants" JSC, "Ekibastuz SDPP-2 Plant" JSC, "Ekibastuz SDPP-1 named after B.Nurzhanov" LLP, "First Wind Power Plant" LLP and "Energy Solutions Center" LLP, who gathered from different parts of the republic in the most picturesque place of Pavlodar region – Bayanaul National Park.

The game "TOPBrain" was held at "Alatau Zharyk Company" JSC to support intellectual employees as part of the development of the youth movement. The event was attended by employees of "Alatau Zharyk Company" JSC, which are members of the NGO "Local Trade Union "Seriktes" and guests from the Youth Association "Zharkyn Bolashak" – volunteers of "Almaty Power Plants" JSC.

Republican forum of working youth was held in Zhambyl region, which gathered young professionals from the medical, oil and gas, transport and energy industries. Such type

## Motivation and remuneration

Employee motivation is one of the basic principles of the Company's Personnel Policy. Creating an effective system of motivation of workers contributes to the retention of highly professional specialists and stimulates them to more productive activities.

The Company's remuneration system is based on the following basic principles:

- 1) motivation of employees to achieve the goals of the Company by increasing the efficiency of individual labor, the activities of the structural unit and the achievement of the strategic goals of the Company;
- 2) the competitiveness of the social package in the labor market, taking into account the regional characteristics and specifics of the business;
- 3) transparency – ensuring that all employees understand the principles of forming the structure and level of remuneration while maintaining confidentiality;
- 4) compliance of the wage system with current legislation.

One of the main tools for ensuring a decent standard of living for the Company's employees is social payments and benefits. In order to create favorable conditions for effective work, employees are provided with social support in the form of material assistance and monetary compensation, and material

of event was held in the republic for the first time and was organized by the Federation of Trade Unions of the Republic of Kazakhstan.

Young professionals of "Samruk-Energy" JSC power holding company, including specialists of its subsidiaries – "Shardarinsk HPP" JSC, "Moynak HPP" JSC, "Bogatyr Komir" LLP, "Ekibastuz SDPP-1" LLP, "Ekibastuz SDPP-2" LLP, "APP" JSC, "AZhC" JSC. Young power engineers and miners of the holding company united at the forum of NGO "Local trade union "Samruk-Energy".

A wide range of topics and issues that are relevant today such as youth participation in all spheres of economy and politics to the theory and practice of the trade union movement in the country were discussed at the meeting of young professionals; Deputies of the RK Majilis (lower house of the RK Parliament) shared their visions and experiences with the forum participants.

Young employees of the Company actively participate in sporting events: football, volleyball, basketball, table tennis, swimming, chess, checkers, pool and etc.

assistance is provided for the provision of annual labor paid leave.

In addition, in 2018, the following items became components of social support for workers: employee insurance against accidents during the performance of labor (official) duties, annual medical examination of employees, sick pay, one-time health care assistance, treatment, financial assistance in receiving a work injury.

The Company, in accordance with the Collective Agreement, provides for: overtime pay, pay for work on holidays and weekends, at night, allowances and surcharges, pay for employees engaged in heavy work, work with harmful (especially harmful), dangerous working conditions, additional paid annual leave. One-time promotion in connection with the anniversary (50, 55, 60 years).

Employees who combine work with training in educational institutions are also provided with additional leave for the period of examination or adjustment sessions, the preparation and protection of the graduation project (work), and the passing of final exams.

The average salary of employees at "Samruk-Energy" JSC group of companies for 2018 increased in relation to the same indicator by 18% – from **198,051** tenge to **234,140** tenge.

The growth of the average salary of the production personnel was 18% – from **183,641** tenge to **215,945** tenge, the administrative staff was 19% – from **372,137** to **443,570** tenge.

### Range of ratios of standard entry level wage compared to local minimum wage at significant locations of operation

No.	Indicator	Value (2018)	Measurement unit
1.	Minimum wage	28.3	thous. tenge
2.	Wage of entry level employee in an organization in significant regions of operation	140.7	thous. tenge
2.1.	Men	144.9	
2.2.	Women	136.3	
3.	Ratio	497	%
3.1.	Men	103	%
3.2.	Women	97	%
No.	Indicator	Value (2018)	Measurement unit
1.	Minimum wage	24.5	thous. tenge
2.	Wage of entry level employee in an organization in significant regions of operation	124.6	thous. tenge
2.1.	Men	126.3	
2.2.	Women	132.8	
3.	Ratio	508	%
3.1.	Men	515	%
3.2.	Women	542	%

There is an integrated performance management system (IMS), which takes into account both the performance of employees and the level of development of their capacity.

The variable part of the salary is directly dependent on the results of this assessment.

### Percentage of employees who are subject to periodic performance and career development evaluations

No.	Indicator	Value
1.	Total number of employees (headcount) at the end of 2018	17,719
2.	Number of employees who passed formal performance assessment, incl.:	1,288
2.1.	Men	592
2.2.	Women	696
3.	The share of employees who passed official performance assessment	7%
3.1.	Men	3%
3.2.	Women	4%

## State awards in 2018

Nº	Full name	Reward type	Company name
	Aimenov Hanat Armiyanovich – Head of Government Relations and Communications Office	“Eren enbegi ushin” medal	“Samruk-Energy” JSC
	Serikbaev Satybaldy Abdigaparuly – Advisor to the Chairman of the Board	“Qurmet” medal	“Alatau Zharyk Company” JSC
	Sharikpaev Kurmanali Mamyrkhanovich – Traction unit machinist of Bogatyrsky loading and transport management	“Qurmet” medal	“Bogatyr Komir” LLP

## Social responsibility

Projects of social corporate responsibility are aimed at providing safe and comfortable working conditions, professional development, solving housing problems and improving the quality of life of employees and their families, financial support for veterans and pensioners, and support for social communities. In order to develop the principles of social partnership, occupational safety, achieve a higher level of ensuring labor rights of employees, the work on obtaining of Certificates of Trust is conducted at “Samruk-Energy” JSC group of companies.

“Samruk-Energy” JSC group of companies has introduced the system of regular monitoring of the social stability rating and the indicator of staff involvement providing for the identification of problems and alarming zones and timely response to them, including through the improvement of the social package of employees, cultural and professional events, the formation of a corporate culture and management of internal communications and etc.

Conciliation Committees were established and operate at “Samruk-Energy” JSC group of companies; they consist of employer’s representatives and representatives of trade unions’ employees, whose main responsibility is to raise awareness among staff and procedures for handling complaints and inquiries. “Samruk-Energy” JSC group of companies strives to provide a competitive social package, the availability of which allows attracting qualified employees. Compensation and benefits are designed to improve the welfare and level of social protection of employees and their families. The number of social payments and benefits provided to employees of the Company’s Group in accordance with signed collective agreements include:

- 1) financial assistance for health care provided at vacation, for the birth of a child;
- 2) financial assistance for burial (an employee and immediate relatives), for the treatment of retired employees, for emergency situations. etc.
- 3) financial assistance in connection with loss of income (registration of maternity leave or leave due to the adoption of a newborn child);

- 4) voluntary health insurance;
- 5) health resort treatment;
- 6) a one-time incentive payment in connection with employees anniversary celebration (50, 60 and 70 years);
- 7) expenses for holding festive. cultural and sports events;
- 8) payment of loans;
- 9) allowance for injury and loss of primary income earner;
- 10) New Year’s gifts to children, etc.

“Bogatyr Komir” LLP provides annual financial assistance to events under social partnership agreements with Ekibastuz city mayor administration, charitable support was received by city non-profit organizations and educational institutions, such as the sponsored lyceum № 6, the Ekibastuz children’s fund, and the public association “Environmental Protection” and others. Religious confessions and Ekibastuz city football club also received financial assistance.

New events were organized at the enterprise along with traditional Labor Day, International Women’s Day, Victory Day and many others. Youth activists of “Samruk-Energy” holding company’s portfolio companies supported most of them.

A five-minute break for physical exercises were organized at the structural units of the enterprise, as well as a citywide marathon in support of the famous Kazakhstani boxer Genady Golovkin, which was attended by over one thousand people, and an e-sports competition were arranged in order to promote and develop mass sports.

The 5<sup>th</sup> Sports Festival (Spartakiada) for the Cup of “Samruk-Energy” JSC Chairman of the Board JSC was held among employees of “Samruk-Energy” JSC group of companies at the sports center of Nazarbayev University.

Sports types such as futsal, volleyball, table tennis, arm-wrestling and chess were presented at the Festival. 9 teams took part in the competition, including the Head Office of “Samruk-Energy” JSC, “AZhC” JSC, “Almaty Power Plants” JSC, “AlmatyErgoSbyt” LLP, “Moynak HPP” JSC, “Ekibastuz SDPP-1”

LLP, and “Ekibastuz SDPP-2 Plant” JSC, “Bogatyr Komir” LLP and “RES Services” LLP.

Events related to the preservation of Kazakhstan cultural heritage – the celebration of 150<sup>th</sup> anniversary of the famous akyn (poet), singer, composer Estay Berkimbayev and the 200<sup>th</sup> anniversary of Musa Shormanov, public, public official and researcher of the traditional culture of Kazakhs also took place with the assistance of our company.

Almaty Power Plants annually organizes a drawing competition among the children of employees, which is held for the sixth time. 78 works made in different genres and techniques were exhibited.

As part of the development of corporate culture, employees of energy holding subsidiaries – Alatau Zharyk Company, Almaty Power Plants, AlmatyErgoSbyt and Samruk-Energy Head office took part in the Almaty Marathon.

“Samruk-Energy” JSC team made its debut at the International Futsal Tournament “Syberia Power Industry Cup – 2018”, which took place in Novosibirsk.

On the eve of the World Environment Protection Day, “Samruk-Energy” JSC supported the Eco-recycling “V recycling” campaign, during which solid household waste and electrical household appliances were received for further processing and disposal in Astana.

Employees of “Samruk-Energy” JSC head office collected more than 120 kg of waste paper, plastic and polyethylene products, textiles, etc. All this was sent for recycling and disposal.

“Samruk-Energy” JSC supports environmental actions aimed at preserving and protecting the environment. Separate garbage collection exists in many developed countries and it is gratifying that such experience comes to Kazakhstan and. it is essential that our capital Astana should set the tone in this. Our company’s policy in the field of “Sustainable Development” is aimed, among other things, at reducing the negative impact on the environment and society.

In order to create healthy and safe working and living conditions, the enterprises of the Group determined the procedure for providing workers with special protective equipment, milk, soap and detergents; canteens, lunch and break rooms are available at the production workshops that work according to shift work schedules.

For the employees of the Company’s group, partial and full reimbursement of expenses for health resorts and inpatient treatment is provided when they go on annual leave, as well as for the cost of vouchers to children’s health camps for the children of employees.

So, this year, employees’ children were provided with vouchers for “Edelweiss”, children health camp of Power Engineers’ Trade Union.

An integrated approach to realizing opportunities for decent and productive work in conditions of equality, security and respect for human dignity, conducting an effective personnel policy will contribute to improving performance, increasing the professionalism of employees, raising corporate culture, respecting and protecting labor rights, as required by the Labor Code Republic of Kazakhstan.



The company undertakes to:

- strengthen and develop the principles of social partnership and collective bargaining;
- make social payments in order to retain, attract qualified employees and create motivation for the Company's personnel.

In order to create a system of centralized monitoring of social attitudes of employees at the enterprises of "Samruk-Energy" JSC group of companies, studies to determine the social stability index and staff engagement index were conducted.

According to the results of these studies, the **social stability index** for "Samruk-Energy" JSC group in 2018 was **64%** and is described as **average**.

The degree of involvement of the administrative and management staff of the Company's group of companies also amounted to 53%.

An important task in the Company's social policy is to ensure the protection of employees and their families.

So, social payments across the group of companies were made in the amount of 3,229,763 thous. tenge in 2018. For the same period in 2017, the costs of social benefits amounted to 2,902,523 thous. tenge.

In the structure of payments, the main share is made up of expenses: a one-time allowance for healthcare when granting a leave – 32%, treatment of employees in health resorts – 6.3%, one-time benefit in connection with employees anniversary (50, 60 and 70 years) – 3%, financial assistance in connection with the birth of a child – 3%, expenditures for festive, cultural and sports events – 2.3%, etc. of the total amount of social payments.

As part of the development of corporate culture in the reporting year, the Company group held cultural and leisure events dedicated to the celebration of the Women's Holiday – March 8, Nauryz holiday, Constitution Day, Energy Day with honoring distinguished employees and awarding state, departmental and industry awards of the CIS Electric Power Council, Kazakhstan Association of oil, gas and energy sector organizations "KAZENERGY", ALE "Kazakhstan Energy Association" JSC, "Samruk-Kazyna" JSC, etc.

#### Share of employees under collective bargaining agreement

No.	INDICATOR	Value (2018)	Measurement unit
1.	Total employees (headcount) as of the end of 2018	17,719	people
2.	Including employees under collective bargaining agreement for 2018:	17,151	people
3.	Share of total employees under collective bargaining agreements:	97%	%

#### Payments and benefits provided to employees working on a full, part-time or temporary basis

No.	Indicator	For full-time employees	For employees with part-time or temporary employment
<b>1.</b>	<b>Payments and benefits to employees</b>		
1.1.	Life insurance	Provided	Provided
1.2.	Healthcare (medical insurance)	Provided	Provided
1.3.	Compensation for disability	Provided	Provided
1.4.	Maternity/paternity leave	Provided	Provided
1.5.	Granting pension (one-time payment upon retirement)	Provided	Not provided
1.6.	Transfer of company shares into ownership	Not provided	Not provided
1.7.	Other (health resorts treatment, financial assistance in connection with the birth of a child, financial assistance for the treatment of family members, financial assistance for rehabilitation)	Provided	Provided

## Human rights

Employees have the right to collective bargaining in the context of current legislation through permanent Conciliation Commissions, Committees for the settlement of social and labor conflicts.

The recruitment procedure in the Company is carried out in accordance with the Rules for the competitive selection of personnel for vacant positions and the adaptation of new employees at "Samruk-Energy" JSC using testing and by complying with principles of transparency and meritocracy. The Company follows the principles of fair and equal treatment of employees when carrying out personnel search and selection procedures, as well as in the current practice of personnel management. The company strives to strictly observe the interests and rights of employees, as well as to provide employees with equal opportunities regardless of race, nationality, language, attitude to religion, belief, place of residence, and any other circumstances. The company provides maximum assistance in preventing any form of discrimination, the use of child and forced labor, as well as the selection and promotion of personnel solely based on professional skills and knowledge.

10 trade union organizations comprising 11,904 people operate in order to regulate and protect the professional, economic and social labor rights and professional interests of the Company's employees.

The trade union organization of the Company plays an important role in the development of proposals on laws and regulations that deal with social labor rights of employees, as well as on social and economic policies, creation of social programs and on other issues in the interests of trade union members; also it participates in the implementation of activities on social protection of employees – union members who were dismissed as a result of the reorganization or dissolution of an organization, is involved in resolving group labor disputes. The trade union role at the Company is to assist in reducing tensions during the implementation of agreed activities on streamlining of the Company's operations, protection of interests of employees – members of the Company's trade union in terms of compliance with labor laws, established social guarantees and compliance with contract provisions.

#### Number of complaints about the practice of labor relations filed, processed and settled through formal grievance mechanisms

Nº	Indicator	value
<b>1.</b>	<b>The total number of complaints about the practice of labor relations filed through formal grievance mechanisms during 2018, among them</b>	<b>84</b>
1.1.	Processed during the reporting period	84
1.2.	Settled during the reporting period	72
<b>2.</b>	<b>The total number of complaints about the practice of labor relations filed before the beginning of the reporting period and settled during the reporting period</b>	<b>12</b>

#### Presentation of health and safety issues in formal agreements with trade unions

Nº	Indicator	value
<b>1.</b>	<b>Do official agreements (global or local) with trade unions address health and safety issues</b>	<b>yes</b>
<b>2.</b>	<b>If yes, information on the extent to which health and safety issues are covered by local agreements signed by an organization. Local level agreements usually address issues such as:</b>	
2.1.	Individual protection means	yes
2.2.	Joint health and safety committees with participation of representatives of management and employees	yes
2.3.	Participation of employees' representatives in health and safety inspections, audits and accident investigations	yes
2.4.	Education and training	yes
2.5.	Grievance mechanism	yes
2.6.	The right to refuse dangerous work	yes
2.7.	Periodical inspections	yes

Nº	Indicator	value
3.	<b>If yes, information on the extent to which health and safety issues are covered by local agreements signed by an organization. Local level agreements usually address issues such as:</b>	
3.1.	Compliance with recommendations of the International Labor Organization (ILO)	yes
3.2.	Actions or mechanisms for solving issues	yes
3.3.	Commitments to target performance standards or the level of applied practical approaches	yes

**ASPECT "FIGHT AGAINST CORRUPTION, INCLUDING EXTORTION AND BRIBERY"**

"Samruk-Energy" JSC updated its anti-fraud and corruption policy in September 2018. The document was developed in order to create a shared understanding among "Samruk-Energy" JSC employees and other persons about "Samruk-Energy" JSC zero tolerance for fraudulent and corrupt actions in all of its forms, and with a view to mitigate the risk of fraud and involvement of "Samruk-Energy" JSC in corrupt practices.

The text of the Policy in Kazakh, Russian and English languages was posted on Samruk-Energy's website – [https://www.samruk-energy.kz/images/2016/ku/ust\\_razv/politika\\_protiv\\_korrupcii](https://www.samruk-energy.kz/images/2016/ku/ust_razv/politika_protiv_korrupcii).

100% of "Samruk-Energy" JSC employees were familiarized with the Anti-Fraud and Corruption Policy in 2018. The results of test for the knowledge of the anti-fraud and corruption policy evidenced that "Samruk-Energy" JSC employees are 100% competent in this field.

Alongside with this, in order to minimize and eliminate the risk of corruption, the Company implements a Compliance Program. The program ensures control over the execution of anti-corruption activities, including the evaluation of corruption risks. The activities implemented under the Compliance Program were described on page 25 of this Annual Report.

"Samruk-Energy" JSC and the group of companies' officials and employees are regularly checked for facts of fraud and corruption.

Following the results of 2018, the group of companies has not recorded any confirmed facts of corruption, fraud and bribery at "Samruk-Energy" JSC group of companies.

For prevention purposes, the Company created "Samruk-Energy" JSC anti corruption action plan. Following 2018 results, all activities were fully implemented in timely manner.

**ASPECT "SAFETY AND HEALTH CARE OF RESIDENTS OF REGIONS OF OPERATION"**

Over the years, within the framework of corporate social responsibility, the Company contributes to the development of regions where it operates and maintains continuous interaction with local communities with regard to matters of Company's participation in the development of local infrastructure, improving the environmental situation in the region, social support and others.

In order to facilitate the employment of the population, the enterprises of the Company's group provide the local employment authorities with information on the availability of job openings describing working conditions and wages for inclusion in the database of current vacancies and projected jobs.

"Samruk-Energy" JSC group employees participate in charity on a regular basis: providing financial assistance to low-income families injured by natural disasters.

All employees of "Moynak HPP" JSC were provided with company housing (77 residential buildings) – comfortable 3, 4, 5 room houses with all amenities. The houses have 6 acres plot of land attached to houses with outbuildings. A point

of sale for the provision of food and essential commodities was opened. There is a kindergarten for 30 children in the village of the Operation service for children of the Company's employees. "Moynak HPP" JSC provides ongoing support to a kindergarten located in Moynak village.

"ESDPP-2 Plant" JSC is a town-forming enterprise for the village "Solnechny", where 60% of the total number of employees work, "ESDPP-2 Plant" JSC has social facilities: medical and preventive services, a swimming pool, a hostel of the hotel type, works on landscaping and gardening of the territory are constantly carried out.

Funds for their maintenance and operation are allocated every year from the budget of the power plant.

The Group's entities participate in citywide volunteer clean-up events, landscaping and gardening of adjacent territories, interact with religious denominations and public foundations, provide financial assistance to retired employees, veterans of the Great Patriotic War, low-income families, disabled peo-

ple, single mothers in the form of monthly subsidies, one-time money payments, grocery baskets, discount vouchers, etc.

In addition, it should be noted that "Samruk-Energy" JSC group of companies shares the main provisions of the precautionary principle. Before launching new projects and facilities, in the course of environmental impact assessment, the Company always take actions aimed at informing the public about the planned activity and its possible impact, so as to identify public opinion and consider it in the impact assessment process.

The Company developed the Plan for communications with stakeholders, which describes the activities of informing each individual group of stakeholders. Detailed information is available in "Stakeholder Engagement" section.

"Bogatyr Komir" LLP fully supports various social initiatives aimed at improving the quality of people's live, and actively participates in urban social programs.

In 2018, works on the improvement and greening of the assigned territories were carried out – the layout of the adjacent territory, the care of lawns and greenery.

To improve social conditions and improve the quality of recreation on the territory of "Zhassybay" RC, construction and repair work was carried out in order to maintain the infrastructure of the recreation center.

3,193 people spent their vacations in vacation resort over eleven summer seasons. 1,297 children had rest in the children's health center. 200 places were allocated for orphans and low-income families.



# THE EXTERNAL AUDIT OF THE COMPANY

*The Company's audit organization is selected in line with the Rules for selection of an audit organization for "Samruk-Kazyna" JSC and organizations, more than fifty percent of voting shares (equity stake) of which are directly or indirectly held by "Samruk-Kazyna" JSC under ownership or trust management, approved by the decision of "Samruk-Kazyna" JSC Management Board.*

Quality and cost of services are the main criteria determining the choice of an audit organization.

PricewaterhouseCoopers ("PwC") network of firms has been the external auditor of the Company since 2012.

PwC has a multibranch network of offices, covering all major markets, both long established and emerging. PwC has a network of offices in 144 countries and over 122,000 employees worldwide. PwC market share among audit companies, which provide services to companies in fuel and energy industry with an income of 200 mln. USD or more is 30%.

In order to improve the quality of services delivered to fuel and energy industry enterprises in different countries of the world, the Global Energy Center was established as part of PwC Company, the largest centers of which are located in Moscow, London and Houston. PwC Global Energy Center specializes in providing consulting services to customers operating in every sector of the energy market through a worldwide network of 4,000 energy professionals. PwC's World Energy Service is the leader in providing services to enterprises in the international fuel and energy industries. PwC employees in Kazakhstan have experience in working with the most complex and technically challenging projects.

Visit [www.pwc.kz](http://www.pwc.kz) for more information.

According to "Samruk-Energy" JSC Policy in engaging audit organizations services, the Company applies the principle of rotation of a partner bearing the main responsibility for the audit, every five years. Dana Inkarbekova was the partner who had main responsibility for the audit from 2012 to 2015. Baurzhan Burkhanbekov has been the partner since 2016.

Furthermore, there are special conditions at "Samruk-Energy" JSC group of companies relating to hiring of audit organizations' employees. Therefore, in the event of expected appointment of an audit organization employee who participated in the compulsory audit of the Company as an employee of an audit organization within two years preceding the date of his/her appointment (election) to the Company as a member of the Management Board, managing director and chief auditor, it is required to obtain a preliminary approval of the Audit Committee in order to avoid conflicts of interest.

PwC conducts audit at the following subsidiaries and affiliates of the Company:

Company	Type of activity	Period
"Samruk-Energy" JSC	Holding company	2008–2010, 2012–2018
"Alatau Zharyk Company" JSC	Services for power distribution, technical distribution of power in Almaty city and Almaty region	2010, 2012–2018
"Almaty Power Plants" JSC	Electricity and heat production for Almaty and Almaty region	2010, 2012–2018
"AlmatyEnergoSbyt" LLP	Sale of electricity in Almaty city and Almaty region	2008–2010, 2012–2018
"Shardarinsk" HPP	Electricity production	2007
"Moynak HPP" JSC	Construction of hydropower plant on Charyn river	2008, 2012–2018
"Ekibastuz SDPP-2 Plant" JSC	Electricity and heat production on the basis of coal extracted from "Bogatyr" and "Severny" open-pit coal mines	2005–2009
"Bogatyr Komir" LLP	Extraction of coal by open pit mining at Bogatyr and Severny coal mines	2008–2010, 2012–2018

Fees paid to the audit firm for auditing services for 2018

Services	"Samruk-Energy" JSC	"Samruk-Energy" JSC group of companies
Audit	29,509,088 tenge	123,240,362 tenge

PwC delivered the following non-audit services during 2018:

Services	"Samruk-Energy" JSC
Consulting services for the implementation of target model of the project "Development of sales processes and introduction of trading processes"	115,819,200 tenge



# 10

## ABOUT THE REPORT

The Company adheres to the following approaches in determining the content and quality of the Report

### **Interaction with stakeholders and materiality**

According to "Samruk-Energy" JSC Sustainable Development Guide that was approved by the Board of Directors, significant aspects and topics for disclosure were identified in the report. This Report was prepared taking into account the reporting principles of the "Global Reporting Initiative" and the GRI Electricity Industry (EU) protocol, the requirements for reporting of the UN Global Compact, and the International Financial Reporting Standards. The company updated the stakeholder map (please see page 116) as well as the Plan for communication with them (<https://www.samruk-energy.kz/ru/shareholder/annual-reports>).

During the survey, stakeholders evaluated the materiality of each of the topics proposed in the questionnaire for disclosure in the annual report, and could also add aspects that were not included to the list, but are significant in the opinion of the stakeholder.

Additionally, an online questionnaire was launched on the Company's website (<https://www.samruk-energy.kz/ru/shareholder/annual-reports>).

In order to assess the identified material aspects for their completeness and balance, discussions were held with the participation of the Company's management and a materiality matrix was developed, which gives a visual representation of sustainable development topics that are important for the Company and stakeholders (see p.118).

### **The Context of Sustainable Development**

The report provides information on the Company's contribution to the economic, environmental, social aspects.

The Company's development strategy determines goals, objectives and strategic KPIs in sustainable development, provides information on their achievement based on the results of 2018, as well as plans for 2019.

### **Completeness**

The indicators and content of the Report are sufficient to reflect the significant impact of the Company on the economy, the environment and society during the reporting period.

### **Balance**

This Report reflects the positive and negative aspects of the Company's results for the reporting year. Certain indicators were disclosed in 3-year dynamics.

### **Comparability**

Stakeholders using this Report can compare the information provided on the Company's financial and operating performance with the results for previous periods and its objectives.

The report was prepared in accordance with GRI Standards, which allows stakeholders to compare the Company's operations with those of other companies.

### **Accuracy**

The information provided in the Report is accurate enough and detailed so that stakeholders can evaluate the results of the Company's operations for the reporting period. Information is expressed both in quality descriptions and in figures.

### **Timeliness**

The report is provided on an annual basis within the shortest possible time after the approval of the audited financial statements and no later than July 30, which allows assuming that the information reflected in this Report is relevant. The report is posted on the company's website in Kazakh, Russian and English, simultaneously for all stakeholders.

### **Clarity**

The information in the Report is set out in an understandable and accessible form to the interested parties.

### **Reliability**

In preparing this Report, the information provided was preliminarily analyzed and disclosed in such a way that stakeholders could check this Report and assess the degree of reliability of its content.

Data sources are official reporting forms, which are submitted to government agencies every year. A number of indicators are calculated in accordance with the forms of internal reporting, which are checked by responsible representatives of companies during internal audit procedures.

Production, social and environmental indicators presented in the Company Report were calculated, collected and consolidated in accordance with principles of reporting and recommendations of Sustainability Reporting Guidelines and the Company's corporate governance procedures. The probability of an error in figures for each category of indicators in the area of sustainable development is minimized. Ratios and specific values are supplemented by absolute values. Figures were indicated by using generally accepted system of measurement units and are calculated using standard coefficients.

*Views of stakeholders were considered during preparation of this Report, as well as all major aspects were covered in accordance with the GRI Standards: Core option. The table showing the location of the standard elements in the Report is attached to the report.*



The report provides all stakeholders with an overview of operations results and achievements of "Samruk-Energy" JSC group of companies from January 1 to December 31, 2018

in electronic, paper form or online. The date of publication of previous Integrated Annual Report of the Company – July 27, 2018.

### Limitation of the scope and boundaries of the Report

The audited consolidated financial statements of the Company for 2018 as of December 31, 2018 and as of 31 December 31, 2017, specified in this Report 2017 are the result of an independent audit of "PricewaterhouseCoopers" LLP.

The company disclosed information in accordance with the GRI G4 Guidelines in the 2017 Report. In order to apply the best world practices, the Company determined the Report scope in accordance with GRI Standards, which were introduced in 2018.

This Report provides information on financial and operating results and sustainable development. Qualitative and quantitative information were presented for 2018, in order to compare and analyze information in indicators, data for 2016 and 2017 were used where applicable.

The indicators of the following subsidiaries and affiliates were used in the audited consolidated financial statements of the Company for 2018:

Name of the company	Nature of business	% voting right	Interest	Country of registration
<b>Subsidiaries:</b>				
"Alatau Zharyk Company" JSC	Transmission and distribution of electricity across Almaty city and Almaty region	100%	100%	Kazakhstan
"Almaty Power Plants" JSC	Production of electricity and heat and hot water in Almaty city and Almaty region	100%	100%	Kazakhstan
"AlmatyEnergoSbyt" LLP	Electricity sale throughout Almaty city and Almaty region	100%	100%	Kazakhstan
"Shardarinsk HPP" JSC	Electricity production at hydropower plant in the Southern Kazakhstan	100%	100%	Kazakhstan
"Moynak HPP" JSC	Electricity production at hydropower plant in Almaty region	100%	100%	Kazakhstan
"Ekibastuz SDPP-1 named after Bulat Nurzhanov" LLP plant	Coal-based production of electricity and heat	100%	100%	Kazakhstan
"Bukhtarminsk HPP" JSC	Is the owner of leased out Bukhtarminsk hydropower plant	90%	90%	Kazakhstan
"Ust-Kamenogorsk HPP"	Since the transfer of hydropower plant to lease. this company does not operate	89.99%	89.99%	Kazakhstan
"Shulbinsk HPP" JSC	Since the transfer of hydropower plant to lease. this company does not operate	92.14%	92.14%	Kazakhstan
"Samruk-Green Energy" LLP	Development of renewable energy	100%	100%	Kazakhstan
"First Wind Power Plant" LLP	Production of electricity at wind power plant	100%	100%	Kazakhstan
"Kazhydrotechenergo" LLP	Implementation of RE projects	100%	100%	Kazakhstan
"Teploenergomash" LLP	Implementation of RE projects	95%	95%	Kazakhstan
"Energy Solutions Center" LLP	Transportation and other services	100%	100%	Kazakhstan

### Statements concerning the future

Data in the Report associated with the future are based on forecast information. Words such as "believes", "assumes", "expects", "evaluates", "intends", "plans", indicators marked as "plan" and similar expressions indicate that in this case it is about forward-looking statement. Actual results may differ significantly from planned and target indicators, expected results, estimates and intentions contained in forward-looking

statements. Forecast statements are only valid on the date of the release of the Report. The Company does not guarantee the anticipated performance results presented in the forecast statements will in fact be achieved, therefore they must not and cannot be considered as the most likely or typical scenario.

## TABLE OF REPORT'S COMPLIANCE WITH GRI STANDARD

GRI Standard	No.	Content	Page no.	Assurance
<b>General elements of the report</b>				
<b>GRI 102: General disclosures 2016</b>				
	102-1	Name of the organization	6	not applicable
	102-2	Activities, brands, products and services	6, 9-11	not applicable
	102-3	Location of headquarters	7, 160	not applicable
	102-4	Location of operations	7, 37-51	not applicable
	102-5	Ownership and legal form	6	not applicable
	102-6	Markets served	6-9	not applicable
	102-7	Scale of the organization	6, 10, 11, 29-35, 120	not available
	102-8	Information on employees and other workers	129, 130	not available
	102-9	Supply chain	68, 69	not available
	102-10	Significant changes to the organization and its supply chain	2-5, 10-13, 16-21, 68, 69, 71-75	PWC
	102-11	Precautionary principle or approach	87, 142, 143	not available
	102-12	External initiatives	107, 117, 129	not available
	102-13	Membership in associations	117	not available
	102-14	Statement from senior decision-maker	2-5	not applicable
	102-15	Key impacts, risks and opportunities	17, 19, 21, 99-101, 108, 124	not available
	102-16	Values, principles, standards and norms of behavior	14, 15, 77, 87, 89, 107	not available
	102-17	Mechanisms for advice and concerns about ethics	89, 91, 119, 142	not available
	102-18	Governance structure	80	not available
	102-19	Delegating authority	84, 93	not available
	102-20	Executive-level responsibility for economic, environmental and social topics	92	not applicable
	102-21	Consulting stakeholders on economic, environmental and social topics	87, 89, 107, 117, 118, 119	not available
	102-22	Composition of the highest governance body and its committees	90, 80-82, 84-86, 92-98	not available
	102-23	Chair of the highest governance body	90, 80, 92	not available
	102-24	Nominating and selecting the highest governance body	83, 89	not applicable
	102-26	Role of highest governance body in setting purpose, values, and strategy	77, 83, 89, 93	not applicable
	102-31	Review of economic, environmental and social topics	107-115	not available
	102-35	Remuneration policies	84, 93	not available
	102-36	Process of determining remuneration	84, 89, 93	not available
	102-40	List of stakeholder groups	116	not available

GRI Standard	No.	Content	Page no.	Assurance
	102-41	Collective bargaining agreements	140	not available
	102-42	Identifying and selecting stakeholders	116	not available
	102-43	Approach to stakeholder engagement	115, 116, 118, 119	not available
	102-44	Key topics and concerns raised	118, 119	not available
	102-45	Entities included in the consolidated financial statements	148, CFR	PWC
	102-46	Defining report content and topic boundaries	146-149	not available
	102-47	List of material topics	118	not available
	102-48	Restatements of information	CFR	PWC
	102-49	Changes in reporting	147, 148	not available
	102-50	Reporting period	148	not applicable
	102-51	Date of most recent report	148	not applicable
	102-52	Reporting cycle	147, 148	not applicable
	102-53	Contact point for questions regarding the report	158	not applicable
	102-54	Claims of reporting in accordance with the GRI Standards	147, 148	not available
	102-55	GRI content index	150	not available
	102-56	External assurance	150-154	not available
<b>Specific topics</b>				
<b>GRI 200: Economic topics 2016</b>				
<b>Economic performance</b>				
GRI 103: Management approach 2016	103-1	Explanation of material topic and its boundary	118, 123	not available
	103-2	The management approach and its components	54, 123	not available
	103-3	Evaluation of the management approach	120, 123	not available
GRI 201: Economic performance	201-1	Direct economic value generated and distributed	111, 120	not available
	201-2	Financial implications and other risks and opportunities due to climate change	123, 124	not available
<b>Market presence</b>				
GRI 103: Management approach 2016	103-1	Explanation of material topic and its boundary	118	not available
	103-2	The management approach and its components	129, 130	not available
	103-3	Evaluation of the management approach	135, 137	not available
GRI 202: Market presence	202-1	Ratios of standard entry level wage by gender compared to local minimum wage	137	not available
	202-2	Proportion of senior management hired from the local community	111	not available
<b>Procurement practices</b>				
GRI 103: Management approach 2016	103-1	Explanation of material topic and its boundary	118	not available

GRI Standard	No.	Content	Page no.	Assurance
	103-2	The management approach and its components	68	not available
	103-3	Evaluation of the management approach	69	not available
GRI 204: Indirect economic impact	204-1	Proportion of spending on local suppliers	69	not available
<b>Anti-corruption</b>				
GRI 103: Management approach 2016	103-1	Explanation of material topic and its boundary	118, 89	not available
	103-2	The management approach and its components	89	not available
	103-3	Evaluation of the management approach	142, 143	not available
GRI 205: Anti-corruption	205-1	Operations assessed for risks related to corruption	87, 90	not available
	205-2	Communication and training about anti-corruption policies and procedures	87, 142, 143	not available
	205-3	Confirmed incidents of corruption and actions taken	87, 115, 142	not available
<b>GRI 300: Environmental topics 2016</b>				
<b>Materials</b>				
GRI 103: Management approach 2016	103-1	Explanation of material topic and its boundary	118	not available
	103-2	The management approach and its components	123	not available
	103-3	Evaluation of the management approach	124	not available
GRI 301: Materials 2016	301-1	Materials used by weight or volume	125	not available
	301-2	Recycled input materials used	125	not available
	301-3	Reclaimed products and their packaging materials	112, 113, 126	not available
<b>Energy</b>				
GRI 103: Management approach 2016	103-1	Explanation of material topic and its boundary	118	not available
	103-2	The management approach and its components	121	not available
	103-3	Evaluation of the management approach	121	not available
GRI 302: Energy 2016	302-1	Energy consumption within the organization	122	not available
	302-3	Energy intensity	111-112, 122	not available
	302-4	Reduction of energy consumption	111-112, 122	not available
<b>Water and effluents</b>				
GRI 103: Management approach 2016	103-1	Explanation of material topic and its boundary	118, 123	not available
	103-2	The management approach and its components	123	not available

GRI Standard	No.	Content	Page no.	Assurance
	103-3	Evaluation of the management approach	125	not available
GRI 303: Water and effluents 2018	303-2	Water sources significantly affected by organization's water withdrawal	112-113, 125	not available
	303-3	Water recycled and reused	112-113, 126	not available
<b>Biodiversity</b>				
GRI 103: Management approach 2016	103-1	Explanation of material topic and its boundary	118	not available
	103-2	The management approach and its components	123	not available
	103-3	Evaluation of the management approach	128	not available
GRI 304: Biodiversity 2016	304-2	Significant impacts of activities, products, and services on biodiversity	128	not available
<b>Emissions</b>				
GRI 103: Management approach 2016	103-1	Explanation of material topic and its boundary	118	not available
	103-2	The management approach and its components	123	not available
	103-3	Evaluation of the management approach	127	not available
GRI 305: Emissions 2016	305-7	Nitrogen oxides (NO <sub>x</sub> ), sulfur oxides (SO <sub>x</sub> ), and other significant air emissions	112, 113, 127	not available
<b>Effluents and waste</b>				
GRI 103: Management approach 2016	103-1	Explanation of material topic and its boundary	123	not available
	103-2	The management approach and its components	124	not available
	103-3	Evaluation of the management approach	126	not available
GRI 306: Effluents and wastes 2016	306-1	Water discharge by quality and destination	126	not available
<b>Environmental compliance</b>				
GRI 103: Management approach 2016	103-1	Explanation of material topic and its boundary	123	not available
	103-2	The management approach and its components	124	not available
	103-3	Evaluation of the management approach	128	not available
GRI 307: Environmental compliance 2016	307-1	Non-compliance with environmental laws and regulations	110, 111, 112, 113, 128	not available
<b>GRI 400: Social aspects 2016</b>				
<b>Employment</b>				
GRI 103: Management approach 2016	103-1	Explanation of material topic and its boundary	118	not available

GRI Standard	No.	Content	Page no.	Assurance
	103-2	The management approach and its components	129	not available
	103-3	Evaluation of the management approach	129, 140	not available
GRI 401: Employment 2016	401-1	New employee hires and employee turnover	112, 113, 130	not available
	401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	141	not available
<b>Occupational Health and Safety</b>				
GRI 103: Management approach 2016	103-1	Explanation of material topic and its boundary	118	not available
	103-2	The management approach and its components	132	not available
	103-3	Evaluation of the management approach	133, 134	not available
GRI 403: Occupational Health and Safety 2018	403-1	Workers representation in formal joint management-worker health and safety committees	134	not available
	403-2	Types of injury and rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities	134	not available
	403-9	Work-related injuries	112, 113, 134	not available
<b>Training and education</b>				
GRI 103: Management approach 2016	103-1	Explanation of material topic and its boundary	118	not available
	103-2	The management approach and its components	131	not available
	103-3	Evaluation of the management approach	131	not available
GRI 404: Training and education 2016	404-1	Average hours of training per year per employee	132	not available
	404-3	Percentage of employees receiving regular performance and career development reviews	135	not available
<b>Non-discrimination</b>				
GRI 103: Management approach 2016	103-1	Explanation of material topic and its boundary	118, 109	not available
	103-2	The management approach and its components	109	not available
	103-3	Evaluation of the management approach	107	not available
GRI 406: Non-discrimination 2016	406-1	Incidents of discrimination and corrective actions taken	115	not available

## ABBREVIATIONS USED

<b>ADB</b>	Asian Development Bank
<b>AZhc</b>	"Alatau Zharyk Company" JSC
<b>JSC</b>	Joint-stock company
<b>"CAEPCO" JSC</b>	"Central-Asian Electric Power Corporation" JSC
<b>"APP" JSC</b>	"Almaty Power Plants" JSC
<b>"KEPMO" JSC</b>	"Kazakhstani Electricity and Power Market Operator" JSC
<b>"SSGPO" JSC</b>	"Sokolov-Sarbai Mining Production Association" JSC
<b>AMS</b>	Administrative and management staff
<b>NPP</b>	Nuclear Power Plant
<b>BAO</b>	Big Almaty lake
<b>Benchmarking</b>	The analysis method, which "Samruk-Energy" JSC uses to compare its operations with the practices of other companies in order to make changes that will enhance its competitiveness
<b>BK</b>	"Bogatyr Komir" LLP
<b>Incl.</b>	Including
<b>RES</b>	Renewable energy sources
<b>WPP</b>	Wind power plant
<b>PUC</b>	Public utility company
<b>SPAID</b>	State Program for Accelerated Industrial and Innovative Development of the Republic of Kazakhstan
<b>"Samruk-Energy" JSC group of companies</b>	Subsidiaries and affiliates of "Samruk-Energy" JSC
<b>SDPP</b>	State District Power Plant
<b>GTPP</b>	Gas turbine power plant
<b>HPP</b>	Hydropower plant
<b>DF</b>	Diesel fuel
<b>EBRD</b>	European Bank for Reconstruction and Development
<b>EEC, EurAsEc</b>	Eurasian Economic Community
<b>ECCAA</b>	Eurasian Council of Certified Accountants and Auditors
<b>EEC</b>	European Economic Community
<b>UES RK</b>	Unified Energy System of the RK
<b>Pollutants</b>	Pollutants
<b>ASW volume</b>	Ash and slag waste volume
<b>PRC</b>	People's Republic of China
<b>Company</b>	"Samruk-Energy" JSC holding company registered in the Republic of Kazakhstan that manages its subsidiaries and affiliates
<b>CRNM and PC</b>	Committee on Regulation of Natural Monopolies and Protection of Competition under the Ministry of National Economy of the Republic of Kazakhstan
<b>KPI</b>	Key performance indicators, indicators (indicators) that describe the efficiency of the Company's operations, allowing to evaluate the performance of the Company as a whole, as well as its executives
<b>CMS</b>	Corporate Management System
<b>CCSM</b>	Coking caking slightly metamorphosed
<b>VOC</b>	Volatile organic compounds
<b>PTL</b>	Power transmission lines
<b>RK MINT</b>	Republic of Kazakhstan Ministry of Industry and New Technologies
<b>RK MNE</b>	Ministry of National Economy of the RK

<b>IFRS</b>	International Financial Reporting Standards
<b>BAT</b>	Best Available Technique
<b>NPG</b>	National Power Grid
<b>UAE</b>	United Arab Emirates
<b>UC</b>	United Company
<b>LLC</b>	Limited Liability Company
<b>UN Subsidiaries and Affiliates</b>	United Nations
<b>SPNA</b>	Specially Protected Natural Areas
<b>UPS</b>	Unified Power System
<b>ALE</b>	Association of Legal Entities
<b>PJSC</b>	Public Joint-stock Company
<b>GHG</b>	Greenhouse gases
<b>MPE</b>	Maximum permissible emissions
<b>MPD</b>	Maximum permissible discharges
<b>Procurement plan</b>	The list of purchased goods, works and services with indication of name, measurement unit, volumes, terms, and also the maximum amounts to be used for purchase of each type of goods, works and services
<b>Development Plan indicators</b>	Indicators that describe production and operating and financial activities. Indicators have quantitative meaning to be approved as part of the Development plan and which meet the results of operations over accounting and planning periods
<b>FSR</b>	Fire safety regulations
<b>UNDP</b>	United Nations Development Program
<b>SR</b>	Safety regulations
<b>LTA</b>	Loading and transportation administration
<b>TOR</b>	Technical Operation Rules
<b>PCB</b>	Polychlorinated biphenyl
<b>RANS</b>	Russian Academy of Natural Sciences
<b>Risk</b>	Exposure to uncertainty related to events or actions which can affect the achievement of set goals and tasks
<b>RK</b>	The Republic of Kazakhstan
<b>RF, Russia</b>	The Russian Federation
<b>IAS</b>	Internal Audit Service
<b>BOD</b>	Board of Directors
<b>EIW</b>	Equipped with insulated wired
<b>CIS</b>	Commonwealth of Independent States
<b>POP</b>	Persistent Organic Pollutants
<b>USSR</b>	Union of Soviet Socialist Republics
<b>Strategy</b>	"Samruk-Energy" JSC Long-term Development Strategy
<b>Business units of the Company</b>	Business units of the Company responsible for certain activity and which are reflected in the Company's organizational structure (department, services)
<b>PMS</b>	Performance Management System
<b>USA</b>	The United States of America
<b>SEZ PIT</b>	Special Economic Zone Park of Information Technologies
<b>EMS</b>	Environmental Management System
<b>SPP</b>	Solar Power Plant
<b>TNC</b>	Transnational company
<b>LLP</b>	Limited Liability Partnership
<b>"AES" LLP</b>	"AlmatyErgoSbyt"LLP

<b>"KUS" LLP</b>	"Kazakhstan Utility Systems" LLP
<b>"FWPP" LLP</b>	"First Wind Power Plant" LLP
<b>TPP</b>	Thermal Power Plant
<b>CHP</b>	Combined heat and power
<b>SFC</b>	Specific fuel consumption
<b>DAP</b>	Dry ash plant
<b>Fund</b>	"Samruk-Kazyna" Sovereign Wealth Fund Joint-stock Company
<b>SharHPP</b>	Shardarinsk HPP
<b>ESDPP-1</b>	"Ekibastuz SDPP-1 named after B. Nurzhanov" LLP
<b>ESDPP-2</b>	"Ekibastuz SDPP-2 Plant" JSC
<b>ETO</b>	Energy Transmission Organization
<b>ESO</b>	Energy Supplying Organization
<b>CAP</b>	Certified Accounting Practitioner
<b>CASA-1000</b>	Central Asia-South Asia Energy Project
<b>CO2</b>	Carbon dioxide
<b>CPA</b>	Certified Public Accountant
<b>DIPCPA</b>	Certified Professional Internal Auditor Diploma
<b>DipPIA</b>	Professional Internal Auditor Diploma
<b>EBITDA</b>	Earnings Before Interest, Tax, Depreciation and Amortization (operating income before expenses for using loans, paying taxes, depreciation and amortization)
<b>EBITDA margin</b>	EBITDA profitability. EBITDA to revenue ratio
<b>ERG</b>	"Eurasian Resources Group" LLP
<b>GRI</b>	Global reporting initiative
<b>IFA (DipIFA)</b>	Diploma of the International Institute of Auditing and Management
<b>IoD UK</b>	Institute of Directors, United Kingdom
<b>ISO</b>	International Organization for Standardization
<b>KEGOC</b>	Kazakhstan Electricity Grid Operating Company" Joint-stock Company
<b>NOx</b>	Collective name of nitrogen oxides NO and NO2
<b>PESTEL-analysis</b>	Tool used by marketers to identify political, economic, social, technological, environmental and legal factors that have an impact on an organization.
<b>SO2</b>	Sulfur oxide
<b>SWOT</b>	Analysis of positive and negative effects of external and internal environmental factors
<b>Measurement units</b>	
<b>%</b>	Percent
<b>GWh</b>	Gigawatt per hours
<b>GJ</b>	Gigajoule
<b>Gcal</b>	Gigacalorie
<b>kV</b>	Kilovolt
<b>kVh</b>	Kilowatt per hour
<b>Km</b>	Kilometer
<b>m</b>	Meter
<b>m³</b>	Cubic meter
<b>MVA</b>	Megavolt-ampere
<b>MW</b>	Megawatt
<b>Mln</b>	Million
<b>Bln.</b>	Billion
<b>Thous.</b>	Thousand
<b>electricity</b>	Electricity
<b>GWh</b>	Gigawatt per hours

## CONTACT INFORMATION

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Following the best practices of information disclosure, "Samruk-Energy" JSC represents Integrated Annual Report 2018 to all interested parties.

This report is presented in two volumes.

Volume 1 contains the Report of the Management and the full non-financial information about the activities of "Samruk-Energy" JSC group of companies.

Volume 2 contains Consolidated Financial Report for 2018 as of December 31, 2018 and for 2017 as of December 31, 2017, which is the result of independent audit of "PricewaterhouseCoopers" LLP.

As part of the interactive Annual Report 2018, the Company placed on the website of "Samruk-Energy" JSC an online questionnaire for all interested parties as a method of feedback on the definition of topics for inclusion in the 2019 Report.

