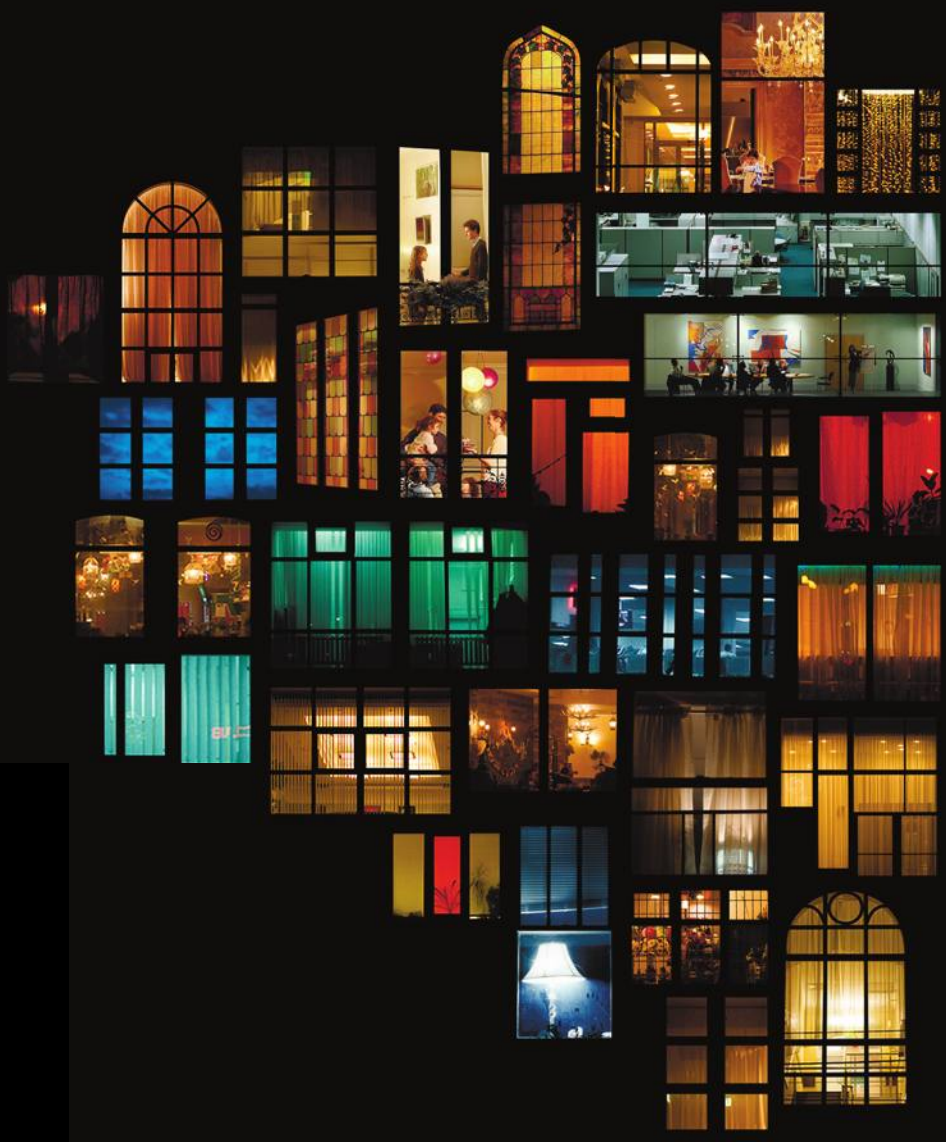
CAEPCO

Central-Asian
Electric Power Corporation

BEHIND EVERY LIGHTED WINDOW
THERE ARE EFFORTS OF TEN THOUSAND PEOPLE



2019
ANNUAL REPORT

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DEAR SHAREHOLDERS AND PARTNERS!

We are pleased to present you this is 2019 Annual Report of Central-Asian Electric Power Corporation JSC.

During the reporting period the Corporation faced a number of challenges, including tariff policy change in Kazakhstan electricity and heat markets against the background of continuous wear of the Corporation's plant and equipment.

In 2019, Kazakhstan power generating companies jointly drew the Government's attention to high production costs not covered by current cap rates. The industry calls for significant investments to modernize the equipment and replace half of the total number of steam turbines with expired lifetime at Kazakhstan power plants.

Since 2009 CAEPCO Group's power generating and transmitting facilities have been renovated with the support of the Government and foreign investors. The investments totaled KZT 216.1 bln for eleven years. Throughout all these years CAEPCO has ranked 3rd in Kazakhstan power sector in terms of its capital investments to its production assets upgrade.

In 2019, the Corporation allocated KZT 16.8 bln to implement its investment program to secure smooth operation of power generating facilities as well as electricity and heat distribution systems. Tariff policy liberalization having regard to all power generating companies' costs would be needed to continue modernization.

It should be noted that 2019 is the year preceding the completion of the Holding's 2016-2020 Development Strategy implementation targeted primarily at the establishment of a vertically integrated private energy company providing its customers with consistent and reliable services. Over recent three years CAEPCO Group worked hard to strengthen its positions on Kazakhstan electric power market in compliance with its Strategy. The Corporation's operations during the reporting year evidence the achievement of the Corporation's goals set with respect to power generation increase, power saving and other aspects. In 2019, as a part of its investment program the Corporation took measures to reduce its exposure to accidents and eliminate down time and continued to introduce energy saving and -efficient technologies in power generation and transmission sectors.

Currently, the Board of Directors is focused on elaborating a new Development Strategy adequate for the economic environment caused by coronavirus in 2020. We witness significant changes affecting Kazakhstan and global business. The professional experience of the members of the Corporation's Board of Directors and Independent Directors allows them to identify the points of growth and prepare a new strategic document subject to all risks, challenges and opportunities.

In 2020 the Corporation kept implementing its production assets modernization program to ensure failure-free supply of electricity and heat to consumers in the regions of its operations and to improve their living standards.

ALEXANDER YAKOVLEVICH KLEBANOV

Chairman of the Board of directors of CAEPCO JSC

DEAR COLLEAGUES AND PARTNERS!

This 2019 Annual Report is a presentation of CAEPCO JSC's performance capturing the projects it implemented to ensure the Corporation's sustainable development.

During the reporting year CAEPCO Group of companies operated under its development plan taking a number of measures to promote reliability of generation, to upgrade its core electricity and heat transmitting assets, to automate its operating processes, and to improve the work of the sales companies in the group. It also completed a number of projects in the sphere of environment protection, professional development and social partnership.

It should be noted that 2019 investment program was cut by KZT 1.9 bln compared to 2018 and amounted KZT 16.8 bln which was directly driven by tariffs reduction and deteriorated industry investment opportunities. During the reporting year the Corporation funded only its high priority projects preventing accidents on electric grids and heat networks and promoting reliability of power supply. The Corporation continued to fulfill its obligations under the loans financing its critical equipment upgrade and commissioning during previous years.

In 2019, the Corporation generated 7,032.7 mln kWh of electricity. Moreover, it completed the following major projects: installation of a station coordinator maintaining balanced electric load in the capacity market and introduction of PRANA system monitoring foundation of turbine generator No.6 at Pavlodar CHP-3 as well as the replacement of auto-transformer No. 6 at Petropavlovsk CHP-2. In its operations the Corporation paid special attention to industrial safety (especially injuries prevention) and tightened its control over occupational safety in the course of works performance as well as its equipment, buildings and vehicles condition monitoring.

The Corporation completed significant work at its EDCs, including renovation of its nine 10-220 kV substations in Pavlodar, North Kazakhstan and Akmola regions. Modernization of the Corporation's heat networks resulted in losses reduction by 1.1%, 1.6% and 1.3% in Pavlodar, Ekibastuz and Petropavlovsk, respectively, compared to 2018. In general, the Corporation's losses in its heat networks and electric grids fell by 1.3% (28.6%) and by 0.3% (6.9%), respectively, compared to 2018.

In 2020, we are proceeding with the implementation of our modernization program given that the lack of investments results in the expansion of production assets wear likely to cause significant growth of accidents and disruption of energy supply to consumers in the future.

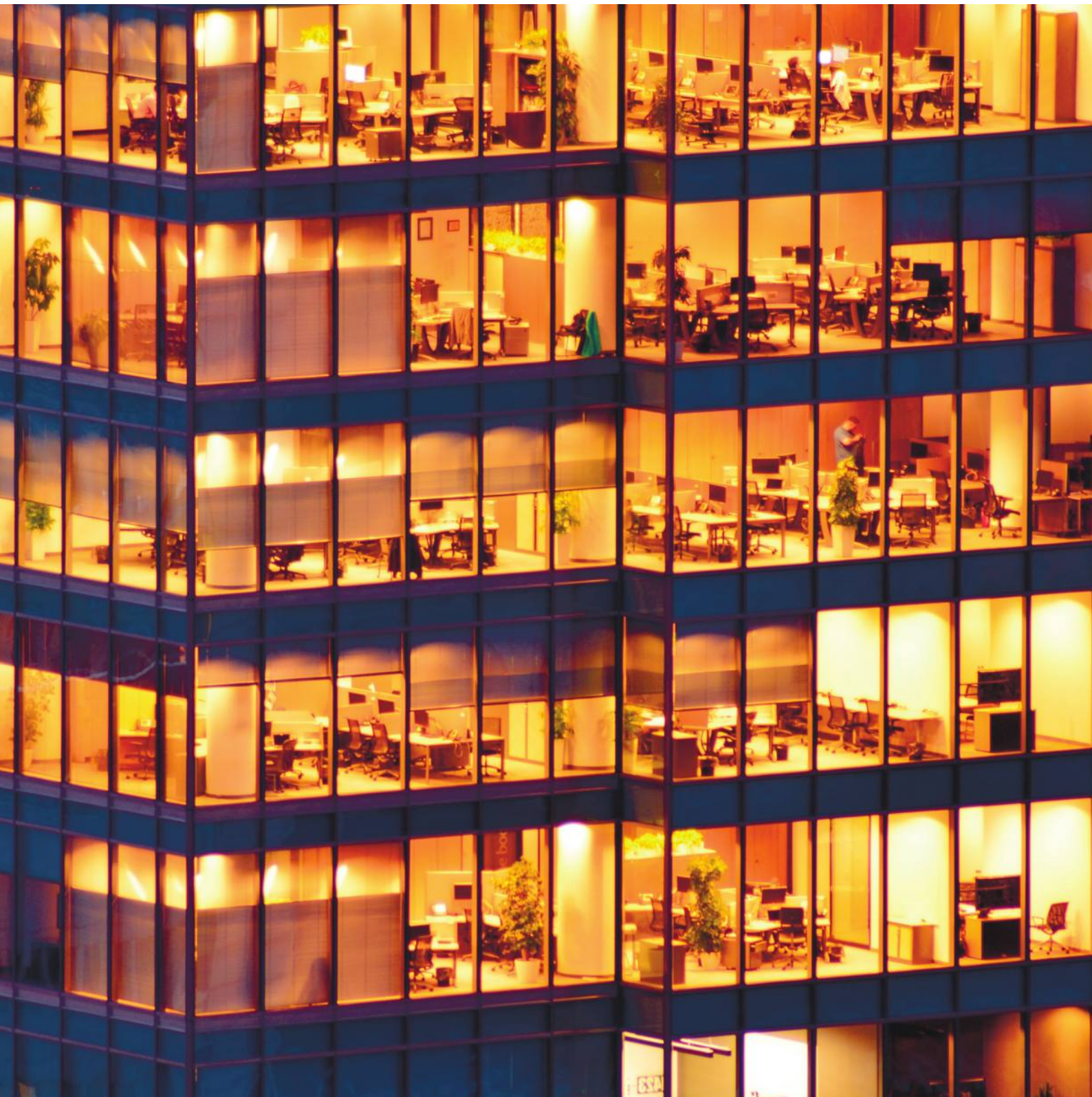
CAEPCO Group of companies takes active part in working groups seeking further advancement of power sector, an industry of a critical strategic importance for Kazakhstan, in collaboration with other Kazakhstan energy companies and state authorities. In the first half of 2020 new cap electricity tariffs were adopted and new methods of determination of power companies' fixed profit was approved. These developments will make it possible to increase investments in the reconstruction and modernization of power equipment in the future to secure stable energy supply to Kazakhstan businesses and population and promote economic upturn in the regions.

SERGEY VLADIMIROVICH KAN

General director of CAEPCO JSC

CAEPCO
Central-Asian
Electric Power Corporation

CAEPCO TODAY



Central-Asian Electric Power Corporation JSC ("CAEPCO") is the biggest private heat and electric power holding in Kazakhstan. CAEPCO Group of companies is a monopolist in the regions of its operations in heat generation and distribution as well as electricity distribution sectors (80% to 100% share).

CAEPCO has assets in the North of Kazakhstan: Akmola, Pavlodar and North Kazakhstan regions.

CAEPCO Group of companies consists of PAVLODARENERGO JSC, SEVKAZENERGO JSC, Akmola Electrical Distribution Company JSC and ASTANAENERGOSBYT LLP.

CAEPCO Group of companies is a major employer and taxpayer. The Holding's policy pays special attention to support of social and economic development in the regions of its operations.

As at 31.12.2019 the CAEPCO's Group personnel headcount is **10 553** people

The number of its consumers exceeds **> 2** million

In 2019, the Corporation had **7%** share in the electricity generation market

Its installed heat capacity was **2 981** Gcal/hour

Its installed electrical capacity was **1 218** MW

PERFOMANCE INDICATORS

POWER GENERATION

7 033 mln kWh
Electric power

6 371 thous Gcal
Heat power

ASSETS

30 KZT bln
Current assets

289 KZT bln
Non-current assets

16,8 KZT bln
nvestments

FINANCIAL INDICATORS

137 195 KZT mln
Sales

(5 044) KZT mln
Net income

(5 078) KZT mln
Total income for the year

20 004 KZT mln
EBITDA

CORPORATION RATINGS

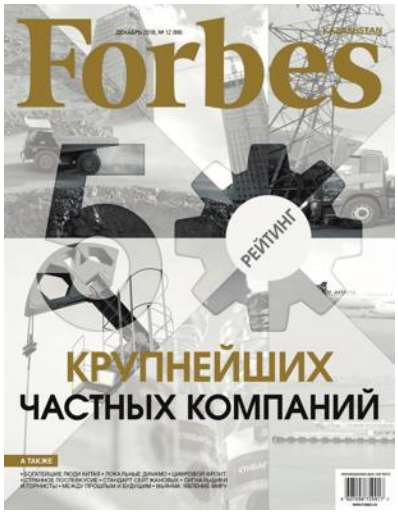
Fitch Ratings

On 7 March 2019, Fitch Ratings, an international rating agency, rated CAEPCO and its Subsidiaries B- with Stable outlook.

KEY EVENTS OF THE YEAR

JANUARY

Forbes Kazakhstan featured PAVLODARENERGO JSC and SEVKAZENERGO JSC, CAEPCO JSC's subsidiaries, on top 50 list of major Kazakhstan companies. The rankings of both companies improved as compared to earlier ratings.



FEBRUARY

The composition of the Corporation's Board of Directors changed due to change in the composition of CAEPCO JSC's shareholders.

Pavlodar EDC JSC celebrated its 55th anniversary.

MARCH

Nursultan Nazarbayev, Elbassy, had a working meeting with Alexander Klebanov, the Chairman of the Board of Directors of CAEPCO JSC, where Elbassy paid attention to vital issues of the heat and electric power generation as well as safety in the power supply of the regions.

Fitch Ratings assigned CAEPCO JSC as well as PAVLODARENERGO JSC and SEVKAZENERGO JSC, its 100% subsidiaries, long-term issuer default rating (both in the national and foreign currencies) of B- with stable outlook. CAEPCO JSC's senior unsecured rating is CCC/RR6/0%.

APRIL

On 25 April 2019, CAEPCO's Production and Technical Department organized a joint seminar for its subsidiaries to identify off-the-meter power consumption without an agreement. The seminar participants shared the methods used to prevent electric power theft.

From 16 April through 18 April 2019 CAEPCO Group of companies conducted its sixth peer OHS review at Akmola EDC JSC.

Pavlodar City Akimat and major regional companies (including PAVLODARENERGO JSC) signed Zhas Shanyrak Memorandum. The memorandum was executed based upon the Presidential Address "Kazakhstan citizens' wellbeing: increase in earnings and improvement of living standards".

Akmola EDC JSC replaced approximately 6 thous. meters with the metering devices integrated into ASCAE, a commercial automated electric power metering system.

2019

MAY

Expert RA Kazakhstan and Kursiv Business Weekly Newspaper included CAEPCO JSC into its top 10 Kazakhstan major transparent companies.

JUNE

The finalists of the professional skills contest held in Akmola region were determined among CAEPCO Group's operating and maintenance employees involved in power greed area operation in Nur-Sultan, Petropavlovsk and Pavlodar.

JULY

SEVKAZENERGO JSC presented its SCADA system installed under electric power complex digitalization program.

SEPTEMBER

SEVKAZENERGO JSC's team won the 1st prize at Kyzylzhar-2019, the 3rd sports and athletics contest of Petropavlovsk City labor collectives.

From 3 September through 5 September CAEPCO JSC conducted peer OHS review in PAVLODARENERGO JSC's structural divisions and subsidiaries in Pavlodar.

OCTOBER

SEVKAZENERGO won Regional Stage of Paryz 2008 competition for socially responsible business in the nomination "The Best Socially Responsible Enterprise".

DECEMBER

CAEPCO JSC was announced the winner in nomination "The Best Annual Report of a Private Kazakhstan Company" at the awarding ceremony during the Almaty City Conference "Annual Reports and Corporate Governance".

EVENTS AFTER REPORTING DATE: COVID-19 RELATED RISKS

In 2020, coronavirus pandemic (COVID-19) has rapidly spread in the world affecting Kazakhstan. This resulted in global disturbance of commodity turnover and national economies collapse, lockdown and restrictions. The Company acknowledges the impact of COVID-19 on its sustainable development and takes all necessary measures to protect life and health of each Company's employee as well as to ensure continuous production for the purpose of reliable failure-free electricity supply to its consumers and the Company's financial stability.

BUSINESS MODEL

The Holding has a vertically integrated business model ensuring high sustainability of operations and risks diversification.

CAPITAL

FINANCIAL CAPITAL

46,043 KZT bln
Authorized capital

136,342 KZT bln
Shareholders' equity

319,211 KZT bln
Assets

PRODUCTION CAPITAL

4 CHPs

983,9 km
of heat networks

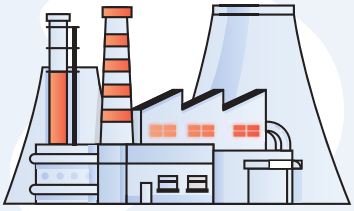
49,2 thous. km
of electricity networks

4 sales companies

NATURAL CAPITAL

The Corporation consumes various fuels (fuel oil and coal), water, electric power and air.

ACTIVITIES

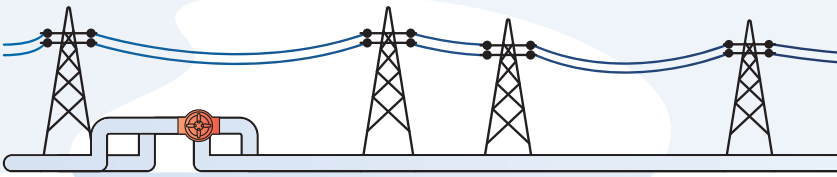


POWER GENERATION:

The Holding generates heat and electricity at its 4 CHPs.

HEAT AND ELECTRICITY TRANSMISSION AND DISTRIBUTION:

Energy is transmitted from generating facilities to customers via heat networks and electrical grids including power converters, power transmission lines and switchgear.



2019 RESULTS

CONSUMERS

7 033 mln kWh
Electricity generation

Please see details on page 27

6 371 thous. Gcal
Heat generation

91 000
consumers were integrated into ASCAE system.

More than
> 3 000
heat meters were installed

EMPLOYEES

Trained personnel:
8 628
(81.8 % of the total headcount)

CAEPCO Group of companies spent
2,8 KZT bln
on OHS events and work environment improvement

Please see details on page 74

HUMAN CAPITAL

10 553 employees

32,4 % employees with higher education

956 people in talent pool

16,9 % staff turnover

49 % employees are trade union members

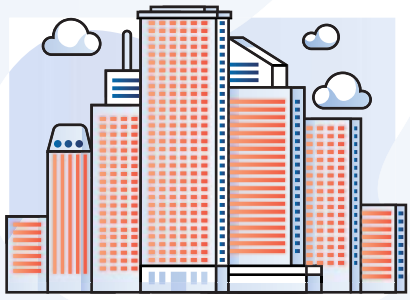
PROFENERGY recent graduates support program

INTELLECTUAL CAPITAL

Deployed systems: Ellipse, Mobility, ASCAE, ASCAHE, THESIS automated document control system, billing, boiler and turbine generator automated control system, Infopro

SOCIAL CAPITAL

The Corporation has been establishing trust-based relationships with regional communities and significantly contributes to social and economic development of the regions being a major employee and an important industrial link.



SALES OF HEAT AND ELECTRICITY:

The Corporation sells electricity and heat to its consumers.

INVESTMENT ACTIVITIES

– Power equipment modernization
– Heat networks and electric grids reconstruction
– Processes automation

STATE

Paid taxes
15 527 KZT mln

Implementation of Environment Protection and Social Actions Plan

AREAS OF OPERATIONS

Implementation of the Stakeholder Engagement Plan

16,8 KZT bln
The Group invested KZT 16.8 bln to production facilities modernization

Environment protection costs:
5 259,676 KZT mln

Please see details on page 87

Wastes reduction by **3,5** thous. tonnes

BUSINESS PROFILE

MISSION

Improving the living standards for customers and creating favorable conditions for economic growth in the regions of operations by providing first-class energy supply services for households, industries and social infrastructure facilities.

The Corporation is implementing this mission by operating in accordance with international production, environmental, health protection and social responsibility standards. The Corporation's performance effectiveness is based on its employees, whose value lies in their high professionalism and the ability to work in a team with a focus on results.

VISION

Central-Asian Electric Power Corporation JSC is a leader among private energy companies in Kazakhstan. The Corporation operates in the most challenging climate conditions in the North of the country. The Corporation successfully uses the advantages of the holding structure by combining dynamism and flexibility of its business units (companies within the Group) with stability and reliability of centralized management on the Group level.

Employees of the Corporation are a team of professionals who are striving for higher goals. The Corporation's relations with its customers and suppliers are based on the principles of respect and mutual responsibility.

VALUES

Adherence to values promotes corporate culture support and development. The Corporation believes that its values link all its business activities including interaction with business partners.

- **Respect** for employees' personal rights and interests, customer requirements and cooperation conditions set by our partners and society.
- **Objectiveness** suggesting remuneration depending on the results achieved and providing equal rights for professional growth.
- **Honesty** in relations and providing information necessary for our work.
- **Effectiveness** as a sustainable achievement of the maximum possible results in everything we do.
- **Braveness** to resist what is unacceptable, and to assume responsibility for the consequences of decisions taken.
- **Care** expressed in attempts to protect people against any harm or threat to health and environment.
- **Trust** in employees allowing to delegate authority and impose responsibility for decisions and ways to implement them.

HISTORY

in 2008

CAEPCO JSC was established in August 2008. As at the company incorporation it united SEVKAZENERGO JSC, PAVLODARENERGO JSC, Astanaenergosbyt LLP. The Central-Asian Power Energy Company JSC was the only founder of CAEPCO JSC.

in 2009

the European Bank for Reconstruction and Development purchased 24.99% CAEPCO JSC's shares and became its investor.

in 2011

Kaz Holdings Cooperatief U.A., Amsterdam became CAEPCO JSC's shareholder upon purchase of 12.89% shares.

in 2014

CAEPCO consolidated 100% stock in Akmola Electicity Distribution Company JSC.

in 2015

Baiterek Holding became CAEPCO JSC's shareholder through its subsidiary funds: KIF ENERGY S.A.R.L, AO «Baiterek Venture Fund», CITIC KAZYNA Investment Fund ENERGY S.A.R.L..

In 2015, a new Pavlodar Region Power System Control Room was introduced into operation and Pavlodar City CAEPCO's Data Processing Center was opened.

in 2017

Kan Sergey Vladimirovich was appointed CAEPCO JSC's President based upon a resolution of the Board of Directors during the scheduled top management rotation.

in 2018

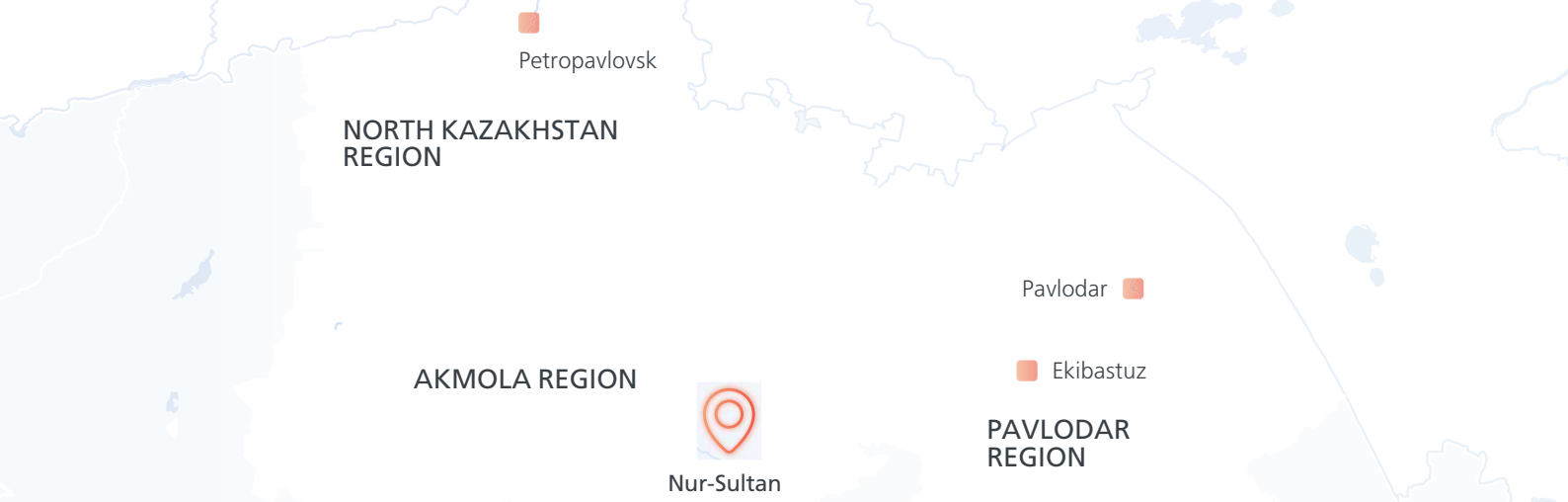
the European Bank for Reconstruction and Development and the Islamic Infrastructure Fund withdrew from the Corporation as it was planned.

Ekibastuzteploenergo LLP, a new company within PAVLODARENERGO JSC, was established.

in 2019

the Board of Directors of the Corporation was updated in connection with the change in the composition of shareholders of CAEPCO JSC.

GEOGRAPHY OF OPERATIONS



MAIN PRODUCTION CHARACTERISTICS

CHP	Installed electrical capacity of the energy system, in MW	Installed heat capacity, in Gcal/h	Equipment renovation since 2009, in %	Year of establi-shment
Pavlodar CHP-3	555	1 154	91,0	1972
Pavlodar CHP-2	110	332	—	1961
Ekibastuz CHP	12	782	100,0	1956
Petropavlovsk CHP-2	541	713	49,7	1961

Number of Substations by Type

Substation Type	Pavlodar EDC JSC	North-Kazakhstan EDC JSC	Akmola EDC JSC
220 kV	4	—	2
110 kV	74	37	50
35 kV	102	121	193
6-10 kV	3 570	2 218	3 319

Total PTL Length, in km

PTL Types	Pavlodar EDC JSC	North-Kazakhstan EDC JSC	Akmola EDC JSC
220 kV	13,7	84,84	—
110 kV	2 798,3	1 327,14	2 505,685
35 kV	2 398,9	2 849,43	5 176,088
6-10 kV	5 723,0	4 443,93	7 290,204
0,4 kV	4 418,7	4 410,72	5 769,711

Total heat network length, in km

Pavlodar Heat Networks LLP	411,45
Ekibastuz Heat Networks / Ekibastuzteploenergo LLP	342,3
Petropavlosk Heat Networks LLP	230,177
Total:	**983,927**

Number of Consumers

Subsidiaries	Electricity	Heat
Sevkazenergosbyt LLP	164 112	74 139
Pavlodarenergosbyt LLP	225 664	169 883
AEDC-energosbyt LLP	124 037	0
Astanaenergosbyt LLP	306 282	289 760
Total:	**820 095**	**533 782**

CAEPCO CORPORATION SUBSIDIARIES

SEVKAZENERGO JSC

SEVKAZENERGO Joint Stock Company is a vertically integrated company consisting of generation, transmission and distribution companies in the city of Petropavlovsk and North-Kazakhstan region.

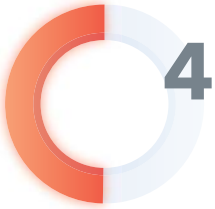
Electric power produced by SEVKAZENERGO JSC is supplied to its customers in the North, central, East and South Kazakhstan regions.

SEVKAZENERGO JSC'S Group includes the following facilities and entities:

PETROPAVLOVSK CHP–2

541 in MW
Installed electrical capacity

713 in Gcal/h
Installed heat capacity



49,7 %
Equipment renovation since 2009

SEVKAZENERGOSBYT LLP

164 112
Number of Electricity Consumers

74 139
Number of Heat Consumers

NORTH-KAZAKHSTAN ELECTRICITY DISTRIBUTION COMPANY JSC

Number of Substations by Type

Substation Type	North-Kazakhstan EDC JSC
220 kV	–
110 kV	37
35 kV	121
6-10 kV	2 228

Total PTL Length, in km

PTL Types	North-Kazakhstan EDC JSC
220 kV	84,84
110 kV	1 327,14
35 kV	2 849,43
6-10 kV	4 449,15
0,4 kV	4 406,37

PETROPAVLOVSK HEAT NETWORKS LLP

230,177 km
Total heat network length

PAVLODARENERGO JSC

PAVLODARENERGO Joint Stock Company is a vertically integrated company consisting of generation, transmission and distribution facilities in the city of Pavlodar and Pavlodar region.

PAVLODARENERGO JSC supplies electricity it generates to Pavlodar, Karaganda, Akmola and East-Kazakhstan Regions markets.

PAVLODARENERGO JSC's Group incorporates the following facilities and entities:

PAVLODAR CHP–3

555 in MW
Installed electrical capacity

1 154 in Gcal/h
Installed heat capacity

PAVLODAR CHP–2

110 in MW
Installed electrical capacity

322 in Gcal/h
Installed heat capacity

91 %
Equipment renovation since 2009

EKIBASTUZ CHP

12 in MW
Installed electrical capacity

782 in Gcal/h
Installed heat capacity

EKIBASTUZTEPLOENERGO LLP (Ekibastuz CHP and the Ekibastuz City heat network)

342,3 km
Total heat network length

PAVLODAR HEAT NETWORKS LLP

411,45 km
Total heat network length

PAVLODAR EDC JSC

Number of Substations by Type

Substation Type	Pavlodar EDC JSC
220 kV	4
110 kV	74
35 kV	102
6-10 kV	3 570

Total PTL Length, in km

PTL Types	Pavlodar EDC JSC
220 kV	13,7
110 kV	2 798,3
35 kV	2 398,9
6-10 kV	5 723,0
0,4 kV	4 418,7

PAVLODARENERGOSBYT LLP

225 664
Number of Electricity Consumers

169 883
Number of Heat Consumers

AKMOLA ELECTRICITY DISTRIBUTION COMPANY JSC

Akmola Electricity Distribution Company Joint Stock Company ("Akmola EDC") is a power grid company engaged in transmission and distribution of electricity among its customers in Akmola region and in the city of Nur-Sultan.

AEDC-Energosbyt LLP is Akmola EDC's subsidiary purchasing electric power for subsequent supply to its customers in Akmola region.

AEDC–ENERGOSBYT LLP

Number of Substations by Type

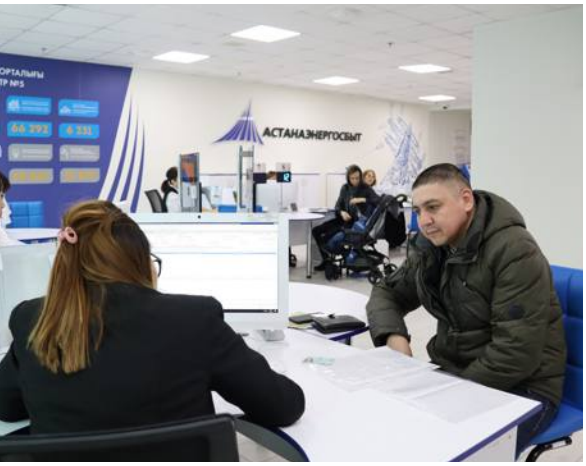
Substation Type	Akmola EDC JSC
220 kV	2
110 kV	50
35 kV	193
6-10 kV	3 319

Total PTL Length, in km

PTL Types	Akmola EDC JSC
220 kV	–
110 kV	2 505,685
35 kV	5 176,088
6-10 kV	7 290,204
0,4 kV	5 769,711

124 037

Number of **Electricity** Consumers



ASTANAENERGOSBYT LLP

The company's main area of business is supplying electricity and heat to customers in the city of Nur-Sultan. For the convenience of its customers, Astanaenergosbyt LLP has eight payment acceptance points and a call center processing data from electricity and hot water meters and provides information on energy supply issues.

306 282

Number of **Electricity** Consumers

289 760

Number of **Heat** Consumers

CAEPCO
Central-Asian
Electric Power Corporation

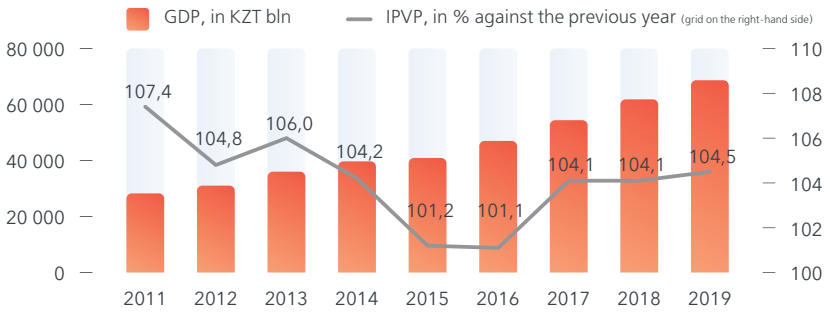
MARKET ANALYSIS

KAZAKHSTAN ECONOMY OVERVIEW

In 2019, Kazakhstan economy developed against the background of significant worldwide economy slowdown and its growth was primarily driven by construction, trade and transportation sectors. In 2019, Kazakhstan GDP increase by 4.5% was triggered mainly by consumers' demand and investments especially to the mining sector. Rise in real income, social benefits and retail lending expansion promoted retail turnover increase by 5.8%. In 2019, capital investments stepped up by 8.5%, however, the industry contribution to GDP was modest as the result of oil production restriction and frail demand for metals on global markets.

Gross domestic product dynamics

Source: Statistics Committee of the MNE of RK



INDUSTRY

In 2019, Kazakhstan production output grew by 3.8% with mining sector increase of 3.7%, triggered, in particular, by 0.2% acceleration in oil production and 15.8% in metals mining. In 2019, oil production flatline resulted from major facilities repair and drop in oil prices. Metals industry faced a better situation, primarily, due to the fact that certain major non-ferrous projects reached their designed capacity.

The manufacturing sector grew by 4.4 % demonstrating the increase in the output of food products and beverages (10.2%), oil refining products (6.6%), main precious and non-ferrous metals (6.8%) and machine building (20.9%) sector.

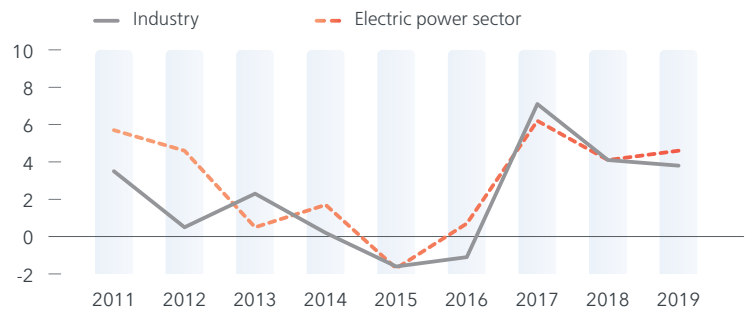
IPI in electric power, gas, and steam supply as well as in air conditioning sectors amounted 101.3%. The increase was mainly triggered by electricity production, transmission and distribution growth by 4.6%.

GDP 4,5 %↗

In 2019, Kazakhstan economy developed against the background of significant worldwide economy slowdown and its growth was primarily driven by construction, trade and transportation sectors. In 2019, Kazakhstan GDP increase by 4.5% was triggered mainly by consumers' demand and investments.

Production and electric power sector dynamics, in %

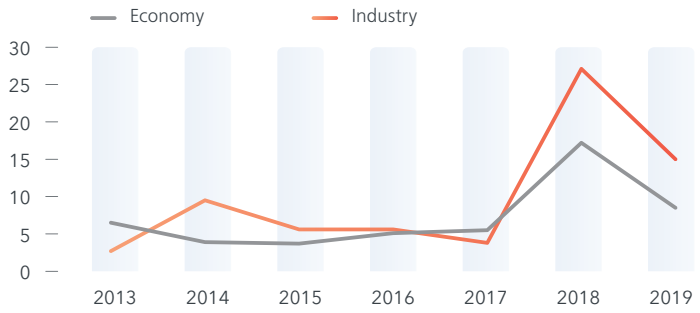
Source: SC MNE RK



INVESTMENTS

In 2019, capital investments rose by 8.5% with the industry investments growth by 15% including 61% oil&gas production investments. Electric power industry faced investments fall due to changes in the industry tariff regulation and investor exodus.

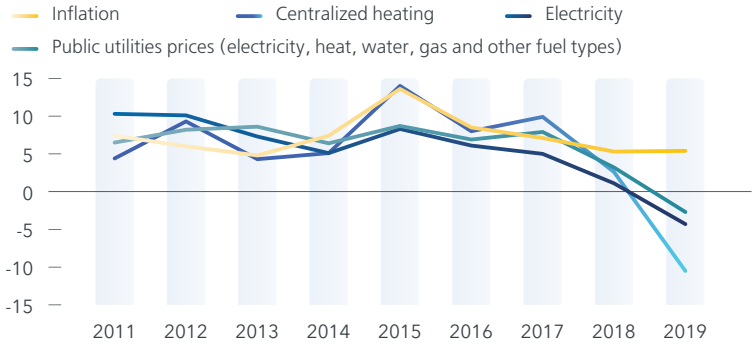
Capital investments dynamics, in %
Source: SC MNE RK



INFLATION

In 2019, the consumer price index amounted 5.4%. The rise in food products prices and Kazakhstan tenge depreciation exerted pressure on the inflation. During 2019 the public utilities prices were reduced by 2.7%, in particular, electricity retail prices dropped by 4.3%.

Inflation dynamics in Kazakhstan, in %
Source: SC MNE RK



OUTLOOK

The World Bank in its April outlook projects Kazakhstan GDP to contract by 0.8% in 2020 as external demand for crude and manufactured goods fall and exports are squeezed on as well as COVID-19 mitigation measures and locking down sap consumer demand and investment.

ENERGY SECTOR OVERVIEW

Electric power sector plays a significant role in Kazakhstan economy and development directly impacting health and comfort of people and social peace. This sector is also inextricably linked with business and industry activity in general securing jobs for approximately 150,000 people. However despite its scale and economic importance Kazakhstan electric power sector has lost its business appeal, however, it continues performing its social function.

Since 1 January 2019, a new electrical capacity market has been established resulting from the split of previously single electric power market into two separate segments, i.e., electric power and capacity niches.

The electric power distribution mechanism remained unchanged. Companies sell the electric power they generate either based upon bilateral agreements or through centralized trading at Kazakhstan Electricity and Power Market Operator JSC's stock exchange.

Electrical capacity is sold and purchased centrally through Financial Settlement Center of Renewable Energy LLP. National purchaser enters into electrical capacity purchase agreements valid for seven years to cover the anticipated deficit of power capacity under the approved annual balance. When selling electrical capacity generating companies assume obligations to maintain their equipment in due technical condition and to be continuously available to produce electric power.

These changes make the electric power sector unprofitable.

PRODUCTION

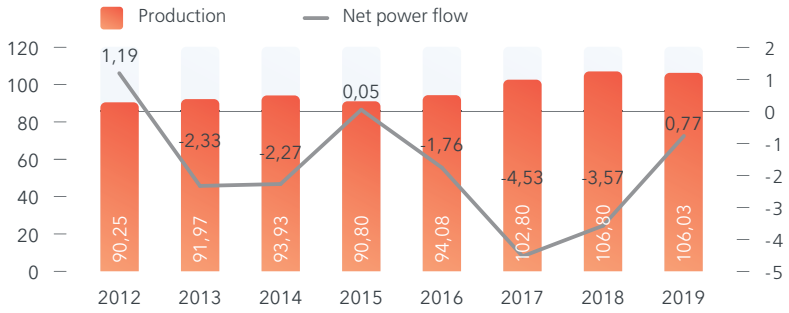
There are three distinguished zones in Kazakhstan power sector: North, South and West. The North zone is the Kazakhstan leader accounting for 77% generation and 67% consumption, respectively, as of 2019 year end. Surplus power produced in the North is transmitted to other regions.

According to KEGOC, the national power system operator, in 2019, electric power generation in Kazakhstan fell by 0.7% or by 767.3 mln kWh as compared to 2018 results amounting 106 bln kWh. Production in the North zone reduced by 1.2% or by 1 bln kWh that was partially compensated by output increase in the South zone (by 1.7% or 186.9 mln kWh) and the West zone (by 0.5% or 63.6 mln kWh).

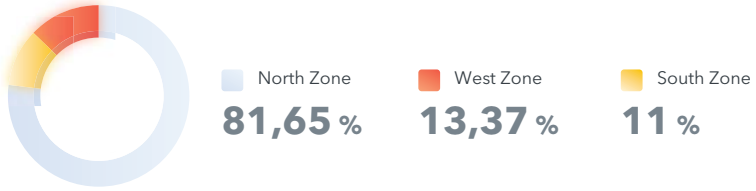
In 2019, electricity production by HEPPs reduced drastically (by 358.1 mln kWh or by 3.5%), TPP output fell by 840.1 mln kWh (1.0%) and GTPP generation contracted by 143.7 mln kWh (1.6%) as compared with 2018 year-end results. The power produced by photovoltaic power stations and biogas plants increased by 574.6 mln kWh (or more than twice) resulting in 1% RES share in the generation structure.

Samruk-Energy JSC is the biggest Kazakhstan power company that generated 28.5% electricity in 2019. It is followed by ERG Group with its 17.5% share in electric power generation. Based upon 2019 year results CAEPCO Group's electric power generation share amounted 6.6% that changed a little as compared to 2018 performance.

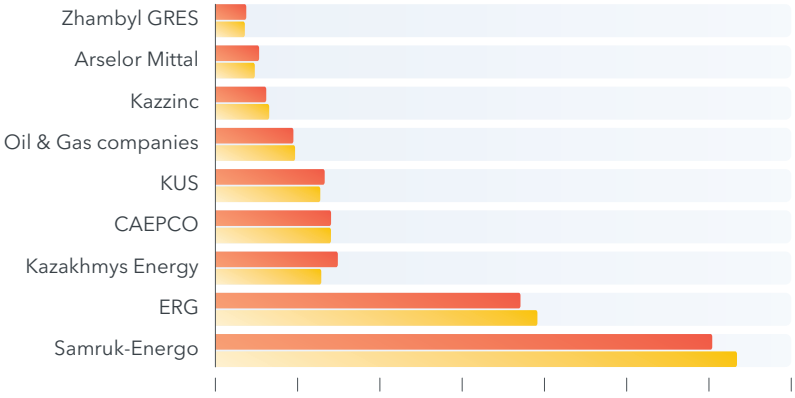
Electricity Production in RK and net power flow, in bln kWh
Source: KEGOC



Electric power production in 2019 by zones, in bln kWh
Source: KEGOC



Electricity production by major Kazakhstan power producers, in bln kWh
Source: Samruk-Energo JSC



Electricity generation by Source, in bln kWh
Source: KEGOC

Source	2017	2018	2019	Change	2019 ratio
TPP	82,42	86,80	85,96	-1 %	81 %
GTPP	8,37	10,30	9,98	-3 %	9 %
GES	11,16	9,10	8,98	-1 %	8 %
PPS, WPS and BGP	0.34	0.50	1,11	122 %	1 %

CONSUMPTION

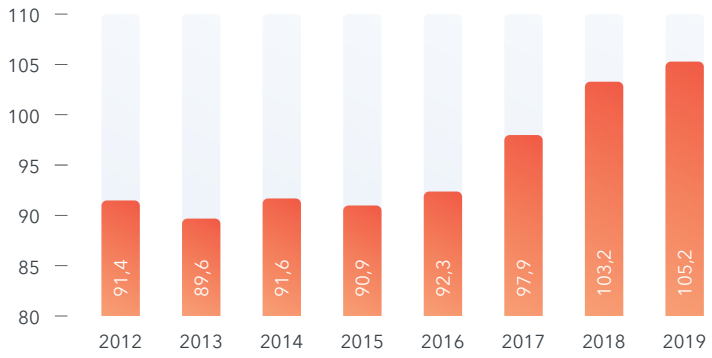
In 2019, electricity consumption grew by 1.96 bln kWh (1.9 %) and amounted 105.19 bln kWh. Consumption primarily increased in the North zone, i.e., by 1.197 bln kWh (1.8%). In the South and West zones electric power consumption grew by 0.74 bln kWh (3.4%) and 0.027 bln kWh (0.2%), respectively.

Substantially all major Kazakhstan production facilities boosted electricity consumption, for example, UKTMP JSC, Kazakhmys Smelting LLP and Kazzinc LLP increased their consumption by 192 mln kWh (28.3%), 153.7 mln kWh (15.0%) and 143.8 mln kWh (5.3%), respectively.

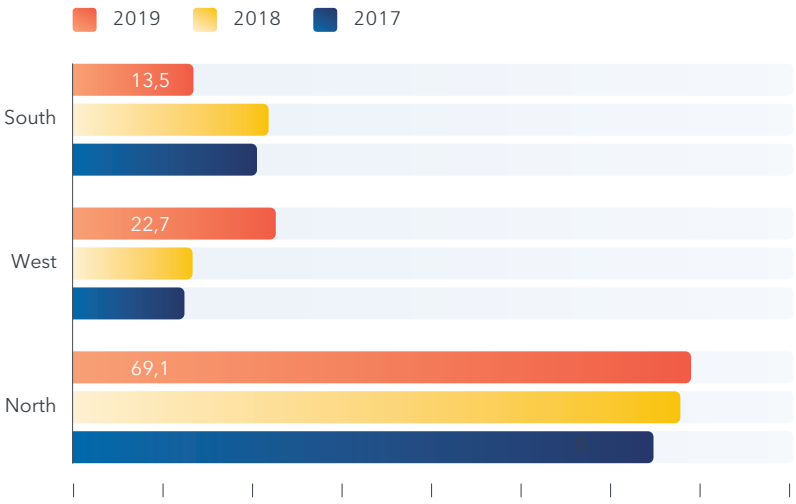
The maximum electric power consumption growth was reported in Karaganda (by 671.8 mln kWh or 3.9%) and Almaty (by 364.2 mln kWh or 3.3%) regions.

In 2019, electric power production exceeded consumption thereof by 836.7 mln kWh.

Electricity consumption in Kazakhstan, in bln kWh
Source: KEGOC



Electricity consumption by zones, in bln kWh
Source: KEGOC



NET POWER FLOW

In 2019, the net power flow from the Russian Federation amounted 133.5 mln kWh. The net power flow to the Central Asia was 908 mln kWh. This resulted in net export of 774.6 mln kWh (3,568.8 mln kWh in 2018).

CAPACITY

One hundred and fifty five (155) power plants generate electricity in Kazakhstan. As at 1 January 2020 the installed electrical capacity of such PPs amounted 22,936.0 MW and exceeded this indicator during the previous year by 1,034.0 MW. The market experienced the boost of installed electrical capacity from various energy sources, i.e., TPP, PPS, WPS, and HEPP capacity increased by 453.0 MW, 450.2 MW, 100.4 MW and 29.0 MW, respectively.

In 2019, the available capacity expanded from 434.0 MW to 19,329.0 MW against the background of maximum annual electrical load of 15,182.0 MW. As compared to 2018 results the maximum load rose by 359.0 MW or by 2.4%.

TARIFF REGULATION

Since 1 January 2019 the maximum tariffs policy has been replaced with the electrical capacity mechanism encouraging investments to the industry.

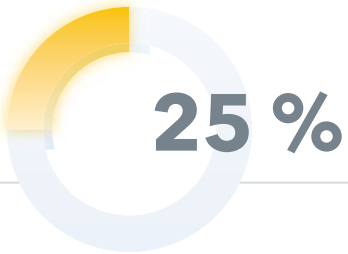
The tariff for electric power production is divided into two elements

- "electricity tariff" being a variable part ensuring electric power production costs recovery;
- "capacity tariff" being a constant part securing the recovery of investments made to construct new and upgrade, modernize, reconstruct, and/or expand existing electric capacity.

Installed and Available Capacity of Kazakhstan Power Plants, in MW (as at 1 January 2019/2020)

Source: Samruk-Energo JSC

Power Plants	Installed Capacity			Available Capacity		
	2019	2020	Growth	2019	2020	Growth
Total	21 902,0	22 936,0	1034,0	18 895,0	19 329,0	434,0
TPP	17 134,0	17 389,0	255,0	15 513,0	15 594,0	81,0
GTPP	1 802,0	1 999,0	197,0	1 520,0	1 662,0	142,0
PPS	146,8	597,0	450,2	125,4	364,0	238,6
WPS	181,6	282,0	100,4	114,5	149,0	34,5
HEPP	2 636,7	2 666,0	29,3	1 622,1	1 558,0	-64,1
BGP	1,1	1,06	0,04	0,6	0,5	-0,1



In November 2018, the Ministry of Energy of the Republic of Kazakhstan made a disputable decision to reduce electricity tariff applicable to all power companies in all Kazakhstan regions. In certain cases this reduction ran to 25%.

A uniform cap tariff will apply to all existing power stations for maintenance the availability of electric capacity and it will also be possible to enter into a separate investment agreement and get a special tariff for the whole capacity or any part thereof.

The consumer focused tariff policy allowed to maintain the prices for the goods and services of the electric power sector on a socially important level. New regulation has resulted in zero profit margin of electric power producers since 2019.

This disbalance of the consumer's interests and the needs of the power generating industry raise special concerns and make us prepare for deterioration in the power industry climate.

On 14 December 2018, without giving neither reasons nor clarifications, the Minister of Energy of the Republic of Kazakhstan (Order No. 508) excluded 12% power producer's profitability rate from tariff calculation formula. This change actually resulted in zero profitability of electric power generation since 2019 year turn giving rise to investors outflow from and liquidity shortage in the sector.

This norm was introduced against the backdrop of the increase of prices for the following main electricity tariff components: fuel costs, railway transportation costs, railway rolling stock costs, cost of transit via KEGOC JSC's network, RES maintenance costs. On top of that power generating companies had to index the salaries of their employees. Throughout the reported period power generating companies covered all their costs left out of the current tariff formula from bank borrowings and funds provided by private shareholders.

It is worth mentioning that the cut of investment programs or the failure to implement thereof due to liquidity shortage will result in critical equipment wear, power output fall, increase incidents rate and will extend the timing necessary to eliminate thereof. Most power companies exhausted their bank borrowing potential to cover the generation costs and current tariff policy imbalance. It is not unlikely that power generating companies will go bankrupt without state support with subsequent transfer of their assets to international and Russian banks exposing Kazakhstan to strategic risks related to power generation, transmission and sale.

Moreover, production assets are obsolete and technical wear call for emergency measures.

Energy sector specifics implies integration of power generation, transmission and consumption and the impossibility of accumulation and storage thereof. Therefore, any equipment failure makes it necessary to import power at higher prices from bordering states threatening Kazakhstan energy independence.

ELECTRIC POWER TRANSMISSION AND DISTRIBUTION

Twenty six EDCs operate throughout 14 regions and 3 cities of the republican significance having 0.4-220 kV power lines on their balance sheet and about 150 small power transmitting companies. The ownership structure of these companies varies. The physical wear of Kazakhstan power networks is 70% with losses running up to 18%.

Kazakhstan National Electric Network (NEN) (220 – 500 kV) is the backbone system ensuring cross-border and cross-regional transmission of electric power and capacity. It consolidates main PPs and load centers, secures interconnected operation of Kazakhstan unified energy system (UES) with the networks of neighboring states. Kazakhstan NENs are operated by KEGOC JSC performing additional functions of System Operator through its National Control Center.

Certain 220 kW PTLs are owned by major industrial groups and EDCs prevents interconnectors use to the best of its potential and makes it difficult to resolve certain issues related to UES optimization of operation mode to reduce losses.

The main problems faced by EDC networks are as follows:

- heavy wear of fixed assets;
- lack of regional development plans involving regional power network expansion (lack of standard technological policy);
- ownerless networks and networks financed by state or private entities;
- high power losses in EDC networks (18%) provided that the average losses amount 14% in Kazakhstan;
- low reliability of electric power supply and substandard power quality;
- real property registration, EDCs fixed assets;
- conflict of regulations adopted by Kazakhstan MNE and ME related to new consumers connection to networks;
- lack of uniform Kazakhstan standard, requirements to automated electricity metering devices;
- several EDCs and numerous power transmitting organizations (40 power transmitting organizations in Karaganda region) within one region;
- lack of EDC's owners interest in fixed assets upgrade, introduction of ASCAE (commercial losses) due to lack of sector investment appeal;
- inconsistent technical solutions due to the fact that power sector facilities are financed through local executive bodies (substations with underloaded transformers (Shymbulak 110 kV substation)), 20 kV voltage (Nur-Sultan), etc.;
- public private partnership financing results in the increase of the additional transmitting network companies (Khorgos International Centre of Boundary Cooperation).

EDCs consolidation would be a possible solution in this situation, Astana EDC JSC and AEDC JSC. Introduction of EDC tariff setting system would promote power network development and contribute to wear reduction.

It would be necessary to consider institution of a network connection charge (this charge was abolished earlier) and to transfer to EDC balance sheet all intermediary distribution networks (ownerless, state owned, private and other networks) connected to consumer's metering device.

All consumers should be covered by ASCAE. Structural reform providing for the transfer of System Operator's functions from KEGOC JSC to a separate entity (similar to UES of Russia) would also better the sector environment.

ELECTRIC POWER SUPPLY SECTOR

Kazakhstan electric power supply sector consists of power sales companies (PSO) purchasing electric power from generating companies or through centralized trading with subsequent retail thereof to ultimate consumers.

The main issue faced by heat sales companies is that current legislation prohibits the adjustment of cap tariff of heat sales companies due to changes, including those related to individual and other consumers relative share change because this results in the cap rate increase by consumer groups.

The Rules for Tariffs Design No. 90 dated 19 November 2019 fail to provide for a compensation of lossess resulting froa change in the relative share of the total volume of consumption by individuals and legal entities applying tariffs differentiated by consumer groups.

The funds not received because of such losses bring about the failure to timely pay for the power sold to heat and electricity consumers in breach of contractual obligations and the occurrence of accounts payable owed to goods and services suppliers.

It would be necessary to amend current regulations to introduce a possibility to take into the account the losses resulting from relative volume change during cap tariff applicability similarly to situations when emergency regulations are valid.

SECTOR OUTLOOK

As forecasted by the Ministry of Energy of the Republic of Kazakhstan, in 2020, power consumption will grow by 3% (to 108.8 bln kWh) and the generation will increase by 7% (113.8 bln kWh) with a surplus of 5 bln kWh.

However, the deterioration of economic situation as the result of COVID-19 fighting measures as well as an unfavourable climate on external markets for core Kazakhstan exporters will adversely affect power consumption in 2020. It is against this background that inefficient sector regulation may hamper the ability to upgrade and add capacity in electric power sector.

Forecast of UES Kazakhstan Electricity Balance, in bln kWh

Source: Ministry of Energy of the Republic of Kazakhstan

Indicator	2020	2021	2022	2023	2024	2025	2026
Electric power consumption	108,8	110,7	112,7	114,5	118,0	120,8	124,1
Electric power generation	113,8	113,5	116.1	120,9	123,5	128,1	128,5
Operating power plants	103,9	101,5	100,5	100,0	100,2	98,9	98,9
Planned power plants	9,9	12,0	15,6	20,8	23,3	29,2	29,6
Including RES	3,6	5,0	5,5	5,6	5,6	5,6	5,6
Surplus:	5,0	2,8	3,4	6,3	5,5	7,3	4,4

CAEPCO
Central-Asian
Electric Power Corporation

PERFORMANCE RESULTS and Development Prospects Overview

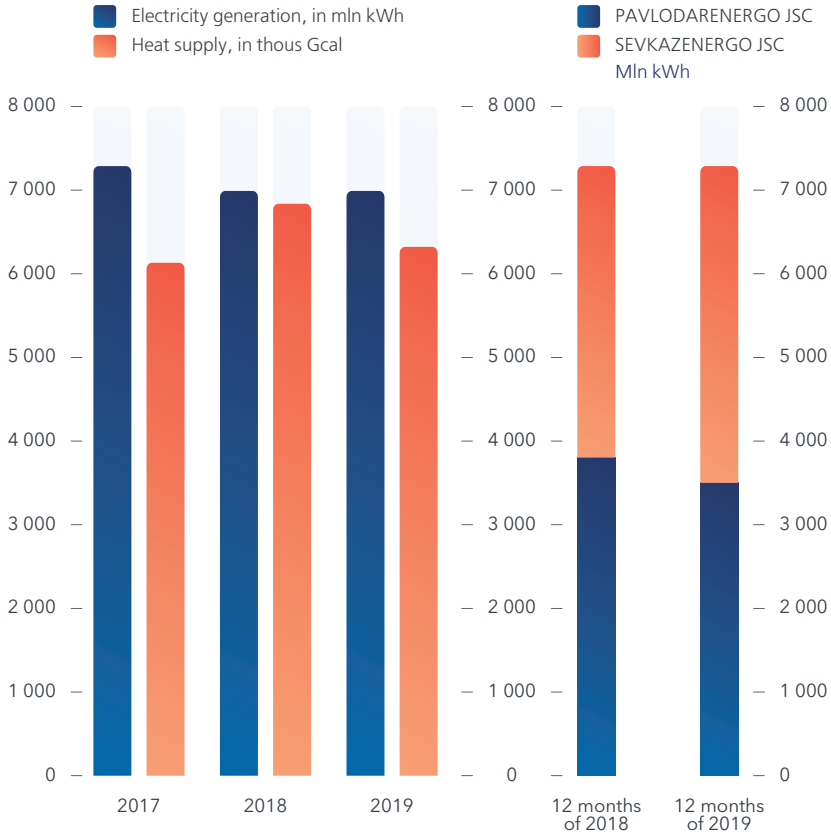
Production efficiency enhancement through technological sophistication and fixed assets and infrastructure upgrade is a key CAEPCO JSC's strategic goal. During the reporting year KZT 16.8 bln were allocated to production facilities modernization under the investment program.

ELECTRICITY AND HEAT GENERATION

In 2019, as part of the investment program the Corporation continued modernization of its equipment to increase generation, reduce its electricity and heat transmission losses and improve its environmental performance.

During 2019, electric power generation by CAEPCO Group of companies amounted 7,032.7 mln kWh demonstrating 0.1% increase compared to 2018 performance with 7,025.7 mln kWh generation.

In 2019, CAEPCO Group of companies generated 6,371.4 thous Gcal of heat evidencing 7.3% reduction compared to 2018 due to heat consumption fall by 8.9% and 3.2% at Ekibastuzteploenergo LLP of PAVLODARENERGO JSC and SEVKAZENERGO JSC, respectively. (During 12 months of the reporting year the average ambient air temperature was +4.0°C, however, in 2018, it was +2.0°C.).



PAVLODAR CHP–3 OF PAVLODARENERGO JSC

Pavlodar CHP-3 introduced a plant-wide control to optimize load carrying on the capacity market and installed PRANA, a system monitoring operation of the unique foundation of turbine-generator No. 6.

The third phase of ash dump site construction is in progress. This will secure continuous operation of the power plant and create a facility sufficient to dump ash for 10.5 years.

PAVLODAR CHP–2 OF PAVLODARENERGO JSC

A condenser at turbine generator No. 2 was reconstructed to avoid violations of water-chemistry requirements and to enable carrying rated electrical load.

EKIBASTUZ CHP OF PAVLODARENERGO JSC

Ekibastuz CHP proceeded with the 2nd phase of construction of its ash dump site in the bed of Lake Tuz and was renovating its buildings and structures.

PETROPAVLOVSK CHP–2 JSC OF SEVKAZENERGO JSC

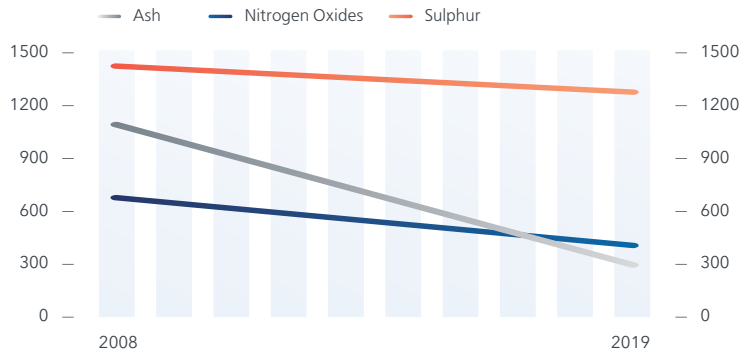
Autotransformer No. 6 was replaced.

Building of dams at the 3rd section of the ash dump site No. 2 was continued. This is one of the measures to ensure continuous operation of the power plant and to create an ash dump site enough for 7 years of use.

Reconstruction of the heat generation scheme at Petropavlovsk CHP-2 is in progress.

POWER GENERATION ENVIRONMENTAL IMPACT REDUCTION

Emissions of ash, nitrogen oxides and Sulphur, in mg/mn³



INSTALLATION OF TITANIUM EMULSIFIERS OF THE 2ND GENERATION

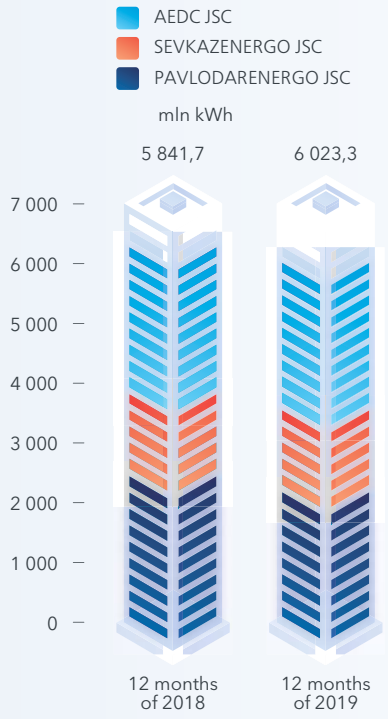
All boilers at PAVLODARENERGO JSC's PPs and Petropavlovsk CHP-2 of SEVKAZENERGO JSC were equipped with the 2nd generation titanium emulsifiers enhancing stack effluents purification and reducing environmental charges.

ASH DUMP SITES CONSTRUCTION

Ash dump sites were constructed using polysynthetic geomembrane preventing soil contamination to ensure ash storage for 25 years.

ELECTRIC POWER TRANSMISSION AND DISTRIBUTION

In 2019, the Corporation implemented several project to prevent power transmission losses and to enhance reliability of power supply to consumers.



In 2019, electric power transmission and distribution was 5,841.7 bln kWh and reduced by 3.0% compared to 2018 due to 1.7% fall in PAVLODARENERGO JSC Group, Ekibastuzteploenergo LLP inclusive, and SEVKASENERGO JSC.

CONSTRUCTION, MODERNIZATION AND TECHNICAL UPGRADE OF 0.4-10 KV POWER LINES OWNED BY

- Pavlodar EDC JSC (6.0 km);
- North-Kazakhstan EDC JSC (40.7 km, including 29.5 km of aerial bundled conductor lines);
- Akmola EDC JSC (59.593 km, including 58.438 km of aerial bundled conductor lines);

106,293 km

CONSTRUCTION AND MODERNIZATION OF 35-110 KV AERIAL LINES OWNED BY

- Pavlodar EDC JSC (21.7 km);
- Akmola EDC JSC (7.191 km);
- North-Kazakhstan EDC JSC (22.0 km);

50,891 km

MODERNIZATION OF 10-220 KV SUBSTATIONS OWNED BY

- Pavlodar EDC JSC (1 substation);
- North-Kazakhstan EDC JSC (6 substations);
- Akmola EDC JSC (2 substations);

9 substations

TECHNICAL LOSSES

- Pavlodar EDC JSC (8.57 %);
- North-Kazakhstan EDC JSC (7.83 %);
- Akmola EDC JSC (4.84 %).

6,9 %

INSTALLATION OF ASCAE METERS AT

- Pavlodar EDC JSC (1,554 meters);
- North-Kazakhstan EDC JSC (947 meters);
- Akmola EDC JSC (4,009 meters).

HEAT TRANSMISSION AND DISTRIBUTION

In 2019, CAEPCO Group heat transmitting companies were primarily involved in restoration and modernization of centralized heating networks in the region of their operations. They also reconstructed heat networks using polyurethane pre-insulated pipes allowing reduction of the number of technology disturbances and heat losses.

In 2019, the Corporation transmitted and distributed 4,573.8 thous Gcal of heat which volume reduced by 3.4% compared to 2018 due to transmission fall at PAVLODARENERGO JSC Group, including Ekibastuzteploenergo LLP, and SEVKAZENERGO JSC by 4.3% and 1.2%, respectively.

IN 2019, CALORIFIC LOSSES FELL COMPARED TO 2018

- by 1.1% (33 thous Gcal) in Pavlodar;
- by 1.6% (54 thous Gcal) in Ekibastuz;
- by 1.3% (40 thous Gcal) in Petropavlovsk.

LENGTH OF PRE-INSULATED PIPES USED TO IMPLEMENT THIS CONSTRUCTION AND MODERNIZATION PROJECT

- 1.706 km in Pavlodar;
- 1.584 km in Petropavlovsk

3,29 km

RECOVERY OF HEAT PIPE INSULATION USING POLYURETHANE SHELL

- 1.245 km in Petropavlovsk.

Automatic heat flow regulators, industrial controllers and modems are installed at heat-transferring enterprises of the Corporation to connect their mechanisms and instrumentation with the dispatch service. All equipment at heat distribution facilities is integrated into a single network allowing dispatchers to carry out real-time monitoring of water pressure and temperature and to make prompt decisions in case of an accident or emergency.

Furthermore, the Corporation uses advanced technology to detect the causes of heat losses, such as thermal imaging devices for pipeline monitoring and diagnostics and ultrasonic flaw detectors.

5,3 %

Upon the above projects implementation at CAEPCO Group of companies the aggregate heat loss will be reduced by 5.3% by the end of 2020 as compared to 2015 turn.

CAEPCO JSC'S PROGRAM OF CENTRALIZED HEAT NETWORKS MODERNIZATION IN PAVLODAR, EKIBASTUZ AND PETROPAVLOVSK

IMPLEMENTATION PERIOD

2016 – 2020

PROJECT BUDGET

- KZT 9.3 bln EBRD loan;
- KZT 9.3 bln of state funds under Nurly Zhol Program;
- KZT 7.35 bln of Corporation's funds.

GOALS

- Enhancement of heat supply reliability and power use efficiency;
- Reduction of losses and environment standards improvement in Pavlodar, Ekibastuz and Petropavlovsk by way of CO_2 abatement.

PERFORMANCE TARGETS

This program implementation will result in

- 109 thous tonnes of fuel savings per annum;
- 168 thous tonnes of CO_2 abatement per annum.

PECULIARITIES

Modernization under this Program implies utilization of pre-insulated pipes that guarantee

- highly efficient thermal insulation;
- advanced equipment reliability;
- 25 year standard life cycle.

PLANS FOR 2020

In 2020, the Corporation intends to increase electricity production by 4.8 % compared to 2019 up to 7,371 mln kWh and to reduce heat supply by 8.2 % compared to 2019 to 5,850 thous Gcal based upon scheduled heat supply to consumers.

PAVLODARENERGO JSC'S CHP-3 plans to upgrade the condenser at turbine generator No.5 to maintain water-chemical regime and rated electrical load.

In 2020, Pavlodar CHP-3 will continue the 3rd phase of its ash dump construction with completion anticipated in 2023.

PavlodarCHP-2 has scheduled the expansion of the 2nd stage of its ash dump site to ensure ash storage for 5 years.

Construction of the ash dump site will be continued at Ekibastuz CHP. It also plans modernization of its potable water supply system involving the transfer of its tank to store service water that will enhance the operational reliability of the station and reduce potable water costs.

Petropavlovsk CHP-2 of SEVKAZENERGO JSC will continue the construction of dam no. 3 of ash dump site No. 2, installation of 6AT autotransformer and renovation of the heat capacity output scheme.

In 2020, a total of 6.21 km of heat networks using pre-insulated pipes will be built and renovated, including 2.428 km in Pavlodar, 3.782 km in Petropavlovsk, as well as 1.496 km of heat pipes with polyurethane insulation in Ekibastuz.

In 2020, investment projects will include the following:

- *construction, renovation and upgrading of 0.4-10 kV electrical networks with a total length of 164.18 km as follows: 25.0 km in North Kazakhstan EDC JSC, 37.18 km in AEDC JSC, and 102.0 km in Pavlodar EDC JSC;*
- *construction and renovation of 35-110 kV overhead lines with a total length of 22.182 km, split between North Kazakhstan EDC JSC and AEDC JSC (22.0 km and 0.182 km, respectively);*
- *renovation of five 35 kV substations, including 3 in Pavlodar EDC JSC, 1 in North Kazakhstan EDC JSC, and 1 substation in Akmola EDC JSC.*

PROCESS AUTOMATION

In 2019, CAEPCO JSC continued to implement integrated projects for the modernization and automation of production, monitoring and related information systems to improve productivity, transparency and cost-effectiveness.

ELLIPSE

The development of automated property, plant and equipment management system based upon ABB Ellipse system enables resolution of the following issues

- setting a transparent planning process and monitoring works performance by contractors;
- ensuring transparent materials (purchase, transition, written off) and labor flow under contracts with SEVKAZENERGO JSC and PAVLODARENERGO JSC;
- establishment of an internal tool to control materials use and labor allocated to technical maintenance and repair by contractors.

MOBILITY

In 2019, Pavlodar EDC JSC completed deployment of Mobility, an application fully integrated into Ellipse system. Mobility allows its user to remotely issue work assignments, manage inventory and monitor the equipment, provide quick access to historical and regulatory data. As part of Mobility project a mobile application was designed for workers involved in field maintenance and repair of infrastructure facilities.

PACS (HEAT)

In 2019, Pavlodar Heat Networks LLP, Petropavlovsk Heat Networks LLP and Ekibastuzteploenergo LLP put into commercial operation PACS, a system for automatic processing of applications from new customers ensuring transparent customer service.

Upon PACS project implementation the companies reduced the timing for connecting consumers as well as simplified and optimized the entire process of connecting new customers to their infrastructures.

ASCAE

This project implementation commenced in 2013 was continued to expand the consumer coverage. By the end of 2019, more than 91 thous consumers (more than 17.5% of total consumers) were equipped with “smart” metering devices, including more than

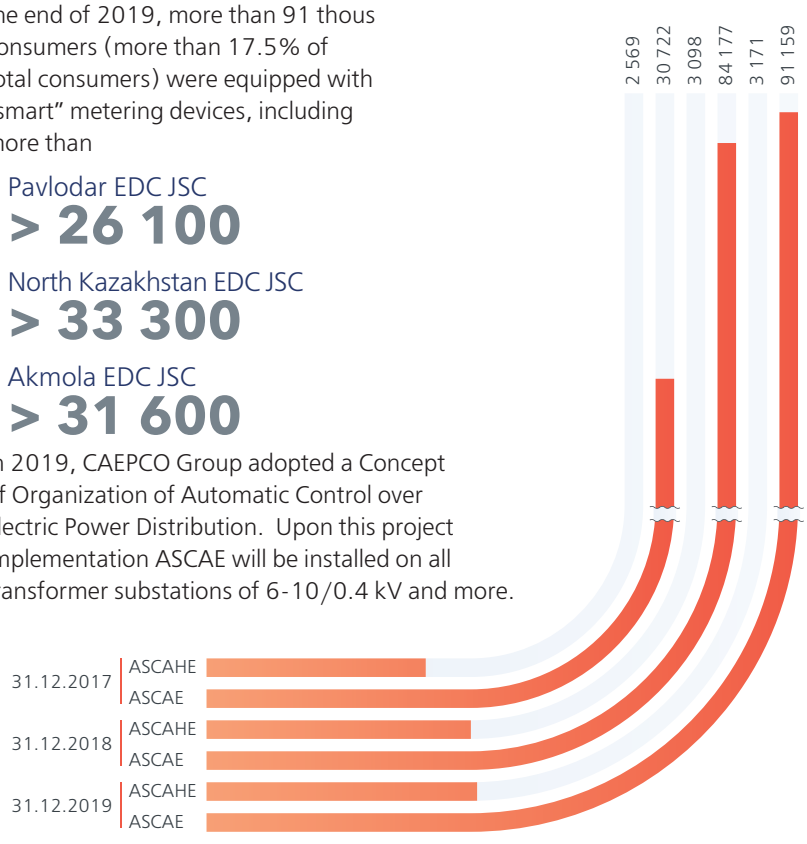
- Pavlodar EDC JSC
  > 26 100
- North Kazakhstan EDC JSC
  > 33 300
- Akmola EDC JSC
  > 31 600

In 2019, CAEPCO Group adopted a Concept of Organization of Automatic Control over Electric Power Distribution. Upon this project implementation ASCAE will be installed on all transformer substations of 6-10/0.4 kV and more.

ASCAHE

As at 31 December 2019 more than 9,200 users were equipped with heat metering devices in Pavlodar, Petropavlovsk and Ekibastuz and more than 3,100 devices were integrated into ASCAHE system. This improved the efficiency of heat data collection to monitor consumption of heat and reduce overdue payments by customers.

The system makes it possible to quickly detect losses and off-the-meter heat consumption as well as to take appropriate measures to prevent such losses and to save heat by households.



BILLING

In 2019, a unified corporate billing system covering both legal entities and individuals for electricity and heat was fully implemented in Astanaenergosbyt LLP and Pavlodarenergosbyt LLP.

This program included the following projects

- **Electricity and Heat Billing.** The system contains a feature automatically determining the amount of electricity and heat to be consumed during the billing month and reversing such amount upon the receipt of actual meter readings.
- **Automatic download of electricity and hot water meter readings.** The system provides for verification of received electricity and hot water meter readings.
- **Actions and Legal Proceedings:** The billing system features automatic calculation of litigation expenses, payments acceptance, automatic allocation of payments to subaccounts related to litigation expenses, legal expenses recording and accounting by actions.
- The billing system implemented by **Astanaenergosbyt LLP** features Commercial Service function providing for automatic calculation, payments collection, accounting and monitoring connection of new consumers when processing accounts receivable.
- The billing system implemented by **Pavlodarenergosbyt LLP** contains unified payment document (UPD) feature applicable to both individuals (collection of payments from third party organizations under UPDs) and legal entities (electronic tax invoices issuance).
- **Analytical statement and other report forms.**
- **Pavlodar EDC JSC and Pavlodar Heat Networks LLP** implemented the applications used by power transmitting companies to enter data (metering devices (MD) installation/removal, MD readings, calculation of power consumed by clients having no MDs installed, calculation of power consumed in breach of agreements/ legislation, heat chambers connection/disconnections, etc.) and to determine the amount of consumed power.

CAEPCO JSC's billing system implemented by the Group's sales and transmitting companies unified electricity and heat calculation algorithms and the operations of consumer servicing functions at the Group's power selling members. The billing system enables control over electricity and heat power accounting and reversals and minimizes hand calculations.

THESIS DOCUMENT AND TASK MANAGEMENT SYSTEM

CAEPCO Group of companies implemented Thesis system automating all their critical operational processes. In 2019, the following issues were resolved within this project:

- automation of goods procurements under the approved purchasing plan and budget for the relevant financial year;
- integration of employees related data based upon 1C: Human Resources data base;
- automation of filing application to revise access rights to the Holding IT systems;
- unification of document forms;
- automation of certain HR documents preparation;
- automation of financial processes commencement.

PLANS FOR 2020

In 2020, CAEPCO Group members will continue complex modernization and production process automation and plan

- *to integrate in ASCAE more than 200 substations of 35 kV and more and approximately 400 transformer substations of 6 – 10 / 0.4 kV;*
- *to automate the processes related to human resources;*
- *to automate financial processes;*
- *to upgrade/improve "Front Office/Records Keeping" system module.*

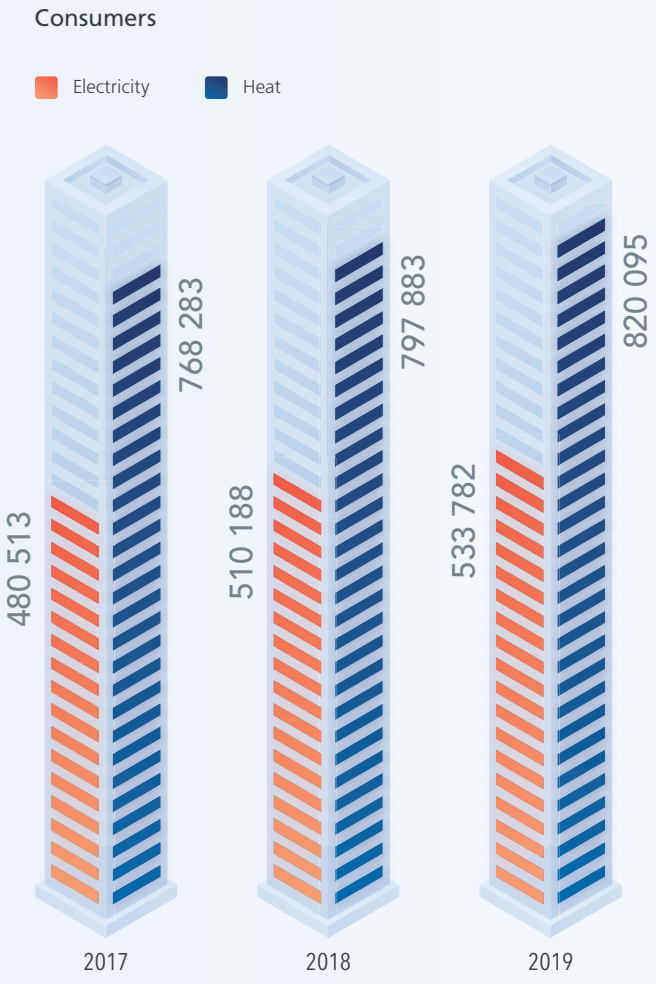
ACTIVITIES OF SALES COMPANIES

In 2019, all operations of sales companies within CAEPCO Group were based upon transparency and full compliance with applicable legislation.

ACCOUNTS RECEIVABLES MONITORING

In 2019, the Group's sales companies kept upgrading their payments calculation and collection systems to improve the following aspects:

- continuous control over accounts receivable by consumer;
- determination of internal and external aspects affecting accounts receivables, structure and dynamics thereof;
- assessment of efficiency and impact of implemented measures on overall financial standing;
- analysis and outlook;
- seeking support of regional and city Akimats to resolve operational issues.



CONSUMER COMMUNICATIONS

In 2019, Astanaenergosbyt LLP and AEDC JSC Group established their official accounts in Instagram in addition to existing social media touch points previously created by SEVKAZENERGO JSC and PAVLODARENERGO JSC all boosting easy and prompt provision to the consumers of information about the Company, tariffs applicable to its services, payment methods, payment acceptance outlets, etc.. Users can also submit their requests and resolve various issues through these accounts.

SERVICE CENTERS

CAEPCO Group sales companies continued to better the services rendered by their front offices and call centers. In 2019, the Group's call center operators routinely processed more than 1.5 million calls advising consumers on power supply matters and accepting meter readings from households. Sales companies also conducted consumer surveys to contribute to service quality refinement.

The following additional ways of meter readings submission were introduced in the reporting year:

- SMS;
- voice mail;
- WhatsApp mobile application.

The following CAEPCO JSC's sales subsidiaries took below measures to provide better customer service.

SEVKAZENERGOSBYT LLP

- An additional front desk was introduced in Service Center No. 1 to process utility payments as suggested by interdepartmental commission;
- Sevkazenergosbyt LLP made it possible for legal entities to pay for the services via self-service kiosks and mobile applications;
- In 2019, Sevkazenergosbyt LLP expanded its services through Integrated Information and Settlements Center (IISC) by concluding agreements with new services providers as well as supplemental agreements with the companies rendering utility and maintenance services. IISC is primarily engaged in calculation of charges, invoices generation, printing and delivery, payments collection and advising on the indebtedness and calculations.

PAVLODARENERGOSBYT LLP

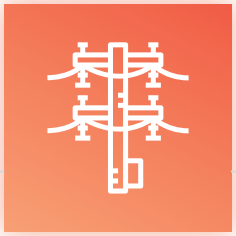
- In 2019, Pavlodarenergosbyt LLP switched to Integrated Billing System that automated and unified heat and electricity accounting and improved consumer servicing through prompt calculation of the cost of actually consumed electricity and heat and offered its consumers online service and information via their personal accounts;
- In 2019, personal accounts were integrated into recently implemented billing system and applied to households in Pavlodar region and Aksu.
- In July 2019, four additional self-service kiosks with card readers were purchased which increased the number of payment kiosks to 11 and 2 operating in Pavlodar and Ekibastuz, respectively.

AEDC - ENERGOSBYT LLP

- Certain arrangements were made to make it possible for legal entities to pay for consumed electricity via self-service kiosks.
- In 2019, AEDC-Energosbyt LLP entered into agreements with Astana ISC LLP (Astana Integrated Settlements Center) to include electricity payments of the consumers residing in Lesnaya Polyana Residential Area in Kosshy settlement and in International settlement in Tselinograd region into one payment document, and also concluded agreements with Kazpost JSC to deliver invoices to Akmola region households.

ASTANAENERGOSBYT LLP

- In November 2019, Astanaenergosbyt LLP's Service Center employees were trained (with the assistance of Population Servicing Center's representatives) to work on e-gov platform in connection with address certificate abolishment in Kazakhstan.
- Astanaenergosbyt LLP cooperated with Astana Innovations JSC to update locations of Astanaenergosbyt LLP's Service Centers in Smart Astana mobile application.
- Astanaenergosbyt LLP cooperated with Nur-Sultan Akimat's Media Office and with the Astana City iKomek 109 Monitoring and Emergency Response Center to address the complaints against Astanaenergosbyt LLP.



In 2019, CAEPCO Group sales amounted 4,894.98 mln kVh demonstrating 9% increase compared to 2018 performance, and its heat sales totalled 11,016 thous Gcal with approximately 3.6% reduction compared to the previous year sales.

QUALITY IMPROVEMENT

In 2019, the Corporation continued the refinement of its quality management system under ISO 9001: international standard and its subsidiaries

- Sevkazenergosbyt LLP
- Pavlodarenergosbyt LLP

successfully underwent their first ISO 9001:2015 Quality Management System compliance audits which evidence high quality of the services they render.

CONSUMERS HEALTH AND SAFETY ARRANGEMENTS AT SALES COMPANIES

All CAEPCO Group sales companies commit to ensuring safe and healthy environment for their consumers by having their service centers equipped/supplied with

- skid-proof rubber rugs at the entrances to prevent people falling;
- ramps or personnel call buttons to help physically challenged visitors;
- video surveillance systems;
- first aid kits with necessary pharmaceuticals;
- air conditioning systems;
- fire and security alarms as well as emergency fire-fighting equipment, evacuation plans and safe emergency exits.

PLANS FOR 2020

- *introduction of interactive services providing for submission of various electronic requests, online data generation at e-gov in Service Center No. 1 of Sevkazenergosbyt LLP;*
- *organization and introduction of Personal Accounts for services providers at the existing Integrated Settlements Center;*
- *further expansion of Integrated Settlements Center functions at Pavlodarenergosbyt LLP and Sevkazenergosbyt LLP to enhance cooperation with utility services providers, condominium management bodies and other organizations servicing consumers;*
- *establishment of an additional service center in Pavlodar;*
- *functional extension of Personal Accounts in the software used in all cities of Pavlodar region and use of Personal Accounts for business consumers;*
- *deployment of 1C Billing system in the heat supply sector of Pavlodarenergosbyt LLP;*
- *introduction into commercial operation of 1C Billing system in AEDC-Energosbyt LLP to unify and automate electricity accounting;*
- *full use of WhatsApp messenger and other applications for meter readings submission and acceptance to improve consumer services.*

PROCUREMENT AND SUPPLY

Timely and fully meeting the need in goods, works and services along with efficient spending are key purchasing priorities of CAEPCO Group.

In 2019, the Holding worked hard to improve its procurement processes and to optimize the number of buyers in its procurement department. Upon the adoption of amendments to the Rules for Natural Monopolies Operations in August 2019 (Order No. 73 of the Minister of National Economy) CAEPCO Group added new requirements to its procurement procedure.

As of the reporting year end the following objectives were attained:

- annual procurement plan was implemented;
- supplies and payment report forms were introduced;
- a new procurement organization structure was approved.

In 2019, CAEPCO Group entered into 2,842 agreements valued at KZT 58 bln with 92% share of contracts with Kazakhstan-resident entities.

PLANS FOR 2020

- *transition to electronic procurement;*
- *updating purchasing processes and regulations as well as standard forms of procurement documents;*
- *Improvement of commercial effectiveness of budgeted funds spending.*

FINANCIAL AND ECONOMIC INDICATORS

The consolidated financial statements of the Company for 2019 were prepared in accordance with the International Financial Reporting Standards. The accounting principles are equal for all enterprises of the Company. The key financial and economic indicators of the Company demonstrate the effectiveness and efficiency of its operational and financial activities, as well as the achievement of the Company's strategic development targets.

Key financial and economic indicators for 2017 – 2019, in kzt mln

INDICATORS	2017	2018	2019
Income from core activities	131 652	143 880	137 195
Prime cost	(100 295)	(114 310)	(116 318)
Gross profit	31 357	29 571	20 878
Expenses of the period	(11 178)	(12 667)	(11 085)
Profit from operating activities	20 178	16 903	9 793
Total EBITDA for the year*	31 865	29 405	20 004
Total EBITDA for the year, margin in %	24,2 %	20,44 %	14,58 %
Goodwill impairment	(737)	–	(282)
Foreign exchange loss	181	(5 479)	(10)
Income tax expenses	(3 613)	(2 232)	(1 829)
Net profit (loss) for the year	**10 639**	**1 600**	**(5 044)**
Total income (loss) for the year	**10 639**	**1 584**	**(5 078)**
Assets	**310 023**	**314 089**	**319 211**
Equity	**149 785**	**144 665**	**136 342**
Capital expenditures on fixed assets	**22 685**	**21 118**	**16 832**

**Total EBITDA excludes exchange rate difference*

INCOME FROM SALE OF PRODUCTS / SERVICES

In 2019, the Corporation produced electricity and heat (including transmission and sale of purchased energy) for a total amount of KZT 137,195 mln, which is KZT 6,685 mln or 4.6% less compared to 2018, в including: income from sale and transmission of electricity reduced by KZT 3,979 mln or 3.9 %, income from sale and transmission of heat fell by KZT 3,208 mln or 7.7%, income from other activities grew by KZT 502 mln.

The main factors that affected income from electricity sale in 2019 compared to the previous year were as follows:

- revenues from electricity sales reduced by KZT 3,314 mln or by 4.1% compared to 2018 due to fall of commercial output of electricity by 261 mln kWh or 3.3%, including reduction by 230 mln kWh (7.6%) in Pavlodarenergo JSC because of curtailment of demand of its major consumers, and commercial output decline by 97 mln kWh or 4.7% in Astanaenergosbyt LLP;
- revenues from electricity transmission decreased by KZT 664 mln or 3.1% due to reduction of power transmission via the grids of Pavlodar EDC JSC by 144 mln kWh (or 6.1%), via SKE JSC by 22 mln kWh (or 1.7%) or Astana EDC JSC by 16 mln kWh (or 1.0%);

- revenues from heat transmission fell by KZT 420 mln or 4.5% because of heat transmission downswing by 144 thous. Gcal or 4.3% Pavlodarenergo JSC and by 16 thous. Gcal or 1.2% in Sevkazenergo JSC;

- revenues from heat sales decreased by KZT 2,789 mln or 8.6% owing to heat commercial output reduction by 379 thous. Gcal (7.9%) in Pavlodarenergo JSC, by 279 thous. Gcal (4.3%) in Astanaenergosbyt LLP and by 15 thous. Gcal (1.1%) in Sevkazenergo JSC.

COST OF PRODUCTS/ SERVICES SOLD

In 2019, the cost of electricity and heat sold was KZT 116,318 mln, i.e., KZT 2,008 mln or 1.8 % more compared to 2018. This increase was caused by higher operating expenses under the following items:

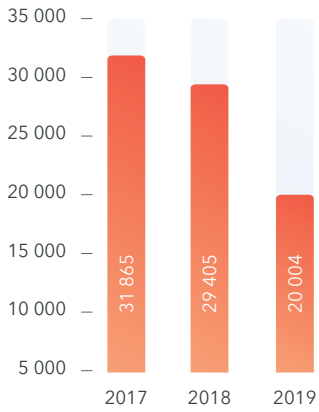
- "Fuel" (6.2%);
- "Remuneration of Labor" (4.9%);
- "Materials" (33.6%);
- "Repair" (21.5%);
- "Electricity Sale Services" (25.7%);
- "Wear and amortization" (10.4%)

The cost structure of the Corporation is dominated (45.5%) by the cost of purchased energy (heat and electricity), including services related to its further distribution to consumers. In 2019, these costs reduced by KZT 1,522 mln, or 3%, due to fall in the volume of energy purchased and services related to its sale. The costs under item "Electricity Sale Services" increased due to introduction of electrical capacity market in Kazakhstan starting from 1 January 2019. The growth in the average price for coal (taking into account railway delivery costs) by 3.5% and fuel oil price by 37.8% triggered "Fuel" item costs rise by KZT 1,268.2 mln or 6.2%. Moreover, prices for petrol, diesel fuel, oil and other fuels and lubricants as well as materials needed to operate core production equipment increased by 33.6% in the average. Increase in "Repair" costs by KZT 1,362.5 mln was caused by an increase in the prices of materials cost and price of installation and construction works and repair volumes in line with the rate estimates approved for the year.

DYNAMICS OF TOTAL EBITDA

In 2019, EBITDA (excluding exchange rate difference) amounted to KZT 20,004 mln, i.e., KZT 9,401 mln or 32% less compared to 2018. The main reasons of reduced operating efficiency included a decline in gross income by KZT 8,693 mln or 29.4%.

EBITDA for the year, in KZT mln



**Total EBITDA excludes the exchange loss*

Operating EBITDA was chosen as the main indicator of the Corporation's performance. This indicator does not account for other income, revenue from financing, nonmonetary component of exchange rate difference-related liabilities, wear, amortization and non-recurring or erratic cost items that have no impact on the core operations of the Corporation. In 2019, operating EBITDA of the Corporation was KZT 19,994 mln showing KZT 3,931 mln or 16 % reduction compared to 2018 due to the following factors:

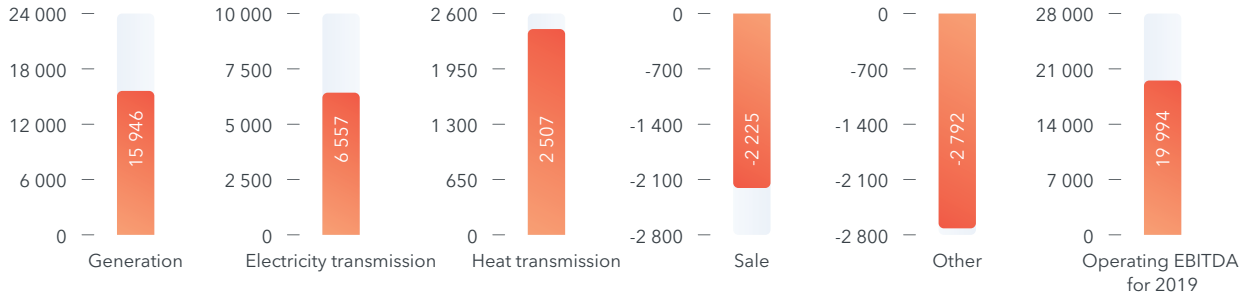
- The main (high-priority) margin segment in the structure of operating EBITDA is production of electricity and heat (KZT 15,946 mln), a decline of KZT3,992 (or 20 %) compared to 2018 is caused by gross profit reduction and increase in the prime cost of this activity.

- In the segment "Transmission and Distribution of Electricity", the indicator rose by KZT 1,428 mln (or 28%) due fall of foreign exchange loss.

- In the segment "Transmission and Distribution of Heat", EBITDA increased by KZT 1,525 mln thanks to prime costs reduction.

- In the segment "Sales of Electricity and Heat", EBITDA declined by KZT 4,178 mln primarily as the result of gross profit fall.

Operating EBITDA by segment, in KZT mln



CHANGES IN NET INCOME/LOSS

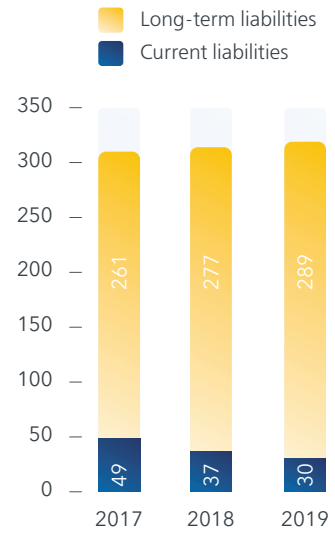
Income from operating activities in 2019 amounted KZT 9,793 mln (7.1 % to the income from sales); profit decreased by KZT 7,110 mln or 42 % due to the following reasons:

- decline of income from core activities by KZT 6,685 mln
- • growth in cost of core activities by KZT 425 mln
- In 2019, based upon audit results aggregate losses amounted KZT 5,077 mln showing an increase by KZT 6,662 mln compared to 2018. This was caused by:
  - rise of financial expenses (net) by KZT 1,251 mln or 18.3%;
  - non-core activities expenses (as adjusted based upon audit results) by KZT 1,315 mln;
  - income tax reduction by KZT 402 mln;
  - change in fixed assets valuation as well as ash dump sites rehabilitation obligations by KZT 16 mln and KZT 34 mln, respectively.

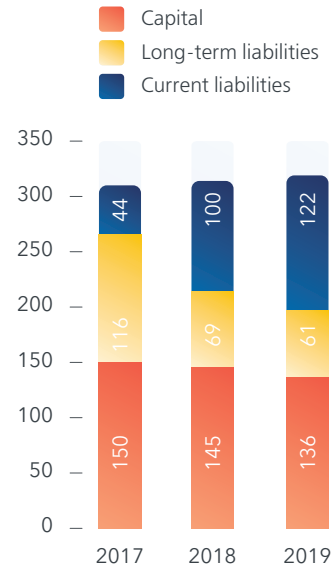
2019 FINANCIAL AND ECONOMIC INDICATORS BY SEGMENTS, IN KZT MLN

Indicator	Electricity and heat production	Electricity transmission and distribution	Heat transmission and distribution	Sales of electricity and heat	Other	Total
Income from core activities	63 973	24 455	7 622	98 731	-57 586	**137 195**
Prime cost	-51 508	-18 724	-6 317	-96 932	57 163	**-116 318**
Gross profit	12 465	5 731	1 305	1 798	-422	**20 878**
Expenses of the period	-3 328	-2 484	-1 332	-3 700	-240	**-11 085**
Income from operating activities	9 137	3 247	-27	-1 902	-662	**9 793**
Financial expenses, net	-4 395	-1 373	-924	-435	-976	**-8 103**
Income/loss from exchange rate difference	-44	-24	30	36	-8	**-10**
Impairment of financial assets; goodwill	-1 480	-26	9	-744	-2 353	**-4 594**
Other	-829	-122	1 250	115	-714	**-300**
Income tax expenses	-297	-370	-193	-465	-504	**-1 829**
Net profit of the year	2 092	1 331	145	-3 395	-5 217	**-5 044**
Operating EBITDA by segment	**15 946**	**6 557**	**2 507**	**-2 225**	**-2 792**	**19 994**

Assets, in KZT mln



Liabilities, in KZT mln



ASSETS AND LIABILITIES

As of 31 December 2019, total assets of the Corporation amounted KZT 319,211 mln, i.e., KZT 5,122 mln or 2% more compared to 2018. As of 31 December 2019, the value of fixed assets was KZT 263,940 mln or 82.7 % of the value of all assets. As a part of its investment program, in 2019, the Corporation allocated KZT 16,832 mln to unfinished construction and acquisition of fixed assets, as well as to commissioning of new and upgraded facilities from the current period and from the previous years.

Other financial assets include deposits with flexible conditions of partial replenishment and withdrawal. Deposits consist of funds accumulated by the Corporation for loan service, investment program financing and maintenance of current assets.

The issued share capital of the Corporation is 50 mln ordinary shares. As of 31 December 2019, the value of completely paid ordinary shares was KZT 46,043 mln.

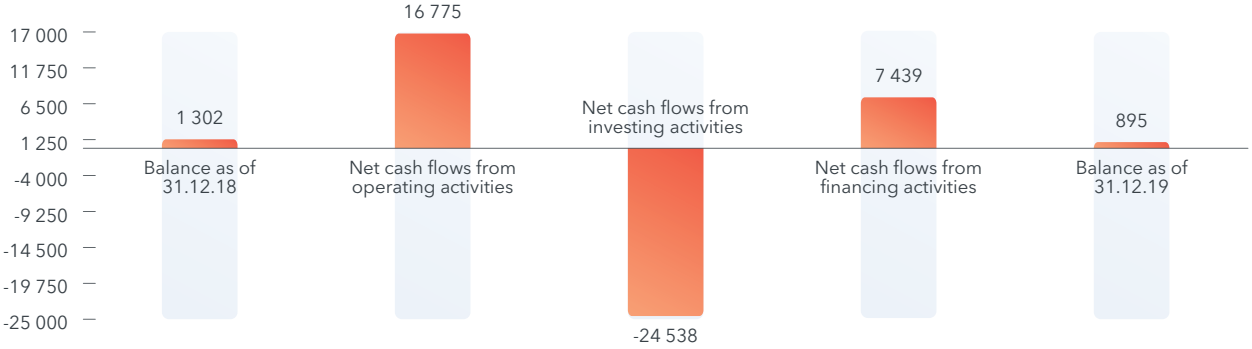
Longterm loans mainly include loans from the EBRD, ADB, Sberbank of Russia JSC obtained to finance the long-term investment program for reconstruction and modernization of the Corporation's assets.

Total financial debt as of the end of the reporting year was KZT 82,375 mln, however, the Corporation maintains financial stability.

CASH FLOW

In 2019, cash flow from operating activities tended to reduce because of the cut in sales and transmission of electricity and heat. Net inflow from operating activities amounted KZT 16,775 mln showing a reduction by KZT 4,751 mln (or 22%) compared to 2018.

The most significant cash outflows from investing activities amounting KZT 24,538 mln were caused by the investment program, as well as accounts payables payment. Significant outflows from financing activities were caused by repayment of bank loans amounting KZT 7,439 mln. Total net cash as of the end of 2019 was KZT 895 mln.



CORPORATION DEVELOPMENT STRATEGY

The Strategy of the Corporation establishes the main directions for its business growth, management projects and technology. Building a vertically integrated private power company rendering its consumers consistent and reliable services through synergy of generation, distribution, transmission and guaranteed sales of both electricity and heat is CAEPCO JSC's strategic goal.

CAEPCO JSC ranks No. 3 in Kazakhstan power sector in terms of capital investments to production facilities renovation and upgrade.

STRONG AREAS

- monopolistic status of the Holding on heat production and distribution as well as electricity distribution market of the Holding's operations.
- diverse portfolio of consumers and stable demand of various clients;
- a vertically integrated company having a full cycle of heat and electricity supply from generation to distribution to ultimate consumers;
- vast experience gained as the result of participation of national and international shareholders in the Holding's capital;
- focus on advanced technologies and progressive Corporation Development policy;
- implementation of a large-scale investment program (KZT 216.1 bln) ranking No. 3 in Kazakhstan in terms of investments among electric power companies.
- reliable business relations with partners and Corporation's business units.

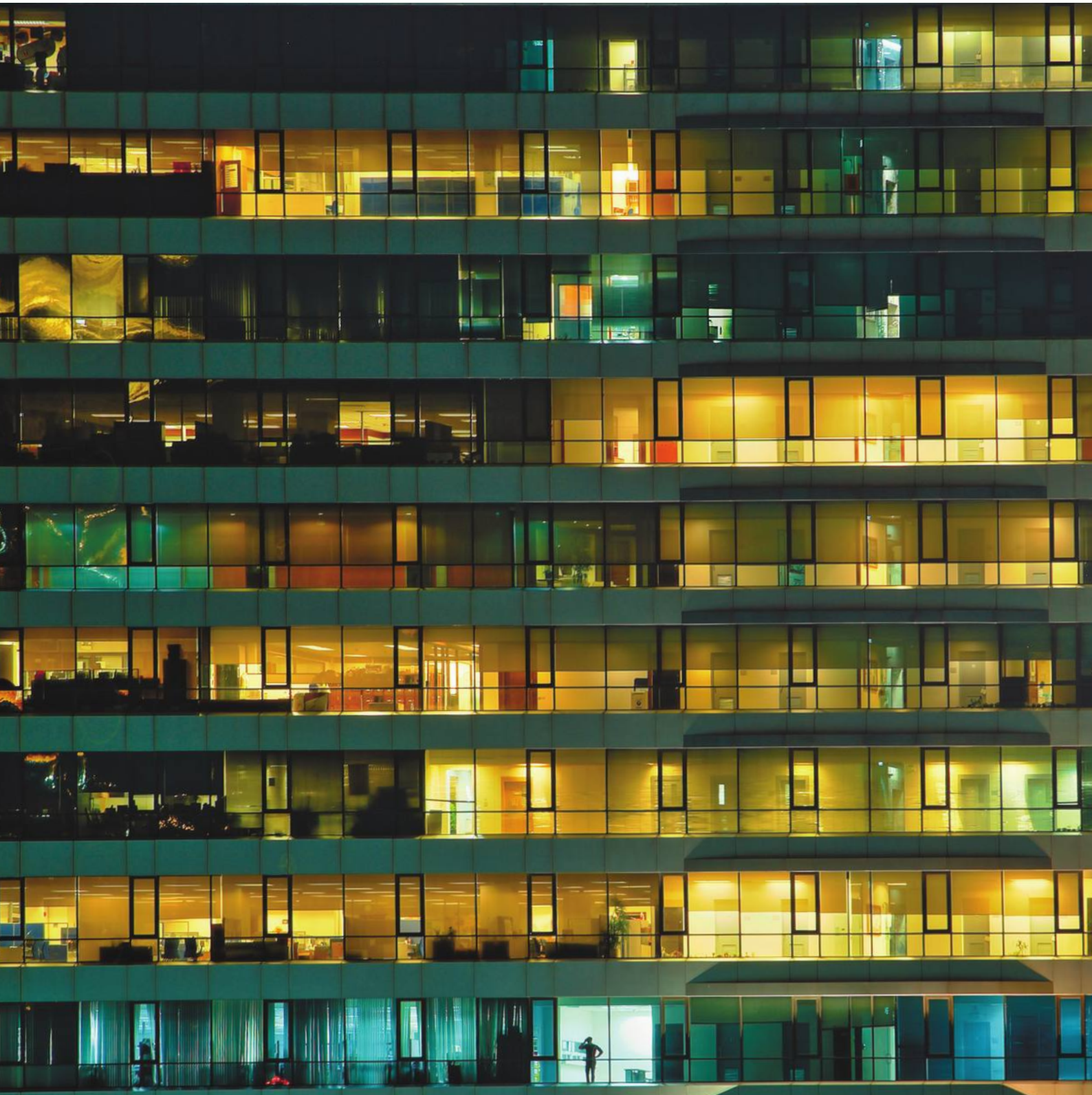
CORE STRATEGIC DEVELOPMENT DIRECTIONS FOR 2020

- targeted market expansion with guaranteed supply and low risk;
- production efficiency advancement through technological sophistication and key production facilities and infrastructure upgrade;
- implementation of attractive projects via reasonable development of innovations;
- implementation of the best management standards via continuous training of personnel in new industrial and management technologies.

DEVELOPMENT STRATEGY IMPLEMENTATION

2009 GOALS	STATUS OF IMPLEMENTATION IN 2019
After the investment program implementation in 2020 the generating equipment wear will reduce from 80% to 56%.	Power plants generating equipment amortization reduced to 51.3 %;
Share of fully modernized production facilities amounts 65 %;	Share of upgraded production assets amounted 64.5 %;
hazardous emissions reduced by 24 %;	hazardous emissions amounted 26.3 thous tonnes and reduced by 25.2%;
anticipated installed electrical capacity growth is 288 MW or 30%;	installed electrical capacity 1218 MW (30 % growth);
istalled heat capacity growth is 210 Gcal/h or 7.6%;	installed heat capacity was 2,981 Gcal/h (6.1% growth);
electricity generation exceeding 2,000 mln kWh or 38.7%;	generated electricity 1,634 mln kWh (30.3% growth); In 2019, 7,033 mln kWh electricity was generated;
heat supply exceeding 200 thous Gcal or 3.4 %.	368 thous Gcal of heat was supplied (6.1% growth). In 2019, 371 thous Gcal of heat was supplied.
In 2009-2020, it is planned to reduce network losses as follows: • 4.4% reduction of electric power losses; • 5.7% reduction of heat losses.	Excess losses were eliminated by 2014. Losses were reduced • by 4.9% for electric power losses; • by 3.5% for heat losses.
Green technology promotion.	The Corporation plans to purchase CAPEC Green Energy LLP implementing renewable energy sources projects.
Transition to integrated billing system.	In 2019, Astanaenergosbyt LLP and Pavlodarenergosbyt LLP introduced integrated corporate billing system for heat and electricity designed for legal entities and individuals.
Maintenance of certification for compliance with international HSE standards.	Pavlodar EDC JSC and Pavlodar Heat Networks LLP introduced data collection features used by power transmitting companies. Holding's subsidiaries maintained Environment Management ISO 14001 certificates. The Corporation maintained quality management system (ISO 9001), Occupational Health and Safety Assessment System (OHSAS 18001) and Energy Management System (ISO/CD 50001). In 2019, TÜV Rheinland Kazakhstan conducted supervisory and certification audits of CAEPCO JSC's subsidiaries, issued integrated management system certificates and confirmed their functionality, efficiency and improvement focus.
Measures aimed at work-related incidents reduction.	In 2019, the Corporation took certain measures in 9 areas covered by CAEPCO JSC's HSE Action Plan for 2018-2019 including 2 peer reviews in AEDC JSC and PAVLODARENERGO JSC.
Recruitment of highly qualified personnel loyal to the Corporation: • Development of management and professional competence; • Development of apprenticeship program to share the expertise and for quick orientation of new employees; • internal and external talent pool formation.	In 2019, 62 employees graduated from higher education institutions upon completion of external degree of studies in the sphere of Corporation operations, and 42 employees completed external technical and vocational trainings. During 4 years the Corporation created a pool of mentors from highly qualified employees of CAEPCO JSC's subsidiaries including those of retirement or pre-retirement age and had them undergo trainings. Three hundred employees are appointed mentors annually. In 2019, 166 employees from the Corporation's talent pool (comprising 956 persons) were promoted to management positions.

CORPORATE GOVERNANCE



Being aware of the importance of efficient and responsible corporate governance CAEPCO JSC consistently follows high standards based upon international principles and best global practices. The Corporation is committed to ongoing corporate management development and aligns its operations subject to the interests of all stakeholders, in particular, investors, shareholders and employees.

GENERAL MEETING OF SHAREHOLDERS

The General Meeting of Shareholders is the supreme management body of the Corporation. Participation in annual general meetings of shareholders, as well as in extraordinary meetings convened by the Board of Directors or the executive body, is the primary way for shareholders to exercise their rights reflected in the Charter of the Corporation.

Shareholders of the Corporation are entitled to

- make suggestions to the agenda of annual General Meetings;
- nominate candidates to the Board of Directors and its Committees;
- convene meetings of the Board of Directors;
- have other rights under applicable legislation.

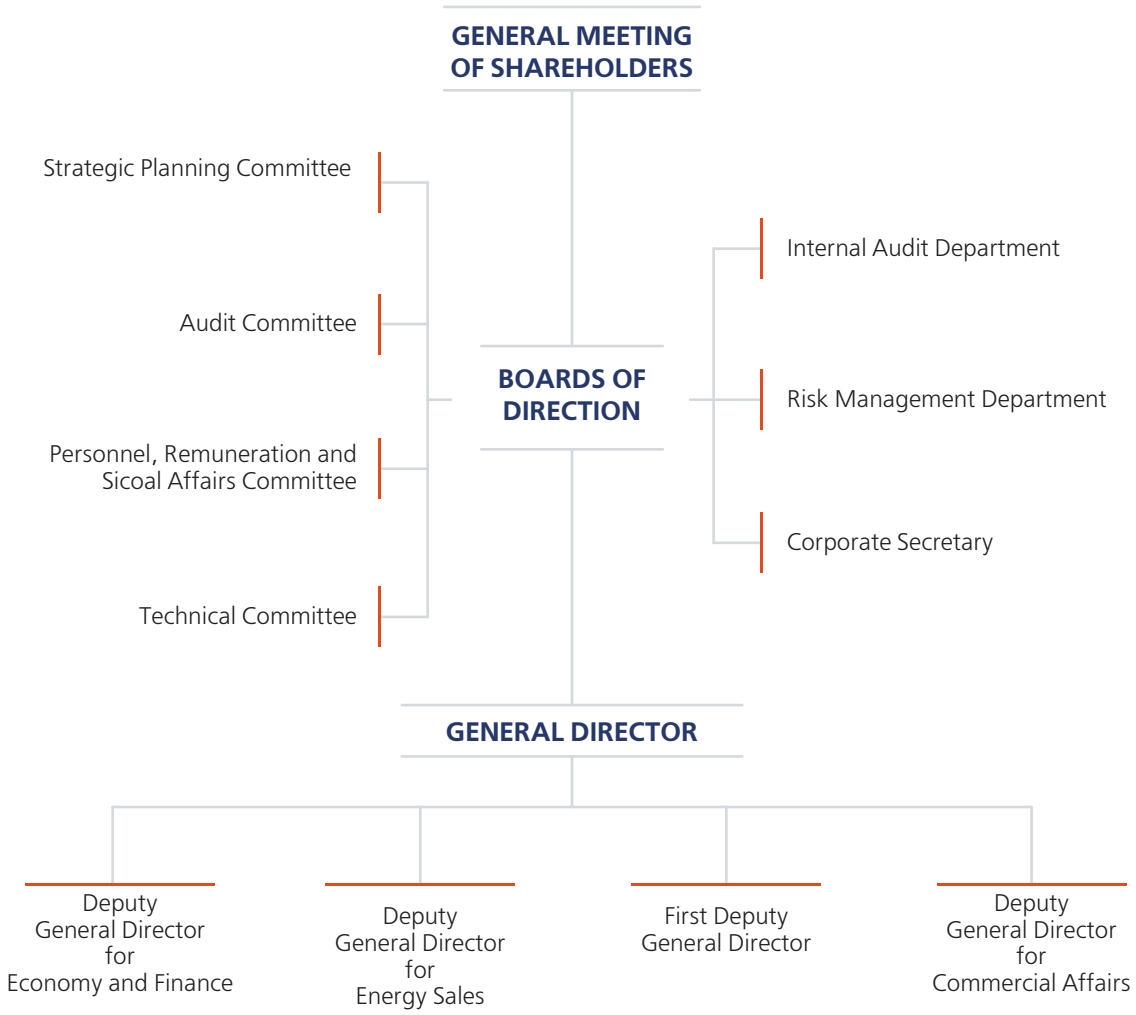
RESULTS OF THE GENERAL MEETINGS OF SHAREHOLDERS

In 2019, the Corporation held 1 annual and 2 extraordinary General Meetings of Shareholders that addressed the following issues:

- approval of financial statements of CAEPCO JSC's subsidiaries;
- determination of distribution of net income of subsidiaries;
- consideration of shareholders' applications regarding actions of CAEPCO JSC's subsidiaries;
- selection of the audit organization to audit financial statements of CAEPCO JSC and its subsidiaries;
- election of new members of the Board of Directors of CAEPCO JSC;
- determining the amount and the terms and conditions of remuneration for newly elected members of the Board of Directors of CAEPCO JSC and certain subsidiaries;
- other matters.

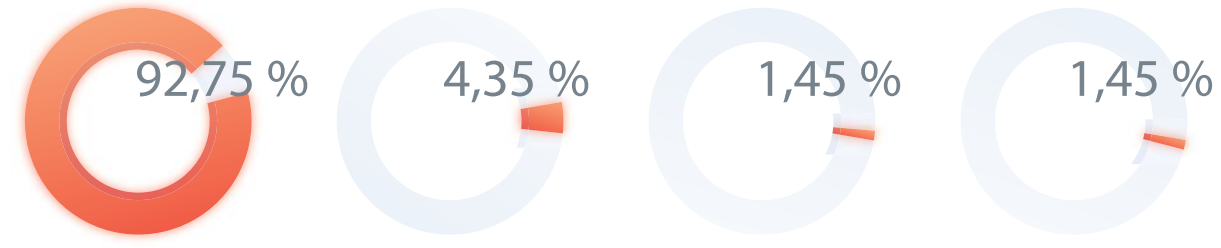
In 2019, corporate governance practices fully complied with the provisions of the corporate governance code developed in accordance with Kazakhstan legislation regarding joint stock companies.

ORGANIZATIONAL STRUCTURE



SHARE CAPITAL STRUCTURE

As of December 31.2018.
the authorized capital of CAEPCO JSC was **₸ 46,043 thous.**



Central-Asian power-energy company JSC — KIF ENERGY S.a.r.l. — CKIF ENERGY S.a.r.l. — Baiterek Venture Fund JSC

and was owned by CAEPCO JSC (92.75%) and the following funds established by Baiterek NMH JSC owning in the aggregate 7.25%: KIF ENERGY S.a.r.l. (4.35%), Baiterek Venture Fund JSC (1.45%); CKIF ENERGY S.a.r.l. (1.45%).

BOARD OF DIRECTORS

The Board of Directors of the Corporation determines strategic goals and maintains necessary operational control mechanisms, including ongoing monitoring and business performance evaluation.

Four independent directors in the Board of Directors, not affiliated with the Corporation, enhance the transparency of the Corporation's operations. Directors are qualified independent pursuant to the Law of the Republic of Kazakhstan "Regarding Joint Stock Companies".

Independent members of the Board of Directors of CAEPCO JSC meet the following criteria:

- they are not CAEPCO JSC's affiliates and were not affiliated with the Corporation three years prior to their election to the Board of Directors;
- they are not affiliated with CAEPCO JSC's affiliated persons;
- they are not subordinate to CAEPCO JSC's officers or organizations affiliated with CAEPCO JSC and had no such affiliation three years prior their election to the Board of Directors;
- they are not civil servants;
- they do not represent shareholders at the meetings of CAEPCO JSC's management bodies and did not do so three years prior to their election to the Board of Directors;
- they do not participate in CAEPCO JSC's audit as an audit working in an audit firm and did not participate in such an audit three years prior to their election to the Board of Directors.

The Board of Directors is headed by the Chairman who convenes meetings of the Board of Directors and prepares their agenda based upon suggestions received from the members of the Board and Directors and Committees of the Board of Directors and the executive body of the Corporation.

The activities of the Board of Directors are governed by the following principles:

- peer-review decision making with thorough discussion of issues using reliable and complete information on the Corporation's activities in accordance with the highest business standards;
- inadmissibility of restrictions on the legitimate interests and rights of shareholders to participate in the management of the Corporation, receive dividends, reports and information on the Corporation;
- ensuring a balance of interests of shareholders of the Corporation and maximum objectivity of decisions made by the Board of Directors in the best interests of shareholders;
- providing the Corporation's shareholders with reliable and timely information.

The General Meeting of CAEPCO JSC's shareholders decides on the remuneration payable to members of the Board of Directors and the executive body. In 2019, the amount of remuneration paid to the members of the Board of Directors and the executive body totalled KZT 100.0 mln.

Term of Office in CAEPCO JSC's Board of Directors as at 10 March 2019:

3 persons | 9-11 years

4 persons | 2-3 years

2 persons | less than a year

PERFORMANCE OF THE BOARD OF DIRECTORS

In 2019, the Board of Directors held 13 meetings. The Board of Directors focused on a number of key issues such as review of monthly and quarterly management reports; monitoring the implementation of the consolidated business plan of CAEPCO JSC for 2018; approval of consolidated business plan of CAEPCO JSC for 2020 (budget); approval of the annual financial statements of PAVLODARENERGO JSC, SEVKAZENERGO JSC and Akmola EDC JSC as well as the annual financial statements of Astanaenergosbyt LLP for 2018; determination of the procedure for net income distribution of these companies for year 2018; selection of the audit organization to audit the consolidated financial statements of CAEPCO JSC for 2019; preliminary approval of the annual consolidated financial statements of CAEPCO JSC for 2018; determination of the procedure for distribution of CAEPCO JSC's net income gained in 2018 as well as the amount of dividends per one ordinary CAEPCO JSC's share; preliminary selection of an audit firm to audit CAEPCO JSC's 2019 consolidated financial statements; review of activity reports of the Internal Audit and Risk Management Departments of CAEPCO JSC, approval of a number of corporate documents, etc. In 2019, the Corporation entered into major transactions disclosed at Internet sites of the Financial Statement Depository and Kazakhstan Stock Exchange.

BoD Meetings	2017	2018	2019
Meetings in presentia	5	8	6
Meetings in absentia	3	–	7

SELECTION AND APPOINTMENT

Members of the Board of Directors of CAEPCO JSC are elected based upon the decision of the General Meeting of Shareholders of the Corporation. Pursuant to CAEPCO JSC's Charter, the Board of Directors should consist of at least six persons and at least one third should be independent directors. Only an individual may be a member of the Board of Directors of CAEPCO JSC and should be nominated from the following people:

- shareholders being individuals;
- persons nominated to the Board of Directors as the representatives of the shareholders' interests;
- individuals who are not shareholders of the Company and who were not nominated to the Board of Directors as the representatives of shareholders' interests.

General Director of CAEPCO JSC may also be elected as a member of the Board of Directors, however, may not act as the Chairman of the Board of Directors.

The Chairman of the Board of Directors of CAEPCO JSC is elected from among its members by a majority vote of the total number of members of the Board of Directors by show of hands.

The term of office of members of the Board of Directors is determined by the General Meeting of Shareholders of CAEPCO JSC and it expires on the date of the General Meeting of Shareholders, at which a new Board of Directors is elected. Persons elected members of the Board of Directors may be re-elected any number of times.

INFORMATION ON DIVIDENDS

CAEPCO JSC's Charter and its Dividends Policy govern distribution, announcement, amount, form and time of dividends payment.

The Corporation's dividends policy is based upon the following principles:

- balance of interests of the Corporation and its shareholders when deciding on the amount of dividends to be distributed;
- strengthening investment attractiveness, financial stability, capitalization and liquidity of the Corporation;
- ensuring market returns on investment capital.

The Corporation intends to allocate a certain portion of its net profit to pay dividends in the amount that allow the Corporation to keep enough funds for its further development. Annual General Meeting of Shareholders decides on distribution of dividends based upon the relevant recommendation of the Board of Directors. In case of any unforeseen circumstances adversely affecting the Corporation the Board of Directors must recommend the General Meeting of Shareholders to refrain from dividends payout (announcement).

In 2019, the General Meeting of Shareholders decided to distribute dividends to CAEPCO JSC's shareholders for 2018 fiscal year in the amount of KZT 800.05 mln.

EXECUTIVE BODY

General Director is the sole executive body of the Corporation responsible for managing the Corporation's day-to-day operations and implementing a strategy determined by the Board of Directors and shareholders. General Director is guided by the principles of action in the best interests of shareholders, integrity, diligence, prudence and vigilance.

SERGEY VLADIMIROVICH KAN

GENERAL DIRECTOR OF CAEPCO JSC

BRIEF BIOGRAPHY

In 1998, Sergey Kan graduated from the Almaty City State University named after Abay. He has more than 20 years of experience in the development, promotion and management of Kazakhstan companies and joint ventures with foreign participation in various areas of business in the Republic of Kazakhstan.

Since 2007 Mr. Kan has been holding the position of the Executive Director of Caspian Offshore Construction LLP. Since 2010 he has been holding the position of the President of Circle Maritime Invest JSC, a ship owning company.

Since 2004 Mr. Kan has been a member of the Board of Directors of Central-Asian power-energy company JSC.

Since 2017, Mr. Kan has been a member of the Board of Directors of Central-Asian Electric Power Corporation JSC.

Sergey Vladimirovich Kan was awarded Parasat state order for significant contribution to the social, economic and cultural development of the country.

REMUNERATION POLICY

CAEPCO JSC's Board of Directors decides on the amount of the remuneration for Corporation's executive body.

Remuneration for the General Director is determined based on the following requirements:

- Remuneration consists of fixed and variable parts;
- The variable part of remuneration depends on key performance indicators of the General Director, his/her qualification level and personal contribution to the Corporation's performance for a certain period with a view to motivate the General Director to work as per the highest quality standards;
- Social benefits, guarantees and compensation payments are provided to the General Director in accordance with the laws, internal regulations of the Corporation and the relevant employment agreement.

MEMBERS OF THE BOARD OF DIRECTORS (AS OF 10 MARCH 2020)

Term of office of elected members of the Board of Directors is 2 years (until 10 March 2022)

KLEBANOV ALEXANDER YAKOVLEVICH (born in 1963)

CHAIRMAN OF THE BOARD OF DIRECTORS

Chairman of the Board of Directors of CAEPCO JSC, Chairman and shareholder of CAPEC JSC

20.08.2007 – Chairman of the Board of Directors of CAPEC JSC;

16.03.2009 – Chairman of the Board of Directors of CAEPCO JSC;

10.03.2020 – re-elected a member of the Board of Directors of CAEPCO JSC (member of the Board of Directors since 2008).

KAN SERGEY VLADIMIROVICH (born in 1968)

A MEMBER OF THE BOARD OF DIRECTORS

General Director of CAEPCO JSC, a member of the Board of Directors and a shareholder of CAPEC JSC

01.08.2004 – a member of the Board of Directors of CAPEC JSC;

12.11.2007 – Executive Director of Caspian Offshore Construction LLP;

01.02.2010 – President of Circle Maritime Invest JSC;

31.05.2012 – Chairman of the Board of Directors of Circle Maritime Invest JSC;

15.10.2015 – Chairman of the Board of Directors of Kazakhstan Institute of Oil and Gas;

28.09.2017 – President of CAEPCO JSC (in 2019, the position was renamed "General Director");

10.03.2020 – re-elected a member of CAEPCO JSC's Board of Directors (a member of the Board of Directors since 2017).

KUTBAY ZHANDAR BERIKULY (born in 1985)

A MEMBER OF THE BOARD OF DIRECTORS

01.12.2015 – 01.09.2019 – Deputy Chairman of the Board of Directors of Almex-Baiterek Fund LLP;

01.09.2017 – 01.08.2019 – Deputy Chairman of the Management Board of Baiterek Venture Fund JSC;

01.08.2018 – Chairman of the Management Board of Baiterek Venture Fund JSC;

10.03.2020 – re-elected a member of the Board of Directors of CAEPCO JSC (a member of the Board of Directors since 2018).

KARYAGIN ANDREY VALERYEVICH (born in 1967)

A MEMBER OF THE BOARD OF DIRECTORS

01.01.2014 – 01.01.2016 – Chairman of the Management Board of Astana Invest Investment House JSC;

01.01.2016 – 01.09.2017 – President of Astana Investment Corporation;

25.12.2017– Chairman of the Board of Directors of Astana Invest Investment House JSC;

10.03.2020 – re-elected a member of the Board of Directors of CAEPCO JSC (a member of the Board of Directors since 2017).

TEN VYACHESLAV VIKTOROVICH (born in 1983)

A MEMBER OF THE BOARD OF DIRECTORS

01.09.2009 – 01.06.2013 – project manager (business appraisal) at Baker Tilly Kazakhstan;

01.06.2013 – 01.04.2018 – Manager of Business Appraisal Department at American Appraisal a Division of Duff & Phelps;

01.11.2017 – Investment Director at M&A Department of Sigma Advisors;

10.03.2020 – elected a member of the Board of Directors of CAEPCO JSC.

KAISER FRANZ-JOSEPH (born in 1949)

A MEMBER OF THE BOARD OF DIRECTORS, AN INDEPENDENT DIRECTOR

Mr. Kaiser is not affiliated with CAEPCO JSC and was not affiliated with CAEPCO JSC three years prior his election

17.11.1975 – 30.06.2009 – a Partner of PriceWaterhouseCoopers (PWC);

2005 – 30.06.2009 – PWC's Project Partner regarding RAO UES of Russia;

10.03.2020 – re-elected a member of the Board of Directors and an Independent Director of CAEPCO JSC (a member of the Board of Director since 2009).

KEHR MANFED-JOSEPH (born in 1947)

A MEMBER OF THE BOARD OF DIRECTORS, AN INDEPENDENT DIRECTOR

Mr. Kehr is not affiliated with CAEPCO JSC and was not affiliated with CAEPCO JSC three years prior to his election

2003–2009 – Vice-President of RWE Power International;

2008–2010 – Managing Director, Senior Advisor at RWE Power International;

25.02.2011 – Chairman of the Board of Directors of Rhein Ruhr Power;

25.10.2011 – a member of the Board of Directors, an Independent Director of CAEPCO JSC.

10.03.2020 – re-elected a member of the Board of Directors, an Independent Director of CAEPCO JSC (a member of the Board of Directors since 2011).

TABANOV ELDAR RASHITOVICH (born in 1968)

A MEMBER OF THE BOARD OF DIRECTORS, AN INDEPENDENT DIRECTOR

04.01.2013 – a member of the Board of Directors, an Independent Director of CAPEC JSC;

01.01.2014 – 13.06.2017 – a member of the Board of Directors, an Independent Director of North-Kazakhstan Electric Distribution Company JSC;

09.09.2015-16.11.2016 – Deputy Chairman of the Management Board of Astana Community Entrepreneurship Corporation NC JSC;

13.10.2016 – a member of the Board of Directors, an Independent Director of Pavlodar Electric Distribution Company JSC;

29.09.2017 – Director of City Box LLP;

15.01.2018 – a member of the Board of Directors, an Independent Director of PAVLODARENERGO JSC;

15.01.2018 – a member of the Board of Director, an Independent Director of Akmola Electric Distribution Company JSC;

15.01.2018 – a member of the Board of Directors, an Independent Director of SEVKAZNEDRO JSC.

10.03.2020 – re-elected a member of the Board of Directors, an Independent Director of CAEPCO JSC (a member of the Board of Directors since 2017).

NAIZABEKOV TIMUR KURMANGAZIYEVICH (born in 1983)

A MEMBER OF THE BOARD OF DIRECTORS, AN INDEPENDENT DIRECTOR

Mr. Naizabekov is not affiliated with CAEPCO JSC and was not affiliated with CAEPCO JSC three years prior to his election.

10.2012 - 10.2014 – Managing Director, a member of the Management Board of the National Investment Corporation JSC;

09.2014 -09.2015 – financial analyst at Union Bancaire Privee;

04.2016 -09.2017 – a member of the Board of Directors, an Independent Director of Kazkommerts Securities JSC;

04.2016 -09.2017 – a member of the Board of Directors, the Chairman of the Management Board of Estate Management Company JSC;

04.2018 – a member of the Board of Directors, an Independent Director of Kazakhtelecom JSC;

10.03.2020 – elected a member of the Board of Directors, an Independent Director of CAEPCO JSC.

In 2019, no activities of the Board of Directors were evaluated.

PERFORMANCE OF THE COMMITTEES OF THE BOARD OF DIRECTORS

CAEPCO JSC'S BOARD OF DIRECTORS HAS FOUR COMMITTEES:

1 STRATEGIC COMMITTEE

It is the Strategic Committee's essential function to review and assess the following aspects of CAEPCO JSC's operations:

- high priority areas of CAEPCO JSC's activities and its development strategy;
- CAEPCO JSC's development concepts, policies, programs, and plans and implementation reports;
- the financial and economic indicators of CAEPCO JSC's performance;
- CAEPCO JSC's budget and compliance therewith;
- provision to CAEPCO JSC's Board of Directors of recommendations regarding any matters requiring (in the Committee's opinion) BoD's actions;
- it assists the Board of Director with the improvement of the Corporation's planning and business development mechanisms.

Kehr M., Chairman

Kan S.V.

Turganov D.N.

Karyagin A.V.

Perfilov O.V.

In 2019, the Strategic Committee supported the Board of Directors with the improvement of the Corporation's planning and business development mechanisms.

2 AUDIT COMMITTEE

Core functions of the Audit Committee are as follows:

- assisting the Board of Directors with efficient performance of its regulatory and oversight functions;
- improvement and strengthening of the internal audit and risk management systems;
- advising the Board of Directors on any matters requiring actions on its part.

Kaiser F., Chairman

Kehr M.

Karyagin A.V.

In 2019, the Committee assisted the Board of Directors in effective performing its regulatory and supervisory functions, improving and strengthening the internal audit and risk management systems. The Committee addressed issues relating to activities of Internal Audit and Risk Management Departments, including review of relevant activity reports of departments, approval of budgets, work plans, preliminary review of audited financial statements of CAEPCO JSC and its subsidiaries.

3 PERSONNEL, REMUNERATION AND SOCIAL AFFAIRS COMMITTEE

Personnel, Remuneration and Social Affairs Committee is primarily responsible for

- the development of uniform human resources policy for CAEPCO JSC and its subsidiaries, including additional remuneration, compensations and social contributions to their workers;
- building an efficient corporate governance system and compliance with its principles.

Tabanov E.R., Chairman

Turganov D.N.

Karyagin A.V.

Nigay A.D.

Konstantinova N.V.

In 2019, Personnel, Remuneration and Social Affairs Committee assisted the Board of Directors in building an effective corporate governance system.

4 TECHNICAL COMMITTEE

Technical Committee's core functions include:

- promotion of the corporate governance effectiveness, projects implementation and control over the progress of CAEPCO JSC's strategy implementation in terms of technical development of CAEPCO JSC and its subsidiaries;
- support of the Board of Directors with the effective performance of regulatory and oversight functions in the sphere of monitoring of adoption of decisions regarding upgrade and modernization of production facilities as well as CAEPCO JSC's and its subsidiaries investment development and control over availability and efficiency of funding of investment projects in CAEPCO JSC and its subsidiaries.

Kehr M., Chairman

Turganov D.N.

Perfilov O.V.

Tatarov I.V.

In 2019, Technical Committee ensured actual participation of its members in effective monitoring of the Corporation's investment projects implementation.

CORPORATE GOVERNANCE CODE COMPLIANCE REPORT

In 2019, corporate governance practices of the Corporation fully met the requirements of the Corporate Governance Code developed in accordance with Kazakhstan legislation regarding joint stock companies. The document is also based on the current international practices in the field of corporate governance and recommendations on application of corporate governance principles by Kazakhstan's joint stock companies.

The principles of the Corporate Governance Code are aimed at formulating and introducing into the Corporation's day-today operations of the norms and traditions of corporate behavior that meet international standards and contribute to creating a positive image of the Corporation in the eyes of its shareholders, customers and employees with a view to exercising the rights of shareholders to the maximum extent possible and improving their awareness as to the Corporation's activities, and also at monitoring and reducing risks, maintaining sustainable improvement of the Corporation's financial performance and successful pursuing its stated goals.

Fundamental principles of the Corporate Governance Code:

- Justice
- Accountability
- Responsibility
- Transparency
- Environmental protection and social responsibility
- Effectiveness
- Control

In 2019, all the fundamental principles of the Corporate Governance Code were respected.

CONFLICT OF INTEREST

Conflict of interest is regulated in the Code of Business Conduct (clause 5.6). This document provides for the employees' liability for the abuse of official position, activities of employees inside and outside the company.

The principle of minimization of a conflict of interest is among the fundamental anti-fraud and corruption guidelines of the Fraud and Corruption Prevention Policy. Pursuant to this principle, the Corporation reduces a conflict of interest through effective distribution of powers and responsibilities by building a transparent organizational structure.

Activities of members of the Board of Directors are governed by the relevant Regulations. Section "Rights and Responsibilities of Members of the Board of Directors" requires the avoidance of a conflict of interest between members of the Board of Directors.

EXTERNAL AUDIT

PWC Kazakhstan LLP is the external auditor of CAEPCO Group's financial statements under the auditing services agreement valid until 2021.

CODE OF BUSINESS CONDUCT

The Corporation implements a Code of Business Conduct approved by the Board of Directors in 2010.

The document combines international standards of business relations regulation in the following four directions:

- business and professional ethics;
- organizational ethics;
- corporate governance;
- social responsibility of the company.

All employees of the Corporation adhere to the standards and provisions of the Code of Business Conduct promoting the achievement of the following operational goals:

reduce the number of compromise decisions and promote independent judgement;	enhance corporate culture as well as the image of the Corporation and its perception by public;	improve the efficiency of corporate governance, risk and crisis management;	promote efficient interaction with stakeholders;	allow avoiding litigations.

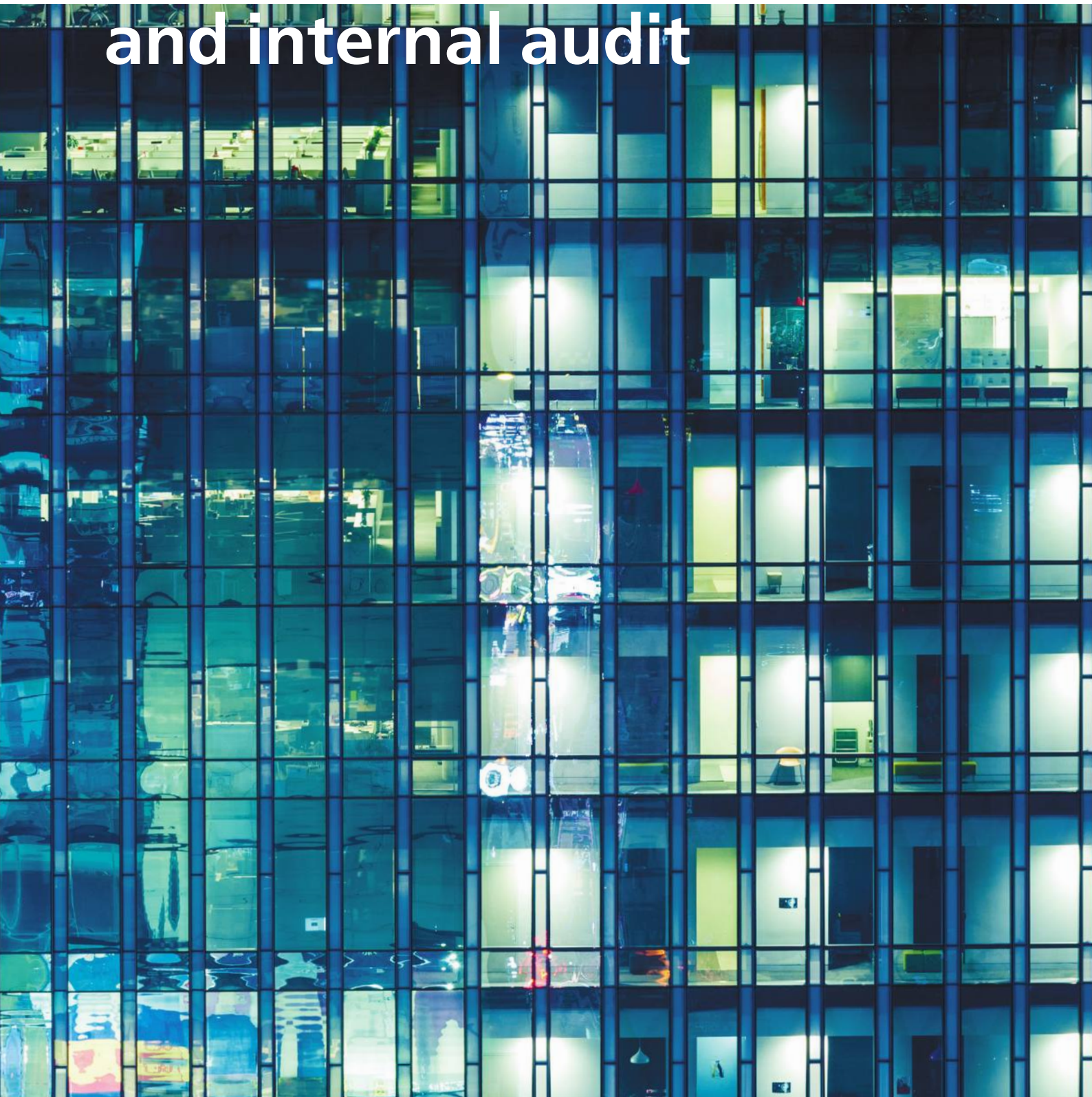
The Code of Business Conduct establishes ethical standards of the Corporation's operations to support the trust in its integrity, transparency and professional competence. The document also sets out the standards for communication inside and outside the Corporation.

With respect to stakeholders the Code contains a set of fair rules permitting no double standards of cooperation with the company. CAEPCO JSC's operations in compliance with the Code of Business Conduct are aimed at delivering benefits to its customers (consumers, society, Corporation and each employee).

Compliance with business ethics across the Group of companies is monitored by executive officers through the organization of activities in accordance with prescribed ethical principles and standards. All employees of the Corporation adhere to standards and provisions of the Code of Business Conduct.

CAEPCO
Central-Asian
Electric Power Corporation

RISK MANAGEMENT and internal audit



The risk management and internal audit systems implemented in the Corporation constitute integral parts of its corporate governance.

Risk management and internal audit processes are continuous related processes integrated into operations of CAEPCO Group.

Risks are managed on all levels of the operations of the Corporation and its subsidiaries, i.e., by its managing and executive bodies, managers and employees of production companies and their structural divisions. Risk management is an on-going and iterative process in the general Corporation's management system making this activity an integral part of all organizational processes and a mandatory element of decision making.

All risk management functions of CAEPCO JSC and its subsidiaries are unified and uphold the methods and practices adopted in the Corporation.

INTERNAL CONTROL AND AUDIT

The Corporation maintains a well-functioning internal audit system reasonably assuring effective control at all its levels, including financial and operational, as well as compliance with laws and regulations.

In 2019, the Corporation's Internal Audit Department (IDA) operated in accordance with the annual action plan approved by the Board of Directors. It assessed the efficiency of the internal control system of the Corporation's subsidiaries of the Corporation focusing on the following business processes:

- management of investment activities;
- management of technical maintenance and repair;
- customer service management;
- human resources management;
- management of procurement, contracts and payments to creditors.

In addition, IDA monitored the implementation of its recommendations and randomly checked fixed assets and inventories.

IAD operates in accordance with the International Standards on Auditing (ISA) developed by the Institute of Internal Auditors, as well as applicable Kazakhstan laws and regulations and the Code of Business Conduct of Internal Auditors of CAEPCO JSC, Internal audit department regulations.

Internal auditors adhere to the following principles in the course of their activities:

- integrity,
- objectivity,
- confidentiality,
- professional competence.

PLAN FOR 2020

In 2020, IAD is planning to implement its annual action plan approved by the Board of Directors providing for evaluation of the internal control system of the Corporation's subsidiaries giving special attention to:

- *investment activities management;*
- *technical maintenance and repair management;*
- *revenue accounting and settlements with debtors;*
- *human resources management;*
- *management of procurement, contracts and payments to creditors.*

In 2020, IAD will cooperate with Audit Committee, external auditor, give advice and prepare methods, monitor the implementation of IAD's recommendations and will effect spot inventory check of fixed assets and other goods.

CORPORATE RISK MANAGEMENT SYSTEM

The Corporation maintains a risk management system (RMS) to identify, assess, efficiently manage, and monitor all significant risks it is exposed to.

The main goals of CAEPCO JSC in the field of risk management are to reduce the negative impact of events occurring in the course of activities of the Corporation, as well as to convert favourable opportunities into actions.

In 2019, Risk Management Department (RMD) implemented its annual action plan approved by the Corporation's Board of Directors that provided for the following activities:

- updating the risk register and risk map of CAEPCO JSC and its subsidiaries;
- risk management and internal control training for key employees of business units and executives of CAEPCO Group;
- identification and assessment of risks, analysis and testing of internal control system in the following business processes: investment activities, warehouse stock management, technical maintenance and repair management;
- updating the list of business processes exposed to the risk of corruption and fraud.

The Corporation regularly trains its key employees and executives to promote risk management maturity and giving particular emphasis to clarification of risk management basic principles and approaches to implement risk-based approach for making management and operational decisions.

RICK MANAGEMENT POLICY

CAEPCO JSC operates in compliance with its risks management policy determining its approach to risks, establishing general principles of RMS composition and functions, its goals and objectives, core approaches to organization, implementation and control of risk management processes in the Corporation. The distribution of responsibilities among RMS system participants and principles of their interaction are governed by the Corporation internal regulations. In 2019, the Corporation continued to identify, assess and control risks.

RISK GROUPS

STRATEGIC RISKS

- Regulatory risks
- Investment risks
- Project risks
- Reputation risks
- Market risks
- Managerial risks
- Credit risks

OPERATIONAL RISKS

- Technological risks
- Procurement and supplies
- IT and information security
- Emergencies
- Human resources risks
- Environmental risks
- Interaction with contractors
- Commercial risks
- Professional risks
- Fuel risks
- Reputation risks
- Social risks
- Property risk

LEGAL RISKS

- Violation of law
- Corruption and fraud risk
- Property risk
- Collection risks
- Regulatory risks
- Environmental risks
- Human resources risks
- Tax risks

FINANCIAL RISKS

- Financial statements
- Interest risks
- Liquidity risk
- Credit risks
- Price risks
- Foreign exchange risks
- Management risks

ORGANIZATION OF RMS ACTIVITIES

01. **RISK IDENTIFICATION**

Detection of risks and their inclusion in the corporate Risk Register for further evaluation and management.

02. **RISK ANALYSIS AND ASSESMENT**

Determining the criticality of risk impact on production, financial and economic performance of the Corporation.

03. **RISK MANAGEMENT**

Identification, evaluation and selection of the most effective method for achieving goals by maximizing the positive and minimizing the negative events that have an impact on the activities of the Corporation.

04. **RISK MONITORING**

Monitoring the action plan for risk management (regularity, timeliness and quality of implementation).

ANALYSIS OF SIGNIFICANT RISKS IMPACTING PERFORMANCE

RISK	FACTORS	RISK LEVEL	CHANGE
Strategic Risks			
Introduction of the electrical capacity market and the balancing electricity market	1. Imperfection of laws regarding electrical capacity market and the balancing electricity market; 2. Insufficient coverage by ASCAE system recording the actual consumption rate; 3. Lack of statistics on consumer load profiles; 4. Lack of software functionalities to work on the electrical capacity market and the balancing electricity market.		
Operational Risks			
Blue collar manpower shortage	1. Low average salary. 2. Relocation to other Kazakhstan regions and abroad. 3. Poor vocational training of energy sector personnel.		
Withdrawal of skilled/key workforce			
Injury/Accident Rates	1. Breach by employees of process requirements established in OHS regulations in the course of works performance; 2. Poor knowledge of OHS regulations by certain workers; 3. Unsatisfactory organization of works; 4. Equipment failures and occupational accidents.		

Seventy-nine risks affecting the Corporation performance were identified in 2019 in the course of the Risk Register and the Risk Map update in accordance with the approved Risk Management Policy.

DESCRIPTION OF THE RISK CHANGE	RISK MINIMIZATION MEASURES
Strategic Risks	
On 1 January 2019 electrical capacity market was introduced. Since then the balancing electrical market has been running in simulation mode. Thus, the risk migrated to major risk category and remains significant and calling for close attention.	1. Cooperation with the Ministry of Energy and other authorities on making proposals and comments to regulations governing the operation of the electrical capacity market and the balancing electricity market; 2. Working with consumers for the purpose of daily schedules provision; 3. Monitoring actual electricity consumption in ASCAE system; 4. Development of ASCAE system for wholesale market consumers; 5. Introduction of data analytics software ensuring efficient operations in electrical capacity and balancing markets.
Operational Risks	
The Corporation's performance largely depends on key experienced employees. Blue collar manpower shortage results in understaffing exposure. Limited number of experienced blue collar personnel and growth of demand for such workforce intensify competition on Kazakhstan and CIS labor markets. In 2019, based upon experts' opinion manpower shortage risk changed to critical.	In order to manage these risks the Corporation takes the following complex measures: 1. optimization of management and production processes and staffing level to use released payroll resources to increase salaries for critical and key blue collar personnel; 2. payroll increase in tariff estimates of CAEPCO JSC's subsidiaries for future periods; 3. improvement of social conditions and employment benefits for subsidiaries' personnel; investigating the possibility to provide accommodation to employees badly in need of improved housing, recent graduates and critically important personnel; 4. implementation of PROFENERGY Program in the following areas: • generation of an external talent pool from students, graduates from higher educational institutions and secondary specialized colleges; • employee advanced training; 5. mentorship development; 6. commencement of ENBEKENERGY Program implementation to relocate personnel from Kazakhstan regions with manpower surplus to CAEPCO JSC's Group; 7. financial and other employee motivation; 8. establishment of a Corporate Training Center to ensure high quality (re-)training, education, professional advancement and development of personnel and Corporation knowledge pool creation.
As per HR analysis the turnover rate in CAEPCO JSC's subsidiaries increased to a certain extent in 2019.	
In 2019, the injury rate grew compared to 2018. The Corporation believes this risk to be major and to have vital importance.	On daily basis the Corporation implements a number of measures to reduce occupational injury/accidents rate and minimize this risk, including the following actions: • stringent control over technical condition of the equipment, buildings, structures and vehicles; • minimization of industrial hazards; • risks assessment; • ongoing monitoring of compliance with OHS regulations; • providing employees with overalls and personal protective gear; • personnel training and awareness check in the sphere of OHS; • investigation and profound analysis of accidents to eliminate the risk of occurrence thereof in the future; • behavior-based care/audits. In 2019, the Corporation adopted an internal regulation governing its interaction with contractors in the sphere of OHS. Lock out/tag out and LOTO procedures are being implemented in the Group.

RISK	FACTORS	RISK LEVEL	CHANGE
Financial Risks			
Foreign exchange rate change	1. Macroeconomic indicators change. 2. Falling of raw materials and power prices in global market; 3. Depreciation of national currencies in emerging countries (KZT inclusive) against a strong USD background. 4. Indirect impact of sanctions policy imposed by developed world. 5. Conclusion of agreements for inventories and services supply in foreign currency. 6. Conclusion/availability of loan agreements denominated in foreign currency.		
Liquidity Strain	1. Zero return on electric power generation; 2. Delayed cash inflow; 3. Overdue accounts receivable increase.		
Growth of overdue receivables	The failure by the Group's consumers of electricity and heat to fully and timely pay for the power consumed in breach of the terms and conditions of respective agreements is caused by the following factors: • poor payment discipline; • decline in basic macroeconomic indicators.		

	Risk impact decreased		Risk impact remained unchanged
	Risk impact increased		Risk probability increased

DESCRIPTION OF THE RISK CHANGE	RISK MINIMIZATION MEASURES
Financial Risks	
Throughout 2019, KZT/USD exchange rate reduced a little more than by 2%. Then KZT demonstrated low volatility. In 2019, the Corporation refinanced its loans denominated in foreign currencies, by switching some of its loans from USD to Russian ruble. Both the Corporation and its subsidiaries have significant obligations in USD and RUB, therefore, insignificant KZT fluctuations in 2019 had no adverse effect on their financial performance at the year end. The risk is assessed to transform to a major exposure and remains important for the Corporation.	The Corporation monitors changes of foreign exchange rates and other indicators impacting thereof, i.e., oil and raw materials prices, etc. It naturally hedges this risk by placing its cash not immediately required for operations on USD deposits and by monitoring the efficiency of its long-term investment programs.
Starting from 1 January 2019 the Corporation's profit margin reduced to 0% due to removal of 12% electricity production profit from the tariff calculation (Order No. 508 of the Minister of Energy of the Republic of Kazakhstan dated 14 December 2018). This resulted in liquidity strain exposure expansion that can force the Corporation's subsidiaries to cut their investment programs or result in their failure to implement such programs. The Corporation assesses the risk of liquidity strain to be important and critical.	The risk of liquidity squeeze is managed by maintenance of adequate reserves, bank loans and available facilities. Management continuously monitors forecasted and actual cash flows, prioritizes payments, analyses repayment schedules related to its financial obligations (outstanding interest payments inclusive), prepares itemized annual budgets and controls the compliance with annual budgets by the Corporation and its subsidiaries. The Group works on optimization of costs not included into the subsidiaries' tariff estimates. The Corporation works on collecting its accounts receivables pursuant to Kazakhstan legislation. CAEPCO JSC defends its interests related to the establishment of adequate electricity generation profit margin in the tariffs applicable to its subsidiaries.
In 2019, the share of receivables overdue for more than 3 months in the total debt for consumed power increased in some power selling subsidiaries. In general, the overdue debt rate remains high. The Corporation considers this risk major and important.	In order to manage this risk the Group's sales companies continuously take the following efficient measures: • notification of consumers of overdue payments; • power supply interruption in case of overdue payments for consumed power; • preparation of installments repayment schedules; • claim administration aimed at collection from power consumers of receivables and penalties or overdue payments; • attachment of debtors' property; • visiting debtors together with enforcement agents to prepare property inventory and to seize the assets; • notification of legal entities of overdue payments owed by their employees; • restriction of debtor's travel outside Kazakhstan; • collections using the debtor's source of finance (deductions from salary and pension contributions); • change of collection method implying the debtor's property (apartment/vehicle) sale at an auction. The Corporation's sales companies accounting provides for bad debt provisions.

Risk probability remained unchanged

Risk probability decreased

Medium risk

High risk

INTERNAL CONTROL STANDARDS

The Corporation has established an internal control system (ICS) incorporating a set of policies, processes, procedures, standards of conduct and actions combined into a single continuous process. ICS is part of the administration process in the Group of companies implemented by the Board of Directors, all executive and supervisory bodies as well as employees.

Corporation's executive officers at all management levels create an efficient control environment by taking the following measures:

- building the awareness of the employees of the Group of the importance of the internal control procedures and the implementation thereof;
- maintenance of a high level of corporate culture and projecting good faith and professionalism;
- enhancement of professional skills and competence of the Group's employees;
- ensuring effective cooperation of business units and employees;
- assuring effective distribution of powers and responsibilities;
- building anti-fraud mechanisms;
- internal control function arrangements.

ICS is targeted at ensuring the efficiency of the Corporation's operations and investment activities, reliability of all reports, compliance with legislation and the Group's internal regulations. The Corporation aspires to secure adequate control of its operations to reduce the risks it is exposed to. Controls are implemented at all management levels.

The following three levels are distinguished in the Corporation's ICS.

OPERATIONAL

This aspect applies to the core business objectives of the organization, including productivity, profitability and preservation of resources.

FINANCIAL

This element implies preparation of reliable financial statements to be published, including interim, condensed financial statements as well as any data derived from such reports (e.g., income data)available to general public.

COMPLIANCE CONTROL

This facet focuses on compliance with laws and regulations governing the operations of the organization.

PLANS FOR 2020

Risk Register and Risk Map applicable to CAEPCO JSC and its subsidiaries will be updated;

CAEPCO Group key employees and executive officers will undergo risk management and internal control system training;

The following business processes will be analyzed and assessed for risks and tested for ICS efficiency:

- *Electricity distribution, consumption accounting and control;*
- *Power sale and accounts receivable management;*
- *Utility connection of heat consuming plants to networks;*
- *Transportation;*
- *Technical maintenance and repair management;*
- *Human resources management.*

The list of business processes exposed to fraud will be updated.

The Corporation will make arrangements to introduce quality management standard (ISO 9001:2015).

ANTI–CORRUPTION

The Anti-Corruption and Fraud Policy approved by the Corporation's Board of Directors governs the Corporation's activities in this sphere of operations, including inter alia the establishment by the Corporation's top management of a unified code of conduct implying zero tolerance towards any corruption whatsoever.

The main principles of the Policy include maintaining a high level of corporate governance, zero tolerance to corruption and fraud, proper risk assessment, minimizing conflicts of interest through effective distribution of powers and responsibilities and creation of a transparent organizational structure.

The key elements in strengthening this area are the development and implementation of an effective anticorruption and fraud strategy, as well as prompt responding to related events. The Corporation is building an appropriate culture of behavior and negative attitudes towards all corrupt and fraudulent practices.

The Policy sets out corruption and fraud fighting methods and procedure used by the Corporation, particularly, those related to identification and assessment of such events, internal ivestigations, calling to account anyone involved in such wrongdoing.

No facts of corruption and fraud were detected in 2019.

The Corporation has well developed feedback channels (Hotline, telephone and mail services) enabling any legal entities and/or individuals to inform the Corporation of any imminent or completed corrupt or fraudulent activities.

The Corporation keeps working to increase the transparency of its operations. The Corporation's business partners are also informed of the Anti-Corruption and Fraud Policy and principles therein because relevant sections thereof are included into standard agreements for purchase of goods, works and services also containing the communication channels to be used to inform of any corrupt activities.

In accordance with the Risk Management System Improvement Action Plan for 2019 and in furtherance of the Anti-Corruption and Fraud Policy the Risk Management Department conducted a survey among the Group's employees (experts) in order to assess the Group's current processes for their exposure to corruption and fraud exposure.

More than 50% of business units of all Corporation's subsidiaries took active part in the survey. This resulted in the updated list of business processes exposed to the risk of corrupt and fraudulent practices by the Group's employees as well as the list of business units where such a risk is most critical.

The business processes reported as the most subject to the risk of corrupt and fraudulent practices were assigned high priority for the purpose of internal control system improvement. It's worth noting that internal control improvement promotes timely response to probable and significant risk of corrupt and fraudulent practices, i.e., to eliminate identified risk by introduction of additional controls and preventive measures.

In 2019, Anti-Corrupton and Fraud Policy was updated and all Corporation's employees were made aware of amendments. Pursuant to the Corporation's internal procedures all newly hired personnel must familiarize themselves with Anti-Corruption and Fraud Policy and must confirm their commitment to comply with the Policy in writing.

SUSTAINABLE DEVELOPMENT

CAEPCO JSC realizes the importance of its impact on the economy, society and environment in the regions of its operations in Kazakhstan and adheres to the principles of sustainable development in its activities. The Group companies commit to continuous improvement of their business.

STAKEHOLDER ENGAGEMENT

Stakeholder engagement is a critical element of the sustainable development system. The Corporation has identified stakeholders in relation to its decisions and activities to monitor the degree of its influence and to review response options. Stakeholders are identified and selected based on the assessment of the impact on current operations and strategic development, as well as the current stakeholder engagement practices of the Corporation.

Thanks to a well-established system of engagement, the Corporation is aware of opinions, interests and wishes of its stakeholders. Keeping in mind high public significance of its operations, CAEPCO JSC implements a number of activities to expand and improve effective stakeholder engagement.

STAKEHOLDER ENGAGEMENT REPORT FOR 2019

Since 2013, the Corporation has been regularly publishing Stakeholder Engagement Plan and Report with detailed quantitative and qualitative indicators, activities and sources of information dissemination. Please review the Report at *http://caepco.kz/ru/investoram/finansovaya-otchetnost/sep.html.*

The strategic goal of CAEPCO is to build an advanced private energy company in strict compliance with generally accepted principles of sustainable development.

STAKEHOLDER OF THE CORPORATION	STAKEHOLDERS' INTERESTS	
Shareholders	• Strategic goals achievement; • Economic benefits/high performance; • High corporate governance rating; • Funds for development and dividends distribution;	• Net worth; • Social programs implementation; • Transparency of business processes.
Employees	• Human resources and social policy; • Terms and conditions of the collective bargaining agreement; • Compliance with employment legislation of the Republic of Kazakhstan; • Motivation to keep and employ highly qualified personnel.	
Government agencies and regulatory authorities	• Timely receipt of reliable information; • Kazakhstan power sector development support; • Ensuring reliable and continuous supply; • Increase of tax payments to local budgets; • Timely and high quality implementation of social projects; • Increase/preservation of jobs; • Compliance with Kazakhstan legislation in the sphere of industrial safety.	
Local communities	• Market share/presence; • Ensuring reliable and failure-free electricity and heat supply; • Marketing communications; • Emissions to the environment.	
Educational Institutions	• Promotion of development of sector related science and education; • Talent training and continuous knowledge sharing; • Social Projects Implementation.	

ENGAGEMENT MECHANISM	ENGAGEMENT IN 2019
• Resolutions of the General Meeting of Shareholders; • Resolutions of the Board of Directors; • Corporate Internet site; • Annual report; • discussions and business meetings.	Thirteen meetings of the Board of Directors were held. The Corporation conducted a number of meetings and events to improve corporate governance.
• Management decisions; • Orders and instructions; • Production, operating and other meetings; • Operating reports; • Oral negotiations; • HSE briefings; • Internal corporate communication channels; • Surveys and questionnaires; • Official social media accounts.	PAVLODARENERGO, SEVKAZENERGO AND AEDC complied with the terms and conditions of relevant collective bargaining agreements. Group's employees received social assistance and support. The Corporation's subsidiaries conducted "Top Professional" contest. The Group continued the implementation of PROFENERGY project. The most distinguished employees of CAEPCO JSC's subsidiaries were given corporate awards and assigned professional degrees.
• Submission of Corporation's performance reports; • Responding to requests sent by state authorities regarding various matters of the Corporation's business; • Suggesting amendments to Kazakhstan laws and regulations; • Memoranda of cooperation with local executive authorities and to support social development in Kazakhstan regions; • Discussions, business meetings.	In 2019, regional Akims' blogs were monitored on regular basis. All requests submitted by individuals regarding the Holding's activities were responded. The information on electricity and heat outage due to scheduled and/or emergency maintenance was published on corporate sites on regular basis with the timing of repair works and heat networks examination specified. The executive officers of the Group's subsidiaries (or assigned personnel) participated in the meetings dedicated to preparation of households to heating season together with state and regulatory authorities.
• Informing consumer and feedback system; • Public hearings and meetings; • Annual report; • Signing memoranda and agreements on cooperation; • Official social media accounts.	In 2019, PE, SKE and AEDC group of companies accepted and processed 452,522; 377,326 and 93 communications from their consumers, respectively. Astanaenergosbyt LLP accepted and processed 23,342 communications from its consumers. Such telephone and electronic communications included clarification requests, applications, suggestions, meter readings notification to the Call Center, etc.
• Cooperation with higher educational institutions in the regions of operations; • Participation in the activities of examination boards, qualifications commissions and in accreditation of training courses; • Conducting events, e.g., breakthrough projects.	In 2019, PE and SKE held a contest of scientific papers and awarded corporate scholarships to the winners. In 2019, PE companies offered 293 students an opportunity to take a paid and unpaid on-the-job training. Eight excursions to the Group's production facilities were held for students of higher educational institutions and secondary specialized colleges. One hundred and nine interns worked at SKE facilities of which 3 students were paid and 7 students got summer employment. Twenty six recent graduates (graduates from higher educational institutions and specialized colleges) were employed during the reporting period. SKE held 15 tours in its facilities. In 2019, AEDC offered on-the-job training to 67 students of which 42 students were paid. It hired 14 students for summer. Eight recent graduates were employed by AEDC.

STAKEHOLDER OF THE CORPORATION	STAKEHOLDERS' INTERESTS
Non-governmental organizations (NGOs)	• Obtaining information regarding Corporation development potential; • Reduction of adverse impact on the environment; • Charity and sponsor support; • Public hearings.
Mass Media	• Transparency of business processes; • Instant access to the Corporation's operational data regarding: - industrial safety; - production modernization; - financial indicators; - joint projects implementation; - development potential of the Corporation and sector.
Suppliers, Contractors	• Creation of transparent competitive environment; • Use of market pricing mechanism; • Stability and reliability of mutually beneficial cooperation; • Performance guarantee under agreements/contracts.
Trade Unions	• compliance with the the employer's obligations related to its employees; • protection of employees' rights and interests; • creation of decent working conditions; • opportunities for personal and professional development; • social guarantees.

INFORMATION POLICY

The information policy of CAEPCO JSC is a set of actions, measures and procedures that assist dissemination of corporate information and create a consistent image of the Corporation among its target audience.

The main goals of information disclosure are as follows:

- timely provision of information on all substantive matters pertaining to the Corporation in order to respect legitimate rights of shareholders, investors and other stakeholders, providing them with appropriate information to make informed decisions or take any other action that could affect the financial and business activities of the Corporation, as well as other information promoting better understanding of the Corporation's activities;
- providing publicly available information about the Corporation to all stakeholders;
- improving openness and trust between the Company and its shareholders, potential investors, market participants, government agencies and other stakeholders;
- improving corporate governance in CAEPCO JSC;
- creating a positive corporate image.

ENGAGEMENT MECHANISM	ENGAGEMENT IN 2019
• Public hearings were held; • Information regarding operations; • Letters (requests) to the Corporation.	In 2019, the Group held the following public hearings regarding environment protection, services, tariff estimate approval, and operational reports: – 18 public hearings in PE, – 13 public hearings in SKE, – 2 public hearings in AEDC, – 3 public hearings in Astanaenergosbyt.
• Media tours and briefings, press conferences; • Press releases; • Responces to information requests; • Mass media monitoring.	In 2019, CAEPCO JSC's Group was referred in mass media and in social media 7,091 times. The Holding's PR service issued 50 corporate publications.
• Feedback system, meetings, negotiations; • Signing agreements and memoranda, agreements regarding strategic cooperation; • tenders; • meetings with contractors and clients.	In 2019, the Group published its tender announcements and results thereof on its corporate site and in mass media.
• Negotiation and approval of the collective bargaining agreement; • Meetings of trade union members with management.	The Corporation established the environment for trade union activities. It cooperated with the trade union based upon the principles of mutual interests, equality under Kazakhstan legislation and the collective bargaining agreement. Charity support was provided from the trade union's funds. The Group's trade unions conducted more than 100 events.

During 2019, awareness-raising work was carried out among stakeholders.

In 2019, CAEPCO Group of companies regularly provided information on its activities to the above stakeholders by updating web-sites of the Corporation and its subsidiaries, providing information to mass media, responding to requests, and by arranging public hearings, press tours, round tables and other events. The Holdings PR services issued 50 corporate publications during year 2019.

In 2019, as much as 7,091 materials on CAEPCO JSC Group of companies were published in mass media (including 720 about CAEPCO JSC, 1,481 about PAVLODARENERGO JSC, 1,441 about SEVKAZENERGO JSC, 389 about AEDC JSC and 3,060 on Astanaenergosbyt LLP.

PUBLIC HEARINGS

SEVKAZENERGO JSC

In 2019, SEVKAZENERGO conducted 13 public hearings to review the following reports:

operational report of Petropavlovsk CHP-2 for 2018 (02.04.2019);
operational report of North Kazakhstan EDC JSC for 2018 (03.04.2019);
operational report of Petropavlovsk Heat Networks LLP for 2018 (04.04.2019);
operational report of Sevkazenergosbyt LLP for 2018 (05.04.2019);
operational report of Petropavlovsk CHP-2 for 2018 (13.05.2019);
operational report of North-Kazakhstan EDC JSC for 2018 (14.05.2019);
operational report of Petropavlovsk Heat Networks LLP for 2018 (15.05.2019);
operational report of Sevkazenergosbyt LLP for 2018 (16.05.2019);
operational report of Petropavlovsk CHP-2 for the first six months of 2019 (17.07.2019);
operational report of North Kazakhstan EDC JSC for the first six months of 2019 (19.07.2019);
operational report of Petropavlovsk Heat Networks LLP for the first six months of 2019 (18.07.2019);
operational report of Sevkazenergosbyt LLP for the first six months of 2019 (20.07.2019).
public hearings regarding the anticipated increase of the maximum electricity retail price(30.12.19)
In 2019, public hearings were conducted with respect to one environment project "Environment Impact Assessment" to final design project "Modernization of Fuel Feed at Petropavlovsk CHP-2 of SEVKAZENERGO JSC".

AEDC JSC

In 2019, AEDC JSC conducted 3 public hearings:

annual operational report of AEDC JSC for 2018 (30.04.2019);
report regarding the implementation of approved tariff estimate for the first six months of 2019.
public hearing to discuss the tariff (19.12.19)

ASTANAENERGOSBYT LLP

In 2019, Astanaenergosbyt LLP conducted 3 public hearings on the following matters:

information provided by Astanaenergosbyt LLP related to annual report regarding heat supply to Nur-Sultan city consumers for 2018 (17.04.2019);
operational report of Astanaenergosbyt LLP's regarding heat supply to consumers and stakeholders for 2018 (29.04.2019);
public hearings regarding the anticipated increase of the maximum electricity retail price of Astanaenergsbyt LLP from 1 January 2020 (18.12.2019).

PAVLODARENERGO JSC

In 2019, Pavlodarenergo JSC held 14 public hearings to consider the following reports and tariff estimates:

PAVLODARENERGO JSC's 2018 annual activities report regarding provision of heat generation services to the Pavlodar city consumers (23.04.2019);

PAVLODARENERGO JSC's 2018 annual activities report regarding provision of heat generation services to the Ekibastuz city consumers (22.04.2019);

PAVLODARENERGO JSC's report for the first six months of 2019 regarding provision of heat generating services (by CHP-3, CHP-2) to the Pavlodar City consumers (30.07.2019);

2018 annual activities report of Pavlodar Heat Networks LLP regarding heat transmission and distribution services to the Pavlodar city consumer and other stakeholders (23.04.2019);

annual activities report of Pavlodar Heat Networks LLP, Ekibastuz Heat Networks PC for 9 months of 2018 regarding heat transmission and distribution to the Ekibastuz city consumers and other stakeholders (22.04.2019);

annual activities report of Pavlodar Heat Networks LLP for the first six months of 2019 regarding heat transmission and distribution to the Pavlodar city consumers and other stakeholders (30.07.2019);

annual activities report of Pavlodarenergosbyt LLP for 2018 regarding regulated heat supply services to the Pavlodar city consumers (23.04.2019);

annual activities report of Pavlodarenergosbyt LLP for 2018 regarding regulated heat supply services to the Ekibastuz city consumers (22.04.2019);

activities report of Pavlodarenergosbyt LLP for the first six months of 2019 regarding regulated heat supply services to the Pavlodar city consumers (30.07.2019);

semiannual activities report of Pavlodarenergosbyt LLP for the first six months of 2019 regarding regulated heat supply services to the Ekibastuz city consumers (29.07.2019);

draft 2019 tariff estimate related to heat generation, transmission and distribution in Ekibastuz (20.03.2019);

annual activities report of Ekibastuzteploenergo LLP for the first six months of 2019 regarding heat generation, transmission and distribution services to Ekibastuz city consumers (29.07.2019);

annual activities report of Pavlodar EDC JSC regarding electricity transmission and distribution via PEDC JSC and 2019 programs implementation (23.04.2019);

report for the first six months of 2019 on the implementation of the approved tariff estimate, investment program of Pavlodar EDC JSC regarding electricity transmission and distribution services (30.07.2019);

In 2019, Pavlodarenergo JSC conducted four public hearings on its environmental projects:

EPC (environment protection chapter) of final design project "Plan of Clay Rock Mining Operations at Beta Deposit in the Pavlodar City North Industrial District" (15.01.2019);

EIA (environment impact assessment) of final design project "Plan of Remediation of Consequences of Production at Beta Deposit" (05.02.2019);

Preliminary EIA in Feasibility Studies for expansion of CHP-3 at PAVLODARENERGO JSC providing for installation of boilers at Stations 7 and 8, turbine generator at Station 7 (19.09.2019);

final design project of dike topping of the 2nd phase reconstruction of ash dump at CHP-2 of PAVLODARENERGO JSC (27.11.2019).

Representatives of the following organizations participated in the public hearings organized by PE: Ecology World PF, Eksm Public Association, Consumers Protection Society Public Association, mass media and state authorities.
The Company publishes information regarding public hearings in external mass media.

HUMAN RESOURCES AND SOCIAL POLICY

HUMAN RESOURCES MANAGEMENT POLICY

Human resources management policy of CAEPCO JSC complies with its strategic goal to build an effective corporate management system in the company implying continuous work to create opportunities to tap employees' potential to the maximum extent. The Corporation is strengthening its human resources management policy by hiring professionals at various levels, retaining highly qualified staff, conducting continuous personnel professional training and development, providing opportunities for professional growth of proactive young specialists, creating a talent pool and succession planning.

EMPLOYEE HEADCOUNT AND SKILL LEVEL

As of December 31, 2019, the Corporation headcount amounted to 10,553 persons. A slight reduction by 2.2% compared to 2018 was caused by manpower optimization at CAEPCO JSC's subsidiaries and staff turnover increase.

Headcount Dynamics, persons

Headcount Structure of CAEPCO JSC in 2018

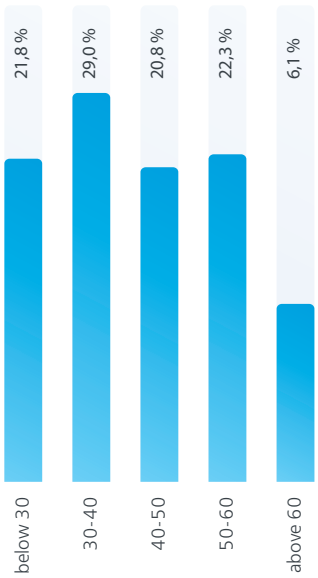
Company Name	Headcount
CAEPCO JSC	97
PAVLODARENERGO Group	4 916
SEVKAZENERGO Group	2 531
AEDC Group	2 417
ASTANAENERGO LLP	592
Total:	**10 553**

EMPLOYEE STRUCTURE BY CATEGORY AND SEX

Employee category	Total		Including			
	Persons	%	men		women	
			persons	%	persons	%
Headcount	10 553	100,0	6 619	62,7	3 934	37,3
Managers	1 513	14,3	1 137	75,1	376	24,9
White-collar employees	3 198	30,3	1 121	35,1	2 077	64,9
Blue-collar employees	5 842	55,4	4 361	74,6	1 481	25,4

Due to the nature of activities, the Corporation's employee structure is dominated by men with a share of 62.7 %. The production personnel are mostly blue-collar workers with a share of men amounting to 74.6 %.

Employee Age Structure

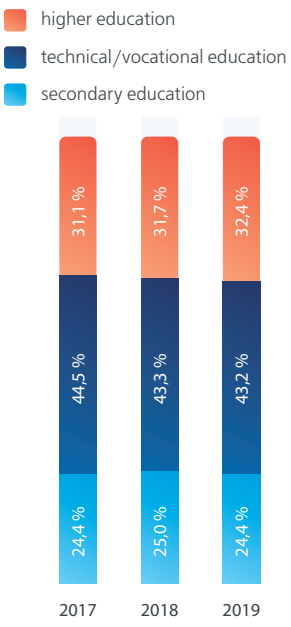


EMPLOYEE AGE STRUCTURE

The Corporation's employee age structure is characterized by a high proportion of employees at the most productive age - under 40 years old – they make up 50.8 % of the total headcount and their share reduced by 1.4% compared to 2018. The share of employees over 60 years remained increased by 0.8% since 2018. Considering the above mentioned figures, the Company implements measures to promote mentoring and succession to ensure transfer of professional knowledge and skills, and to gradually reduce the average employee age in order to achieve the best ratio between young proactive employees and highly qualified mature workers.

The average employee age across the Holding is 41 years.

Education structure dynamics



EMPLOYEE EDUCATION STRUCTURE

In 2017-2019, the share of Corporation's employees with higher education increased as the result of personnel motivation including incentives under PROFENERGY corporate program. The share of workers with technical/professional education remained unchanged compared to 2018.

In 2019, a total of 82 employees of the Corporation obtained a college degree by correspondence training, including 62 employees with a major in energy-related disciplines; 45 employees finished technical/vocational schools by correspondence training, including 42 employees who majored in professionally relevant disciplines.

In 2019, 195 employees continued studying at higher education institutions by correspondence training, including 131 workers who majored in professionally relevant disciplines; 126 employees were obtaining technical/vocational education by correspondence training, 119 in professionally relevant disciplines.

EMPLOYEE TRAINING AND DEVELOPMENT

Employee training and development system of the Corporation covers the following areas:

- mandatory professional training;
- development of leadership skills;
- development of professional competences.

To improve the effectiveness of activities and create safe working conditions, the Corporation carries out corporate training based on individual development plans.

In 2019, 8,628 persons (81.8 % of the total headcount) were trained, including 6,599 production workers (76.5 %) who received mandatory training. In 2019, 3,746 employees (35.5 % of the total headcount) were trained in training centers of the Corporation. A total of 757 employees received training in related occupations in order to enhance the professional profile of the Corporation.

	2017	2018	2019
Number of employees who received training, retraining, or professional development, including:	8 215	8 391	8 628
Occupational safety, fire safety guidelines and operating procedures (initial training, proficiency testing, certification/re-certification), courses for managers	6 022	6 398	6 599
Trainings in ISO9001, ISO14001, OHSAS1800 quality management systems (including environmental protection, internal audit and risk management issues)	157	131	39
Related occupations training	722	797	757
Civil defense and emergency training	7	17	52
Other (professional development, seminars, trainings, etc.)	1 307	1 048	1 181

PERSONNEL TURNOVER

In 2019, the turnover rate in the Corporation increased by 1.9 % compared to 2018. The main reasons for staff resigning include:

- relocation within Kazakhstan (city/rural settlements);
- relocation outside Kazakhstan (CIS countries, including Russia);
- dissatisfaction with wages.

In 2019 the Corporation continued to take the following measures to reduce personnel turnover rate:

- identification of payroll fund reserves and use of these funds to raise wages;
- promotion of mentoring and incentives for young specialists;
- financial and non-financial incentives for skilled personnel;
- improving work environment and social guarantees in accordance with collective bargaining agreements.

During the reporting year the Corporation hired 2,208 employees. The hiring rate reduced by 1.1% compared to 2018 due to processes optimization and staff downsizing. In accordance with Kazakhstan Labor Code employees must be notified of staff redundancy one month prior to termination of their employment agreements.

The Corporation personnel is informed of significant changes in CAEPCO JSC Group operations pursuant to Kazakhstan legislation and the Group's internal regulations.

Turnover Rate

Employment Rate

TALENT POOL

In 2019, subsidiaries of CAEPCO JSC created a talent pool of 956 senior, middle and junior level managers to ensure the availability of the required personnel reserve to fill managerial positions at various levels.

Talent pool is developed based on individual programs of professional and managerial training of succession pool members, including training in the Corporation's own training centers, skills improvement, internships, mentoring, performance of management functions and temporary employee relocation. In 2019, 166 persons from the talent pool were appointed to management positions.

External talent pool is also updated on an annual basis, including from among graduates.

As many as 1,253 young specialists (12% of the total manpower) work at the Corporation's enterprises, 318 of them were employed in 2019, including 177 persons for leading positions and professions. These include 183 persons (57.5%) with technical/vocational training and 135 persons (42.5 %) graduates of higher educational institutions.

ATTRACTING YOUNG SPECIALISTS AND EMPLOYEE DEVELOPMENT

In 2019, as part of the PROFENERGY project implemented since 2016, subsidiaries of CAEPCO JSC continued to implement the Program aimed at supporting young specialists and improving their professional level with a view to attracting graduates to key/critical positions in the enterprises and retaining key employees.

The Program provides for regular informing the Group's personnel of its contents and conditions, meetings with students and tours to production facilities, participation of the Corporation's employees in the activities of the examination boards and state certification commissions dealing with final examinations and diploma projects. On an average, 500 students annually participate in the Program with subsequent employment rate of 5%. Throughout 4 years 2,000 students were involved in the program, including:

- 176 students who were hired upon paid internship in CAEPCO JSC's subsidiaries and diploma receipt;
- 1,656 students completed unpaid on-the-job training and pre-graduation internship;
- 99 students were employed during summer;
- 11 students got corporate scholarships upon scientific papers contest winning.

In order to heighten graduates interest in employment in the Corporation the Program conditions are constantly improved to meet students' needs, opportunities available to the companies in the Group and peculiarities of the labor market in the regions of the Corporation's operations. In 2019, the interns of AEDC JSC district units were accommodated in Nur-Sultan hotels with their catering paid by the Corporation.

The Program also provides for employee stimuli to get industry-specific education. From 2016 through 2019 more than 900 employees took this opportunity, including

- 673 employees who were granted paid leaves;
- 146 employees who were paid bonuses for successful graduation;
- 103 were granted interest-free loans to pay their tuition.

Mentorship is being developed under PROFENERGY project aimed at professional knowledge and skills transfer to students and quick orientation of young specialists. It took CAEPCO JSC four years to create mentors pool comprising highly qualified retired professionals and those of pre-retirement age and all such mentors underwent training. Now up to 300 employees are appointed mentors annually.

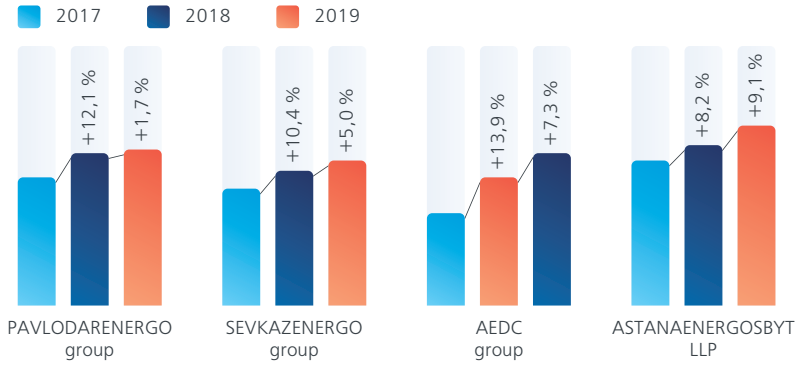
EMPLOYEE MOTIVATION AND REMUNERATION

The Corporation's time-bonus remuneration system is based on the unified wage rate scale. The basic salary of the first wage level equals or exceeds the minimum earnings established in Kazakhstan legislation for the relevant financial year. All positions and professions on the wage rate scale are distributed based upon personnel categories (manager, specialist, worker, and clerk), processes (production, administrative, maintenance), business function criticality, works complexity, work environment and this qualification does not depend on sex.

The Corporation's system of employee motivation and remuneration is designed to promote the efficiency and performance of each employee. CAEPCO JSC annually increases salaries of its workers in compliance with approved budgets and wage rate scales subject to such personnel role in and contribution to business.

In 2019, the Group took measures to optimize its processes and labor force (3.9% of the total manpower) allocating released payroll resources to increase the salaries of its key and critical personnel primarily to production staff (blue-collar workers, engineers and line managers (ranging 7-`13%)). As the result of such measures taken, in 2019, the average employee remuneration in the Group increased by 1.8% compared to 2018.

AVERAGE REMUNERATION GROWTH RATE BY CAEPCO JSC'S SUBSIDIARIES



NON-FINANCIAL INCENTIVES

As part of its employee motivation system the Holding annually officially recognizes contribution of its employees and veterans to Kazakhstan energy sector development by granting awards, certificates of merit and honorary titles at festive events.

In 2019, 200 employees of the Group were granted titles of honor and awards:

- 8 employees were awarded by the Ministry of Energy of the Republic of Kazakhstan;
- 4 employees were awarded by Electricity Council of the Commonwealth of Independent States;
- 57 veterans and employees were awarded by Kazakhstan Electric Power Association;
- 20 veterans and employees were awarded by Corporation's management;
- 111 employees were awarded by CAEPCO JSC.

INTERACTION WITH TRADE UNIONS

Trade unions operate in CAEPCO Group of companies under Uniform Collective Bargaining Agreements providing for social benefits and guarantees to the employees and their families.

SEVKAZENERGO and AEDC Groups have entered into relevant Uniform Collective Bargaining Agreements for 2018-2020 and 2019-2021, respectively. PAVLODARENERGO group was valid in 2016-2019 and, in 2019, the group took the following steps to renew the agreement:

- analysis of the amendments suggested to the Uniform Collective Bargaining Agreement by employees;
- agreement revision in compliance with updated employment legislation;
- drafting Uniform Collective Bargaining Agreement for 2020-2023.

In developing the terms and conditions of the Uniform Collective Bargaining Agreement the Corporation enterprises adhere to the principles of economic feasibility, sufficiency, joint responsibility and transparency.

Within the framework of social partnership, the following activities are held annually with the participation of enterprises and trade unions:

- sports and recreational events;
- organization of leisure and cultural events;
- celebration of commemorative days and holidays;
- charity events.

In 2017-2019, the total number of trade union members at the Corporation's enterprises fell due to overall headcount reduction. Global individualization of social and labor relations also promoted mitigation of trade unions importance and their members reduction.

	2017	2018	2019
Number of employees in trade unions, person	6 020	5 696	5 196
Share in total headcount, %	57	53	49

SOCIAL SUPPORT, GUARANTEES AND COMPENSATIONS

The social policy of CAEPCO JSC is determined jointly with employees and trade unions, being their representatives, and is implemented at the cost of subsidiaries of the Corporation.

Any employment disputes in CAEPCO Group of companies are settled in compliance with applicable legislation as well as under relevant Collective Bargaining Agreements and grievance committee Regulations with participation of employers' and employees' representatives. The Corporation's internal regulations govern the procedure of employment disputes requests submission and the procedure of responding thereto and all employees are informed thereof in the course of hiring procedure.

The composition of grievance committee is governed by internal regulations applicable to specific Company group. In case of a labor dispute the employee is entitled to address the following Group officers prior to application to the grievance committee:

- HR Department manager;
- Chairman of trade union/ employees' representative;
- the relevant company's CEO.

In 2019, only one employee addressed the grievance committee to settle a disputable matter and such employee's request was fully satisfied. Neither employee discrimination whatsoever nor abuse of employees' rights was discovered in 2019.

Goals	Social Package
Personnel motivation for long-term employment	• additional professional pension contributions at the rate of 5 %; • bonus payment for professional competitions; • rewards to celebrate anniversaries and holidays.
Effective compensation and benefits policy	• compensation of utilities costs, provision of benefits for dormitories and rental housing; • transportation of employees to/from work; • selling coal at cost to employees living in houses with furnace heating; • subsidizing camp tours for children under 15 years old; • New Year gifts to children.
Support of employee working efficiency and health	• insurance against occupational accidents and diseases; • compulsory health insurance; • reimbursement of sanatorium and preventive treatment expenses.
Social support of employees	• financial support in case of pregnancy; • financial assistance for funeral services; • paid study leave; • retirement allowance; • veterans support program.
Sports and recreational activities	• reimbursement of food expenses to participants of sports competitions; • reimbursement of expenses for cultural events and group recreation.

SOCIAL SUPPORT IN CASE OF MATERNITY AND PATERNITY

Company Name	Number of employees who took maternity/child care leave during the year			Number of employees who were on maternity/child care leave as of the end of the year	Number of employees who returned from maternity/child care leave during the year
	women	men	total		
CAEPCO JSC	8	0	8	10	1
PAVLODARENERGO Group	83	1	84	216	38
SEVKAZENERGO Group	44	0	44	94	17
AEDC Group	30	0	30	86	18
Astanaenergosbyt LLP	42	0	42	88	24
Total:	**207**	**1**	**208**	**494**	**98**

Under Collective Bargaining Agreement the Corporation continuously renders social assistance to veterans and retired employees by way of financial aid, leisure events arrangement, etc.

CAEPCO JSC takes active part in social projects supporting population in the regions of its operations. A multi-family house is being constructed in Pavlodar under memorandum of joint implementation of social projects boosting business social responsibility.

In 2019, SEVKAZENERGO JSC won the regional phase of PARYZ, competition for socially responsible business in the nomination "The Best Socially Responsible Company".

PLANS FOR 2020

In 2020, the Group plans to implement its Human Resources Management Policy targeted at attracting and developing highly skilled labor and to achieve the following tasks:

- *PROFENERGY project development in the following areas:*
  - support of recent graduates and professional advancement;
  - mentorship development;
  - key personnel development program;
  - critical professions support program;
- *Improvement of key performance indicators upon the achievement of the Corporation's strategic and operational goals;*
- *Implementation of housing improvement programs for key employees and critical professions;*
- *Further automation of HR management processes related to personnel development: orientation, assessment, training, etc.;*
- *ENBEKENERGY project implementation to attract personnel from Kazakhstan regions with labor surplus and hiring them in the Group of companies;*
- *Improvement of the system of corporate education, (re-)training against labor shortage background, training quality improvement, introduction of efficiency monitoring after training.*

OCCUPATIONAL HEALTH AND SAFETY

The main strategic goal of CAEPCO Group of companies in the field of occupational health and safety (OHS) is to reduce the total number of accidents through the implementation of preventive measures and introduction of best OHS practices.

In 2019, the first enterprise-wide professional skills contest was conducted among the Company's operation, maintenance and repair personnel in the sphere of utilization of power distribution networks (PGA).

In 2019, as part of its 2018-2019 OHS Action Plan CAEPCO JSC completed the following tasks:

- Pavlodar EDC JSC introduced mobile video recorders into its operations. As per the Regulation for Mobile Video Recorders Use and Control thereof the following procedures are to be recorded: team work permit issuance, team briefing, and workplaces preparation. All records are archived in the established procedure for further review by responsible personnel

This project was implemented to attain the following objectives:

  – to improve labor discipline and responsibility of the employees involved in operational switchings;

  – timely detection of violations and mistakes made by employees when performing their work;

  – unbiased information on the breach of production discipline and OHS regulations;

  – improvement of production personnel training (based upon video records of technical trainings, specialized trainings and OHS briefings).

- In 2019, World Day for Safety and Health at Work was celebrated with the following usual events:

  – extended OHS session chaired by the First Deputy General Director of CAEPCO JSC;

  – month of safe production;

  – CAEPCO JSC's subsidiaries held kids' creative contests "Labor Safety through the Eyes of the Child";

  – OHS Family Days were held when the family members of employees were allowed to visit work places at CAEPCO JSC's subsidiaries, safety trainings and quizzes as well as a tea party were organized for kids;

  – CAEPCO JSC's General Director handed over his commendations to the best OHS functions and their managers;

  – CEOs of CAEPCO JSC's subsidiaries awarded their letters of recognition to the best employees in terms of OHS;

  – PAVLODARENERGO JSC shot a filmlet where the kids of the employees of PAVLODARENERGO JSC's Group urged their parents to comply with OHS requirements;

  – SEVKAZENERGO JSC organized a challenge "PUT ON YOUR HELMET";

  – the First Deputy General Director of CAEPCO JSC and subsidiaries' CEOs distributed their OHS video messages.

- Enterprises of the Holding keep holding peer OHS reviews aimed at preventing injuries, accidents and incidents during operation of power and process equipment. In 2019, two peer reviews were conducted at enterprises of PAVLODARENERGO JSC and SEVKAZENERGO JSC.
- In furtherance of OHS standard "Safety Requirements for Vehicles/ Pedestrians Interaction at Production Sites and Facilities", road markings and signs were introduced at Pavlodar CHP-2 and Pavlodar CHP-3;
- CAEPCO JSC has completed its transition from utilization of waist belts to fall arrest harnesses. Currently the use of waist belts is prohibited.
- The Group approved its Safety Guidelines for Works in Confined Spaces detailing applicable processes, core exposure, critical zones determination and marking, personnel qualification requirements, risk assessment, insulation, work permits and preparation, work performance, etc.
- The Group decided to automate all OHS aspects (Safety Walks) involving integration and automatization of OHS activities in the following spheres: reviews, incidents management, OHS risks, OHS trainings, contractor management (contractor access control and detection of OHS violations by contractors). The system will become fully operational in 2020.
- It is the first time in its history that the Corporation conducted in-house professional skills contests among its operation and maintenance personnel engaged in maintenance of electricity distribution networks (EDN). Six crews of electricians representing

CAEPCO JSC's EDNs took part in the contest. During the competition the teams demonstrated modern methods and approaches used to perform works in EDN. The ultimate goal of this event was to improve the professional skills of the personnel to ensure reliable and safe maintenance of electric installations and to reduce the number of injuries and incidents.

- Ekibastuzteploenergo LLP commenced modernization of shower facilities for 365 people, lavatories, halls and staircases.

In 2019, despite implemented OHS programs and events the number of incidents in CAEPCO JSC and its subsidiaries increased by 45% compared to 2018. After each incident the following measures were taken:

- thorough investigation to identify core and system causes to prevent similar incidents in the future;
- informing personnel of the incident circumstances and its causes;
- elimination of the incident root causes;
- personnel briefings, etc.

The Corporation's management resolved to establish a corporate training center to eliminate incidents causes related to poor personnel training and their failure to comply with OHS rules and regulations. The main goal of the training center is to train personnel in the best practices and assess the training results. The center will commence its operations in 2020.

OCCUPATIONAL HEALTH AND SAFETY COUNCILS

Each subsidiary of CAEPCO JSC has its own occupational health and safety council consisting of representatives of the employer and the trade union, including technical occupational health and safety inspectors. Councils are headed by chairpersons who are also employees of the enterprise.

Occupational health and safety councils perform the following functions:

- examination of the causes of occupational injuries and diseases, analyze the effectiveness of occupational safety measures, review information and analytical materials about the actual state of occupational safety in the organization;
- analysis of the results of employee workplace certification, participation in preparation of business units and organizations to bringing work places in compliance with OHS requirements;
- consideration of suggestions regarding elimination of identified OHS violations, creation of safe work environment, programs development, recommendations, decisions, etc. aimed at OHS;
- assistance with timely and high quality OHS briefings of employees, OHS knowledge checks, regular trainings and knowledge update of employees and trade union leaders regarding OHS legislation;
- submitting proposals to introduce more advanced technology, new equipment to ensure OHS and eliminate hard labor;

- informing the company employees of OHS measures preventing occupational injuries, occupational diseases, regulations regarding certified work clothes, footwear and other personal protective equipment and correct utilization thereof;
- participation in the review of occupational safety budgets, compulsory social insurance against industrial accidents and occupational diseases; monitoring expenditures of the organization spent on improving occupational safety practices.

TECHNICAL OCCUPATIONAL HEALTH AND SAFETY INSPECTORS

Each subsidiary has technical occupational health and safety inspectors, who interact with heads of departments, the occupational health and safety service, operation inspectors, industrial safety supervision inspectors, as well as with state labor inspectors, state supervision and control authorities.

The main functions performed by technical occupational health and safety inspectors are as follows:

- protection of personnel rights and interests;
- participation in the development and suggesting amendments to Occupational Health and Safety Section in the Collective Bargaining Agreement as well as to comprehensive programs and high priority action plans in the sphere of OHS;
- monitoring the compliance with OHS requirements at workplaces;
- representation of interests of trade union members before state, public organizations and courts in the course of employment disputes consideration related to Labor Code application in terms of OHS.

In 2019, subsidiaries' technical OHS inspectors were trained on the following topics:

- core requirements established by employment legislation;
- types and procedure of OHS reviews;
- OHS arrangements;
- Physical and psychological hazards and management thereof;
- OHS culture enhancement.

All inspectors working in the Corporation have OHS certification.

TYPES AND INCIDENCE OF OCCUPATIONAL INJURIES

All occupational injuries are meticulously analyzed to define statistics in terms of severity and quantity of injuries in CAEPCO JSC and its subsidiaries, incident frequency rate, injury rate dynamics, timing of injuries within a day, number of injuries with a breakdown by age of the injured persons, injury causes, classification of incidents resulting in injuries, to compare injury rate with a breakdown by companies of the same sector, etc. The Corporation is committed to minimize occupational injury rate and pays close attention to occupational health and safety and to elimination of injury causes.

During the reporting year 9 incidents occurred in the Corporation's subsidiaries, including 3 minor injuries, 5 severe injuries and 1 fatal injury.

All incidents that occurred in 2019 may be classified as follows:

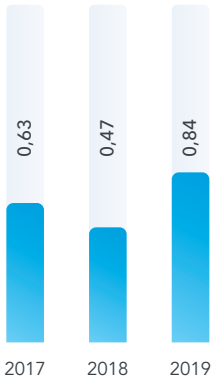
- impact of harmful and hazardous production factors and substances;
- electric shock;
- falling from height;
- injured person falling;
- impact by moving, shattering and rotating equipment and components.

The incidents were caused by the following factors:

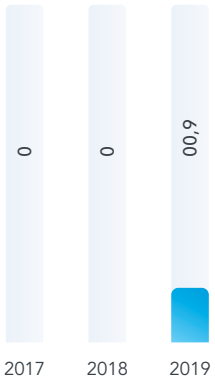
- unsatisfactory organization of works;
- gross negligence of an injured person;
- unsatisfactory organization of works and gross negligence of the injured person;
- equipment failure.

Please see the level and rates of occupational injuries in the Corporation in the charts below.

Total Incident Frequency Rate (TIFR) per 1,000 employees



Fatality Incident Frequency Rate (FIFR) per 1,000 employees



TIFR formula:

$$Fr = \frac{n \times 1\,000}{N}, \text{ where}$$

FIFR formula:

$$Fr1 = \frac{n \times 1\,000}{N}, \text{ where}$$

Occupational Injury Rates

	2017	2018	2019
Headcount	10 549	10 704	10 553
Number of injury cases	7	5	9
Number of injured persons/including women	7/0	5/2	9/0
Number of fatalities	0	0	1

The incident recording, reporting and notification system of the Corporation complies with the laws and regulations of the Republic of Kazakhstan and the International Labor Organization (ILO).

The Corporation and its subsidiaries take the following actions to prevent occupational injuries, monitor and record violations of OHS requirements:

- investigation of minor injuries, incidents, potentially dangerous incidents causing more serious injuries and damages;
- preparation of newsletters regarding incidents and making all personnel of the Corporation's subsidiaries of such incidents to inform of the causes thereof and prevent similar events in the future;
- personnel training in OHS and electrical safety;
- introduction of internal OHS regulations;
- conduct of scheduled and unscheduled OHS inspections;
- OHS Days;
- OHS meetings;
- bringing working places in compliance with OHS requirements;
- provision of posters and safety signs for work places;
- conduct of professional skills contests;
- model work permits issuance and other events.

The activities of contractors working at Corporation's production facilities are controlled as follows: experts of subsidiaries conduct inspections, personnel briefings, and meetings with contractors.

In 2019, the Corporation approved and brought into force and effect the HSE Rules for Cooperation with Contractors. This document is designed to streamline interactions with contractors of CAEPCO JSC's subsidiaries regarding HSE matters in the course of performance of works and services in the territory of subsidiaries as well as goods and materials supply.

In 2019, the Corporation actually spent KZT 2.8 bln on OHS events and working environment improvement.

All Corporation's employees are insured against incidents in accordance with the law of the Republic of Kazakhstan "Regarding Mandatory Insurance of Employees Against Occupational Incidents".

In 2019, the Corporation actually spent KZT 2.8 bln on OHS events and working environment improvement.

OHS COSTS

780 KZT mln 2017

780 KZT mln 2018

2,8 KZT bln 2019

Subsidiary	Amount, in KZT
PAVLODARENERGO Group	2,157 KZT bln
SEVKAZENERGO Group	500,6 KZT mln
AEDC Group	131,9 KZT mln
ASTANAENERGOSBYT LLP	16,4 KZT mln
Total:	**2,8** KZT bln

EMPLOYEES OF CORPORATION EXPOSED TO HIGH INJURY RISK

Technical maintenance and repair of power equipment exposes workers to high risks. While working with power equipment personnel has personal protective equipment and electrical safety devices and occupational safety is ensured by OHS training, technical and organizational measures and such works monitoring.

In 2019, various measures were implemented to secure safety of electrical works:

- the best personal protective equipment and special clothes to protect against electric arc are made available to personnel of CAEPCO JSC's subsidiaries;
- mobile video recorders are used in PEDC JSC to improve labor discipline and responsibility of the personnel involved in operational switches, work place preparation, installation/removal of workplace grounding, etc.

Despite all measures taken 2 cases of personnel electric shock/burns in the course of power equipment maintenance were recorded.

All electrical traumas were investigated and preventive measures were taken.

CUSTOMER SAFETY AND PUBLIC AWARENESS EFFORTS

Top managers of each district unit of the Corporation's electrical distribution companies jointly with occupational health and safety specialists conduct awareness-raising campaigns among the population regarding safety precautions to be taken near operating electrical installations and power transmission lines.

In 2019, out-of-school events on electrical safety were held in educational institutions. Letters containing a reminder of the basic electrical safety rules and measures to prevent electrical injuries among children were sent for further distribution to the Department of Education of the North-Kazakhstan Akimat MPI, the Petropavlovsk City Departments of Education SI, the Pavlodar City Department of Education SI, and heads of district departments of education. These activities are implemented to prevent injuries among school-aged children and college students.

To warn the public and personnel about danger, safety signs and inscriptions are placed on all electrical installations operated in subsidiaries, all equipment is protected against unauthorized access by providing appropriate fences, locks and blocking mechanisms.

Regional and district media publish articles to prevent injuries, including among children, and to protect public health.

PLANS FOR 2020

In 2020, CAEPCO JSC plans to develop a new OHS Action Plan for 2020-2021. The Document will be subject to OHS best practices and OHS issues and data regarding incidents that occurred in the Group companies.

In 2019, the Corporation intends to introduce and maintain the following corporate OHS standards and documents:

- *JSA Job Safety Analysis, OHS guidelines establishing the procedure of risk assessment and personnel briefing prior to work commencement, etc.;*
- *CAEPCO JSC's personnel incentives guidelines to promote compliance with OHS requirements.*

In 2020, CAEPCO JSC and its subsidiaries plan the following events:

- *second corporate professional skills contest among business units of CAEPCO JSC's electricity distribution companies;*
- *introduction of video recording devices at all CAEPCO JSC's electricity distribution companies;*
- *implementation of Isolation of Energy Sources, OHS standard providing for lock out/tag out or LOTO.*

ENVIRONMENTAL POLICY

It is an important goal of the Corporation's investment activities to reduce the adverse impact of power generation on the environment.

ENVIRONMENT PROTECTION COSTS*

No.	Costs	Amount of costs, in KZT		
		2017	2018	2019
	CAEPCO JSC	2 940,600	5 188,625	5 259,676
PAVLODARENERGO JSC				
1	Investment costs	848,396	2 684,95	2 613,091
2	Cost of overhaul repair of key assets intended for environment protection	59,050	70,810	431,929
3	Operating costs	603,674	665,889	196,625
SEVKAZENERGO JSC				
1	Investment costs	707,700	570,178	981,923
2	Cost of overhaul repair of key assets intended for environment protection	152,121	200,592	266,600
3	Operating costs	189,116	214,911	228,987
AEDC JSC				
1	Investment costs	358,200	730,854	518,343
2	Cost of overhaul repair of key assets intended for environment protection	–	–	–
3	Operating costs	22,315	50,441	22,178

70%

It is an important goal of the Corporation's investment activities to reduce the adverse impact of power generation on the environment. From 2009 through 2019 the Corporation cut down its ash emissions by 70%.

ENVIRONMENTAL PROTECTION MEASURES

To enhance the efficiency of environmental protection activities, CAEPCO Group of companies is planning and implementing environmental protection measures aimed at reducing the environmental impact of its activities and improving the environmental efficiency and safety at its enterprises. In 2019, the total cost of implementing such activities amounted KZT 5,259.676 mln.

Such measures will include modernization and overhaul repair of the main and ancillary process equipment generating, transmitting and distributing power, production wastes disposal and industrial environmental monitoring.

Environment impact assessment section is developed with respect to all new construction and upgrade projects notified to local communities and stakeholders during public hearings. All Corporation's projects undergo state expert appraisal in territorial environment protection authorities to confirm the compliance of such projects with Kazakhstan environmental standards.

** Please see detailed information regarding implemented envorinment protection measures in the following sections.*

ATMOSPHERIC AIR

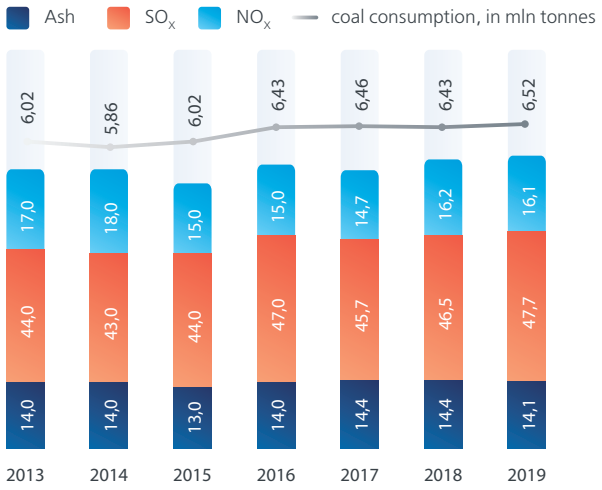
ATMOSPHERIC AIR PROTECTION

In 2019, CAEPCO Group of companies produced 7,032.7 mln kWh of electricity and 6,371.1 thous Gcal of heat from 6,521.8 thous tonnes of Ekibastuz coal and 9,257 thous tonnes of fuel oil, i.e., nonrenewable energy sources.

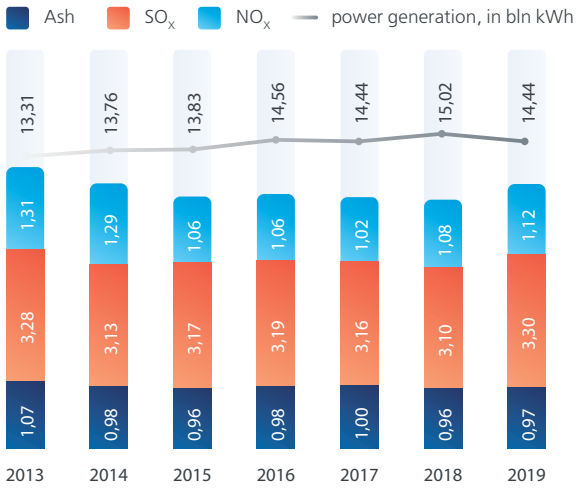
Replacement of outdated generating equipment with low energy and environmental efficiency with modern facilities that meet current environmental protection requirements is the most important factor in reducing emissions by the Corporation.

In 2019, the Group power generation reduced (by 3.9%) against the backdrop of fuel consumption increase by 1.4% and the rise of specific harmful emissions by 1.1% (Sox emissions increased by 2.5%, solid particles (ash) emissions reduced by 2.1% and NOx emissions remained on the same level). Specific harmful emission increased with respect to all substances, NOx, Sox and ash emissions increased by 3.7%, 6.5% and 1.0%, respectively. The emissions increase was caused by fuel consumption.

Gross harmful emissions into the atmosphere in 2013-2019, in thous tonnes



Specific harmful emissions into atmosphere in 2013-2019, in mg/MWh/thous tonnes



In 2019, the following significant measures were taken to protect atmospheric air:

- recovery of boiler heating surface ensuring efficient removal, disposal, inactivation, suppression and deactivation of contaminants in gas;
- overhaul and routine maintenance of dust and gas collectors (repair of worn components of dust extraction plants and gas pipes, aspiration devices and assessment of their effectiveness, heat insulation and burner casings repair, burners repair and replacement within boilers overhaul repair);
- ensuring real time operation of automated environmental monitoring systems;
- replacement, upgrade and modernization of core equipment securing efficient removal, disposal, inactivation, suppression and deactivation of pollutants in waste gas, reduction of power consumption to cover in-house needs, improvement of fuel consumption accounting, reduction of specific fuel consumption per product unit sold.

23,6%

From late 2008 to 2019, the aggregate emissions by CAEPCO Group of harmful emissions to atmosphere fell by 23.6% (from 108.5 thous tonnes to 82.9 thous tonnes, other emissions inclusive).

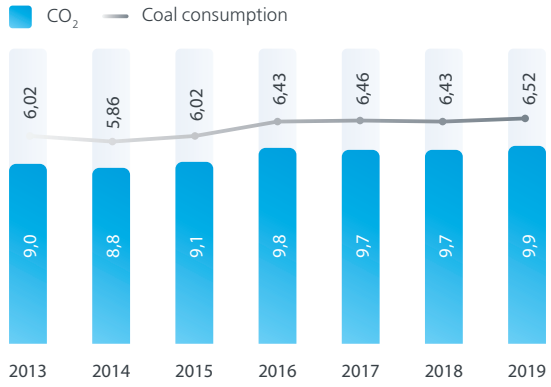
GREENHOUSE GAS (CO_2) EMISSIONS

The Corporation made certain arrangements to make an inventory of greenhouse gas emissions and ozone-depleting substances consumption. The method it uses to monitor greenhouse gas emissions complies with regulations and accounts emissions resulting from ordinary production activities, special processes (commissioning, process shutdown, repair and maintenance) and emergencies.

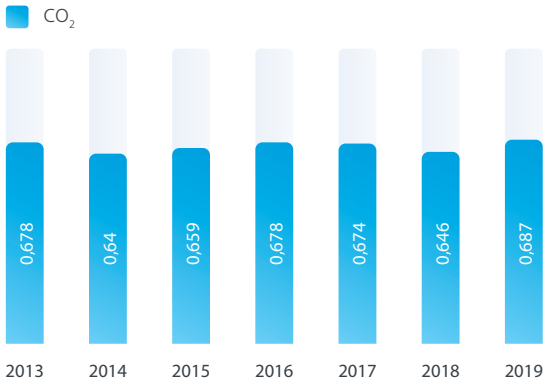
The Corporation implements an additional tool to reduce greenhouse gas emissions - a program focused on energy savings and overall fuel efficiency, as new generating units are making an increasing share of generated energy, as well as introduction of the ISO 50001 energy management system (energy saving measures) at enterprises, the purpose of which is both to increase energy efficiency of production processes and to reduce greenhouse gas emissions. Thanks to this program, in 2019, greenhouse gas (CO2) emissions decreased by 35.203 thous tonnes.

Gross CO2 emissions resulting from fuel combustion in 2019 increased by 2% with specific emissions of greenhouse gas growth by 6%.

Gross CO_2 emissions in 2013-2019, in mln tonnes



Specific CO_2 per unit of generated power in 2013-2019, in tonnes/MWh



The most significant measures implemented in 2019 under the Energy Saving Program to reduce greenhouse gas emissions included the following:

- reconstruction of heating device at Petropavlovsk CHP-2 of SEVKAZENERGO JSC;
- reconstruction of 7AT auto-transformer of SEVKAZENERGO JSC;
- modernization of boiler air heater BKZ-420-140 at Plant 1 of CHP-3 of PAVLODARENERGO JSC;
- repair of turbine unit T-120/130-130PR2 at Plant 4 of CHP-3 of PAVLODARENERGO JSC;
- installation of energy saving lamps at CHP-3 and CHP-2 of PAVLODARENERGO JSC;
- repair of boiler safety valves at Plants 2 and 3 of CHP-2 of PAVLODARENERGO JSC.

STATE ENVIRONMENTAL CONTROL

In 2018, Pavlodar Regional Department of Ecology conducted a scheduled inspection within PAVLODARENERGO JSC (CHP-2, CHP-3) and Ekibastuzteploenergo LLP (Ekibastuz CHP) to verify compliance with environmental legislation and issued seven prescriptive orders. All violations referred in five prescription orders were fully eliminated. Elimination of breaches stated in two orders is in progress.

The Department of Ecology for North Kazakhstan region conducted one scheduled (preventive check) and one unscheduled inspections across SEVKAZENERGO JSC and issued prescriptive orders to eliminate detected violations. SEVKAZENERGO JSC's works aimed at violation elimination are underway.

WATER

WATER MANAGEMENT AND CONSERVATION

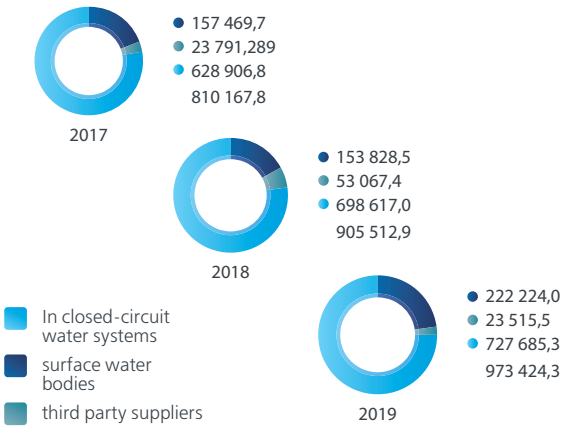
Water resources play an essential role in the Group's production and in the equipment cooling process. CAEPCO Group's generating facilities are equipped with closed-circuit service water systems with cooling ponds (Petropavlovsk) or cooling towers (Pavlodar).

The companies within CAEPCO Group have drinking water supply systems, as well as storm and household sewer systems. Water supply for in-house, drinking and fire-fighting needs, as well as sewerage, is centralized via municipal water supply and sewage networks on a contractual basis.

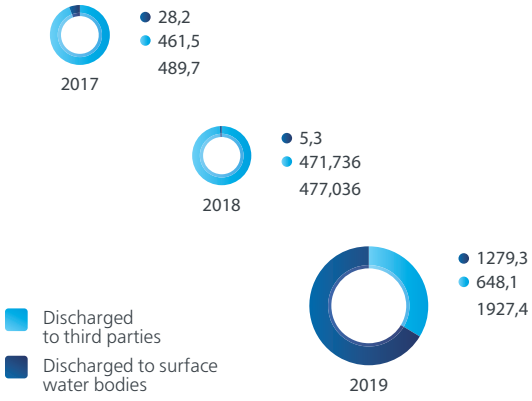
All water used by CAEPCO JSC is fresh. The Corporation does not use sensitive water sources.

In 2019, the Corporation consumed a total of 973,424.3 thous m^3, mostly via the closed-circuit water systems. In the reporting period, water discharge amounted 1,927.4 thous m^3.

Water consumed with a breakdown by sources, in thous m^3



Waste water discharged, in thous m^3



In 2019, the most important environmental activities related to water use and water discharge included the following:
• modernization of industrial closed-circuit water systems, recycled water systems and the system preventing contamination and depletion of water resources at SEVKAZENERGO JSC;
• maintenance and repair of rotary screens at the central pumping stations, routine repairs of borehole and drainage pumps, pumps of central pumping station, maintenance of the feed pump, circulating pumps, cleaning of the outlet channel at SEVKAZENERGO JSC;
• inspection of the underwater section of intake chambers of the central pump, repair of feed pumps and borehole pumps, replacement of built-in bituminous roofing of the on-shore pumping station of SEVKAZENERGO JSC;
• monitoring of qualitative and quantitative water characteristics (water analysis was conducted in accordance with the approved schedule) at SEVKAZENERGO JSC and PAVLODARENERGO JSC;
• taking measures improving the quality of discharged water, enhancing the efficiency of water treatment facilities (Rubezh-45 floating booms cleaning) at SEVKAZENERGO JSC;
• repair of pipelines, stop and control valves for service and potable water at CHP-3 and CHP-2 of PAVLODARENERGO JSC;
• replacement and repair of locking valves on service water and fire-fighting pipelines as well as in heat networks at Ekibastuz CHP of PAVLODARENERGO JSC.

LAND

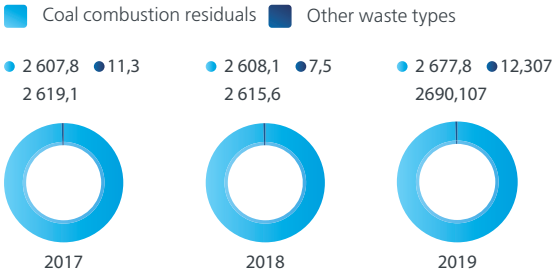
EFFICIENT HANDLING AND DISPOSAL OF PRODUCTION WASTES

Coal combustion residuals representing 99 % of the total amount of wastes are stored at specially equipped hydraulic engineering facilities – coal ash dump sites. Compliance with the environmental regulations of the Republic of Kazakhstan in creating new ash dump sites allows preventing environment contamination by ash production waste and ensuring stable CHP operation.

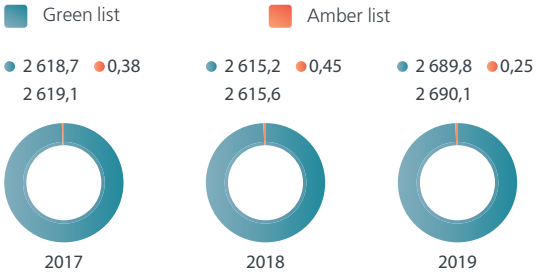
In 2019, the waste generated by CAEPCO Group of companies amounted 2,677.761 thous tonnes, including 2,609.068 thous tonnes of ash and 12.307 thous tonnes of industrial and utility wastes.

The Group's waste increase by 74.5 thous tonnes compared to 2018 was caused by fuel consumption and repair works growth.

Total weight of generated waste, in thous tonnes



Waste by hazard level, in thous tonnes



Wastes by handling method, in thous tonnes

Indicator	2017	2018	2019
Waste generated	**2 619,1**	**2 615,6**	**2 690,1**
Including coal combustion residuals	2 607,8	2 608,1	2 677,8
Waste used at the enterprise	5,02	0,424	2,839
Waste discontaminated	0,04	0,04	0,04
Waste handed over to third parties *	6,270	7,148	9,978
Waste disposed at enterprise's own sites	2 607,8	2 607,8	2 676,7
Including coal combustion residuals	2 607,8	2 607,8	2 677,8

In 2019, SEVKAZENERGO JSC and PAVLODARENERGO JSC sold 1,283.06 tonnes of ash light fraction from their ash dump sites.

In 2019, the most important waste disposal activities included the following:

- ash dump site No. 3 reclamation and dikes topping at Section 3 of ash dump site No.2 of SEVKAZENERGO JSC;
- dikes topping at Section 1 of the ash dump site and construction of the 3rd phase of ash dump site at CHP-3 of PAVLODARENERGO JSC;
- construction of the 2nd phase of ash dump site at Ekibastuz CHP of Ekibastuzteploenergo LLP;
- arrangement of storage sites for wastes generated in the course of modernization and construction of power facilities (setting up sites and containers installation);
- sale of coal combustion residuals to reduce stored amount thereof;
- separate collection of waste that cannot be placed in landfills: waste paper and cardboard, plastic and glass wastes.

New ash dump sites were built using the Canadian polysynthetic geomembrane, which is a stateof-the-art waste containment technology. It is a reliable and durable landfill liner ensuring protection of soil and ground water against contamination with chemicals contained in clarified water of the hydraulic ash removal system.

ENVIRONMENTAL MANAGEMENT SYSTEM

Availability of the environmental management system that is developed, well-functioning and certified for compliance with ISO 14001 standard is the most important indicator of a systematic efficient work in the field of environmental protection, promoting the Corporation's competitive capacity, increasing the market value of shares and creating a positive image in its relations with external stakeholders.

In addition to environment management system the Corporation also maintains a quality management system (ISO 9001), occupational health and safety management system (OHSAS 18001) and energy management system (ISO/CD 50001).

During the reporting period TÜV Rheinland Kazakhstan conducted supervisory and certification audits of CAEPCO JSC's subsidiaries to verify compliance with the following international standards: ISO 14001 (Environmental Management System), ISO 9001 (Quality Management System), OHSAS 18001 (Occupational Safety and Health Management System), ISO/CD 50001 (Energy Management System). As a result, certificates of integrated management system (IMS) were issued and the Corporation's efficiency, effectiveness and focus on improvement were confirmed.

CAEPCO Group of companies semiannually conducts environmental peer reviews to identify the best industrial environment, wastes and consumption management practices as well as to promote the environment protection awareness.

PLANS FOR 2020

As part of its Environmental Policy, the Corporation intends to further improve environmental efficiency and safety of its enterprises and to minimize a negative environmental impact of their operations. To this end, the Corporation is going to implement environmental protection plans and energy saving programs, to further upgrade obsolete equipment, to comply with environmental regulations and to take part in discussions of a new version of Environmental Code.

CORPORATE EVENTS PROMOTING SUSTAINABLE DEVELOPMENT

FEBRUARY

Under social partnership agreement AEDC JSC conducted a master class for students of the Nur-Sultan City Management College on resuscitation measures applied to electrocuted persons

APRIL–MAY

CAEPCO JSC's subsidiaries celebrated the World Day for Safety and Health at Work with a Family Day of Occupational Health Safety and a contest for young specialists;

CAEPCO JSC's subsidiaries held kids' creative contests "Labor Safety through the Eyes of the Child" awarding the winners and giving presents to all participants.

JUNE

PAVLODARENERGO JSC determined the winners of its annual contest of scientific papers conducted among the third year students of higher educational institutions and secondary specialized colleges in Pavlodar region under PROFENERGY project. The winners were granted personal scholarships.

JULY

Corporation's young workers participated in "PUT ON YOUR HELMET" challenge to promote OHS regulations compliance.

Dussenbay Turganov, the Chairman of the Board of Directors of SEVKAZENERGO JSC, took part in the closing ceremony of IQanat, the first republican conference of school children. SEVKAZENERGO JSC is a trustee of IQanat Public Fund in the North Kazakhstan region.

AUGUST

•A student of the Petropavlovsk City Railway Transport College won a scientific paper contest held under PROFENERGY project and was given an award.

Ekibastuzteploenergo LLP took active part in BirgeTazaQazaqstan, a republican environment protection campaign involving waste collection at watersides and near dam ponds.

OCTOBER

Employees of SEVKAZENERGO JSC planted birch and mountain-ash trees in a Powermen Public Garden;

SEVKAZENERGO JSC and North-Kazakhstan EDC JSC took part in Green Office, the first national contest conducted by Green Kaz supported by the Ministry of Ecology, Geology and Natural Resources of the Republic of Kazakhstan and OSCE Programme Office. Both companies were issued appreciation letters for participation.

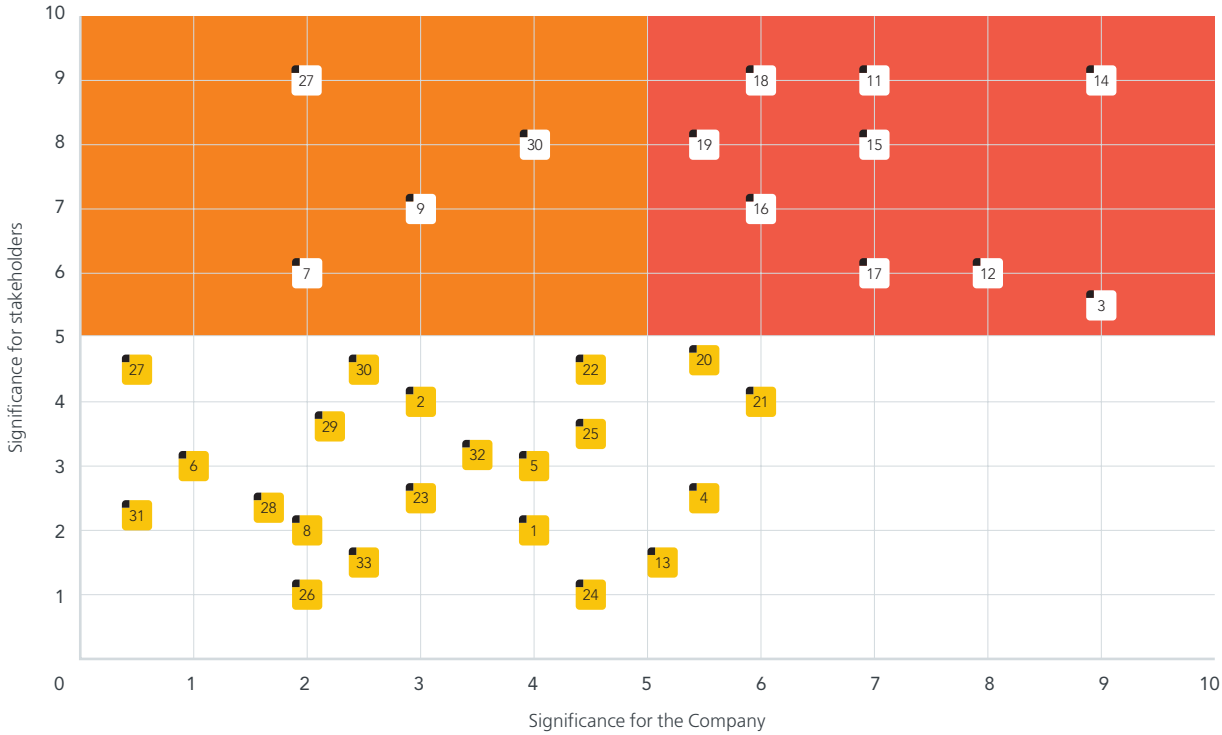
ABOUT THE REPORT

Central-Asian Electric Power Corporation JSC ("CAEPCO JSC") has issued its Annual Reports since 2013.

This report contains information regarding operations of CAEPCO JSC and its subsidiaries in 2019. This document includes Sustainable Development Report prepared in accordance with GRI G4 standards and disclosures thereof related to electric utilities sector. Please see the table explaining where to find standard reporting elements and performance data in section "Index of GRI Elements".

During recent four years CAEPCO JSC's Annual Report ranks top 3 of the best annual reports in Kazakhstan non-financial sector. In 2019, the company's report was recognized the Best Annual Report of a Private Kazakhstan Company.

LIST OF TOPICS AND MATERIALITY MAP



GRI ELEMENT INDEX

No.	Aspects	No.	Aspects
1.	Economic performance	18.	Training and education
2.	Market presence	19.	Diversity and equal opportunities
3.	Indirect economic impacts	20.	Non-discrimination
4.	Procurement practices	21.	Freedom of association and collective bargaining
5.	Anti-corruption	22.	Child labor
6.	Anti-competitive behavior	23.	Forced or compulsory labor
7.	Materials	24.	Safety practices
8.	Power	25.	Rights of indigenous people and minorities
9.	Water	26.	Respect of human rights
10.	Biodiversity	27.	Local communities
11.	Emissions	28.	Assessment of vendor compliance with social criteria
12.	Effluents and wastes	29.	Public policy
13.	Assessment of vendor compliance with environmental standards	30.	Customer health and safety
14.	Compliance with environmental requirements	31.	Products and services labeling
15.	Employment	32.	Consumer privacy
16.	Relations between employees and management	33.	Violations of social and economic legislation
17.	Occupational health and safety		

GRI ELEMENT INDEX

GRI STANDARD AND YEAR OF PUBLICATION	INDICATOR	PAGE NUMER, SECTION AND/OR URL	EXCEPTIONS/ COMMENTS
GRI 101: Foundation (2016)			
GRI 102: General Disclosures (2016)	ORGANIZATION PROFILE		
	102-1 Name of the organization	Business Profile, page 7	
	102-2 Activities, brands, products, and services	Business Profile, page 7 and Business Model, page 10	
	102-3 Location of headquarters	Contacts, page 110	
	102-4 Location of operations	Geography of Operations, page 14	
	102-5 Ownership and legal form	Corporate Structure, page 46	
	102-6 Markets served	Geography of Operations, page 14, Subsidiaries, page 15	
	102-7 Scale of organization	Key Performance Indicators, page 7	
	102-8 Information on employees and other workers	Human Resources and Social Policy, page 74	
	102-9 Supply Chain	Business Model, page 10	
	102-10 Significant changes to the organization and its supply chain	Organizational Structure, page 46 Share Capital Structure, page 46	No changes
	102-11 Precautionary Principle or Approach	Environmental Protection Measures, page 87	
	102-12 External Initiative	Greenhouse Gas Emissions, page 89 Environmental Management System, page 92	
	102-13 Membership in Associations	-	The Corporation is a member of the Kazakhstan Electricity Association (KEA)
	STRATEGY		
	102-14 Statement from Senior Decision-Maker	Letter of Chairman of the Management Board, page 4 Letter of the General Director, page 5	
	ETHICS AND INTEGRITY		
	102-16 Values, Principles, Standards, and Norms of Behavior	Corporate Governance Code Compliance Report, page 54	
	Corporate Governance		
	102-18 Management Structure	Governance Structure, page 46 Performance Overview of the Committees of the Board of Directors, page 52	

GRI STANDARD AND YEAR OF PUBLICATION	INDICATOR	PAGE NUMER, SECTION AND/OR URL	EXCEPTIONS/ COMMENTS
GRI 102: General Disclosures (2016)	STAKEHOLDER ENGAGEMENT		
	102-40 List of Stakeholder Groups	Stakeholder Engagement, page 67	
	102-41 Collective Bargaining Agreements	Interaction with Trade Unions, page 78	
	102-42 Identifying and Selecting Stakeholders	Stakeholder Engagement, page 67	
	102-43 Approach to Stakeholder Engagement	Stakeholder Engagement, page 67	
	102-44 Key Topics and Concerns Raised	Stakeholder Engagement, page 67	
	Reporting Practice		
	102-45 Entities Included in the Consolidated Financial Statements	About the Report, page 94	
	102-46 Defining Report Content and Topic Boundaries	List of Topics and Materiality Map, page 95	
	102-47 List of Material Topics	List of Topics and Materiality Map, page 95	
	102-48 Restatements of Information	-	Indicators were not changed and are comparable with the data provided in previous annual reports of the Corporation.
	102-49 Changes in Reporting	-	No changes
	102-50 Reporting Period	About Report, page 94	
	102-51 Date of Most Recent Report	About Report, page. 94	
	102-52 Reporting Cycle	About Report, page 94	
	102-53 Contact Point for Questions Regarding the Report	Contacts, page 110	
	102-54 Claims of Reporting in Accordance with the GRI Standards	About Report, page 94	
	102-55 GRI Content Index	GRI Element Index, page 95	
	102-56 External Assurance	About Report, page 94	
SIGNIFICANT TOPICS			
ECONOMICS			
GRI 103: Management Approach (2016)	103-1 Explanation of the Material Topic and its Boundary	List of Topics and Materiality Map, page 95	
	103-2 The Management Approach and its Components	Financial and Economic Indicators, page 38	Comprehensive economic policy covers all major topics in this area.
	103-3 Evaluation of the Management Approach	-	Not conducted
GRI 203: Indirect Economic Impacts (2016)	203-1 Infrastructure Investments and Services Supported	Social Projects, page 93	
	203-2 Significant Indirect Economic Impacts	Attracting Young Specialists, page 77	

GRI STANDARD AND YEAR OF PUBLICATION	INDICATOR	PAGE NUMER, SECTION AND/OR URL	EXCEPTIONS/ COMMENTS
ENVIRONMENT PROTECTION			
GRI 103: Management Approach (2016)	103-1 Explanation of the Material Topic and its Boundary	List of Topics and Materiality, page 95	
	103-2 The management approach and its components	Environment Impact Management, page 87	Comprehensive environmental impacts management policy covers all major topics in this area.
	103-3 Evaluation of the Management Approach	-	Not conducted.
MATERIALS			
GRI 301: Materials (2016)	301-1 Materials Used by Weight or Volume	Environmental Impact Management, page 87	
WATER			
GRI 303: Water (2018)	303-1 Water Withdrawal by Source	Water Management and Water Resources Conservation, page 90	
	303-3 Water Withdrawal	Water Management and Water Resources Conservation, page 90	
	303-4 Water Discharge	Efficient Industrial Wastes Management, page 90	
EMISSIONS			
GRI 305: Emissions (2016)	305-1 Direct GHG Emissions	Greenhouse Gas Emissions, page 89	
	305-4 GHG Emissions Intensity	Greenhouse Gas Emissions, page 89	
	305-5 Reduction of GHG Emissions (COR2R)	Greenhouse Gas Emissions, page 89	
	305-7 Nitrogen oxides (NOx), sulfur oxides (SOx) and other significant air emissions	Atmospheric Air Protection, page 88	
WASTE			
GRI 306: Waste (2016)	306-2 Waste by Type and Disposal Method	Efficient Handling and Disposal of Production Wastes, page 91	
COMPLIANCE			
GRI 307: Environmental Compliance (2016)	307-1 Non-Compliance with Environmental Laws and Regulations	Greenhouse Gas (CO2) Emissions, page 89	
SOCIAL CATEGORY			
GRI 103: Management Approach (2016	103-1 Explanation of the Material Topic and Its Boundary	List of Topics and Materiality, page 95	
	103-2 The Management Approach and Its Components	Environment Impact Management, page 74	Comprehensive environmental HR policy covers all major topics in this area.
	103-3 Evaluation of the Management Approach	-	Not conducted.
EMPLOYMENT			
GRI 401: Employment (2016)	401-1 New Employee Hires and Employee Turnover	Employee Turnover, page 76	
LABOR/MANAGEMENT RELATIONS			
GRI 402: Labor/ Management Relations (2016)	402-1 Minimum Notice Periods Regarding Operational Changes	Human Resources and Social Policy, page. 74	

GRI STANDARD AND YEAR OF PUBLICATION	INDICATOR	PAGE NUMER, SECTION AND/OR URL	EXCEPTIONS/ COMMENTS
OCCUPATIONAL HEALTH AND SAFETY			
GRI 403: Occupational Health and Safety (2016)	403-1 Occupational Health and Safety Management System	Occupational Health and Safety Councils, page 83	
	403-2 Hazard Identification, Risk Assessment, and Incident Investigation	Types and Incidence of Occupational Injuries, page 84	
	403-3 Occupational Health Services	Employees of the Corporation Exposed to High Injury Risk, page 86	
TRAINING			
GRI 404: Training and Education (2016)	404-2 Programs for Upgrading Employee Skills and Transition Assistance Programs	Personnel Training and Development, page 76	
DIVERSITY AND EQUAL OPPORTUNITIES			
GRI 405: Diversity and Equal Opportunity (2016)	405-1 Diversity of Governance Bodies and Employees	Employees Structure by Category and Sex, page 74.	
LOCAL COMMUNITIES			
GRI 103: Management Approach (2016)	103-1 Explanation of the Material Topic and its Boundary	List of Topics and Materiality, page 95	
	103-2 The Management Approach and Its Components	Stakeholder Engagement, page 67	
	103-3 Evaluation of the Management Approach	-	Not conducted.
GRI 413: Local Communities (2016)	413-1 Operations with Local Community Engagement, Impact Assessments, and Development Programs	Stakeholder Engagement, page 67	
CUSTOMER HEALTH AND SAFETY			
GRI 103: Management Approach (2016)	103-1 Explanation of the Material Topic and its Boundary	List of Topics and Materiality, page 95	
	103-2 The Management Approach and Its Components	Customer Safety, page 86	
	103-3 Evaluation of the Management Approach	-	Not conducted.
GRI 416: Customer Health and Safety (2016)	416-1 Assessment of the Health and Safety Impacts of Product and Service Category	Customer Safety, page 36	
ADDITIONAL INFORMATION			
GRI G4 Electric Utilities Disclosure	G4-EU1 Installed Capacity Broken Down by Primary Energy Source and by Regulatory Regime	CAEPCO Today, page 14	
	G4-EU2 Net Energy Output Broken Down by Primary Energy Source and by Regulatory Regime	Key Performance Indicators, page 7	
	G4-EU3 Number of Residential, Industrial, Institutional and Commercial Customer Accounts	Geography of Operations, page 14	
	G4-EU4 Length of Above and Underground Transmission and Distribution Lines by Regulatory Regime	Main Production Characteristics, page 14	
	G4-EU5 Allocation of CO2E Emissions Allowances or Equivalent, Broken Down by Carbon Trading Framework	Greenhouse Gas Emissions, page 89	

FINANCIAL STATEMENTS

CENTRAL-ASIAN ELECTRIC-POWER CORPORATION JOINT STOCK COMPANY AND ITS SUBSIDIARIES

CONSOLIDATED STATEMENT OF FINANCIAL POSITION FOR THE YEAR ENDED 31 DECEMBER 2019 (in thousands of tenge)

	Note	31 December 2019	31 December 2018
ASSETS			
NON-CURRENT ASSETS:			
Property, plant and equipment	8	263,940,484	260,133,112
Goodwill	9	1,405,202	1,687,141
Intangible assets	10	1,764,085	1,979,566
Deferred tax assets	37	983,455	1,640,086
Loans receivable	12	11,065,201	4,074,492
Other financial assets	13	539,413	86,249
Advances given	11	1,236,850	4,716,792
Other non-current assets	16	8,162,459	2,397,150
Total non-current assets		**289,097,149**	**276,714,588**
CURRENT ASSETS:			
Inventories	14	5,099,159	4,751,626
Trade receivables	15	15,023,978	15,435,390
Advances given	11	1,602,348	2,197,762
Income tax prepaid		772,431	809,345
Other current assets	16	3,165,560	7,428,544
Loans receivable	12	2,903,462	4,499,930
Other financial assets	13	652,418	950,152
Cash and cash equivalents	17	894,566	1,301,811
Total current assets		**30,113,922**	**37,374,560**
TOTAL ASSETS		**319,211,071**	**314,089,148**
EQUITY AND LIABILITIES			
EQUITY:			
Share capital	18	46,043,272	46,043,272
Additional paid-in capital	19	1,348,105	1,348,105
Revaluation reserve for property, plant and equipment		36,607,620	38,998,854
Retained earnings		52,342,715	58,274,754
Total equity		**136,341,712**	**144,664,985**

CENTRAL-ASIAN ELECTRIC-POWER CORPORATION JOINT STOCK COMPANY AND ITS SUBSIDIARIES

CONSOLIDATED STATEMENT OF FINANCIAL POSITION FOR THE YEAR ENDED 31 DECEMBER 2019 (in thousands of tenge)

	Note	31 December 2019	31 December 2018
LIABILITIES			
NON-CURRENT LIABILITIES:			
Bonds issued	20	13,244,969	19,410,835
Deferred revenue	24	6,885,923	7,242,625
Lease liabilities	25	1,380,582	1,717,330
Deferred tax liabilities	37	38,029,150	38,675,054
Provision for asset retirement obligations	23	1,192,343	1,745,140
Employee benefit obligations		114,368	116,367
Other long-term payables		331,001	367,414
Total non-current liabilities		**61,178,336**	**69,274,765**
CURRENT LIABILITIES:			
Current portion of bonds issued	20	5,963,431	473,473
Loans	21	82,374,864	72,461,789
Trade payables	26	23,463,760	17,076,140
Advances received	27	2,405,256	2,524,568
Current portion of provision for asset retirement obligations	23	927,879	61,665
Current portion of employee benefit obligations		14,586	11,905
Current portion of lease liabilities	25	551,609	500,583
Financial guarantees	22	1,872,553	2,090,875
Other liabilities and accrued expenses	28	4,117,085	4,948,400
Total current liabilities		**121,691,023**	**100,149,398**
TOTAL EQUITY AND LIABILITIES		**319,211,071**	**314,089,148**

CENTRAL-ASIAN ELECTRIC-POWER CORPORATION JOINT STOCK COMPANY AND ITS SUBSIDIARIES

CONSOLIDATED STATEMENT OF PROFIT OR LOSS AND OTHER COMPREHENSIVE INCOME FOR THE YEAR ENDED 31 DECEMBER 2019
(in thousands of tenge)

	Note	2019 г.	2018 г.
REVENUE	29	137,195,299	143,880,232
COST OF SALES	30	(116,317,593)	(114,309,584)
GROSS PROFIT		**20,877,706**	**29,570,648**
General and administrative expenses	31	(8,656,614)	(10,262,996)
Selling expenses	32	(2,428,287)	(2,404,415)
Finance costs	33	(10,207,280)	(8,268,842)
Finance income	34	2,104,129	1,416,338
Impairment of financial instruments, net	39	(4,311,747)	(538,029)
Foreign exchange loss, net	35	(10,033)	(5,479,440)
Impairment of goodwill	9	(281,939)	–
Other expenses, net	36	(300,116)	(201,415)
(LOSS)/PROFIT BEFORE TAXATION		**(3,214,181)**	**3,831,849**
INCOME TAX EXPENSE	37	(1,829,363)	(2,231,737)
(LOSS)/PROFIT FOR THE YEAR		**(5,043,544)**	**1,600,112**
OTHER COMPREHENSIVE INCOME/(LOSS) FOR THE YEAR, net of income tax			
Items that will not be reclassified subsequently to profit or loss:			
– Loss on revaluation of property, plant and equipment		–	(15,750)
– Changes in estimates related to provision for asset retirement obligations		(34,061)	–
TOTAL COMPREHENSIVE (LOSS)/INCOME FOR THE YEAR		**(5,077,605)**	**1,584,362**
(Loss)/earnings per share			
(Loss)/earnings per share for the year, in KZT	41	(136.49)	43.30

CENTRAL-ASIAN ELECTRIC-POWER CORPORATION JOINT STOCK COMPANY AND ITS SUBSIDIARIES

CONSOLIDATED STATEMENT OF CHANGES IN EQUITY FOR THE YEAR ENDED 31 DECEMBER 2019 (in thousands of tenge)

	Share capital	Additional paid-in capital	Revaluation reserve for property, plant and equipment	Retained earnings	Total equity
At 31 December 2017	**46,043,272**	**1,348,105**	**41,413,587**	**60,979,619**	**149,784,583**
Adjustment of opening balance IFRS 9 (Note 2)	–	–	–	(2,665,526)	(2,665,526)
Restated balance at 1 January 2018	**46,043,272**	**1,348,105**	**41,413,587**	**58,314,093**	**147,119,057**
Profit for the year	–	–	–	1,600,112	1,600,112
Other comprehensive loss for the year	–	–	(15,750)	–	(15,750)
Total comprehensive (loss)/income for the year	–	–	**(15,750)**	**1,600,112**	**1,584,362**
Amortisation of revaluation reserve on property, plant and equipment	–	–	(2,398,983)	2,398,983	–
Financial guarantees (Note 22)	–	–	–	(1,672,700)	(1,672,700)
Shareholder operation	–	–	–	(237,914)	(237,914)
Dividends declared	–	–	–	(2,127,820)	(2,127,820)
At 1 January 2019	**46,043,272**	**1,348,105**	**38,998,854**	**58,274,754**	**144,664,985**
Loss for the year	–	–	–	(5,043,544)	(5,043,544)
Other comprehensive loss for the year	–	–	(34,061)	–	(34,061)
Total comprehensive loss for the year	–	–	**(34,061)**	**(5,043,544)**	**(5,077,605)**
Amortisation of revaluation reserve on property, plant and equipment	–	–	(2,357,173)	2,357,173	–
Shareholder operation	–	–	–	(2,445,613)	(2,445,613
Dividends declared	–	–	–	(800,055)	(800,055)
At 31 December 2019	**46,043,272**	**1,348,105**	**36,607,620**	**52,342,715**	**136,341,712**

CENTRAL-ASIAN ELECTRIC-POWER CORPORATION JOINT STOCK COMPANY AND ITS SUBSIDIARIES

CONSOLIDATED STATEMENT OF CASH FLOWS FOR THE YEAR ENDED 31 DECEMBER 2019 (in thousands of tenge)

	Note	2019 г.	2018 г.
OPERATING ACTIVITIES:			
(Loss)/profit before taxation		(3,214,181)	3,831,849
Adjustments for:			
Depreciation and amortisation	8, 10	13,000,529	11,825,056
Finance costs	33	10,207,280	8,268,842
Impairment of financial instruments, net	39	4,311,747	538,029
Impairment provision for obsolete and slow-moving inventories	14	173,433	83,345
Loss on disposal of property, plant and equipment	36	(213,173)	830,672
Loss on impairment of goodwill		281,939	–
Accrual of provision for unused vacations		92,911	176,605
Foreign exchange loss, net	35	10,033	5,479,440
Finance income	34	(2,104,129)	(1,416,338)
Gain on write-off of accounts payable		(58,911)	(21,718)
Loss on impairment of CIP items		346,387	88,251
Provision for asset retirement obligations		38,272	572,007
Other		–	(244,880)
Operating cash flow before movement in working capital		**22,872,137**	**30,011,160**
Changes in inventories		(520,966)	45,464
Changes in trade receivable		86,479	1,397,946
Changes in advances given		(245,914)	(639,661)
Changes in other current assets		3,214,217	(201,648)
Changes in other non-current assets		(2,573,394)	2,295
Changes in other trade receivables		160,067	(2,060,350)
Changes in trade payables		6,446,531	585,653
Changes in deferred revenue		(356,702)	(109,970)
Changes in advances received		(119,312)	301,587
Changes in other liabilities and accrued expenses		(1,136,355)	2,295,646
Changes in provision for asset retirement obligations		(137,962)	(270,294)
Changes in employee benefit obligations		205,482	(53,362)
Cash from operating activities		**27,894,308**	**31,304,466**
Income tax paid		(1,949,409)	(2,389,522)
Interest paid	20, 21, 25	(9,170,338)	(7,389,567)
Net cash from operating activities		**16,774,561**	**21,525,377**

CENTRAL-ASIAN ELECTRIC-POWER CORPORATION JOINT STOCK COMPANY AND ITS SUBSIDIARIES

CONSOLIDATED STATEMENT OF CASH FLOWS FOR THE YEAR ENDED 31 DECEMBER 2019 (in thousands of tenge)

	Note	2019 г.	2018 г.
INVESTING ACTIVITIES:			
Acquisition of property, plant and equipment		(12,573,481)	(21,536,098)
Acquisition of intangible assets		(141,629)	(274,222)
Placement of deposits		(30,953,689)	(22,190,081)
Cash withdrawn from deposits		30,921,691	38,714,726
Proceeds from interest accrued on placed deposits		128,141	382,839
Receipt of interest accrued on loans receivable		43,945	23,338
Proceeds from disposal of property, plant and equipment		–	31,248
Cash given to EcoAlternativa LLP	16	(3,300,000)	(3,595,638)
Loans given	12, 39	(89,500)	(10,595,609)
Repayment of loans issued	12, 39	1,518,090	796,082
Acquisition of financial assets		36,999	(316,000)
Cash returned from guarantee fees		(23,178)	(14,305)
Cash given to shareholders	12, 39	(10,195,820)	(894,720)
Cash returned from shareholders	12, 39	90,500	800,000
Net cash used in investing activities		**(24,537,930)**	**(18,668,440)**
FINANCING ACTIVITIES:			
Proceeds from loans	21	80,710,056	30,827,798
Repayment of loans	21	(70,803,838)	(30,577,328)
Proceeds from issuance of bonds	20	–	1,440,568
Bond redemption	20	(1,134,684)	(2,732,325)
Dividends paid	25	(532,072)	(424,119)
Proceeds from government grants	18	(800,055)	(2,489,124)
Lease payments	24	-	20,333
Net cash from/(used in) financing activities		**7,439,407**	**(3,934,197)**
NET DECREASE IN CASH AND CASH EQUIVALENTS		**(323,963)**	**(1,077,260)**
Cash and cash equivalents at the beginning of the year	17	**1,301,811**	**2,368,075**
Effect of exchange rate changes on cash balances in foreign currencies	35	(15,510)	93,319
Expected credit losses for cash and cash equivalents		(67,772)	(82,323)
Cash and cash equivalents at the end of the year	17	**894,566**	**1,301,811**

GLOSSARY, ABBREVIATIONS

Overhead power line	– shall mean an electric line for transmission of electric power through the wires located in the open air and attached by means of insulators and fittings to supports or brackets.
Overhead transmission lines	– shall mean the structures intended for transmission of electric power over a distance by wires.
Gigacalorie or Gcal	– shall mean a unit of measurement of thermal energy used for assessment in the heat power industry, heating systems and the utilities sector.
Gigacalorie per hour or Gcal/h	– shall mean a derived unit of measurement used to specify the amount of heat produced or used by a certain equipment per a unit of time.
Cooling tower	– shall mean a structure shaped like an exhaust tower providing air stack effect.
Goodwill	– shall mean the difference between the price of a company and the fair value of all its assets.
Ash	– shall mean an incombustible residue (in the form of dust) which consists of mineral impurities left after complete combustion of fuel.
Ash dump site	– shall mean a place for collection and disposal of waste ash and slag generated during combustion of solid fuel at combined heat and power plants.
Calorie or cal	– shall mean an off-system unit for measuring the amount of heat.
Boiler	– shall mean a device for generating pressurized steam or hot water through fuel combustion, use of electric power, heat of exhaust gas or technological process.
Power transmission line or PTL	– shall mean a structure consisting of wires (cables) and auxiliary devices for transmission of electric power from power plants to consumers.
Megawatt	– shall mean a unit of power measurement in electricity generation.
Pavlodar HNs	– shall mean Pavlodar heat networks.
Substation	– shall mean an electric installation used for conversion and distribution of electric power and consisting of transformers or other power converters, switchgear, control devices and auxiliary facilities.
Available capacity of a unit (plant)	– shall mean an installed capacity of a generating unit (plant) minus its capacity limitations.
Combined head and power plant or "CHPP" or cogeneration heating plant	– shall mean a thermal power plant generating not only electric power, but also heat supplied to consumers in the form of steam and hot water.
Transformer	– shall mean a device for converting any significant properties of energy (e.g., electric transformer, torque converter) or objects (e.g., photo transformer).
Turbine generator	– shall mean a combination of a steam turbine, electricity generator and exciter united by one shaft train; it converts potential energy of steam into electric power.
Installed capacity	– shall mean an effective value of the turbine generators' rated capacity.
Installed heat capacity of the plant	– shall mean the sum of all rated heating capacities for all the equipment commissioned under the act and designed for supplying heat to external consumers and steam and hot water for internal needs.
Installed electrical capacity of the energy system	– shall mean total effective capacity of all turbo and hydropower generators of power plants in the energy system in accordance with their passports or specifications.

Wet scrubber	– shall mean a device for wet ash and dust removal operating in the phase inversion mode.
COSO	– shall mean the Committee of Sponsoring Organizations of the Treadway Commission.
CTF	– shall mean Clean Technology Fund.
EBITDA	– shall mean an analytical indicator, which means earnings before interest, taxation, depreciation and amortization.
ESAP	– shall mean Environmental and Social Action Plan.
ISO	– shall mean International Organization for Standardization.
KEGOC	– shall mean Kazakhstan Electricity Grid Operating Company JSC.
OHSAS	– shall mean International occupational health and safety management system.
JSC	– shall mean a joint stock company.
Subsidiaries	– shall mean subsidiary organizations.
AEDC or Akmola EDC	– shall mean Akmola Electrical Distribution Company JSC.
ASCAHE	– shall mean automatic system for commercial accounting of heat energy.
ASCAE	– shall mean automatic system for commercial accounting of electricity.
GDP	– shall mean gross domestic product.
OHL	– shall mean overhead lines.
Pollutants	– shall mean contaminants.
HWS	– shall mean hot water supply.
GRES	– state district power plant.
GTPP	– shall mean gas turbine power plant.
HEPP	– shall mean hydroelectric power plant.
EBRD	– shall mean European Bank for Reconstruction and Development.
FARD	– shall mean fly ash removal device.
kWh	– shall mean kilowatt per hour.
MW	– shall mean megawatt.
MNE RK	– shall the Ministry of National Economy of the Republic of Kazakhstan.
EP	– shall mean environment protection.
Pavlodar EDC	– shall mean Pavlodar Regional Electric Distribution Company JSC.
PCHP-2	– shall mean Petropavlovsk combined heat and power plant No. 2.
PE	– shall mean PAVLODARENERGO JSC.
RK	– shall mean Republic of Kazakhstan.
PGA	– shall mean power grid area.
ICS	– shall internal control system.
BoD	– shall mean Board of Directors.

ABC	– shall mean aerial bundled conductor.
NK REDC	– shall mean North Kazakhstan Regional Electric Distribution Company JSC.
SKE	– shall mean SEVKAZENERGO JSC.
MM	– shall mean mass media.
RMS	– shall mean risk management system.
SMW	– shall mean solid municipal wastes.
INR	– shall mean inventories.
LLP	– shall mean limited liability partnership.
TPP	– shall mean thermal power plant.
CHP	– shall mean combined heat and power plant.
CAPEC	– shall mean Central-Asian Power-Energy Company JSC.
CAEPCO	– shall mean Central-Asian Electric Power Corporation JSC.
PP	– shall mean power plant

CONTACTS

CENTRAL-ASIAN ELECTRIC POWER CORPORATION JSC

Head Office of CAEPCO JSC:

2 Dostyk Str., SAAD Business Center, Nur-Sultan, 050012,
Republic of Kazakhstan E-mail: info@energy.kz
Tel.: +7 (7172) 64-57-77

NAME/POSITION	CONTACT DETAILS
INVESTOR AND SHAREHOLDER RELATIONS:	
NATALIA BUKSHA, *Chief Accountant, CAEPCO JSC*	2 Dostyk Str., Nur-Sultan Republic of Kazakhstan Telephone: +7 (7172) 64-57-77
TALGAT ZHUMADILOV, *Managing Director for Corporate Development, CAEPCO JSC*	2 Dostyk Str., Nur-Sultan Republic of Kazakhstan Telephone: +7 (7172) 64-57-77
PERSON IN CHARGE OF THE ANNUAL REPORT	
MIRA SAIDAKMETOVA, *Chief of PUBLIC RELATIONS DEPARTMENT, CAEPCO JSC*	2 Dostyk Str., Nur-Sultan Republic of Kazakhstan Telephone: +7 (7172) 64-57-77

AUDITOR

The auditor of CAEPCO JSC is PwC Kazakhstan located at: 34 Al-Farabi, 4th Floor, AFD Business Center, Almaty, A25D5F6, Republic of Kazakhstan

Telephone: +7 (727) 330 32 00

Facsimile: +7 (727) 244 68 68

REGISTRAR

Integrated Securities Registrar JSC (state registration certificate No. 1678–1910–02-AO issued on 11.01.2012 by the Almaty City Department of Justice.

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