



Central-Asian  
Electric Power Corporation



# TRANSFORMING ENERGY INTO LIFE

ANNUAL REPORT 2020

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## MANAGEMENT LETTERS

### DEAR PARTNERS,

In 2020, the global economy faced a crisis caused by a pandemic that affected all aspects of society. We have witnessed the increasing importance of power supply in an emergency situation, when almost two-thirds of the world's population were forced to be in isolation at the same time. During the COVID crisis, the social significance and the life-supporting role of the electric power industry and heat supply became clear. I would like to note that the enterprises of the CAEPCO holding managed to provide reliable energy supply to consumers both during the quarantine period and throughout the reporting year. This was made possible as a result of investments in the modernisation of the holding's production assets over the past decade.

In March 2020, in response to the call of Elbasy Nursultan Nazarbayev in the fight against COVID-19, the akimats of Almaty and Pavlodar received more than 300 tons of disinfectants of the Kaustik plant from the Holding at no cost. In July, we stepped in during the infectious outbreak in the Pavlodar region: two provisional centers for COVID-19 patients were organised on the basis of our own premises. To create the necessary conditions for medical staff and patients, medicines and specialised equipment were purchased, including machines for artificial lung ventilation and computerised tomography.

It is obvious that the global crisis caused by the spread of COVID-19 may result in dramatic changes. The most significant changes include sharp reduction in costs and redistribution of equity in favour of digital solutions, as well as an increase in demand for renewable energy sources. CAEPCO Group of Companies is aimed at building a diversified electric power holding, where both coal and renewable energy will be developed. In 2020, the holding closed a deal to buy out CAPEC Green Energy, which successfully commissioned the first start-up complex of a wind farm in the Akmola region with a capacity of 100 MW. When constructing Astana EXPO 2017 wind farm, high-end wind power generators produced by VESTAS, one of the global wind power sector leaders, were used.

The strategic decisions of the reporting year aimed at improving corporate governance include the approval of the amended charter of CAEPCO JSC and the establishment of a collegial executive body in the form of a Management Board. The new body will manage current activities of the Corporation and implement the strategy determined by the Board of Directors and shareholders.



**ALEXANDR KLEBANOV**

Chairman of the Board of  
Directors of CAEPCO JSC

In the reporting year, the Development Strategy of CAEPCO JSC for the next five years is developing, taking into account such trends in the development of the modern power market as energy efficiency, energy conservation, as well as projects to improve environmental indicators.

In 2021, CAEPCO Group of Companies will continue to implement investment programs at the holding's enterprises, and will also hold events in cooperation with all stakeholders for sustainable development and growth.

### DEAR COLLEAGUES AND CONSUMERS,

2020 has become a distinctive year for all of us. The COVID-19 pandemic has brought with it new challenges and difficulties. Despite this, CAEPCO JSC actively continued its work to ensure reliable energy supply to consumers and successfully met its business targets. During the reporting period, each employee and the team of the Group of Companies, demonstrated exceptional fortitude, hard work and ability to respond promptly to any difficulties, for which I want to express my deep gratitude to them. I am sure that well-coordinated and constructive collaboration will bring the Holding's activities to a new level in the nearest future.

Energy is an infrastructure industry that is of key importance in the socio-economic development of the country. In the reporting year, the Corporation continued to implement a program for modernising its production assets to ensure uninterrupted supply of electric power and heat, which became of greater social significance during quarantine restrictions due to the spread of COVID-19. We have observed the impact of the COVID crisis on the fuel and energy complex of Kazakhstan, on the one hand, in the form of reduced consumption of energy resources, and the ability to react quickly during the recovery of economic activity on the other. All this clearly demonstrates the importance of the electric power industry and confirms the need for its development ahead of schedule.

In 2020, the situation in Kazakhstan's electric power industry was characterised by a positive trend aimed at liberalising of tariff policy. Starting from the second half of the year, new marginal electric power tariffs were adopted, a new methodology for determining the fixed profit of energy producing companies was approved. Timely adjustment of the marginal tariffs of electric power stations will allow implementing projects to modernise assets and reduce the number of emergency situations. The positive impact in the reporting year can be due to a lot of work done to reduce losses during transmission of electric power and heat, to digitalise projects, and to improve the environmental parameters of activities. A total of 14.9 billion tenge was allocated for implementation of the investment program in 2020.

Despite the economic situation complicated by the COVID crisis, CAEPCO JSC continues implementing its long-term strategy. Promoting the development of green economy has always been among the priority areas. Calls for a low-carbon development have increased from the Government and international organisations. Such a scenario creates



**BAGDAT ORAL**

Chairman of the Management  
Board of CAEPCO JSC

new challenges for the energy industry of our country, but at the same time creates opportunities. With the consolidation of CAEPCO Green Energy to the Group's perimeter in 2020, the "green" focus has acquired precise characteristics and a clear perspective, taking into account the fact that renewable energy sources in Kazakhstan are now included in the number of priority investment projects. This is definitely a new stage in the history of the Holding. At that, the traditional coal electric power industry will, of course, be the main source of both heat and electric power in the republic for a long time. We intend to continue building our work with the use of innovations and improving the environmental parameters of coal power plants. In the future, the issues of making coal more eco-friendly, gasification of CHP, the development of decentralised heat supply with the use of heat pumps or gas boilers are considered.

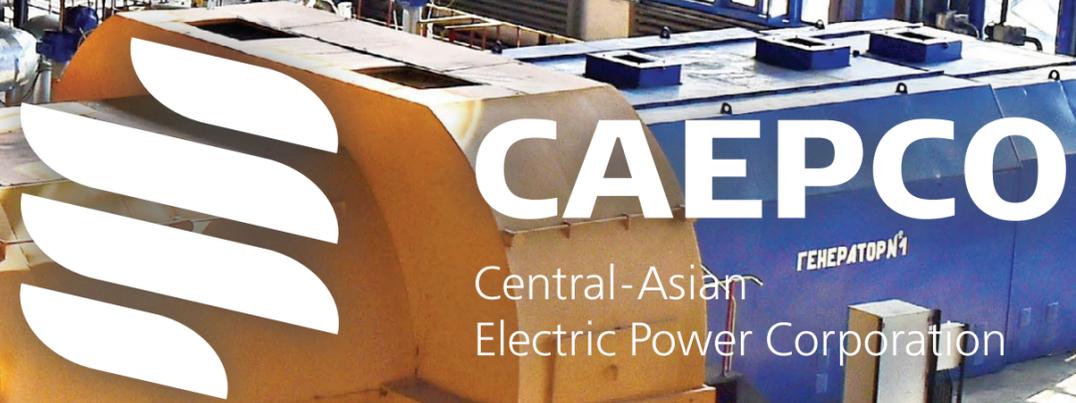
Over 12 years of its activity, CAEPCO holding has gained a reputation as a reliable power company, and even in difficult economic conditions, it has always fulfilled its obligations to consumers, shareholders and creditors. We will continue our activities, following our mission to provide high-quality power supply services to the population, industry and social infrastructure facilities, building our activities in accordance with international standards of production, ecology, health protection and the social sphere.

In conclusion, I would like to thank the entire Holding staff for the support and selfless work, as well as our shareholders and partners for effective cooperation. We intend to continue to maintain our position as a leader among private power companies in the Republic of Kazakhstan.

# CORPORATION PROFILE

**THE PURPOSE OF THE CORPORATION IS TO IMPROVE THE QUALITY OF LIFE OF ITS CONSUMERS AND CREATE CONDITIONS FOR THE ECONOMIC DEVELOPMENT OF THE REGIONS OF OPERATION.**

# 1



# CAEPCO

Central-Asian  
Electric Power Corporation



# SUMMARY

**NAME:**  
CENTRAL-ASIAN ELECTRIC POWER CORPORATION JOINT-STOCK COMPANY

Abbreviated name: CAEPCO JSC

## INFORMATION ON STATE REGISTRATION

Registered by the Integrated Securities Registrar JSC, State Registration Certificate 1678-1910-02-JSC issued on 11 January 2012 by the Department of Justice of Almaty.

CAEPCO JSC WAS INCORPORATED  
IN AUGUST

**2008**

As at the Holding incorporation, it combined SEVKAZENERGO JSC, PAVLODARENERGO JSC, Astanaenergobyt LLP. Central-Asian Power Energy Company JSC was the only founder of CAEPCO JSC. In 2014, CAEPCO JSC consolidated 100 % stock in Akmola Electric Distribution Company JSC.



**2009**

shareholders of the Holding were represented by the European Bank for Reconstruction and Development (EBRD) with 24.99 % share and Islamic Infrastructure Fund (Kaz Holdings Coöperatief U.A., Amsterdam) with 12.89 % share. Both shareholders withdrew from CAEPCO JSC in 2018.

**2015**

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

# GEOGRAPHY OF OPERATIONS

GROUP OF COMPANIES  
**SEVKAZENERGO JSC**



GENERATION

GROUP OF COMPANIES  
**PAVLODARENERGO JSC**



TRANSMISSION



SALES OF  
HEAT AND  
ELECTRICITY



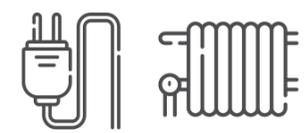
GROUP OF COMPANIES  
**AKMOLA ELECTRIC  
DISTRIBUTION COMPANY JSC**



TRANSMISSION



SALES OF  
ELECTRICITY



SALES OF HEAT AND  
ELECTRICITY

## REGIONS OF OPERATION:

CAEPCO assets are represented in the northern regions of the country: Akmola, Pavlodar and North Kazakhstan regions.



# KEY EVENTS OF THE YEAR, INCLUDING SOCIAL PROJECTS

## JANUARY

> In 2020, PAVLODARENERGO JSC celebrated 55 years since commencement of its activities. For more than half a century, the main objective of the company has been high-quality and uninterrupted power supply of the Pavlodar Irtysh land. Power engineers are implementing one of the largest investment programs among the private energy sector enterprises in Kazakhstan. The planned volume of investments for 2010- 2020 amounted to 124.5 billion tenge.



## MARCH

> On 10 March, a new composition of the Board of Directors was elected at the extraordinary general meeting of CAEPCO JSC shareholders.

> PAVLODARENERGO JSC transferred 60 tons of disinfectants to the akimat of Pavlodar at no charge for decontamination of the city. All production is made at the Kaustik plant of CAPEC holding.

> CAPEC JSC transferred 250 tons of disinfectant for decontamination of streets and premises to the akimat of Almaty as a gift from the Holding in response to the call of Elbasy Nursultan Nazarbayev in the fight against **COVID-19**.

## IMPOSITION OF A STATE OF EMERGENCY IN KAZAKHSTAN AMID **COVID-19**

In March 2020, WHO announced the beginning of a global pandemic due to the spread of **COVID -19** infection. A state of emergency was established in Kazakhstan, and thus, each subsidiary of CAEPCO Group of Companies took actions for carrying out anti-epidemic measures:

- > Automatic thermometric control systems were installed at the checkpoints.
- > Timely purchase of antiseptics, disinfectants, facemasks and gloves was carried out.
- > Daily preventive measures were carried out in all structural units (disinfection, observance of face mask requirements, thermometry, instructing personnel, posting memos.
- > The protocol in case of confirmation of COVID-19 is approved.
- > Social distance zones (markings on stairwell landings and inside the premises) are specified in the service centers of energy sales organisation of the Group of Companies, body temperature of visitors is measured, replenishment and control over availability of disinfection products are carried out, as well as informing of the population about the possibility of paying for services via the Internet, and other resources.
- > Remote working regime was introduced for office workers.
- > Vehicles were treated with disinfectants.
- > All meetings were transitioned into online conferences.
- > Daily monitoring of patients with COVID-19 and signs of acute respiratory infection was established.

## JUNE

> Employees of SEVKAZENERGO JSC organised a special event "Clean Shores" to collect household garbage along the territory adjacent to the supply and discharge channels.

## JULY

> CAEPCO JSC and its subsidiary PAVLODARENERGO JSC organised two provisional centers for COVID-19 patients in the Pavlodar region. The building of Energetic Recreation Center and the buildings of the recreation area in Michurino village were reequipped into hospitals.



## OCTOBER

> SEVKAZENERGO JSC held a press tour of the reconstruction facilities and modernisation of the Petropavlovsk CHP-2 and North-Kazakhstan EDC JSC. The annual visit to the enterprises of the energy sector of the region is carried out to inform the public and the population about the use of tariff funds, therefore, representatives of the antimonopoly department, the akimat of Petropavlovsk and the media took part in the event.



## NOVEMBER

> Nurlan Nogayev, Minister of Energy of the Republic of Kazakhstan, paid a working visit to Pavlodar region.

## DECEMBER

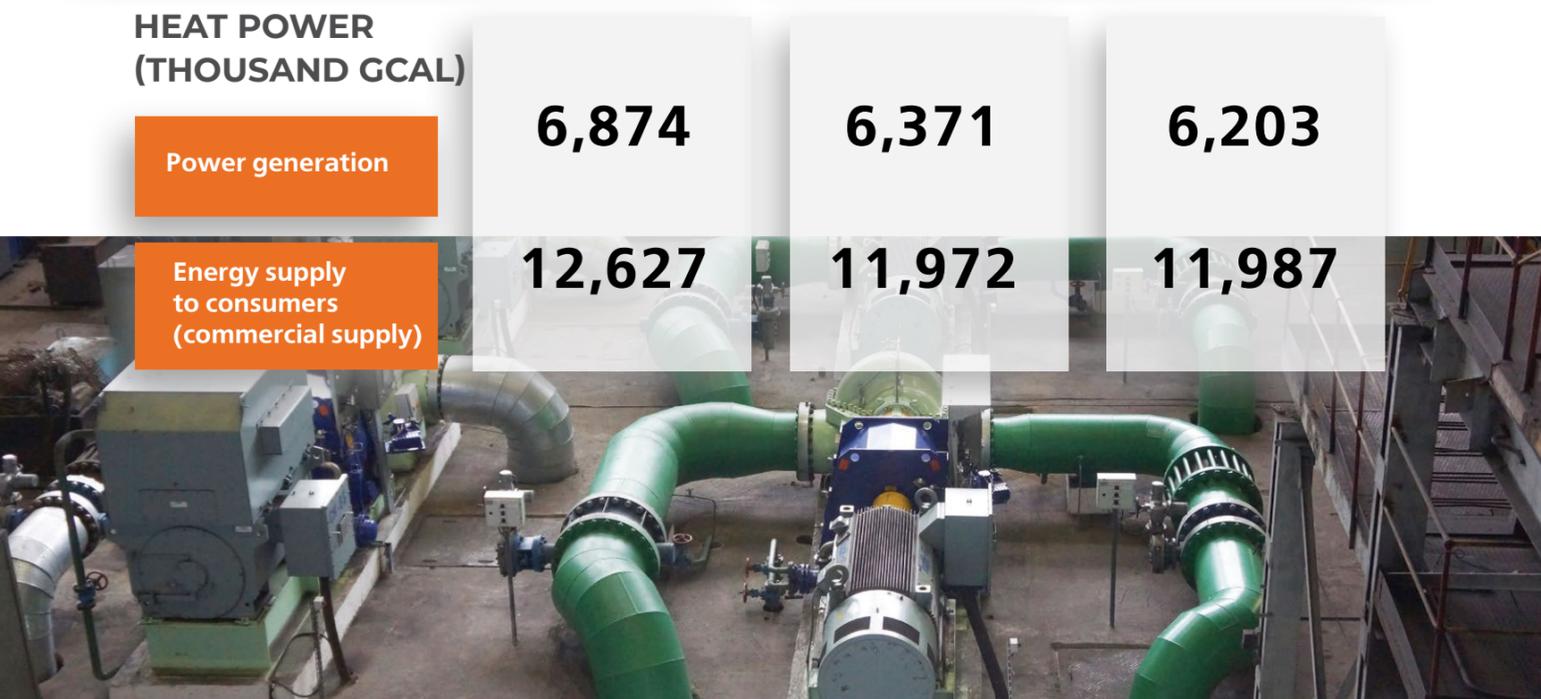
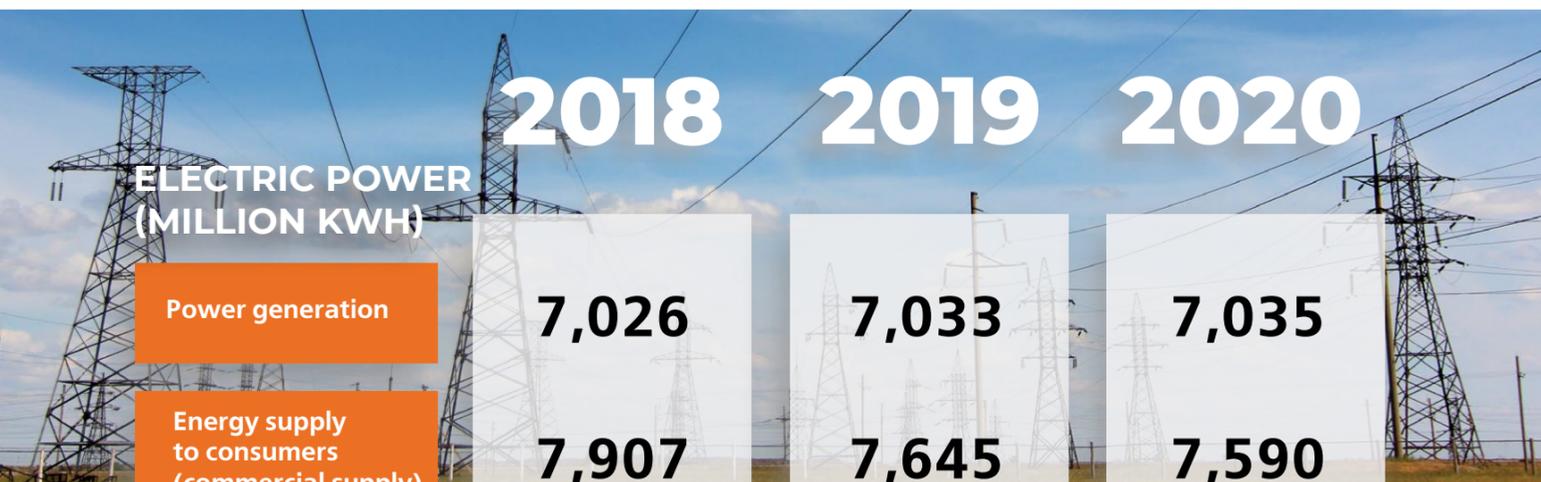
> Alexandr Klebanov, Chairman of the Board of Directors of CAEPCO JSC, was awarded the honorary title Honored Power Engineer of the CIS. The award for a significant contribution to the development of energy industry shortly before the professional holiday was presented by Nurlan Nogayev, the Minister of Energy of Kazakhstan.



> In PAVLODARENERGO, a traditional competition Best in Profession was held among the employees of the Group of enterprises. Electric welders of manual welding competed for the title of the winner demonstrating their skills and knowledge when performing theoretical and hands-on tasks.

> International Green Technologies and Investment Projects Center Non-Profit JSC conducted an expert assessment of the actual technological condition of the generation facilities of CAEPCO JSC for compliance with the principles of the best available technologies on the instructions of the Ministry of Ecology, Geology and Natural Resources of the Republic of Kazakhstan.

# PERFORMANCE INDICATORS



## ASSETS

**2018**    **2019**    **2020**

Current assets, million tenge

**37,375**

**30,114**

**47,541**

Non-current assets, million tenge

**276,714**

**289,097**

**327,469**

## INVESTMENT VOLUME, BILLION TENGE

**18.7**

**14.4**

**14.9**

## FINANCE

**149,149**

million tenge

THE VOLUME OF SALES

**-5,472**

million tenge

NET PROFIT

**21,706**

million tenge

EBITDA

**14.6 %**

million tenge

EBITDA MARGIN



## MISSION

- > Improving the quality of life of consumers.
- > Creating conditions for the economic development of the regions of operation.
- > Provision of high-quality energy supply services to the population, industry and social infrastructure facilities.

The Corporation implements this mission by building its activities in accordance with international standards of production, ecology, health care and the social sphere.

## 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 centralised 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

- > **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.
- > **Integrity** in relations and providing information necessary for our work.
- > **Effectiveness** as a sustainable achievement of the maximum possible results in everything we do.
- > **Courage** 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.

# BUSINESS MODEL

## FINANCIAL CAPITAL

**375,010** million tenge **123,535** million tenge **46,043** million tenge  
**ASSETS** **EQUITY** **AUTHORISED CAPITAL**

## PRODUCTION CAPITAL

**4** CHP **983.9** km **48.7** thousand km **4** SALES COMPANIES  
**OF HEAT NETWORKS** **OF ELECTRIC POWER NETWORKS**

## HUMAN CAPITAL

**33 %** UNIVERSITY GRADUATE **782** EMPLOYEE POOL **10,441** EMPLOYEES  
**14.4 %** STAFF TURNOVER **45 %** SHARE OF EMPLOYEES IN THE TRADE UNION

The program for supporting young specialists within **PROFENERGY** project

## INTELLECTUAL CAPITAL

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

# CAPITALS

## SOCIAL CAPITAL

The Corporation promotes development in the regions of its operation and makes a significant contribution to the social and economic development of the regions being a major employer and an important link in the industrial sector.

## NATURAL CAPITAL

As part of its production activities, the Corporation uses various types of fuel (fuel oil and coal), water resources and electricity, as well as the resources of the air basin.

## HEAT AND ELECTRIC POWER GENERATION

combined generation of heat and electric power at 4 CHPs of the Holding

## TRANSPORTATION AND DISTRIBUTION OF HEAT AND ELECTRIC POWER

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

## SALES OF HEAT AND ELECTRIC POWER

activities for the sale of heat and electric power to consumers

## INVESTMENT ACTIVITIES

- Power equipment modernisation
- Heat networks and electric grids reconstruction
- Process Automation

# PRINCIPAL ACTIVITIES

# 2020 RESULTS

## CONSUMERS

**6,203** thousand Gcal **HEAT GENERATION** **7,035** million kWh **ELECTRICITY GENERATION**

## EMPLOYEES

**5,789** TRAINED PERSONAL  
**1.34** billion tenge **ON OHS EVENTS AND WORK ENVIRONMENT IMPROVEMENT**

## AREAS OF OPERATIONS

**14.9** billion tenge **5,530** million tenge  
**IMPLEMENTATION OF THE STAKEHOLDER ENGAGEMENT PLAN** **THE GROUP INVESTED 14.9 BILLION TO PRODUCTION FACILITIES MODERNISATION** **ENVIRONMENT PROTECTION COSTS**

# SUBSIDIARIES

CAEPCO Group of Companies includes SEVKAZENERGO JSC, PAVLODARENERGO JSC, ASTANAENERGOSBYT LLP and Akmola Electric Distribution Company JSC (AEDC JSC). CAEPCO JSC assets are represented in the northern regions of the country: Akmola, Pavlodar and North Kazakhstan regions, as well as in Nur-Sultan, Pavlodar, Petropavlovsk and Ekibastuz.

## PAVLODARENERGO JSC

**Chief Executive Officer:**  
O.V. Perfilov

**Legal address:**  
27 Krivenko Str., Pavlodar

PAVLODARENERGO JSC is a vertically integrated company that includes generating, transporting and marketing units operating in the Pavlodar region and in Pavlodar city.

**PAVLODARENERGO JSC comprises of:**

- > Pavlodar CHP-2
- > Pavlodar CHP-3
- > Ekibastuzteploenergo LLP (Ekibastuz CHP and Ekibastuz heat network)
- > Pavlodar Heat Networks LLP
- > Pavlodar Electric Distribution Company JSC
- > Pavlodarenergosbyt LLP
- > CAPEC Green Energy LLP ( 51 %)

Electric power generated by PAVLODARENERGO JSC is supplied to the markets of Pavlodar, Karaganda, Akmola and East Kazakhstan regions.

## SEVKAZENERGO JSC

**Chief Executive Officer:**  
I.V. Tatarov

**Legal address:**  
66 Zhumabayev Str., Petropavlovsk

SEVKAZENERGO JSC is a vertically integrated company that includes generating, transporting and marketing units of the North Kazakhstan region and Petropavlovsk city.

**SEVKAZENERGO JSC comprises of:**

- > Petropavlovsk CHP-2
- > North-Kazakhstan Electric Distribution Company JSC
- > Petropavlovsk Heat Networks LLP
- > Sevkazenergosbyt LLP

Electric power generated by SEVKAZENERGO JSC is supplied to the markets of the northern, central, eastern, and southern regions of Kazakhstan.



## AKMOLA ELECTRIC DISTRIBUTION COMPANY JSC

**Chief Executive Officer:**  
A.V. Pavlov

**Legal address:**  
8 Tsiolkovsky Str., Nur-Sultan

AEDC JSC ("Akmola EDC") is an electric grid company that transmits and distributes electric power to consumers in the Akmola region and Nur-Sultan.

**AEDC JSC comprises of:**

- > AEDC-Energosbyt LLP

AEDC-Energosbyt, a subsidiary, purchases electric power to supply consumers of the Akmola region.

## ASTANAENERGOSBYT LLP

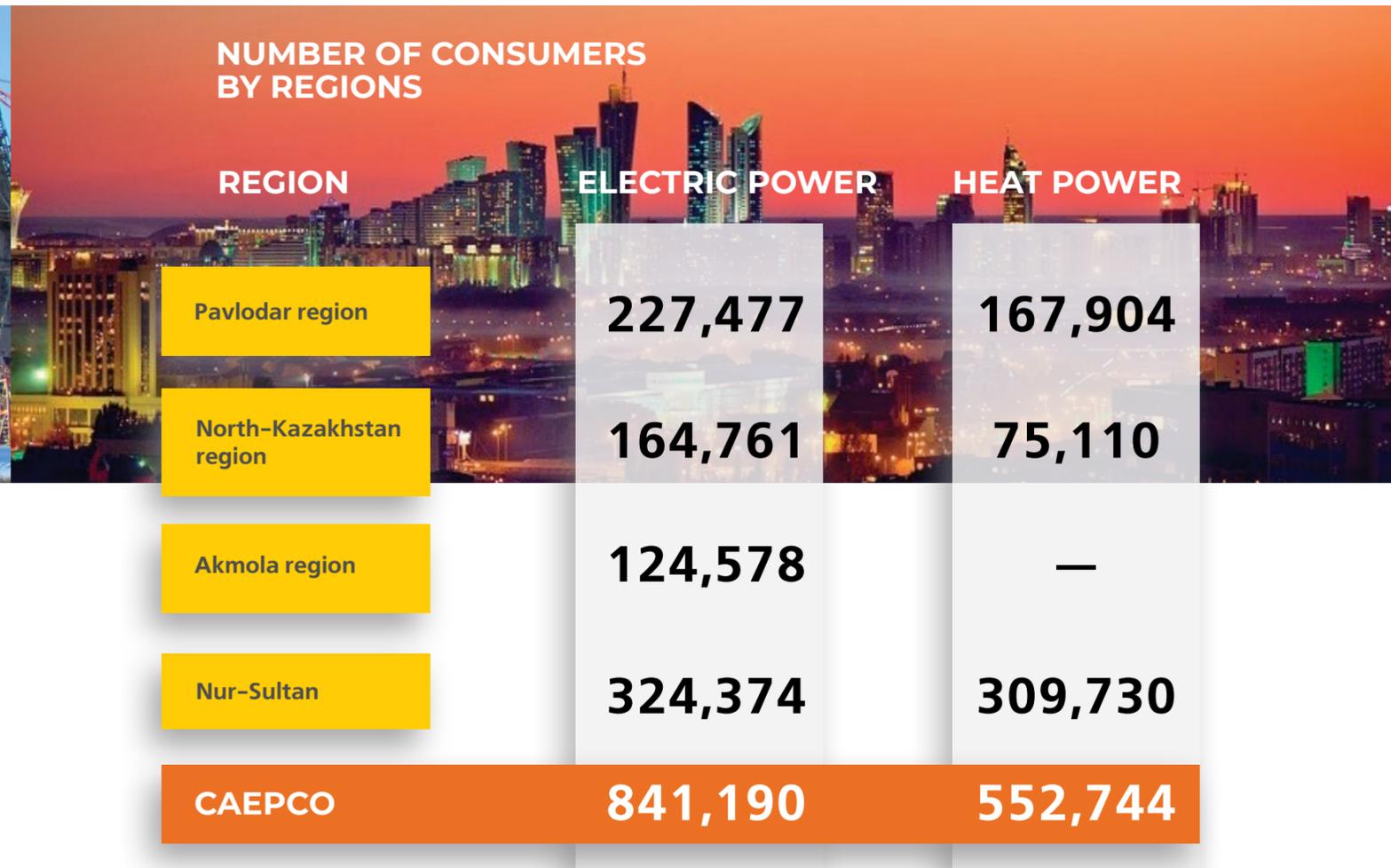
**Chief Executive Officer:**  
A.V. Zinkevich

**Legal address:**  
4/1 Momyshuly Str., Nur-Sultan

**Astanaenergosbyt LLP** is a company that supplies electric and heat power to consumers in Nur-Sultan. For the convenience of consumers, Astanaenergosbyt LLP has 8 payment acceptance outlets and a contact center.

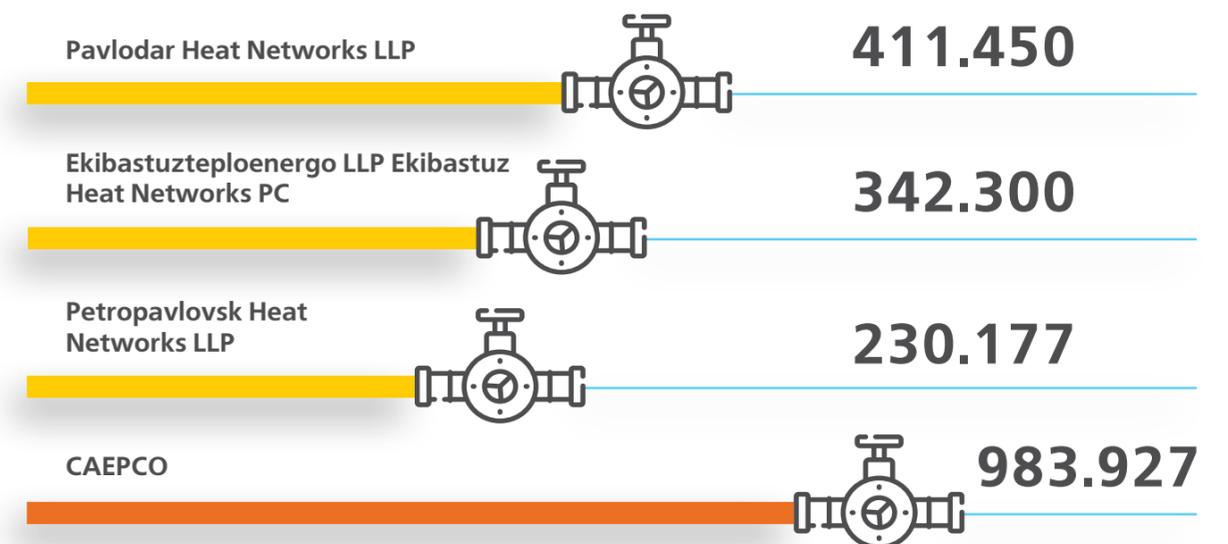
**Number of substations by type**

Substation Type	Pavlodar EDC JSC	North-Kazakhstan EDC JSC	Akmola EDC JSC
220 kW	4	-	2
110 kW	74	37	50
35 kW	102	121	193
6-10 kW	3,534	2,208	3,305



PTL Type	PTL Length, km		
	Pavlodar EDC JSC	North-Kazakhstan EDC JSC	Akmola EDC JSC
220 kW	13.73	84.84	-
110 kW	2,798.31	1,327.14	2,505.84
35 kW	2,398.45	2,849.43	5,176.09
6-10 kW	5,697.43	4,191.74	7,129.27
0,4 kW	4,372.03	4,402.18	5,384.84

### HEAT NETWORK LENGTH



**Information on IMS certificates of CAEPCO JSC subsidiary**

Ser. No.	Standard	Registration number of a certificate
<b>PAVLODARENERGO JSC (CHP-2 and CHP-3)</b>		
1	ISO 14001:2015	01 104 1321810
2	ISO 9001:2015	01 104 1321810
3	OHSAS 18001-2007	OC-4870-0020
<b>EKIBASTUZTEPLOENERGO LLP</b>		
4	ISO 14001:2015	01 104 1819006
5	ISO 9001:2015	01 104 1819006
6	ISO 45001:2018	
<b>AEDC JSC</b>		
7	ISO 14001:2015	01 104 1319426
8	ISO 9001:2015	01 104 1319426
9	OHSAS 18001-2007	OC-4870-0024
<b>Pavlodar Heat Networks LLP</b>		
10	ISO 14001:2015	01 100 1319414
11	ISO 9001:2015	01 100 1319414
12	OHSAS 18001-2007	OC-4870-0028
<b>SEVKAZENERGO JSC</b>		
13	ISO 14001:2015	01 104 1321852
14	ISO 9001:2015	01 104 1321852
15	OHSAS 18001-2007	OC-4870-0010
<b>North-Kazakhstan REDC JSC</b>		
16	ISO 14001:2015	01 104 1518811
17	ISO 9001:2015	01 104 1518811
18	OHSAS 18001-2007	OC-4870-0051
<b>Petropavlovsk Heat Networks LLP</b>		
19	ISO 14001:2015	01 104 1321855
20	ISO 9001:2015	01 104 1321855
21	OHSAS 18001-2007	OC-4870-0037
<b>AEDC JSC</b>		
22	ISO 14001:2015	01 104 1819000
23	ISO 9001:2015	01 104 1819000
24	OHSAS 18001-2007	01 213 1819000

**CAPEC GREEN ENERGY LLP**


The development strategy of the Group of Companies provides for increasing the share of green energy in the asset structure. In 2020, the subsidiary of CAEPCO JSC concluded agreements for the phased purchase and sale of a stake in CAPEC Green Energy LLP. In 2021, the Group of Companies completed the delivery of the financial asset in full.

CAPEC Green Energy LLP was established on 23 July 2014 for implementing investment projects in the area of renewable energy sources (RES). The company has implemented the project Construction of Astana EXPO-2017 Wind Power Plant of 100 MW Capacity for Wind Power Conversion by two start-up complexes. The first start-up complex with a capacity of 50 MW was commissioned on 26 August 2019, and the second start-up complex with a similar capacity was commissioned on 26 November 2020.

CAPEC Green Energy has a number of advantages that allow successful implementing of the Company's projects and, in the future, effectively developing mutually beneficial partnerships, render services in the area of renewable energy at the highest level.

**The main resources and capabilities of the company (success factors):**

- > Highly qualified management and workforce.
- > Successful international and local experience in implementation of RES projects.
- > Accumulated hands-on knowledge of regulatory legal acts, laws and rules for the support and development of renewable energy sources.

**The company renders the following services on a professional basis:**

- > General information support of RES projects.
- > Providing auxiliary materials and information for making decisions on the most premier choice of equipment, its manufacturers for wind and solar plants.
- > Participating in the process of preparation, structuring and discussion of contractor agreements, equipment supply agreements, and services agreements within implementation of RES projects.



## INDUSTRY POSITION

- > The Holding enjoys a monopolistic position in the regions where it operates on the market of heat production and distribution and electric power distribution.
- > A differentiated portfolio of consumers and stable demand among various types of customers.
- > A vertically integrated company is a full cycle of providing heat and electric power from production to distribution to the final consumer.
- > Acquired experience from equity participation with

international and Kazakh shareholders.

- > Focus on introduction of advanced technological solutions and a progressive development policy of the Corporation.
- > Existing reliable communications with partners and divisions of the Corporation.

Over the years of implementation of a large-scale program for the renewal and reconstruction of production assets, CAEPCO JSC has invested 228.4 billion tenge, which is one of the best indicators among the electric power companies of Kazakhstan.



## STRATEGY

The development 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 electric power and heat is the strategic goal for CAEPCO JSC.

### FULFILMENT OF TASKS UNDER THE DEVELOPMENT STRATEGY

The strategy provides for implementation of measures in four strategic areas:

#### Targeted market expansion with guaranteed sales and low risk:

- > Expansion of the geography of operations for the Corporation's enterprises.
- > Implementation of growth projects to enter new markets for energy generation and transmission.

#### Improving production efficiency through improving the technical level of production and updating fixed production assets and infrastructure:

- > Reconstruction and modernisation of equipment of power generating facilities through investment programs, reducing the risks of accidents and eliminating downtime.
- > Minimisation of specific consumption for production

of a unit of heat and electric power.

- > Reduction of excess losses during transportation of heat and electric power.
- > Introduction of energy-saving and energy-efficient technologies in the production and transmission of energy.
- > Building an effective environmental risk management system.

#### Implementation of promising projects through the balanced development of innovative directions; promotion of green technology development.

#### Implementation of the best management standards through continuous training of personnel in new effective technologies in the production sector and enterprise management:

- > Establishing service centers on a single IT platform.
- > Transition to a single billing system.
- > Maintaining up-to-date certification for compliance with the requirements of international standards in the area of ecology, personnel health protection, industrial safety.
- > Carrying out measures to reduce occupational injuries.
- > Continuous training for improving the professional level of employees.





# 2

## CORPORATE GOVERNANCE

THE CORPORATE GOVERNANCE SYSTEM IN THE CORPORATION IS BASED ON RECOGNISED BASIC TRANSPARENCY, JUSTICE, ACCOUNTABILITY AND RESPONSIBILITY.

Understanding the importance of effective and responsible corporate governance, CAEPCO JSC consistently follows high standards based on international principles and best international practices. The Corporation strives for continuous improvement of the corporate governance system and builds its activities taking into account the interests of all parties, in particular investors, shareholders and employees.

### GENERAL MEETING OF SHAREHOLDERS

The supreme governing body of the Corporation is the General Meeting of Shareholders. The main way for shareholders to exercise their rights recorded in the Corporation's Charter is to participate in the annual meeting of shareholders and in extraordinary meetings at the initiative of the Board of Directors or the executive body.

**The shareholders of the Corporation are entitled to:**

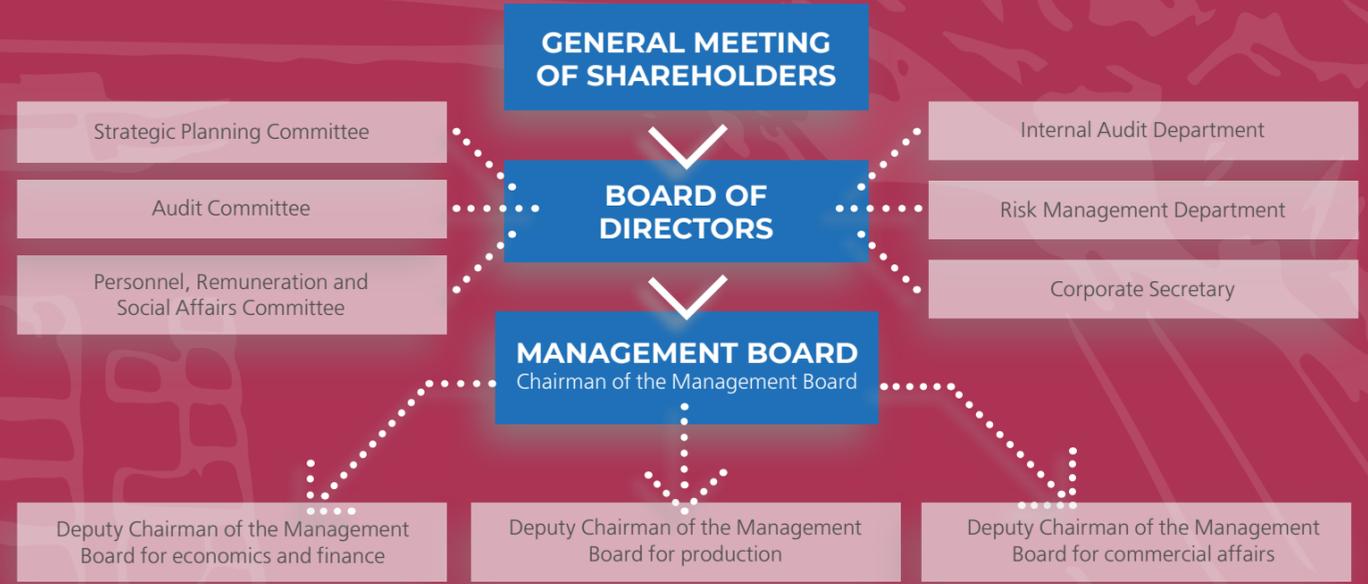
- > Submit proposals to the agenda of the annual General Meeting
- > Nominate candidates to the Board of Directors and Committees
- > Convene meetings of the Board of Directors
- > Other rights stipulated by the current legislation.

### PERFORMANCE OF THE GENERAL MEETING OF SHAREHOLDERS

In 2020, 1 annual and 3 extraordinary General Meetings of Shareholders were held, where the following issues were reviewed:

- > Approval of the financial statements of CAEPCO JSC
- > Determining the order of allocation of net income of subsidiaries
- > Considering issues on appeals of shareholders to the actions of CAEPCO JSC
- > Designating the audit firm for the audit of the financial statements of CAEPCO JSC and its subsidiaries
- > Election of new members of the Board of Directors of CAEPCO JSC
- > Determining the amount and conditions of remuneration payment to the newly elected members of the Board of Directors of CAEPCO JSC
- > Approval of the new version of the Charter
- > Other matters

### ORGANISATIONAL STRUCTURE

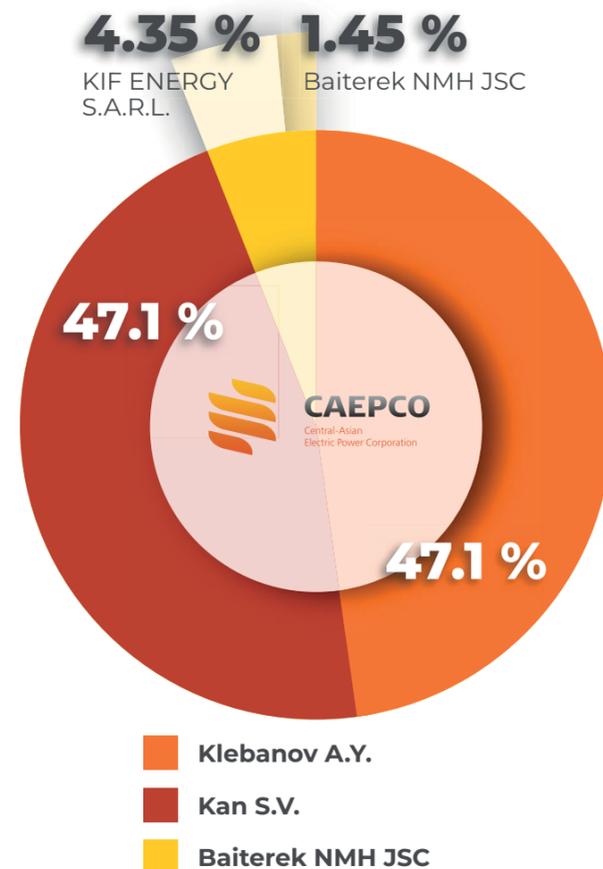


## SHARE CAPITAL STRUCTURE



AS AT 31 DECEMBER 2020 ГОДА  
SHARE CAPITAL OF CAEPCO JSC IS

**46,043,272**  
thousand tenge



Shareholders of CAEPCO JSC are represented by Alexandr Yakovlevich Klebanov (47.1 %), Sergey Vladimirovich Kan (47.1 %) and funds established with the participation of Baiterek NMH JSC with a total share of 5.8 %: KIF ENERGY S.a.r.l. – 4.35 %, Baiterek Venture Fund JSC – 1.45 %

## BOARD OF DIRECTORS

The Board of Directors of the Corporation determines strategic objectives, supports the necessary mechanisms for monitoring activities, including ongoing monitoring and evaluation of the Holding's performance.

In order to increase the transparency of the Corporation's activities, the Board of Directors comprises of three independent directors who are not affiliated with the Corporation.

The independence of the members of the Board of Directors of the Corporation is determined in accordance with the requirements of the Law of the Republic of Kazakhstan "On Joint-Stock Companies".

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

- > They are not affiliated with CAEPCO JSC and were not affiliated with CAEPCO JSC for three years prior to their election to the Board of Directors.
- > They are not affiliated in relation to the affiliated persons of CAEPCO JSC.
- > They are not subordinated to officials of CAEPCO JSC

or entities of persons affiliated with CAEPCO JSC and were not subordinated to such persons for three years prior to their election to the Board of Directors.

- > They are not government employees.
- > They are not representatives of the shareholders at the meetings of the bodies of CAEPCO JSC and were not such representatives for three years prior to their election to the Board of Directors.
- > They do not participate in the audit of CAEPCO JSC as auditors working for an audit firm, and did not participate in such an audit for 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 on suggestions received from the members and committees of the Board of Directors and the executive body.

### 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 shareholders decides on the remuneration payable to the Board of Directors and the executive body. In 2020, the amount of remuneration paid to the Board of Directors and the executive body totalled 74.2 million tenge.

## SELECTION AND APPOINTMENT

The members of the Board of Directors of CAEPCO JSC are elected by the decision of the General Meeting of shareholders of the Corporation. According to the provisions of the Charter, the Board of Directors of CAEPCO JSC must consist of at least six persons, of which at least one third of the members of the Board of Directors must be represented by independent directors. Only an individual can be a member of the Board of Directors of CAEPCO JSC and be elected from among:

- > Individual shareholders;
- > Persons proposed for election to the Board of Directors representing the interests of shareholders;
- > Individuals who are not shareholders of the company and have not been proposed for election to the Board of Directors representing the interests of shareholders.

The Chairman of the Management Board of CAEPCO JSC may also be elected as a member of the Board of Directors, but may not be elected 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 open voting.

The term of office of the members of the Board of Directors is established by the General Meeting of shareholders of CAEPCO JSC. The term of office of the Board of Directors expires at the time of the General Meeting of shareholders, at which a new Board of Directors is elected. Persons elected to the Board of Directors may be re-elected an unlimited number of times.

## INFORMATION ON DIVIDENDS

The Corporation's policy regarding the accrual, the procedure for declaring, the amount, form and timing of payment of dividends is defined in the Corporation's Charter and the Regulations on the Dividend Policy of CAEPCO JSC.

### The main principles of the Corporation's dividend policy are as follows:

- > Balance of interests of the Corporation and its shareholders in determining the amount of dividend payments;
- > Increasing the investment attractiveness, financial stability, capitalisation and liquidity of the Corporation;
- > Ensuring market return on invested capital.

The Corporation intends to allocate a certain portion of its net profit to pay dividends in the amount that allows the Corporation to keep enough funds for further development. The decision to pay dividends is made by the annual General Meeting of shareholders upon the recommendation of the Board of Directors. If there are unforeseen negative circumstances for the Corporation, the Board of Directors is obliged to recommend to the General Meeting of shareholders not to make a decision to pay (declare) dividends.

In 2020, the annual General Meeting of shareholders made a decision on the absence of payment of dividends to the shareholders of CAEPCO JSC for the 2019 financial year.

# COMPOSITION OF THE BOARD OF DIRECTORS

(AS OF JULY 2021)

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

## Term of service on the Board of Directors of CAEPCO JSC at 10 March 2020:

- > 9-12 years – 3 persons;
- > 2-3 years – 3 persons;
- > Less than a year – 3 persons.

### 1 ALEXANDR KLEBANOV (born in 1963)

Chairman of the Board of Directors

Chairman of the Board of Directors of CAEPCO JSC, Chairman of the Board of Directors 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)

### 2 BAGDAT ORAL (born in 1986)

Member of the Board of Directors

03.2014 – 06.2014 – Head of the Prospective Development Department of Samruk-Green Energy LLP

06.2014 – 07.2018 – Director of CAPEC Green Energy LLP

07.2018 – 04.03.2021 – Vice-President (Deputy Chairman of the Management Board) for Energy Sales and Tariff Policy of CAEPCO JSC

05.03.2021 – Chairman of the Management Board of CAEPCO JSC

13.04.2021 – elected as a member of the Board of Directors of CAEPCO JSC

### 3

### ALEXANDR NIGAY (born in 1984)

Member of the Board of Directors

03.05.2012 – until now – Director for Strategic Development of Com Trade Product LLP

03.08.2015 – until now – Director for Strategic Development of Kazakhstanskiye Trubnye Sistemy LLP

26.07.2016 – until now – Director for Strategic Development of Mineral Product LLP

09.10.2017 – 30.06.2021 – Vice President on Commercial Issues (Commercial Deputy Chairman of the Management Board) of CAEPCO JSC

08.07.2021 – elected as a member of the Board of Directors of CAEPCO JSC

### 4

### ZHANDAR KUTBAY (born in 1985)

Member of the Board of Directors

01.08.2015 – 01.09.2017 – Deputy Chairman of the Management Board of Almex-Baiterek Fund LLP

01.09.2017 – 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 (member of the Board of Directors since 2018)

### 5

### FRANZ-JOSEPH KAISER (born in 1949)

Member of the Board of Directors, Independent Director

Not affiliated with CAEPCO JSC and was not affiliated with CAEPCO JSC three years prior his election.

17.11.1975 – 30.06.2009 – Price Waterhouse Coopers (PWC) Partner

2005 – 30.06.2009 – PWC Partner for RAO UES of Russia project

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

### 6

### MANFRED-JOSEPH KEHR (born in 1947)

Member of the Board of Directors, Independent Director

Not affiliated with CAEPCO JSC and was not affiliated with CAEPCO JSC three years prior his election.

2003–2009 – Vice President of RWE Power International

2008–2010 – Managing Director, Senior Advisor of RWE Power International

25.02.2011 – Chairman of the Board of Directors Rhein Ruhr Power

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

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

### 7

### ELDAR TABANOV (born in 1968)

Member of the Board of Directors, Independent Director

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

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

09.09.2015-16.11.2016 – Deputy Chairman of the Management Board of Astana SEC NC JSC

13.10.2016 – a member of the Board of Directors, 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, Independent Director of PAVLODARENERGO JSC

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

15.01.2018 – a member of the Board of Directors, Independent Director of SEVKAZENERGO JSC

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

## Activities of the Board of Directors

	2018	2019	2020
Meetings in presentia	8	6	2
Meetings in absentia	–	7	14

**In 2020, the Board of Directors held 16 meetings. The Board of Directors focused on the following key issues:**

- > Review of monthly and quarterly management reports.
- > Monitoring the implementation of the consolidated business plan of CAEPCO JSC for 2019.
- > Approval of the consolidated business plan (budget) of CAEPCO JSC for 2021; approval of the annual consolidated financial statements of PAVLODARENERGO JSC, SEVKAZENERGO JSC and Akmola Electric Distribution Company JSC and the annual financial statements of Astanaenergoby LLP for 2019.
- > Determining the order of distribution of net income of subsidiaries for 2019, as well as designating the audit firm for conducting an audit of the financial statements for 2020.
- > Preliminary approval of the annual consolidated financial statements of CAEPCO JSC for 2019.

- > Determining the order of allocation of net income of CAEPCO JSC for the past 2019 financial year and the amount of the dividend per one ordinary share of CAEPCO JSC; preliminary designating of an audit firm for the audit of the consolidated financial statements of CAEPCO JSC for 2020.
- > Review of reports on activities of the Internal Audit Department and the Risk Management Department of CAEPCO JSC.
- > Approval of a number of internal regulatory documents.
- > Other.

In 2020, the Corporation entered into major transactions disclosed on the websites of the Financial Statements Depository and the Kazakhstan Stock Exchange.

<b>17.01.2020</b>	Conclusion of an interested-party transaction in connection with the conclusion of an additional agreement to the shareholders' agreement dated 29 October 2015 between CAEPCO JSC, Central Asian Fuel and Energy Company JSC and CKIF ENERGY S.A.R.L.
<b>30.03.2020</b>	Conclusion of an interested-party transaction due to changes in the terms of financing provided by Al Hilal Islamic Bank JSC for CAEPCO JSC together with PAVLODARENERGO JSC, SEVKAZENERGO JSC, Akmola Electric Distribution Company JSC and Astanaenergoby LLP.
<b>30.03.2020</b>	Approval of CAEPCO JSC, as the sole participant of Astanaenergoby LLP, to conclude an interested-party transaction in connection with a change in the terms of financing provided by Al Hilal Islamic Bank JSC for Astanaenergoby LLP together with CAEPCO JSC, PAVLODARENERGO JSC, SEVKAZENERGO JSC and Akmola Electric Distribution Company JSC.
<b>30.03.2020</b>	Approval of an interested-party transaction in connection with the conclusion of an additional agreement to the shareholders' agreement dated 29 October 2015 between CAEPCO JSC, Central Asian Fuel and Energy Company JSC and CKIF ENERGY S.A.R.L.
<b>28.08.2020</b>	Approval of the conclusion of contracts for the purchase and sale of a data processing center by CAEPCO JSC with PAVLODARENERGO JSC and SEVKAZENERGO JSC as interested-party transactions.

## PERFORMANCE OF THE COMMITTEES OF THE BOARD OF DIRECTORS

**There are three committees under the Board of Directors of CAEPCO JSC.**

### STRATEGIC COMMITTEE

**The core functions of the committee are as follows:**

- > Review and evaluation of the priority areas of activity of CAEPCO JSC, its development strategy;
- > Review and evaluation of the concepts, policies, programs, development plans of CAEPCO JSC and the results of their implementation;
- > Review and evaluation of financial and economic indicators of CAEPCO JSC activities;
- > Review and evaluation of CAEPCO JSC budget and the results of its implementation;
- > Bringing to the attention of the Board of Directors of CAEPCO JSC recommendations on any issues that, in the opinion of the Committee, require action on its part;
- > Assistance to the Board of Directors on improving the frameworks for planning and developing the Corporation's activities.

### COMPOSITION OF THE COMMITTEE\*

**M. Kehr - Chairman**

S.V. Kan  
L.L. Yanushko  
O.V. Perfilov  
I.V. Tatarov

### AUDIT COMMITTEE

**The core functions of the committee are as follows:**

- > Assisting the Board of Directors in the effective implementation of its regulatory and supervisory functions in terms of control over financial reporting and internal control, as well as control over availability and functioning of an adequate risk management system and internal control system in the company;
- > Improving and strengthening of internal audit, as well as risk management systems and internal control systems;

- > Bringing to the attention of the Board of Directors recommendations on any issues requiring action on its part.

### COMPOSITION OF THE COMMITTEE\*

**F. Kaiser - Chairman**

M. Kehr  
A.V. Karyagin

In 2020, one Committee meeting was held. The Committee assists the Board of Directors in the effective implementation of its regulatory and supervisory functions, improvement and strengthening of internal audit, as well as risk management systems. The Committee reviewed issues related to work of PricewaterhouseCoopers LLP, an external auditor, and the approval of the annual consolidated financial statements of CAEPCO JSC for the year ending 31 December 2019.

### PERSONNEL, REMUNERATION AND SOCIAL AFFAIRS COMMITTEE

**The core functions of the committee are as follows:**

- > Development of a unified personnel policy for CAEPCO JSC and its subsidiaries, including issues of payment of additional remuneration, compensation and social benefits to employees;
- > Development of an effective corporate governance system and implementation of its principles.

### COMPOSITION OF THE COMMITTEE\*

**E.R. Tabanov - Chairman**

A.V. Karyagin  
A.V. Nigay  
L.L. Yanushko  
N.V. Konstantinova

In 2020, one Committee meeting was held. The Committee assists the Board of Directors in building an effective corporate governance system, in particular, the report on personnel management indicators in CAEPCO Group of Companies for 2019 and dynamics for 2017 and 2018 was reviewed.

\*as of July 2021

## EXECUTIVE BODY\*

On 17 July 2020, the charter of CAEPCO JSC was approved in a new version due to the planned changes in the structure of the Executive Body through its transformation into a collegial form of management. The new charter of CAEPCO JSC reflects all changes in the structure of the Executive Body. The main purpose of changing its structure was to increase the efficiency of management, generation of a balanced approach to management, taking into account several professional views of representatives of different sectors: production, commerce, sales, economics and finance.

The collegial executive body was established on 1 September 2020 from employees holding senior positions in the Corporation. The collegial executive body is represented by the Management Board headed by the

Chairman of the Management Board, which manages the current activities of the Corporation and implements the strategy determined by the Board of Directors and shareholders. The Management Board is guided by the principles of action in the best interests of shareholders, integrity, diligence, prudence and vigilance.

In 2020, seven meetings of the Management Board were held, where a number of decisions was made on the Holding's operating activities, including an increase in wages in CAEPCO JSC subsidiaries and approval of internal regulatory documents of the Procurement Department and the Health, Safety and Environment Department.

Full name	Position	Education	Professional experience
<b>Bagdat Oral</b>	Chairman of the Management Board of CAEPCO JSC	October 2009 – December 2011 Albert Ludwigs University of Freiburg Master of Science (Renewable Energy Sources Management)	March 2021 – until now, Chairman of the Management Board of CAEPCO JSC
		September 2004 – June 2008 Almaty University of Power Engineering and Telecommunications Bachelor of Heat Power Engineering (Thermal Stations)	July 2018 – March 2021, Deputy Chairman of the Management Board for Energy Sales and Tariff Policy of CAEPCO JSC
			June 2014 – July 2018, Director of CAPEC Green Energy LLP
<b>Leonid Yanushko</b>	Deputy Chairman of the Management Board of CAEPCO JSC on production	1972-1977 Odessa Polytechnic University, awardee of Order of the Red Banner of Labour	January 2021 – until now, Deputy Chairman of the Management Board of CAEPCO JSC for production
			06.11.2017-05.11.2018, Advisor to CAEPCO JSC
			2012-2015, General Director of Trest Sredazenergomontazh JSC
<b>Igor Ilin</b>	Deputy Chairman of the Management Board of CAEPCO JSC for Commercial Affairs	Kazakh-British Technical University (Automation and Control)	April 2021 – May 2021, Managing Director for Development of Samruk-Energy JSC
			October 2020 – March 2021, Head of Samruk-Energy JSC Trading House
			January 2018 – October 2020, General Director of Aventis Group
<b>Sergey Li</b>	Deputy Chairman of the Management Board of CAEPCO JSC for economics and finance	Swiss Business School, MBA	March 2021 – until now, CAEPCO JSC, Deputy Chairman of the Management Board of CAEPCO JSC for economics and finance
		Durham University, United Kingdom, Bachelor of Business Economics	January 2020-March 2021, Co-Managing Director for Economics and Finance of Samruk-Energy JSC
		St. Andrew's College, United Kingdom, A-Level Program	March 2016 – January 2020, Director of the Treasury and Corporate Finance Department for Samruk-Energy JSC

\*as of July 2021

## REMUNERATION POLICY

The amount of remuneration to the executive body is determined by the decision of the Board of Directors of CAEPCO JSC.

The framework for determining the amount of remuneration to members of the Management Board meets the following requirements:

- > Remuneration consists of constant and variable portions;
- > The variable portion of remuneration depends on the key performance indicators of the member, is linked to the level of qualification and personal contribution to the performance of the Corporation for a certain period. The variable portion is aimed at stimulating a member of the Management Board to achieve a high quality of work;
- > Social support, guarantees and compensation payments to a member of the Management Board are carried out in accordance with the legislation, internal documents of the Corporation and the labour agreement.

## INTERNAL CONTROL AND AUDIT

In order to improve business processes and the efficiency of decisions made, the Corporation has established internal control mechanisms, which is systematic for CAEPCO JSC, integrated into strategic and operational management at all levels and covers all departments in the exercise of their functions.

CAEPCO JSC has an Internal Audit Department, and

internal audit units were established and are functioning in its subsidiaries.

The independence and objectivity of the activities of the Internal Audit Department and units (hereinafter referred to as the "IAD", "IAU") are ensured by subordination and accountability to the Board of Directors of Companies. The Audit Committees under the Board of Directors of CAEPCO JSC and its subsidiaries supervise the activities of the IAD/IAU.

The activities of the IAD/IAU are carried out in accordance with the current legislation of the Republic of Kazakhstan, the Code of Ethics of Internal Auditors. The main documents regulating the activities of IAD/IAU are the Regulations on IAD/IAU, the Internal Audit Policy and the Rules for Conducting Internal Audit.

IAD carries out its work in accordance with the annual work plan approved by the Board of Directors. IAD submits reports on the work performed by the Department to the Board of Directors of CAEPCO JSC.

In 2020, the effectiveness of the internal control system of business processes in subsidiaries was evaluated: "Investment Activities Management", "Maintenance and Repair Management", "Human Resources Management", "Procurement Management", "Contracts and Settlements with Creditors", "Accounting for Treasury Transactions". Also, monitoring over implementation of recommendations of the IAD and a selective stock taking of property, plant and equipment and inventory were carried out.

Internal auditors adhere to the following principles in their work: integrity, objectivity, confidentiality, professional competence.

The Corporation has a functioning internal control system that provides sufficient confidence in the effectiveness of control in operating activities, compliance with laws and regulations.



## CORPORATE GOVERNANCE COMPLIANCE REPORT

In 2020, the corporate governance practice of the Corporation fully complied with the provisions of the Corporate Governance Code developed in accordance with the requirements of the legislation of the Republic of Kazakhstan On Joint-Stock Companies. The document takes into account the existing international experience in the area of corporate governance, and recommendations on the application of corporate governance principles by Kazakh joint-stock companies.

The principles of the Corporate Governance Code are aimed at developing and introducing norms and traditions of corporate behaviour that meet international standards and contribute to creating a positive image of the Corporation in the eyes of its shareholders, customers and employees into the daily practice of the Corporation's activities to achieve the fullest exercising of shareholders' rights and increase their awareness of the Corporation's activities, as well as to control and reduce risks, maintain sustainable growth of the Corporation's financial indicators and the successful implementation of its statutory activities.

### The main principles of the Corporate Governance Code are as follows:

- > Justice
- > Accountability
- > Responsibility
- > Transparency

- > Environmental protection and social responsibility
- > Effectiveness
- > Control

In 2020, all the fundamental principles of the Corporate Governance Code were respected.

## CONFLICT OF INTERESTS

The conflict of interests is regulated by the Code of Business Conduct (paragraph 5.6), which prescribes the responsibility of employees for abuse of official position, the activities of employees internally or externally.

Minimising Conflicts of Interest is one of the main principles regarding fraud and corruption in the Anti-Corruption and Fraud Policy. This principle declares that the Corporation reduces the conflict of interests on the basis of an effective distribution of powers and responsibilities through the development of a transparent organisational structure.

The activities of the members of the Board of Directors are regulated by the relevant Regulation. Avoidance of conflicts of interest among members of the Board of Directors is prescribed in the clause on the Rights and Obligations of members of the Board of Directors.

## INFORMATION POLICY

The information policy of CAEPCO JSC is a set of actions, measures and regulations that allow to manage the process of distributing corporate information, the perception of a single vision of the Corporation among the target audience.

### The main objectives of information disclosure are as follows:

- > Timely provision of information on all material issues related to the Corporation in order to comply with the legal rights of shareholders, investors, as well as other stakeholders in providing information required for making an informed decision or performing other actions that may affect the financial and economic activities of the Corporation, as well as other information that contributes to the most complete understanding of the activities of the Corporation.
- > Ensuring the availability of public information about the Corporation for all stakeholders.
- > Increasing the level of openness and trust in relations between the Corporation and shareholders, potential investors, market participants, government agencies and other stakeholders.
- > Improving the corporate governance of CAEPCO JSC.
- > Creating a positive image of the Corporation.

## CORPORATE ETHICS

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

### The document combines the standards of international practice of regulating business relations in four areas:

- > Business and professional ethics
- > Organisational 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 operating results:

- Reducing the number of compromise decisions and promoting independent judgement
- Enhancing corporate culture as well as the overall image of the Corporation and its perception by public
- Improving the efficiency of the corporate governance, risk management and crisis management process
- Promoting efficient stakeholder engagement
- Allowing to avoid litigations

## EXTERNAL AUDIT

DELOITTE LLP is the audit firm that conducts an external audit of the financial statements of CAEPCO JSC group. The contract with the company for rendering of audit services is concluded until 2021.





# 3 MARKET ANALYSIS

ENERGY COMPANIES STRIVE TO INCREASE ENVIRONMENTAL CONSCIOUSNESS

## ECONOMIC REVIEW

### GROSS DOMESTIC PRODUCT

Due to the global pandemic of the **COVID-19** coronavirus and quarantine measures, the GDP of the Republic of Kazakhstan decreased by 2.5 % in 2020 (according to preliminary data from the Bureau of National Statistics of the Agency for Strategic Planning and Reforms of the Republic of Kazakhstan).

To combat the pandemic in the spring of 2020, a state of emergency was introduced in the country, which implied restrictions that remained with varying degrees of intensity until the end of the year. These measures allowed to sharply reduce the number of cases and, along with sanitary and other measures, to ensure the protection of the health and life of citizens. However, the restrictions resulted in a decrease in business activity, loss of income of the population and increased uncertainty.

The imposed restrictions had the biggest impact on the service sector, where the decline in 2020 was 5.4 %. In particular, wholesale and retail trade decreased by 8.3 %. The production of goods increased by 2 %, primarily due to agriculture and construction.

**GDP**  
**2.5 %** ↓

Due to the global pandemic of the **COVID-19** coronavirus and quarantine measures, the GDP of the Republic of Kazakhstan decreased by 2.5 % in 2020.

Gross domestic product dynamics



Source: The Bureau of National Statistics of the Agency for Strategic Planning and Reforms of the Republic of Kazakhstan

### INDUSTRY

In 2020, the volume of industrial production decreased by 0.5 %. At that, an increase in production volumes was recorded in 12 regions of the republic: a decrease was observed in the Kyzylorda, Mangistau, Atyrau, Turkestan regions and in Shymkent.

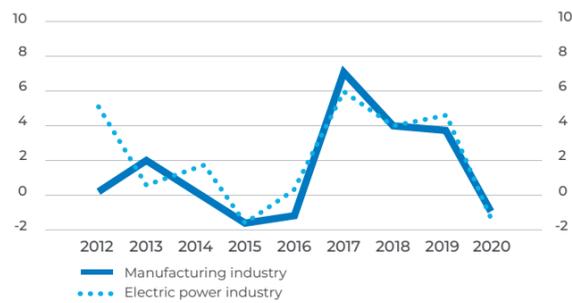
In 2020, reduction in the mining industry and quarry development was 3.7 %. To a large extent, this is due to a decrease in crude oil production by 5.4 %. Due to

the global decline in the economy, there was a drop in demand for petroleum products on global markets, which resulted in the risk of overstocking and lower prices. The largest suppliers of raw materials around the world, in particular the OPEC+ countries, reduced production.

In the manufacturing industry, production increased by 4.1 %, only slightly behind the growth in 2019 (4.4 %). Food manufacturing increased (by 3.3 %), production of essential medicines and pharmaceutical chemicals increased significantly (by 47 %); growth in ferrous metallurgy was 3.2 %, and 16.4 % in vehicle manufacturing. Obviously, certain industries managed to avoid long production downtime.

Industrial production decreased by 0.1 % in the supply of electricity, gas, steam, hot water and air-conditioned air mainly due to a decrease in the volume of production, transmission and distribution of electric power by 1.2 % (in 2019, there was an increase by 4.6 %). The dynamics of the energy industry largely correlates with the dynamics of industrial production.

**The dynamics of production in the industry in general and in the electric power industry, %**



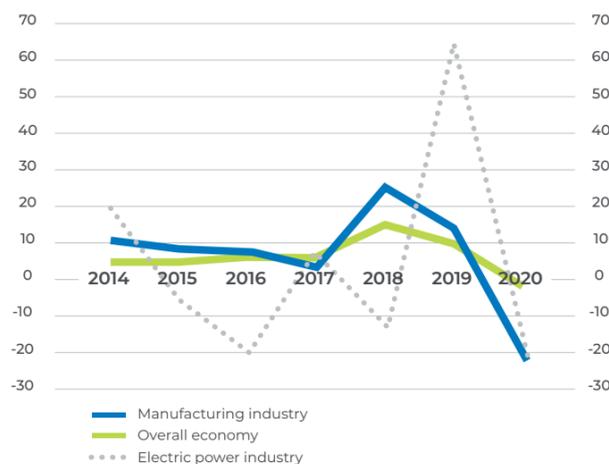
Source: The Bureau of National Statistics of the Agency for Strategic Planning and Reforms of the Republic of Kazakhstan

**INVESTMENTS**

The volume of investments in fixed capital in Kazakhstan in 2020 amounted to 12.3 trillion tenge, which is 3.4 % less than in 2019. Almost half of this volume corresponded to industry, where the decrease in investment was 19.5 %. Reduction in the mining industry reached 26.4 %.

The energy sector accounted for approximately 11 % of investment in the industry. After an explosive investment growth by 65 % in 2019 as a result of the introduction of the capacity market, in 2020 the decline was 20.5 %.

**Fixed capital investments dynamics, in %**



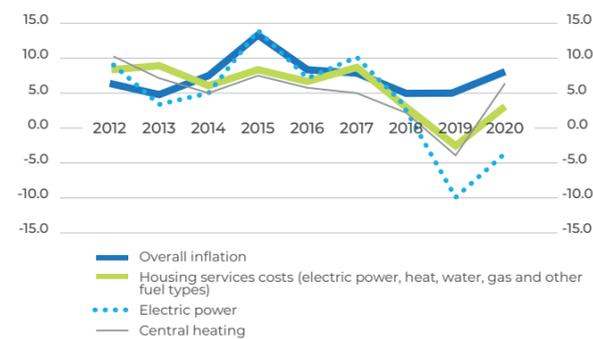
Source: The Bureau of National Statistics of the Agency for Strategic Planning and Reforms of the Republic of Kazakhstan

**INFLATION**

In 2020, inflation in Kazakhstan was 7.5 %. Food prices increased by 11.3 % becoming the main factor in the growth of the price index. The cost of non-food products increased by 5.5 %, and paid services – by 4.2 %.

The cost of housing services increased by 3.5 %. In particular, after a decrease by 4.3 % in 2019, retail electricity prices increased by 6.5 % in 2020. The cost of heating continues to decline. In 2020, the price drop amounted to 2 %.

**Inflation dynamics in the Republic of Kazakhstan, in %**



Source: The Bureau of National Statistics of the Agency for Strategic Planning and Reforms of the Republic of Kazakhstan

**FORECAST**

According to the World Bank's March forecast, Kazakhstan's economy is expected to grow by **3.2 %** in 2021. In 2022, this indicator may reach **3.5 %**, which is due to the expectation of a recovery in business activity, the forecast of an increase in oil demand and production volumes, as well as continuation of fiscal measures to support the economy. This scenario is also supported by the ongoing vaccination of the population against coronavirus, which reduces the risk of further restrictions on the work of organisations.

**ENERGY SECTOR OVERVIEW**

At the end of 2020, K.K. Tokayev, the President of the Republic of Kazakhstan, signed the law "On amendments and additions to certain legislative acts of the Republic of Kazakhstan on supporting the use of renewable energy sources and electric power".

One of the key innovations of the law is represented by measures aimed at stimulating the construction of maneuverable capacities that contribute to better regulation of production and consumption imbalances during peak hours.

In addition, the law establishes a pass-through tariff for RES support. The costs of purchasing electric power from renewable energy sources from existing energy-producing organisations will be deducted from their marginal tariffs.

In general, it is obvious that there is a course towards

creating of favourable conditions for the development of renewable energy. By 2050, such energy sources should account for at least half of the total energy consumption.

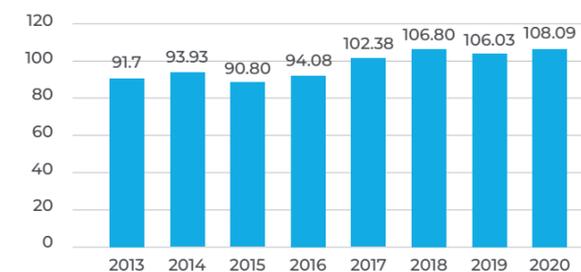
The new law guarantees the provision of financial support from the Government of the Republic of Kazakhstan to the financial settlement center of renewable energy in case of non-fulfilment of its obligations on payments to RES projects (in order to increase the creditworthiness of the FSC). The law also provides for an increase in the validity period of the contract for the purchase of electric power from 15 to 20 years in order to increase the attractiveness of the renewable energy market for future investors.

Another innovation was represented by introduction of centralised purchase and sale of flood electric energy through the FSC.

**PRODUCTION**

According to KEGOC system operator, 108.09 billion kWh of electric power was produced in Kazakhstan in 2020, which is 1.9 % more than in 2019. At that, in 2019, the decrease was 0.7 %. An increase in production in 2020 was observed in all three zones of the EPS of Kazakhstan.

**Electric power generation in the Republic of Kazakhstan, billion kWh**



Source: KEGOC

In 2020, as in prior years, 77 % of electric power was produced in the Northern zone. Production increased by 1.7 % compared to 2019 and reached 83.03 billion kWh.

The Western zone accounts for 12 % of production. In 2020, 13.49 billion kWh was produced, which is 0.9 % more than in the prior year.

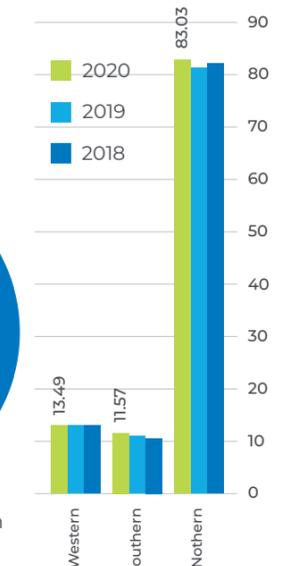
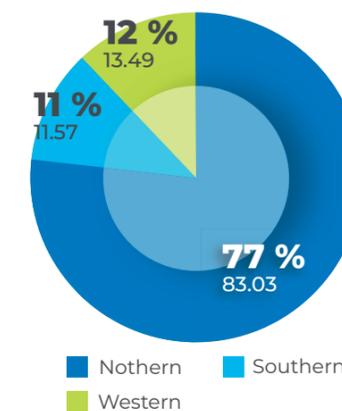
11 % of electric power was produced in the Southern zone, while the most significant growth was observed in this zone, i.e. by 5.1 % up to 11.57 billion kWh.

In 2020, 80 % of the electric power was generated at TPP. The generation growth was 1 %. At the GTPP, there was a decrease in generation by 4 % (8.8 % in the total generation volume), and at the HEPP there was an increase by 6 % (the share in the total generation volume is also 8.8 %).

Production of plants using renewable energy sources (PPS, WPS and BGP) demonstrates stable growth. Their share in the total generation structure increased from 1 % in 2019 to 2.2 % in 2020.

**Electric power production by zones, billion kWh**

**Structure of electric power production by zones in 2020, billion kWh**



Source: KEGOC

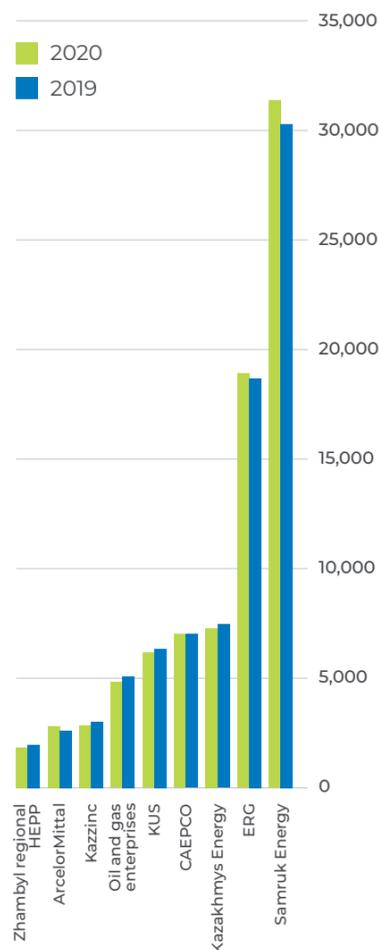
### Electric power production by generation types, billion kWh

Generation type	2018	2019	2020	Change	Weight in 2020
TPP	86.80	85.96	86.66	1 %	80.2 %
GTPP	10.30	9.98	9.55	-4 %	8.8 %
HEPP	9.10	8.98	9.53	6 %	8.8 %
PPS, WPS and BGP	0.50	1.11	2.35	112 %	2.2 %

Source: KEGOC

Samruk-Energy JSC is the largest generating group: in 2020, the volume of electric power production increased by 3.9 % and amounted to 29 % of the republican production. ERG is second largest generation group, which accounts for 17 % of the total generation. In 2020, there was an increase in production by 1.7 %. CAEPCO Group of Companies remains on the 4th place among generating companies with a 7 % share in the total generation volume.

### Electric power generation at the largest energy-producing enterprises of the country, billion kWh

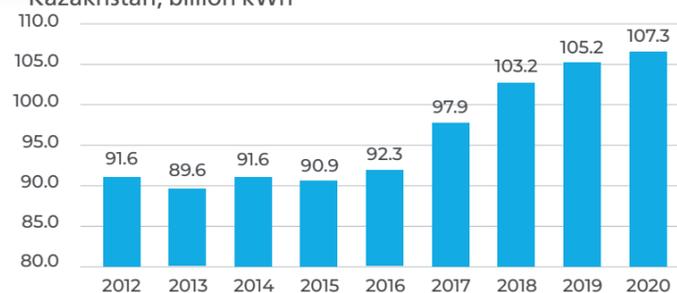


## CONSUMPTION

The growth of electric power consumption in 2020 amounted to 2 %, the volume reached 107.3 billion kWh. Consumption in the Northern zone increased by 2 % or by 1.5 billion kWh. Consumption in the Southern zone – by 3 % or by 0.6 billion kWh. Consumption growth in the Western zone reached 1 % and increased by 0.08 billion kWh.

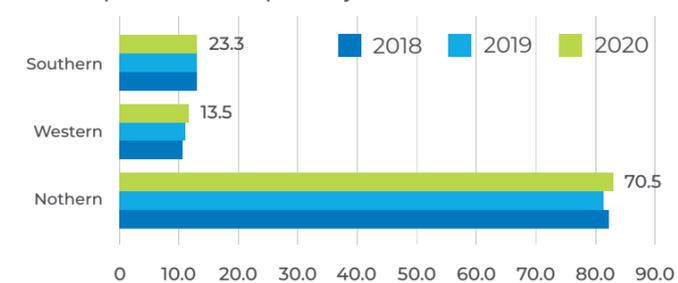
At that, there was a decline in consumption by 3.47 % among 17 largest consumers. Five enterprises significantly reduced consumption, while most of the others either did not change the volume of consumption, or slightly increased it.

### Electric power consumption in the Republic of Kazakhstan, billion kWh



Source: KEGOC

### Electric power consumption by zones, billion kWh



Source: KEGOC

## NET POWER FLOW

Net power export in 2020 amounted to 413.3 million kWh. In particular, export to the Russian Federation was at the level of 1,105.9 million kWh, and import amounted to 1,240.6 million kWh. Export to Central Asia was 862.8 million kWh, and import was 314.8 million kWh.

## CAPACITIES

Production of electric power in Kazakhstan is carried out by 179 electric power stations of various forms of ownership. The installed capacity at the beginning of 2021 was 23,547.1 MW (increased by 611.10 MW by the beginning of 2020). At that, the main increase in installed capacity is demonstrated by stations using renewable energy sources. The capacity of solar power plants increased by 288.3 MW, wind power plants – by 229.6 MW, hydroelectric power plants – by 63.6 MW. At that, the capacity growth at steam turbine thermal power plants in 2020 amounted to 15.5 MW, and at GTPP – to 16 MW.

## Installed and available capacity of power plants in Kazakhstan, MW

(as of 1 January 2020/2021)

Power plants	Installed capacity			Available capacity		
	2020	2021	Growth rate	2020	2021	Growth rate
<b>Total</b>	<b>22,936</b>	<b>23,547.1</b>	<b>611.10</b>	<b>19,329</b>	<b>20,039.1</b>	<b>710.10</b>
TPP	17,389	17,404.5	15.50	15,594	15,679.0	85.00
GTPP	1,999	2,015.0	16.00	1,662	1,777.1	115.10
PPS	597	885.3	288.30	364	641.6	277.60
WPS	282	511.6	229.60	149	311.6	162.60
HEPP	2,666	2,729.6	63.60	1,558	1,628.7	70.70
Biogas plant (BGP)	1.06	1.1	0.04	0.5	1.1	0.60

Source: Samruk-Energy JSC

The available capacity in 2020 increased by 710.1 MW to 20,039.1 MW. According to KEGOC, the annual maximum load in 2020 was recorded on 7 December at 7 p.m. and amounted to 15,761 MW. Compared to 2019 (26 November, 7 p.m.), the maximum load increased by 579 MW or by 3.8 %.

Generation in the Republic of Kazakhstan amounted to 15,461 MW, which is 580 MW or 3.9 % more of a similar indicator in 2019.

## TARIFF REGULATION

In 2019, the policy of “marginal tariffs” was replaced by the mechanism of the Electric Capacity Market.

**The tariff for electric power is separated into two parts:**

**1. The tariff for electric power** is a variable part that will provide a payback for the costs of producing electric power;

**2. The tariff for capacity** is a fixed portion that will ensure the return on investment in the construction of new electric capacities, and renewal, modernisation, reconstruction or expansion of existing ones..

For all existing stations, one marginal tariff is set for the service for maintaining the availability of electric power. In addition, it is possible to conclude an individual investment agreement and get an individual tariff, both for the entire capacity and for a certain part of it.

## INDUSTRY DEVELOPMENT FORECAST

According to the forecast of the Ministry of Energy of the Republic of Kazakhstan, electricity consumption is expected to reach 108.9 billion kWh in 2021 (this is 1 % more than in 2020). Production is projected to amount to 115.4 billion kWh, which will exceed the results for 2020 by 6.8 %. The surplus is expected to reach 6.5 billion kWh.

### Forecast balance of electric power of the EPS of the Republic of Kazakhstan, billion kWh

Name	Forecast						
	2021	2022	2023	2024	2025	2026	2027
Electric power consumption	108.9	111.8	114.9	117.7	120.3	123.5	126.5
Electrical power generation	115.4	123.6	124.0	127.6	132.3	132.6	132.3
Existing stations	114.1	114.1	113.3	112.8	110.9	109.5	105.7
Planned including RES	1.3	9.5	10.7	14.8	21.4	23.1	26.6
<b>Deficit (+), excess (-)</b>	<b>-6.5</b>	<b>-11.7</b>	<b>-9.1</b>	<b>-9.9</b>	<b>-12.0</b>	<b>-9.1</b>	<b>-5.8</b>

Source: Ministry of Energy of the Republic of Kazakhstan



# PERFORMANCE RESULTS AND DEVELOPMENT PROSPECTS OVERVIEW

THE KEY ASPECT OF THE STRATEGIC DEVELOPMENT OF CAEPCO JSC IS TO INCREASE PRODUCTION EFFICIENCY, IN PARTICULAR THROUGH THE REPLACEMENT OF FIXED ASSETS. THE CORPORATION HAS AN IMPLEMENTED INVESTMENT PROGRAM FOR 2009-2020.

## 14.9 BILLION TENGE

CAEPCO JSC constantly carries out a set of measures to reduce the losses of heat and electric power during its transportation, as well as to improve the reliability of supplying consumers with these types of energy. In 2020, within the framework of the investment program, a number of measures for modernisation of equipment aimed at increasing generation, reducing losses during the transmission of electric power and heat and improving the environmental parameters of activities were continued.

In 2020, the Corporation planned to allocate 20.3 billion tenge for implementation of the investment program activities. In fact, 14.9 billion tenge was allocated, which is due to the postponement of the completion of work on electric and heat networks projects for 2021.

## INVESTMENT ACTIVITIES FOR HEAT AND ELECTRIC POWER GENERATION

In 2020, the Corporation planned to increase electric power generation by 6.5 % relative to 2019, up to 7,488 million kWh, and to reduce the supply of heat by 2.6 % relative to 2019, up to 6,205 thousand Gcal, which was due to the planned reduction in the volume of heat for consumers of PAVLODARENERGO JSC and SEVKAZENERGO JSC.

In fact, generation of the Corporation did not change relative to 2019 and amounted to 7,035 million kWh. Decrease in the supply of heat amounted to 2.6 % compared to 2019, up to 6,203 thousand Gcal, which is due to a higher average outdoor temperature in the heating months of 2020 than in 2019 (-0.7 oC and -6.2 oC, respectively) and a decrease in the volume of heat consumption by the unit of PAVLODARENERGO JSC with Ekibastuzteploenergo LLP by 1.4 % and SEVKAZENERGO JSC by 5.8 %.

In 2020, the Corporation allocated 14.9 billion tenge for implementation of the investment program activities.

### 2020 RESULTS

**PAVLODAR CHP-3**  
(INCORPORATED IN 1972)

**91.0 %**  
Equipment upgrade since 2009

The reconstruction of the condenser of the turbine generator No. 5 of the Pavlodar CHP-3 was carried out. The event is aimed at eliminating violations of water-chemistry conditions of the plant, carrying the nominal electrical load of the turbine generator, reducing the temperature pressure in the condenser, increasing efficiency.

Works on implementation of the project for construction of the ash dump of the 3rd phase continue. This is one of the measures to ensure continuous production run of the plant, which will allow dumping ash and slag for 10.5 years.

**PAVLODAR CHP-2**  
(INCORPORATED IN 1961)

Implementation of measures to increase the 2nd phase of the ash dump has been started to ensure continuous production run of the plant, which will allow dumping ash and slag for 5.1 years.

**EKIBASTUZ CHP**  
(INCORPORATED IN 1956)

**100 %**  
Equipment upgrade since 2009

Works on construction of the 2nd phase of the ash dump of the Ekibastuz CHP in the bed of Lake Tuz continued.

**PETROPAVLOVSK CHP-2**  
(INCORPORATED IN 1961)

**49.7 %**  
Equipment upgrade since 2009

Transformer No. 3 was replaced.

Works on implementation of the project for building diverging walls of section No. 3 of the ash dump No. 2 were completed. This is one of the measures to ensure continuous production run of the plant, which will allow dumping ash and slag for 7 years.

## TRANSMISSION OF ELECTRIC POWER

In 2020, as part of investment programs, work was performed on construction, reconstruction and technical re-equipment of 0.4-10 kV electric networks for 144.961 km: North-Kazakhstan EDC JSC – 17.77 km, with the use of self-supporting insulated wire; Akmolra EDC JSC – 39.581 km, of which HV line of protected wire of 10 kV – 30.21 km, OTLI of 0.4 kV – 7.182 km of self-supporting insulated wire; Pavlodar EDC JSC – 87.61 km, of which 70.07 km with the use of self-supporting insulated wire.

Works on the construction and reconstruction of 35-110 kV overhead lines for 21.7 km were performed at Pavlodar EDC JSC; reconstruction of 7 substations of 10-220 kV, including 6 substations for North-Kazakhstan EDC JSC and 1 substation for Pavlodar EDC JSC.

### PAVLODAR EDC JSC

**In 2020, the following projects were implemented as part of the investment program:**

- > Construction works of the 110/10 kV substation Severnaya Gorodskaya with the installation of two 40 MVA power transformers with the construction of a double-circuit 110 kV line Promyshlennaya substation – Severnaya-Gorodskaya substation in Pavlodar. Completion of this event is planned for 2022.
- > Reconstruction of the 110/10 kV Ermakovskaya substation with the replacement of power transformers from 2x10 MVA to 2x16 MVA, oil switches to gas switches in the ODS 110 kV, with the installation of a block-modular ODS building and the replacement of the KRU-10 kV with 10 kV vacuum switches in Aksu.
- > Reconstruction of the 110/10 kV Potanino substation with replacement of outdoor switchgear 10 kV cells with oil switches with vacuum ones and replacement of stand-up reservoir 110 kV switching tubes with surge suppressor 110 kV excess-voltage suppressors in Aksu.
- > Reconstruction of ODS 35 kV on the 220/35/10 kV Kalkaman substation with the replacement of 3 oil switches of 35 kV and 220 kV with gas-insulated switches with the replacement of disconnecting devices with porcelain insulation with polymer one in the Kalkaman village.
- > Construction of a new 35 kV overhead power line L-62 Voskresenka 2 – Trofimovka to replace the existing line of 21.7 km.
- > Works on the construction, reconstruction and technical re-equipment of 0.4-10 kV electric power networks for 87.61 km, including the replacement of bare wire with self-supporting insulated wire on 0.4-10 kV overhead power lines of 70.07 km and the construction/reconstruction of 0.4-10 kV cable power lines of 17.54 km.

LOSSES REDUCED

BY **4.1 %**

In the period from 2009 to 2020, electric power losses were reduced by 4.1% in the networks, while excess losses were completely eliminated in 2014

- > As part of the construction of the pumping station No. 2/3, a complete reconstruction of the transformer substation No. 282 equipment was carried out with the replacement of 2x1000 kVA power transformers with 2x1600 kVA transformers with the installation of soft-starter cabinets.
- > Three modular transformer substations with dry-insulated power transformers and vacuum switches have been installed to replace the existing ones in Pavlodar. These substations are equipped with modern security and fire alarm devices.
- > As part of the reconstruction of 10 kV overhead power transmission lines, the existing transformer substations with overhead input were replaced with a cable one in the amount of 4 units, reconstruction of existing transformer substations with the installation of four single-end service assembled chambers and load switches, installation of three 10 kV outdoor switchgears in Pavlodar.
- > Installation of trunking radio communication was performed in the Lebyazhensky district.
- > 5 sets were delivered for the installation of a radio relay communication system (LRES VPES : Zarya substation – Yamyshevo substation – Chernoye substation).
- > Development of designing estimates for the installation of antenna mast structures was performed: 1 unit at Maraldy substation.
- > Installation of antenna mast structures was performed – 3 units at Novoyamyshevo substation, Chernoe substation, Zarya substation (purchase of equipment in 2019).
- > Installation of security and fire alarm systems was

### AKMOLA EDC JSC

**In 2020, the following projects were implemented as part of the investment program:**

- > Construction of 110/10 kV Garden Village substation with branch line from the 110 kV Airport-2-Severnaya and Dostyk-Severnaya power lines.
- > Reconstruction of 0.4-10 kV power line – 39.581 km was performed with the replacement of the bare wire with self-supporting insulated wire – 7.182 km (VLI-0,4 kV), 10 kV VLZ for 30.21 km and replacement of 12 units of 10/0.4 kV EPTS.
- > Major repairs of 3 roofs were carried out, including the 10kV Stepnogorsk interdistrict electric power network Institutscoe; warmed station at Ulenty substation; Yessil interdistrict electric power network of RMHF building in Tasty-Taldy village.
- > 17 units of special equipment and vehicles were purchased.
- > 60 units of computer equipment and intangible assets were updated.
- > Equipment on SCS central unit was purchased:
  - Video wall with ARISS SCADA OOO "NTK interface" software for 4 monitors – 2 sets.
  - Video wall with ARISS SCADA OOO "NTK interface" software for 6 monitors – 1 set.
  - Video complex for the control room with OIK Dispatcher NT software with basic configuration – 1 set.
  - Broadband wireless access with multiplexing equipment – 1 set (three radio relay link spans and two multiplexing units).
  - Radio complex with multiplexing equipment – set (two radio relay link spans and two multiplexing units).
- > Reconstruction of the cable communication line was carried out at Zavodskaya-Bulandinsky distribution zone substation – 3km.

carried out in the Maysky, Uspensky and Lebyazhensky districts;

- > 26 personal computers, one network storage and two laptops were purchased.
- > Software was purchased and put into operation – 2 sets of Rastr software and 1C Billing software).
- > Reconstruction of 35 units of buildings and constructions was carried out.
- > Working projects have been developed for the construction of three 35 kV overhead lines along with the existing ones.
- > Installation of power management system metering devices on the top-down principle was carried out in the amount of 499 units at 10-220 kV substations in the Pavlodar region.
- > Electronic metering devices were installed in the Pavlodar region (without transmitting information via the PLS-II system and an alternative communication channel).
- > Purchase of technological equipment was made.

### NORTH-KAZAKHSTAN EDC JSC

**In 2020, the following projects were implemented as part of the investment program:**

- > Reconstruction of 0.4-10 kV power lines – 17.77 km, with the use of self-supporting insulated wire.
- > Repair of industrial buildings, transformer substations, workshops of distribution zones, repair and production facility sections – design and estimate documentation for 2021-2022 has been developed.
- > Installation of ASCAE registers at 933 accounting points.
- > Replacement of three 10/0.4 kV EPTS.
- > Replacement of a 10,000 kVA power transformer with 35/10 kV Rabochiy Poselok substation.
- > Electrical measuring devices were purchased.
- > Inventories for the construction of the 110 kV overhead line Novomikhailovka-Liteynaya were purchased, a special vehicle in the form of APT-30 aerial work platform was purchased.

## TRANSMISSION OF HEAT

The key activities to reduce heat power losses are aimed at restoring and modernising district heating networks in Pavlodar, Ekibastuz and Petropavlovsk. In 2020, the construction and reconstruction of thermal pipelines with the use of preinsulated pipes of 4.06 km was completed:

**Pavlodar — 0.438 km**

**Petropavlovsk — 3.622 km.**

### PAVLODAR

In Pavlodar, due to the high level of wear of heating networks: on main pipelines — 85.15 %, on district pipelines — 82.94 %, there was an increase in heat losses compared to 2019 by 0.7 % or by 18 thousand Gcal.

Due to the refusal of the Ministry of Industry and Infrastructural Development of the Republic of Kazakhstan in budget subsidies for the applications submitted by Pavlodar Heat Networks LLP in 2019-2020, the facility "Reconstruction of the TM-37 heating pipe in Pavlodar" with a total length of 2.5 km, which was planned to be completed and put into operation in 2020, is included in the Investment Program at its own expense until 2025.

**At the expense of the city budget of the State Institution Construction Department of Pavlodar, construction and installation works were carried out at two facilities in 2020:**

- > Construction of the heating network from NO-21 to NO-21/8 and extension of the off-site heating network from UP-8 along Kamzin Street to Ladozhskaya Street, along Ladozhskaya Street to Kutuzov Street, for reserving the heat supply of Dostyk microdistrict in Pavlodar. The total length of heating networks on the facility is 1,897.0 m;

- > Construction of a section of the TM-5 heating pipe from TK213 to TK216 with a pipe diameter of 700 mm to a school for 350 places in the Zatonsky microdistrict of Pavlodar.

In the reporting year, heat losses decreased by 20 thousand Gcal compared to 2019. Automatic heat flow controllers, industrial controllers and modems were installed at heat-transmitting enterprises to connect mechanisms and control and measuring devices with the dispatching unit. All the equipment of heating units is introduced into a single network, which allows dispatchers to quickly control hydraulic and temperature conditions, and specialists to make decisions faster in emergency situations.

The Corporation applies advanced technologies to detect sources of heat energy losses: thermovision inspection devices for monitoring and diagnostics of main pipelines, ultrasonic flaw detectors. Implementation of all the above measures allowed to reduce the total heat losses in the networks by 2.3 % by the end of 2020 compared to the beginning of 2015.

IN THE PERIOD FROM  
2009 TO 2020, LOSSES  
IN HEATING NETWORKS  
WERE REDUCED BY

**2.7 %**

### PETROPAVLOVSK

In Petropavlovsk, a high level of wear of heating networks (70.7 %) results in a significant number of technological violations: 127 failures were recorded in 2019, as well as 141 failures in 2020.

As part of the investment program of the enterprise, work was carried out on the reconstruction of 3 sections of heating mains with a total length of 3,622 linear meters for the amount of 2,068,925 thousand tenge (excluding VAT), including:

- > heating mains No. 15 2Du 600 mm on Sovetskaya street from UN-15-06-c to TP-15-12-c in Petropavlovsk of 1,950 linear meters of pipeline for the amount of 1,046,366 thousand tenge (net of VAT);

- > heating mains No. 7 2Du of 600 mm on Krepostnoy street from TK-1-10 to TP-15-12c in Petropavlovsk of 1,420 linear meters of pipeline for the amount of 849,192 thousand tenge (net of VAT);

- > heating mains No. 7-18 2Du of 500 mm on Pionerskaya street from TK-18-07 to TK-7-07A in Petropavlovsk of 252 linear meters of pipeline for the amount of 173,367 thousand tenge (net of VAT).



## PROJECT FOR ENHANCEMENT OF HEAT SUPPLY RELIABILITY (2016–2020)

As part of the investment program of CAEPCO JSC in the period from 2016 to 2020, a project was implemented, which was financed both at its own expense and by attracting a new investment loan from the EBRD and budget subsidies from the Ministry of Investment and Development of the Republic of Kazakhstan under the Nurly Zhol program. The project was aimed at improving the reliability of heat supply, energy efficiency, as well as reducing losses and improving environmental standards by reducing CO2 emissions, as a result of saving coal consumption associated with reducing heat losses during transmission through networks.

### Project participants

Loan from the European Bank for Reconstruction and Development

### Plan

9.30 billion tenge

### Fact

6.733 billion tenge

### Results

**33.2 km of main and distribution pipelines were reconstructed and built, 29.1 km of heat insulation was restored.**

State funds within Nurly Zhol program

9.30 billion tenge

4.845 billion tenge

Equity of CAEPCO subsidiary

7.35 billion tenge

6.249 billion tenge

### Total amount

**25.95 billion tenge**

**17.828 billion tenge**

## PLANS FOR THE RECONSTRUCTION AND MODERNISATION OF EQUIPMENT FOR 2021

In 2021, within the framework of the investment program, a number of measures for modernisation of equipment aimed at increasing generation, reducing losses during the transmission of electric power and heat and improving the environmental parameters of activities were planned to be continued.

**In 2021, the Corporation intends to allocate 23.5 billion tenge for implementation of the investment program activities.**

In 2021, the Corporation plans to generate electricity at the level of 2020 — up to 7,052.6 million kWh, and an increase in the supply of heat by 4.0 % relative to 2020 to 6,406 thousand Gcal, which is associated with the planned volumes of heat for consumers of PAVLODARENERGO JSC and SEVKAZENERGO JSC.

It is planned to carry out measures for reconstruction of the condenser of the turbine generator No. 6 at CHP-3 of PAVLODARENERGO JSC to exclude violations of the water-chemistry conditions and carrying the nominal electrical load. We will also continue the work on construction of chimney No. 2 to remove the restrictions on the thrust of existing boiler units operating on the chimney No. 1, and the ability to connect to the tube of boiler units at the stations No. 5, 6 and promising boilers at the stations No. 7, 8.

In 2021, construction of the third phase of the ash dump of Pavlodar CHP-3 will continue, which is scheduled for completion in 2022.

It is planned to continue building up phase 2 of the ash dump at Pavlodar CHP-2, which will ensure the storage of ash and slag from CHP-2 for 5 years.

Work on the construction of an ash dump will continue at the Ekibastuz CHP. It is also planned to repair buildings and constructions.

In 2021, it is planned to install a 2T power transformer at the Petropavlovsk CHP-2 of SEVKAZENERGO JSC, to perform the reconstruction of boiler unit No. 7. It is also planned to start the reconstruction of boiler unit No. 2 at the expense of borrowed funds.

In 2021, it is planned to build and reconstruct main heat pipelines using pre-insulated pipes of 1.92 km, including: 0.214 km in Pavlodar, 0.91 km in Petropavlovsk, 0.796 km in Ekibastuz, as well as the reconstruction of distribution heat networks of 1.905 km in Ekibastuz.

**In 2021, as part of investment programs, it is planned to:**

- > AEDC JSC: completion of construction and commissioning of 110/10 kV Garden Village substation with branch line from the 110 kV Airport-2-Severnaya and Dostyk-Severnaya power lines;

- > construction, reconstruction and technical re-equipment of 0.4-10 kV electric networks of 79.85 km, including 10.1 km for NK EDC JSC, 51.55 km for AEDC JSC, 18.2 km for AEDC JSC;

- > construction and reconstruction of 35-110 kV overhead lines of 97.013 km, including 30 km for NK EDC JSC, 48.313 km for AEDC JSC construction, 18.7 km for AEDC JSC;

- > reconstruction of 11 substations of 35 kV and more, including 1 substation for AEDC JSC, 2 substations for NK EDC JSC, 8 substations for AEDC JSC.

# PROCESS AUTOMATION

In 2020, a comprehensive modernisation and automation of production, accounting and related information systems, including ELLIPSE and MOBILITY, was carried out at CAEPCO JSC. All projects are aimed at improving labour productivity, transparency of activities and economic efficiency.

## ASCAE

ASCAE implementation commenced in 2013 continued to expand the consumer coverage. In 2020, the "Concept of organisation of automated control over distribution of electric power" was approved, as part of which priorities for the standardisation of business processes and automation of technical accounting were identified, phase 1 of the development and configuration of the integration of information systems of the ASCAE was started.

ASCAE was installed as part of the Investment Program in 2020 at 129 substations of 35 kV and more and at 397 transformer substations 6 – 10 / 0.4 kV, including:

- > Pavlodar EDC JSC – 4 substations and 93 transformer substations;
- > North-Kazakhstan EDC – 304 transformer substations;
- > Akmola EDC JSC – 125 substations.

## BILLING

During 2020, the following works were performed:

- > Replication of the unified corporate billing system in Ekibastuzteploenergo LLP in terms of heat.
- > Unified templates of reporting and printing forms, standardised algorithms of business processes.
- > Accepting payments from individual entrepreneurs through Kaspi app.
- > Uploading of analytical reporting forms has been transferred to the data storage to optimise the performance of the billing system.
- > Since December 2020, service centers of Astanaenergosbyt LLP have installed their own payment kiosks for utilities. Payment via the terminal allows consumers to maintain a social distance and excludes direct contact with an employee of the enterprise (cashier).

## THESIS DOCUMENT AND TASK MANAGEMENT SYSTEM

During 2020, the following works were performed:

- > Automation of the key personnel processes:
  - Hiring and relocation of employees;
  - Recall from annual leaves;
  - Confirmation of appointment;
- > Completion of "Front Office/Records Keeping" module;
- > Works on automation of financial processes were initiated:
  - Mutual settlements with counterparties.
  - Coordination of contracts with counterparties.
  - Integration of data on counterparties with 1C Manufacturing Enterprise Management.

## PROCESS AUTOMATION PLANS FOR 2021

- > Carrying out works to improve performance of THESIS, the corporate document management system.
- > Install ASCAE at 70 substations of 35 kV and more, 532 transformer substations 6 – 10 / 0.4 kV
- > Carrying out works on modernisation of the Personal Account for Astanaenergosbyt LLP.
- > Perform works on the project "Mobile application and request management system" to automate the business process of carrying out works on revenue and technical meter readings and transmitting data to the billing system.



# ACTIVITIES OF POWER SUPPLY ORGANISATIONS

The policy of power supply organisations in 2020 was aimed at implementing measures to modernise customer service, improve the quality of management and qualification of personnel, inform the population about the economical consumption of electric power.

In 2020, public health measures were organised in customer service offices in accordance with sanitary requirements, as well as the requirements for strengthening measures to prevent COVID-19 in customer servicing were fulfilled.

### Analysis of the number of customers of power supply organisations

Period	Electric power			Heat power			Growth percentage	
	Total	Individuals	Legal entities	Total	Individuals	Legal entities	E/P	H/P
at 31 Dec 2019	820,095	786,680	33,415	533,782	516,364	17,418	3 %	4 %
at 31 Dec 2020	841,190	806,926	34,264	552,744	534,584	18,160		

### Analysis of sales volumes of power supply organisations

Period	Electric power (million kWh)			Heat power (thousand Gcal)			Growth percentage	
	Total	Individuals	Legal entities	Total	Individuals	Legal entities	E/P	H/P
2019	4,895	2,139	2,756	11,016	6,799	4,217	-3 %	1 %
2020	4,740	2,221	2,519	11,172	6,930	4,243		

### Analysis of sales of power supply organisations

Period	Electric power (million kWh)			Heat power (thousand Gcal)			Growth percentage	
	Total	Individuals	Legal entities	Total	Individuals	Legal entities	E/P	H/P
2019	71,913	25,215	46,698	38,696	16,847	21,849	7 %	9 %
2020	76,789	27,621	49,168	41,995	17,702	24,293		

In the reporting year, regular work was performed to reduce accounts receivable: timely delivery of notifications, automated informing, analysis of accounts receivable by market segments and sending letters to heads of enterprises, akims (mayors) of cities and districts. Timely preparing and sending of requests for disconnecting consumers who have amounts due.

For maximum coverage of consumers, delivery of notifications about amounts due to subscribers via e-mail and messengers is organized and is successfully functioning. This made it possible to improve the delivery method, made consumers more informed about available amounts due for the consumed energy resources.

Frequency of power dialling to consumers with amounts due has been increased.

Modern technologies are used to improve the quality of customer service. For the convenience of consumers, a payment system has been established through second-tier banks, the Internet, ATMs, kiosks. Contracts have been concluded with second-tier banks for accepting payments from the population, as well as with branches of Kazpost JSC, AstanaPlat LLP, QIWI Kazakhstan, Kazakhstan Interbank Settlement Center of the National Bank of the Republic of Kazakhstan, etc. Payment is also implemented online and via QR code through Kaspi.kz application.

### Submitted requests for collection of accounts receivable

2020	Number			Amount (million tenge)		
	Total	Individuals	Legal entities	Total	Individuals	Legal entities
	9,561	5,150	4,411	3,838	458	3,380

### Submitted for enforcement

2020	Enforcement proceedings		of them have been executed in (paid by consumers)	
	Amount	Amount (million tege)	Amount	Amount (million tenge)
	6,956	3,007	2,828	1,845

## IMPROVING THE QUALITY AND EFFICIENCY OF CUSTOMER SERVICE

### NUR-SULTAN

> Since the beginning of 2020, the city's service centers have been providing services through the iQala Open City information system without the need for a face-to-face visit to service centers, which has proven its effectiveness taking into account disease control and prevention restrictions in the city.

> Along with iQala city service center, 26 key services rendered to the population of Nur-Sultan have been developed, regulated and transferred.

> Additional workplaces for operators and specialists of the contract management department were organized in trading rooms of the service centers No. 4 and No. 5 of Astanaenergosbyt LLP, as well as the installation and adjustment of payment kiosks for utility services for legal entities was carried out. Installation of self-service machines for accepting payments has reduced the load on the company's cash registers.

### PETROPAVLOVSK

> A consumer information board was organized in the service center No. 1 in Petropavlovsk, where one can fill out an application online, get the necessary documents on the E-gov portal without assistance. This project is aimed at rendering services in an electronic form, which corresponds to the plan of the state program Digital Kazakhstan.

### PAVLODAR

> The second supervisory audit of the quality management system for compliance with the requirements of ISO 9001:2015 standard was successfully passed by Pavlodarenergosbyt LLP.

## PLANS OF POWER SUPPLY ORGANISATIONS FOR 2021

- > Expansion of the payment system for consumers via the Internet, conclusion of contracts with second-tier banks for accepting payments from consumers and entities making payments through kiosks.
- > Expansion of the service for issuing receipts through a single payment document of Astana ERC LLP for electric power consumers in Kosshy, Akmol, Internatsionalny vilages, Akkol and Makinsk.
- > Carrying out works on expanding the methods of delivering payment documents and notifications about amounts due to consumers.
- > Expansion of the existing Personal Account service with access for consumers residing in Ekibastuz.
- > Development of a mobile application for the Personal Account service, implementation of an online consultant on the united information-computing center website of Petropavlovsk and the Petropavlovsk region.
- > Further expansion of unified payment centers.

## PROCUREMENT

Timely and complete satisfaction of the needs for goods, works, services, as well as the most efficient use of financial resources are the main priorities of CAEPCO Group of Companies in procurement.

During 2020, the Corporation carried out works aimed at improving all procurement processes and increasing efficiency.

In the reporting year, 3,386 contracts worth over 106 billion tenge were concluded. The share of contracts with residents is 97.7 %.

**Following the results of the reporting period, the following tasks were completed:**

- > The annual procurement plan was executed
- > Online reporting forms for deliveries and payments were introduced
- > The updated Policies and Procedures for procurement were approved.

## PROCUREMENT PLANS FOR 2021

- > Switching to an electronic form of procurement
- > Improving the commercial efficiency of budgetary funds spending
- > Improving the efficiency of inventory management





# CORPORATE RISK MANAGEMENT SYSTEM

RISK MANAGEMENT CONTRIBUTES TO ACHIEVING THE SET GOALS AND IMPROVING PERFORMANCE INDICATORS, INCLUDING IN TERMS OF HUMAN HEALTH AND SAFETY, ENVIRONMENTAL PROTECTION, COMPLIANCE WITH REGULATORY REQUIREMENTS AND OPERATING EFFICIENCY.

## CORPORATE RISK MANAGEMENT SYSTEM

CAEPCO Group of Companies has a functioning corporate risk management system (RMS). The Risk Management Policy approved and implemented by CAEPCO JSC establishes the Group's attitude to risks, general principles of development and functioning of the RMS, its goals and objectives, the main approaches to the organisation, implementation and control of risk management processes.

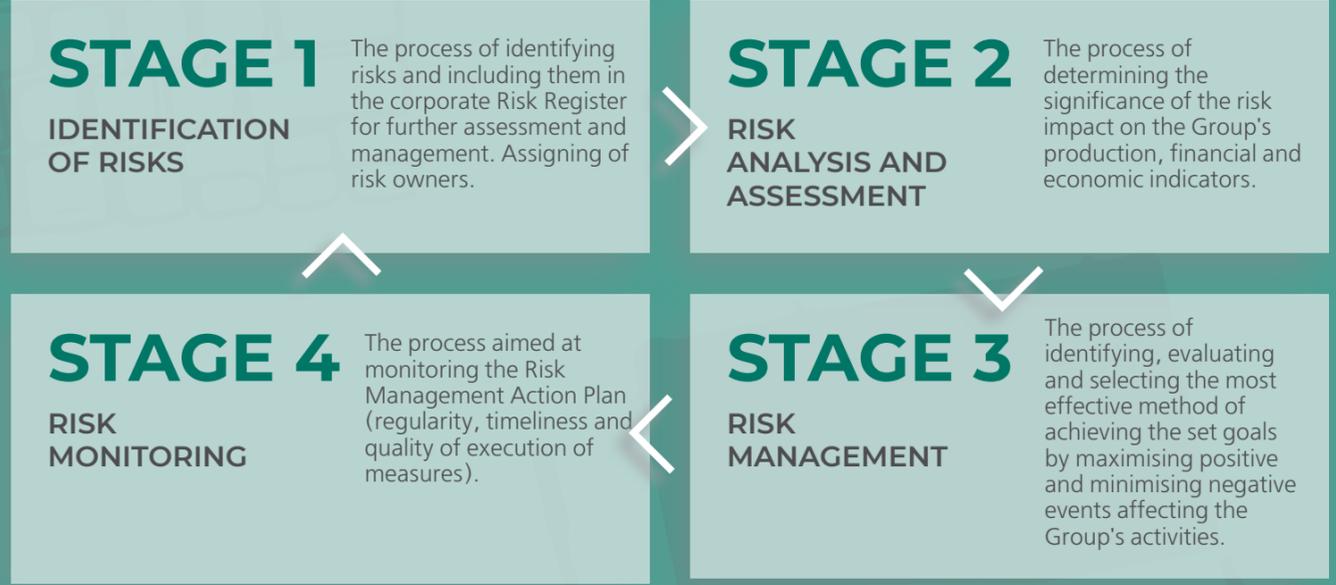
confidence in achieving the strategic and operational goals set for the Group.

To determine the level of risk impact on the Group's activities, the level of risk materiality is determined by expert assessment of the probability and consequences of risk, as well as by quantitative assessment using mathematical methods for calculating the probability and consequences of risk.

The main objectives of the Group in the area of risk management are represented by timely identification, assessment and reduction of the negative impact of risks that pose a threat to the effective implementation of economic activities and the reputation of the Group, health of employees, the environment, the property interests of shareholders and investors, as well as the implementation of favourable opportunities to ensure sustainable continuous operation and development, reasonable

CAEPCO Group of Companies strives to meet the standards and best risk management practices, increases the risk management culture and continuously improves risk management processes. In 2020, the Company also continued introducing and improving a risk-based approach to business management. Coordination and methodological support for the functioning and improvement of the RMS and ICS is carried out by the Risk Management Department.

### THE MAIN STAGES OF THE RISK MANAGEMENT PROCESS



**STAGE 1**  
IDENTIFICATION OF RISKS

The process of identifying risks and including them in the corporate Risk Register for further assessment and management. Assigning of risk owners.

**STAGE 2**  
RISK ANALYSIS AND ASSESSMENT

The process of determining the significance of the risk impact on the Group's production, financial and economic indicators.

**STAGE 3**  
RISK MANAGEMENT

The process of identifying, evaluating and selecting the most effective method of achieving the set goals by maximising positive and minimising negative events affecting the Group's activities.

**STAGE 4**  
RISK MONITORING

The process aimed at monitoring the Risk Management Action Plan (regularity, timeliness and quality of execution of measures).

- > Preliminary review and approval:
  - Internal audit reports on RMS efficiency
  - Acceptable risk level (risk appetite)
  - Risk Register
  - List of risk owners
  - Risk management reports
  - Internal RMS documents
  - Timely informing of the Board of Directors about risks and preparing proposals for improving RMS

- > Independent evaluation of the efficiency and monitoring of the current condition of RMS and ICS
- > Recommendations for improving RMS and ICS efficiency improvement
- > Informing the Executive Body and the Board of Directors about the status of RMS and ICS based on the results of the conducted audits

**AUDIT COMMITTEE**

**INTERNAL AUDIT DEPARTMENT**  
FUNCTIONAL SUBORDINATION TO THE AUDIT COMMITTEE

**BOARD OF DIRECTORS**

**MAIN RMS PARTICIPANTS**

**RISK MANAGEMENT DEPARTMENT**  
ACCOUNTABILITY TO THE AUDIT COMMITTEE

**MANAGEMENT BOARD**

**RISK OWNERS**

**PERFORMERS OF CONTROL PROCEDURES AND RISK MANAGEMENT MEASURES**

- > Defining the strategy for RMS development
- > Goal-setting, approval of principles and approaches to RMS organisation
- > Making decisions on critical risk management
- > Approval:
  - Acceptable risk level for shareholders (risk appetite);
  - Risk management performance indicators;
  - Risk Register.
- > Assigning of risk owners
- > Review and approval of key risk management reports
- > Approval of internal RMS documents

- > Ensuring functioning of RMS, including:
  - Adoption and approval of the necessary decisions on RMS functioning
  - Resolution of cross-functional risk management tasks (performed by several structural divisions)

- > Timely identification and assessment of risks
- > Making proposals on risk management methods
- > Timely development and organisation of implementation of risk management measures
- > Risk monitoring

- > Assistance to the risk owner in the development of risk management measures
- > Execution of control procedures for timely mitigation of risks
- > Timely and full implementation of risk management measures

- > Coordination of actions of all RMS participants
- > Coordination and methodological support of risk management processes
- > Critical risk analysis and aggregation of information about key risks
- > Organisation of the risk identification and assessment process (development/updating of the Corporate Risk Register and the Critical Risk Register)
- > Collection and analysis of information on implementation of RMS measures
- > Monitoring and analysis of Key Risk Indicators
- > Providing all stakeholders (Executive Body, Audit Committee, Board of Directors) with information about risks

Risk Management Department information/reporting within RMS

**OPERATING RISKS**

- > Technological risks
- > Procurement and supply
- > Information technologies and information security
- > Emergency situations
- > Human resources risks
- > Environmental risks
- > Interaction with counterparties
- > Commercial risks
- > Professional risks
- > Fuel risks
- > Reputational risks
- > Social risks
- > Property risks

**STRATEGIC RISKS**

- > Regulatory risks
- > Investment risks
- > Project risks
- > Reputational risks
- > Political risks
- > Market risks
- > Management risks
- > Credit risks
- > Technological risks

**LEGAL RISKS**

- > Law violation
- > Corruption risk and fraud
- > Property risks
- > Collection risks
- > Regulatory risks
- > Environmental risks
- > Human resources risks
- > Tax risks

**FINANCIAL RISKS**

- > Price risks
- > Management risks
- > Credit risks
- > Liquidity risks
- > Interest rate risks
- > Foreign currency risks

Allocation of responsibility between the participants of the RMS and the nature of their interaction is regulated by internal regulatory documents approved by the Board of Directors of the Corporation.

CAEPCO Group of Companies strives to meet the standards and best risk management practices, increases the risk management culture and continuously improves risk management processes.

In 2020, the Corporation also continued introducing and improving a risk-based approach to business management. Coordination and methodological support for the functioning and improvement of the RMS and ICS is carried out by the Risk Management Department, which solves the following tasks:

- > Coordination of risk management and internal control processes.
- > Development of methodological and internal regulatory documents in the area of ensuring internal control and risk management processes.
- > Organisation of training of employees of the Group of Companies in internal control and risk management.
- > Analysis of the corporate Risk Register and the Risk Map of CAEPCO Group of Companies and development of proposals for responding and reallocating resources in relation to the management of relevant risks.
- > Formation of consolidated risk management reports.
- > Implementation of operating control over the processes of internal control and risk management of the divisions of the Group of Companies in accordance with the established procedure.

During the year, the Risk Management Department carried out its work in accordance with the annual work plan approved by the Board of Directors:

- > Updating of the corporate Risk Register and Risk Map of CAEPCO JSC and its subsidiaries and analysis of critical risks.
- > Conducting training in risk management and internal control system for key employees of divisions and senior employees of the CAEPCO group.
- > Identification and assessment of risks, analysis and testing of the effectiveness of the ICS organisation in business processes:
  - Technical maintenance and repair management;
  - Distribution, accounting for electric power consumption and energy control;
  - Energy sales and accounts receivable management;
  - Technological connection of heat consumers to the heating networks;
  - Transport support of the enterprise;
- > Updating the list of business processes exposed to risk of fraud.
- > Updating and approving a new version of the Internal Control System Policy, as well as the Methodology for organising the internal control system in the Group of Companies.

In order to increase the level of maturity of risk management in the Group of Companies in 2020, training was conducted for key employees of departments and managers through interactive services. During training, attention was paid to explaining the basic principles and approaches to risk management in order to apply a risk-based approach to making managerial and operational decisions in the context of the impact of the COVID-19 pandemic on the continuous production and operational activities.

## MANAGING SIGNIFICANT RISKS IN 2020

In the reporting year, works on identification, assessment and control of risks continued. The black swan event of 2020, which brought the COVID-19 pandemic, significantly changed the rules of the game and the model of behaviour in business management. During the year, the current situation has become a serious test of organisational maturity for almost all companies and enterprises, including CAEPCO Group of Companies.

First of all, the accepted strategies and the business continuity system are challenged. The COVID-19 epidemic has become a test of the readiness of personnel and resources to ensure the declared level of operational activity in emergency situations.

In particular, CAEPCO Group of Companies was exposed to a high probability of the following risks due to the influence of COVID-19:

- > Staff retirement due to morbidity.
- > Disruptions or interruptions in the supply chains of goods and services.
- > Interruption of operational and production activities.
- > Decrease in financial solvency of consumers of energy supply services.
- > Risks associated with the IT infrastructure and information security violations.

Taking into account the above, during 2020, the main strategic and operational goals were to ensure the continuity of the activities of CAEPCO Group of Companies.

In order to achieve the goals of CAEPCO JSC and its subsidiaries, Business Continuity Plans were revised and supplemented, as well as their implementation was ensured, sanitary and epidemiological requirements of authorised bodies were fully observed, and measures were implemented to minimise the incidence and spread of coronavirus infection among employees of the Group of Companies, contractors and customers.

The management system of CAEPCO Group of Companies that was built and implemented on the methodological basis of a risk-oriented approach to company management, guidelines and standards ISO 31000, ISO 22301, COSO ERM 2004, ISO 9001, OHSAS 18001 and others, as well as based on its own practices and best international practices, has shown its effectiveness in high uncertainty due to the influence of concomitant negative risk factors of the **COVID-19** pandemic.



**The name of the key risk and the dynamics of the significance of the risk for the year**

**Risk description and key risk factors**

**Risk management approach**

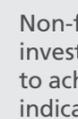
Area: strategic risks

 Introduction of a balancing electricity market in real time

Since 1 January 2019, the electric power market was put into operation in the Republic of Kazakhstan, while the balancing electric energy market is functioning in a simulation mode. The introduction of the balancing electric energy has been postponed to 1 January 2022. The risk has migrated to the zone of critical risks, and remains significant, relevant and requiring close attention and participation.

**KEY RISK FACTORS:**

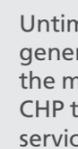
1. Imperfection of the legislative framework in the area of the balancing electric energy functioning;
2. The inability of coal power plants (CHP) to carry the load on a "curved" schedule, among other reasons due to the high level of physical wear of the main and auxiliary equipment of generating enterprises;
3. The absence of a full-scale automated control system that records the actual consumption of electric power, as a result – the lack of complete statistics on the profiles of consumer loads;
4. Imperfection of the algorithm for calculating income and costs when buying/selling imbalances on balancing electric energy;
5. The absence of the possibility of influence of guaranteeing suppliers on planning of consumption volumes during the day by consumers, as a result, losses of energy sales organisations.

 Non-fulfilment of the investment program/ failure to achieve the planned indicators on projects

The COVID-19 pandemic has had a negative impact on the possibility of timely implementation of Investment programs of CAEPCO JSC subsidiaries.

**KEY RISK FACTORS (due to the impact of the COVID-19 pandemic):**

1. Non-fulfilment of contractual obligations by project contractors and material suppliers;
2. Lack of financing due to a decrease in the volume of energy production and transmission.

 Untimely replacement of the generating capacities and the main structures of the CHP that are retiring by the service life

The significance of the risk is due to the high level of physical and moral wear and tear of the main and auxiliary equipment of the Group's generating enterprises, which may result in a reduction in the volume of electric power generation, and the inability to provide consumers with sufficient heat power.

**KEY RISK FACTORS:**

1. Actual wear and depletion of the resource of the main generating equipment and structures;
2. Unsatisfactory growth rates of reconstruction, modernisation and new construction;
3. Inefficient model of investment financing of energy enterprises;
4. Limited own financial resources;
5. The inability to attract significant credit resources within the framework of the current structure of the industry and the model of regulating tariffs for heat and electric power;
6. Adoption of unfavourable tariff decisions regarding the production of electric and heat power by the authorised body.

1. Cooperation with the Ministry of Energy of the Republic of Kazakhstan and other authorised bodies, participation in joint working groups to discuss and submit proposals and comments to legislative documents regulating the rules of operation of balancing electric energy.
2. Defending the interests of excluding guaranteeing suppliers organisations from the balancing electric energy.
3. Working with large consumers to provide daily schedules of electric energy consumption.
4. Monitoring of the actual consumption of electric energy by consumers through the ASCAE system.
5. Further development of the ASCAE system for electric energy consumers.
6. Consideration of the issue of implementing information and analytical software for effective operation in the electric power market and the balancing electric energy market.

Measures taken to manage the risk and prevent the introduction of a compensating tariff by the authorised body:

1. Coordination of the postponement of implementation of Investment programs measures with the authorised body.
2. Conducting claims activities with project contractors and suppliers of materials.
3. Development (adjustment) of work schedules by the contractor.

1. Inclusion of reconstruction/new construction measures in investment programs for timely replacement of disposed equipment.
2. Determining job priority on reconstruction/new construction, taking into account the significance of equipment for reliable supply of consumers with heat and electric power in sufficient volume.
3. Attraction of additional sources of financing for implementation of reconstruction/new construction works to replace the disposed equipment.
4. Conclusion of investment agreements (as part of the electric power market) with the authorised body for the modernisation and reconstruction of equipment.

**ANALYSIS OF KEY RISKS THAT HAVE A SIGNIFICANT IMPACT ON THE ACTIVITIES AND RESPONSE MEASURES**

Based on the results of updating the Corporate Risk Register and the Risk Map, carried out in accordance with the approved Risk Management Policy, 79 risks were identified in 2020 that affect the Group's activities as a whole.

The priority of risks is determined on the basis of their impact on the key financial, environmental and social aspects of the activities of CAEPCO Group of Companies, taking into account the strategic goals, development priorities and mission of the Corporation.

### The name of the key risk and the dynamics of the significance of the risk for the year

### Risk description and key risk factors

### Risk management approach

Area: operating risks

#### Lack of qualified production and technical personnel

#### Loss of qualified / key personnel

The activities of the subsidiaries of CAEPCO JSC largely depend on key qualified employees. The lack of a sufficient number of personnel, in particular in the production and technical area, results in risks associated with a shortage of personnel. Competition in Kazakhstan and the neighbouring CIS countries in the labour market is increasing due to the limited number and simultaneous growth in demand for qualified specialists, as well as the uncompetitive level of wages of employees of the energy industry of Kazakhstan. In 2020, according to expert estimates, the risk of a shortage of production and technical personnel retained its position in the critical risk zone on the Risk Map.

#### KEY RISK FACTORS:

1. The uncompetitive level of the average salary of employees of the energy industry results in low attractiveness of this sector;
2. High internal and external migration of the population;
3. Low level of training of qualified personnel for the energy industry by educational institutions.

The analysis of HR statistics indicators by the end of 2020 demonstrates a slight improvement in staff turnover indicators in the Group's subsidiaries. At that, this insignificant improvement in the situation is due to the impact of the COVID-19 pandemic (suspension of the activities of various enterprises during the quarantine period, a decrease in migration due to the closure of internal and external borders, a drop in the level of income of the population, etc.). The Group predicts the probability of an increase in staff turnover in 2021 as the epidemiological situation improves.

The risk level in 2020 is due to the projected filling of the existing ash dump of Pavlodar CHP-3 in 2021 and the delay in the implementation of the event for the construction of phase 3 of the ash dump due to the lack of a source of financing, as well as the long choice of a land plot for the construction of a new ash dump of Petropavlovsk CHP-2.

#### KEY RISK FACTORS:

1. Untimely commissioning of ash dumps under construction (delays in design and construction);
2. Lack of sufficient financing in the tariff estimates and investment programs of energy-producing organisations for projects for the construction and development (expansion) of ash dumps;
3. Imperfection of the legislation of the Republic of Kazakhstan, in terms of impossibility of including capital-intensive costs for construction and development projects (building up) ash dumps in the individual tariff under contracts for the purchase of services for maintaining the availability of electric power (capacity market).

The key risk factor of 2020, which has a significant impact on the continuity of the Group's production activities, is the coronavirus pandemic (COVID-19).

#### OTHER POTENTIAL KEY RISK FACTORS:

1. Natural disasters (floods, lightning strikes, fires);
2. Sabotage and terrorist threats (attacks);
3. Untimely purchase/non-delivery of material resources;
4. Untimely replenishment of fuel reserves/ non-delivery of fuel.
5. Lack of liquidity /lack of financial resources;
6. Fire /ignition;
7. Technological violations in the operation of equipment (accidents, failures).
8. Military actions, demonstrations, unauthorised strikes of workers.

#### Full (partial) suspension of the company's activities/ interruption of production

As part of the management of these risks, a set of measures is carried out:

1. Optimisation of management and production processes, staffing levels in order to identify the reserves of the wage fund with the subsequent distribution and allocation of the released funds to increase wages, primarily to crucial and key production personnel
2. Increase of the wage fund in the tariff estimates of subsidiaries of CAEPCO JSC when advocating for tariffs for the next period
3. Improving the social and living conditions of the staff and the social package for employees, considering the possibility of providing housing to employees who are in urgent need of improving housing conditions, young professionals and crucial personnel
4. Continuing of implementing PROFENERGY project in the following areas:
  - External succession pipeline through attracting students, graduates of higher and secondary specialised educational institutions
  - Improving the educational level of employees
5. Development of the mentoring practice
6. Material and non-material incentives for qualified employees
7. Creation of a corporate training center for high-quality training, retraining, education, advanced training and development of personnel, accumulation of knowledge in the Group.

1. Increasing the height of existing ash dump dams to the maximum possible (permissible) levels.
2. Attraction of borrowed funds for the completion of the construction of the ash dump of Pavlodar CHP-3.
3. Active interaction with authorised state bodies and other participants of the electricity market in order to change the norms of the current legislation for the possibility of accepting applications from energy-producing organisations for construction, increasing ash dumps with further establishment of an individual tariff within the framework of contracts for the purchase of services for maintaining the availability of electric power (power market).

1. Orders on anti-epidemic measures have been issued and regularly updated in each subsidiary of the Group, responsible persons have been appointed.
2. Automatic thermometric control systems were installed at the checkpoints.
3. Timely purchase of antiseptics, disinfectants, facemasks and gloves was carried out.
4. Daily preventive measures are carried out in all structural units (disinfection, observance of face mask requirements, thermometry, instructing personnel, posting memos).
5. The protocol in case of confirmation of COVID-19 is approved.
6. Social distance zones (markings on stairwell landings and inside the premises) are specified in the service centers of energy sales organisation of the Group, body temperature of visitors is measured, replenishment and control over availability of disinfection products are carried out, as well as informing of the population about the possibility of paying for services via the Internet, and other resources.
7. Employees are on a remote working regime.
8. Vehicles are treated with disinfectants.
9. Meetings are held as online conferences.
10. Daily monitoring of patients with COVID-19 and signs of acute respiratory infection is established.

**The name of the key risk and the dynamics of the significance of the risk for the year**

**Risk description and key risk factors**

**Risk management approach**

Area: operating risks

The indicator of excess heat losses of the Group's energy transmission enterprises is at a high level, and is largely due to the high deterioration of the heat main and distribution networks in the regions of the Group's operations (Ekibastuz, Pavlodar, Petropavlovsk). Based on the results of 2020, an increase in the indicator of excess losses was recorded, both in absolute and relative terms.

**KEY RISK FACTORS:**

1. High level of wear of heating networks (unsatisfactory condition), including the absence and/or damage to pipe covering;
2. Leaks of heat conductor in heating networks (including those caused by technological violations and unsatisfactory condition of heating networks in general);
3. Unauthorised connections of consumers to heating networks;
4. Irrational mode of operation of heating networks to ensure hydraulic and temperature conditions at heating unit of end users;
5. Change in the volume of productive supply (also due to climatic conditions – relatively high outdoor air temperature during the heating period);
6. Unpaid losses of heat power on abandoned / consumer heating networks, etc.;
7. Non-compliance of the norm of heat consumption of the housing stock with the actual heat consumption;
8. The absence of heat distribution stations for consumers.

In 2020, a decrease in injuries was recorded in comparison with the indicators of 2019. Meanwhile, 1 (one) fatal accident was recorded. The risk is significant and relevant for the Group as a whole.

**KEY RISK FACTORS:**

1. Violation of technological requirements stipulated by the rules and regulations on labour protection and safety by employees while working;
2. Unsatisfactory knowledge of instructions, requirements for safety and labour protection of individual employees;
3. Unsatisfactory organisation of work performance;
4. Equipment failures, industrial accidents.

1. Restoration of the destroyed / missing thermal insulation of pipelines;
2. Performing annual capital and current repairs of heating networks;
3. Reconstruction of heating networks with the use of pre-insulated pipelines (foamed polyurethane technology);
4. Installation of design throttling devices on elevator heating units of consumers;
5. Identification and suppression of the facts of unauthorised consumption of heat power
6. Interaction with authorised state bodies in order to increase the rate of heat consumption of the housing stock to the level of actual heat consumption.

Within the framework of risk minimisation, a set of measures aimed at preventing industrial injuries is carried out on an ongoing basis, including:

- Strict control over the technical condition of equipment, buildings, structures and vehicles
- Minimisation of harmful and dangerous factors of production
- Risk assessment
- Constant monitoring of safety in work performance
- Providing employees with workwear and personal protective equipment
- Training and testing of employees' knowledge on occupational safety and health and industrial safety
- Investigations and in-depth analysis of accidents that have occurred in order to avoid their recurrence in the future
- Conducting behavioural security audits to find out the reasons for violations of security requirements
- Implementation of procedures for lock out / tag out (LOTO) of equipment to ensure safety during equipment repair and prevent its unintentional or accidental start-up
- Providing personnel with safety tethers with five fixing points for safe performance of work at height
- Application of video recorders mounted on helmets or tablets in electric grid companies for registering personnel work permits and ensuring safety when switching equipment
- Step-by-step transition to the use of suits for electrical personnel made of thermal protective fabric to protect against electric arc

**The name of the key risk and the dynamics of the significance of the risk for the year**

**Risk description and key risk factors**

**Risk management approach**

Area: financial risks

 Increase in overdue accounts receivable in the retail market of electric and heat power

The risk level in 2020 is largely due to the impact of the COVID-19 pandemic on the solvency of consumers of energy supply services. In May-December 2020, as part of the execution of the order of the President of the Republic of Kazakhstan to support the population during the COVID-19 pandemic, local executive bodies sent subsidies to energy supply organisations to repay accounts receivable of household consumers. This support from the state has had a certain positive impact on accounts receivable. At the year-end, the share of 3 month past-due debts of consumers remained at the level of 2019 in the total amount of debt for consumed energy. In general, the indicator of amounts due continues to remain at a high level. This risk is significant for the Group of Companies as a whole.

**KEY RISK FACTORS:**

1. Non-compliance with the terms of contracts regarding the implementation of timely and full payment for energy supply services by consumers of heat and electric power due to:
  - Low payment discipline
  - Deterioration of the main macroeconomic indicators (including due to the impact of the COVID-19 pandemic)
2. Imperfection of the legislative framework regarding the possibility of carrying out transactions for the purchase and sale of residential real estate without paying off debts for energy supply services;
3. Untimely renegotiation of energy supply contracts when changing the homeowner
4. A ban on the accrual of penalties and the application of penalties (disconnection, debt collection) for late repayment of debts during the period of the state of emergency under COVID-19.

As part of the management of this risk, the Group's energy marketing organisations carry out a set of measures on an ongoing basis:

- Consumers are notified about the amount due
- The power supply is stopped in case of late payment for energy supply services
- Debt repayment schedules are drawn up in instalments
- Claim work is being carried out to recover debts and penalties from non-paying consumers for late payment of services rendered
- The property of debtors is seized
- Defaulters are visited with the presence of enforcement agents for estate inventory and seizure of property
- Information about amounts due by employees for utilities is sent to the address of enterprises
- Debtors' departure from the Republic of Kazakhstan is restricted
- Collection is carried out through the debtor's source of financing (deduction from wages and pension contributions)
- The method of collection is changed, on the basis of which the debtor's property (apartment or vehicle) is evaluated for sale at auction
- For debts with a low probability of recovery, reserves for doubtful debts are created in the accounting of the Group's energy sales organisations

Area: legal risks

 Tightening of environmental regulations

On 2 January 2021, the Environmental Code of the Republic of Kazakhstan was approved in a new version, the norms of which imply a significant tightening of environmental requirements. The regulatory legal act comes into effect on 1 July 2021. The Code provides for transition to comprehensive environmental permits for objects of the first hazard category with the condition of introducing the best available technologies. Compliance with environmental standards at the Group's generating facilities is a risk that may entail serious finance costs for the Group. The competent authorities have made, are making and in the future will make certain requirements for production facilities that have a significant harmful impact on the environment, aimed at improving the environmental friendliness of production. However, fulfilment of obligations for the large-scale implementation of expensive projects for the introduction of best available technologies without state support will require significant costs and, as a result, can have a significant negative impact on the business, financial position and results of the Company's activities.

**KEY RISK FACTORS:**

1. The adoption of a new Environmental Code in the Republic of Kazakhstan, which contains stricter standards, including those establishing:
  - Tightening of the maximum environmental standards for emissions into the environment
  - The need for mandatory introduction of expensive (and not always technically feasible and applicable) best available technologies at the Group's energy-producing enterprises that have a significant harmful impact on the environment, aimed at reducing the negative impact of production on the environment
  - Step-by-step increase of reducing coefficients when calculating the fee for emissions into the environment (in case of non-receipt of a comprehensive economic permit);
2. Introduction of appropriate amendments to other NPA of the Republic of Kazakhstan (Administrative Code, Tax Code), providing for an increase in administrative penalties for violation of new environmental standards.

1. Conducting a comprehensive technological audit at the generating enterprises of the Group (Petropavlovsk CHP-2, Pavlodar CHP-2 and Ekibastuz CHP), according to the results of which approximate lists of best available technologies for each CHP will be identified.
2. Development of long-term Programs to improve the environmental efficiency of the Group's energy-producing enterprises, aimed at reducing their negative impact on the environment.

## INTERNAL CONTROL STANDARDS

CAEPCO Group of Companies has implemented an internal control system (ICS), which is a set of policies, processes, procedures, standards of conduct and actions combined into a single continuous process. The ICS is part of the management process of the Group of Companies carried out by the Board of Directors, the Management Board, all executive bodies of subsidiaries, control bodies and employees.

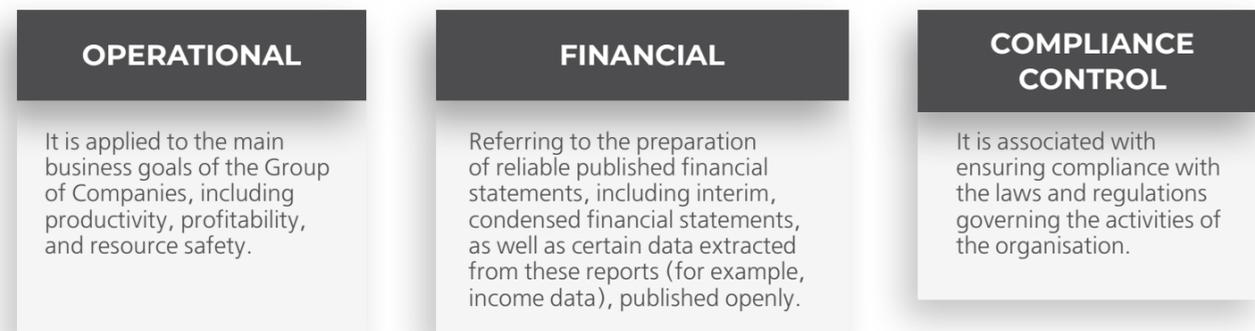
The management at all levels of management creates an effective control environment by:

- > Forming an understanding of the need for and implementation of internal control procedures among the employees of the Group of Companies.
- > Maintaining a high level of corporate culture and demonstrating the principles of integrity and competence.

- > Improving the professionalism and competence of employees of the Group of Companies.
- > Ensuring effective interaction of structural divisions and employees.
- > Ensuring effective distribution of powers and responsibilities.
- > Formation of fraud prevention mechanisms.
- > Organisation of the activities of internal control bodies.

The ICS is aimed at ensuring the achievement of the goals of the Group of Companies and minimising risks in its operational and investment activities, the reliability of all types of reporting, compliance with the requirements of legislative acts and internal corporate requirements. The Company strives to ensure that all its activities are adequately controlled in order to reduce risks. Control procedures are implemented at all levels of management.

### The Group of Companies has three levels of internal control system:



### THE PLAN FOR THE DEVELOPMENT OF RMS AND ICS FOR 2021

- > Updating of the Risk Register and Risk Map of CAEPCO JSC and its subsidiaries and analysis of critical risks
- > Conducting training in risk management and internal control system for key employees of divisions and senior employees of the CAEPCO group
- > Identification and assessment of risks, analysis and testing of the effectiveness of the ICS organisation in business processes:
  - Transport support of the enterprise
  - Procurement management for goods, works and services
  - Inventory management and warehousing
  - Technical maintenance and repair management.
- > Updating the list of business processes exposed to risk of fraud
- > Organisation of work to improve the approaches and principles of process management of CAEPCO Group of Companies within the framework of the Quality Management Standard (ISO 9001:2015).

## ANTI-CORRUPTION MANAGEMENT

CAEPCO Group of Companies has an Anti-Corruption and Fraud Policy approved by the Board of Directors, which is the fundamental internal regulatory document of the Holding and its subsidiaries in this area. The Policy, among other things, determines modelling of a single ethical standard by the top management of the Group for rejection of corruption in all its forms and manifestations.

The main principles of the Policy are represented by maintaining a high level of corporate governance, intolerance to corruption and fraud, proper risk assessment, minimising conflicts of interest based on an effective distribution of powers and responsibilities by building a transparent organisational structure.

Important elements of strengthening this area are represented by creation and implementation of an effective strategy that ensures anti-corruption and fraud, as well as prompt response to emerging events of this nature. The Group develops an appropriate corporate culture and a negative attitude to all manifestations of corruption and fraud.

The Policy highlights the methods and procedures used to counter fraud and corruption, in particular, to identify and assess such facts, conduct official investigations, and bring to justice for all identified cases of illegal actions. CAEPCO Group of Companies has developed and operating feedback channels (hotline, telephone and mail services) for legal entities and individuals (including employees of the Group) to contact and report on the upcoming or known facts of corruption and fraudulent actions.

Work aimed at increasing the transparency of activities is performed on an ongoing basis. In order to inform the business partners of the Group of Companies about the existing requirements and principles of the Anti-Corruption and Fraud Policy, the approved standard templates of contracts concluded by the Corporation and its subsidiaries for the purchase of goods, works and services include certain sections that also reflect communication channels in the event of corruption.

In compliance with the requirements of the Anti-Corruption and Fraud Policy, according to the Work Plan for improving the Risk Management System for 2020, the Risk Management Department conducted an anonymous survey of employees through interactive services in order to assess the existing business processes of the Group of Companies for their exposure to the risk of fraud and corruption.

More than 50 % of all structural units of the Group's subsidiaries and enterprises took an active part in the survey. Following the results of the survey, the list of business processes, during implementation of which there is a high probability of committing corrupt and fraudulent actions by employees of the Group, as well as the list of structural units most exposed to the risk of fraud and corruption, was updated.

The business processes identified by respondents as the most exposed to this risk are identified as priorities for improving the Internal Control System. It should be noted that the work carried out within the framework of improving internal control allows to respond to probable and significant risks of corruption and fraud in a timely manner, namely, to eliminate the identified risks by introducing additional control and prevention measures.

In accordance with internal procedures, all newly hired employees are required to familiarise themselves with the requirements of the Anti-Corruption and Fraud Policy and sign a written confirmation of compliance with these requirements.

No facts of corruption and fraud were identified during 2020.



# SUSTAINABLE DEVELOPMENT

THE STRATEGIC GOAL OF CAEPCO JSC IS TO BUILD AN ADVANCED PRIVATE POWER COMPANY IN STRICT COMPLIANCE WITH THE GENERALLY ACCEPTED PRINCIPLES OF SUSTAINABLE DEVELOPMENT.

The principles of sustainable development are fundamental in the activities of the enterprises of CAEPCO Group of Companies. Thanks to a well-established system of all the stakeholders, the Corporation is aware of their opinions, interests and wishes. Based on the high social significance of its activities, in order to minimise risks, CAEPCO JSC implements a set of measures aimed at expanding and improving the effectiveness of interaction with all the stakeholders.

## STAKEHOLDER ENGAGEMENT

The Corporation has identified a circle of people who are interested in its decisions and activities in order to understand its influence and ways to take measures in response to them. The basis for identifying and selecting stakeholders is an assessment of the impact on the current activities and strategic development, as well as the established practice of the Corporation's stakeholder engagement. Since 2013, the Corporation has been publishing an annual Report on stakeholder engagement, which is publicly available on the corporate website. The Report describes in detail quantitative and qualitative indicators, activities, as well as sources of information sharing. The main topics of the document: "Occupational health and safety", "Social assistance and support", "Procedure for resolving labour disputes", "Implementation of the collective agreement", "Organisation of leisure and recreation", "Impact of the company's activities", "Interaction with state authorities. Participation of the enterprise in the life of the city and the region", "Preparation for the heating season", "Fulfillment of investment obligations", "Ensuring transparency in tenders", "Practical training and employment of university graduates", "Environmental problems, social activities" and others.

For the full version of the Report please visit the website



Stakeholder in relation to the Corporation	Stakeholders' interest in the Corporation	The form of the stakeholder's dialogue with the Corporation	Works completed in 2020
Shareholders	<ul style="list-style-type: none"> <li>&gt; Implementation of strategic objectives</li> <li>&gt; Economic profit/ performance</li> <li>&gt; Corporate governance rating</li> <li>&gt; Funds for development and receiving dividends</li> <li>&gt; Net asset value</li> <li>&gt; Implementation of social programs</li> <li>&gt; Transparency of business processes</li> </ul>	<ul style="list-style-type: none"> <li>&gt; Resolutions of the General Meeting of Shareholders</li> <li>&gt; Decisions of the Board of Directors</li> <li>&gt; Corporate website</li> <li>&gt; Annual report</li> <li>&gt; Discussions, business meetings</li> </ul>	<p>16 meetings of the Board of Directors were held</p> <ul style="list-style-type: none"> <li>&gt; Work was performed to improve all forms of corporate governance</li> </ul>

Stakeholder in relation to the Corporation	Stakeholders' interest in the Corporation	The form of the stakeholder's dialogue with the Corporation	Works completed in 2020
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**Employees**

- > Human resources and social policy
- > Terms of the collective agreement
- > Compliance with the labour legislation of the Republic of Kazakhstan
- > Motivation for retaining and attracting highly qualified employees

- > Management decisions
- > Orders and instructions
- > production, operational and other meetings
- > Reports on current activities
- > Oral negotiations
- > Industrial safety and labour protection briefings
- > Internal corporate communication channels
- > Surveys and questionnaires
- > Official accounts in social networks

The provisions of Collective Agreements were observed in PAVLODARENERGO, SEVKAZENERGO and AEDC.

Employees were provided with social assistance and support in the Group of Companies.

A competition "The best in the profession" was held in the subsidiaries.

Implementation of activities within the framework of the corporate project PROFENERGY continued.

The most distinguished employees of the subsidiaries were awarded industry and corporate awards and awarded professional titles.

**State authorities and regulatory bodies**

- > Getting timely and reliable information
- > Assistance to the development of the electric power industry in the Republic of Kazakhstan
- > Ensuring reliable and uninterrupted supply
- > Increase in tax revenues to local budgets
- > Timely and high-quality implementation of social projects
- > Increase / saving of jobs
- > Compliance with the legislation of the Republic of Kazakhstan in the area of industrial safety.

- > Reporting on the results of the financial and economic activities of the Corporation
- > Providing information at the request of state bodies in various areas of the Corporation's activities
- > Development of proposals on amendments to laws and regulations of the Republic of Kazakhstan
- > Memoranda of cooperation between local executive bodies and the Corporation in order to support and develop the social sphere of the regions
- > Discussions, business meetings.

In 2020, daily monitoring of blogs of akims of the regions of operation was carried out. Answers have been provided to all citizens' appeals concerning the activities of the Holding's enterprises.

Information about planned and emergency shutdowns of electric and heat power was posted on corporate websites on a permanent basis, the terms of repair work, testing of heating networks were indicated.

The heads of the subsidiaries (or appointed responsible persons) participated in the meetings of the headquarters for the preparation of the housing stock for the heating season together with state and regulatory authorities.

**Local communities (Consumers)**

- > Market share/ market presence
- > Ensuring reliable and uninterrupted electricity and heat supply
- > Marketing communications
- > Emissions into the environment

- > Informing and feedback system with consumers
- > Public hearings, meetings
- > Annual report
- > Signing of memoranda and agreements on partnership and cooperation
- > Official accounts in social networks.

In 2020, Pavlodarenergo group of enterprises accepted and processed 501,881 requests from consumers. In 2020, SEVKAZENERGO enterprises received and processed 377,043 requests from consumers. AEDC received 93 requests from consumers. Astanaenergosbyt accepted and processed 671,409 requests from consumers. Calls and electronic requests included questions, requests, suggestions, transmission of meter readings to the contact center, and more.

Stakeholder in relation to the Corporation	Stakeholders' interest in the Corporation	The form of the stakeholder's dialogue with the Corporation	Works completed in 2020
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**Educational institutions**

- > Promoting the development of branch science and education
- > Training of promising personnel and ensuring the continuity of generations
- > Providing charitable and sponsorship assistance.

- > Cooperation with universities in the regions of operation
- > Participation in the work of examination commissions, qualification commissions, in the process of accreditation of educational programs
- > Events: competition of scientific ideas.

In 2020, a competition of scientific papers for a nominal corporate scholarship in Pavlodarenergo and Sevkazenergo was organised and held.

In 2020, a group of Pavlodarenergo enterprises provided an opportunity to pass paid and unpaid industrial practice for 177 students.

36 students have completed practical training at the Sevkazenergo enterprises, including 2 with remuneration; 5 students are employed for the summer. 2 guided tours to the company's facilities were organised.

In 2020, 29 students completed an internship at AEDC, including 7 paid positions; the company paid for meals for 5 students during paid internship; 4 people were employed after graduation.

**Non-governmental organisations (NGOs)**

- > Getting information about the Corporation's development prospects
- > Reducing the negative impact on the environment
- > Providing charitable and sponsorship assistance
- > Public hearings.

- > Conducting public hearings
- > Informing about current activities
- > Letters (appeals) addressed to the Corporation.

In 2020, the Group of Companies held 29 public hearings on the environment, on rendering of services, approval of tariff estimates, reports on activities:

In Pavlodarenergo – 13 public hearings  
 In Sevkazenergo – 9 public hearings  
 In AEDC – 3 public hearings  
 In Astanaenergosbyt – 4 public hearings

**Mass media**

- > Transparency of business processes;
- > Ensuring prompt access to information about the Corporation's activities on the following topics:
  - Production safety
  - Modernisation of production
  - Financial indicators
  - Implementation of joint projects
  - Prospects for the development of the Corporation, the industry

- > Press tours, media briefings, press conferences
- > Press releases
- > Responses to information requests
- > Media monitoring

In 2020, 101,393 mentions of the activities of CAEPCO Group of Companies in the media and social networks were published and aired.

The Holding's PR service issued 50 corporate publications.

Stakeholder in relation to the Corporation	Stakeholders' interest in the Corporation	The form of the stakeholder's dialogue with the Corporation	Works completed in 2020
<b>Trade unions</b>	<ul style="list-style-type: none"> <li>&gt; Compliance by the employer with the established obligations in relation to employees</li> <li>&gt; Protection of the rights and interests of employees</li> <li>&gt; Creating decent working conditions</li> <li>&gt; Providing opportunities for professional and personal growth</li> <li>&gt; Social guarantees.</li> </ul>	<ul style="list-style-type: none"> <li>&gt; Discussion and approval of the collective agreement</li> <li>&gt; Meetings of trade union members with the management.</li> </ul>	Work was carried out to create conditions for the implementation of the activities of the trade union – cooperation with the trade union organisation on the principles of mutual interests, equality in accordance with the legislative acts of the Republic of Kazakhstan and the terms of the Collective Agreement.
<b>Suppliers, contractors</b>	<ul style="list-style-type: none"> <li>&gt; Creating a transparent competitive environment</li> <li>&gt; Using the market pricing mechanism</li> <li>&gt; Stability and reliability of mutually beneficial cooperation</li> <li>&gt; Guarantee of fulfilment of obligations under contracts.</li> </ul>	<ul style="list-style-type: none"> <li>&gt; Feedback system, holding of meetings, negotiations</li> <li>&gt; Signing of agreements and memoranda, agreements on strategic cooperation</li> <li>&gt; Tenders</li> <li>&gt; Meetings with contractors and clients</li> </ul>	In 2020, announcements about tenders and their results will be posted on the corporate websites of the Group of Companies and in the media.

## PAVLODARENERGO JSC

**In 2020, 13 public hearings were held, almost all events were held online in view of the pandemic:**

1. Annual report on the activities of PAVLODARENERGO JSC for 2019 on rendering of services for the production of heat power to consumers in Pavlodar (2 November 2020).
2. Report on the activities of PAVLODARENERGO JSC for the 1st half of 2020 on rendering of services for the production of heat power to consumers (CHP-3, CHP-2) in Pavlodar (2 November 2020).
3. Report on the activities of Pavlodar Heat Networks LLP on the transmission and distribution of heat power to consumers and other stakeholders for 2019 (2 November 2020).
4. Report on the activities of Pavlodar Heat Networks LLP on the transmission and distribution of heat power to consumers and other stakeholders for the 1st half of 2020 (2 November 2020).
5. Annual report on the activities of Pavlodarenergosbyt LLP for heat energy supply services in Ekibastuz for 2019 (23 November 2020).
6. Report on the activities of Pavlodarenergosbyt LLP for heat supply services in Ekibastuz for the 1st half of 2020 (23 November 2020).

7. Annual report on the activities of Pavlodarenergosbyt LLP for heat energy supply services in Pavlodar for 2019 (2 November 2020).
8. Report on the activities of Pavlodarenergosbyt LLP for heat supply services in Pavlodar for the 1st half of 2020 (2 November 2020).
9. Public hearings in Ekibastuzugol LLP on discussion of the draft tariff estimates for production, transmission and distribution of heat power in Ekibastuz for the period from 1 May 2020 to 30 April 2021 (11 March 2020).
10. Annual report on the activities of Ekibastuzugol LLP for 2019 in rendering services for the production, transmission and distribution of heat power to consumers in Ekibastuz (5 November 2020).
11. Annual report on the activities of Ekibastuzteploenergo LLP for the 1st half of 2020 for rendering of services for the production, transmission and distribution of heat power to consumers in Ekibastuz (5 November 2020).
12. Report on the results of the first half of 2020 on implementation of the approved tariff estimate, implementation of the approved investment program of Pavlodar Electric Distribution Company JSC for rendering of services for the transmission and distribution of electric power (2 November 2020).
13. The annual report on the activities of Pavlodar Electric Distribution Company JSC for rendering

of services for the transmission and distribution of electric power through networks and implementation of the investment program for 2019 (2 November 2020).

Information about the public hearings was posted in the media of Pavlodar and Ekibastuz and on the official accounts of the company.

## SEVKAZENERGO JSC

**In 2020, 9 public hearings were held, almost all events were held online in view of the pandemic:**

1. Report on the activities of Petropavlovsk CHP-2 for 2019 (29 May 2020).
2. Report on the activities of North-Kazakhstan Electric Distribution Company JSC for 2019 (29 May 2020).
3. Report on the activities of Petropavlovsk Heat Networks LLP for 2019 (1 June 2020).
4. Report on the activities of Sevkazenergosbyt LLP for 2019 (1 June 2020).
5. Report on the fulfilment of investment obligations of Petropavlovsk CHP-2 for 2019 (29 July 2020).
6. Report on the fulfilment of investment obligations of North-Kazakhstan Electric Distribution Company JSC for 2019 (29 July 2020).
7. Report on the fulfilment of investment obligations of Petropavlovsk Heat Networks LLP for 2019 (30 July 2020).
8. Report on the fulfilment of investment obligations of Sevkazenergosbyt LLP for 2020.
9. Public hearings on the draft for the consideration of applications for approval of tariff and tariff estimates for services of Petropavlovsk CHP-2, Petropavlovsk Heat Networks LLP, Sevkazenergosbyt LLP, North-Kazakhstan Electric Distribution Company JSC. (23.10.2020).

Information about the public hearings was posted in the media of Petropavlovsk and on the official accounts of the company.

## AEDC JSC

**In 2020, 3 public hearings were held, almost all events were held online in view of the pandemic:**

1. Public hearing for approval of tariff for the transmission of electric power subject to the investment program for the period from 2021 to 2025 (13 November 2020)

2. The report on implementation of the approved tariff estimates for 2019 and the annual report on the activities of AEDC JSC for 2019 (13 June 2020)

3. Report for the 1st half of 2020 (31 July 2020).

Information about the public hearings was posted in the media of Akmola region and on the official accounts of the company.

## ASTANAENERGOSBYT LLP

**In 2020, 4 public hearings were held, almost all events were held online in view of the pandemic:**

1. Information from Astanaenergosbyt LLP to the annual report on rendering of the service "Supply of heat power to consumers in Nur-Sultan" for 2019 (12 March 2020).
2. Report in the form of public hearings on rendering of the service "Supply of heat power to consumers in Nur-Sultan" for 2019 (20 March 2020).
3. Information on implementation of the tariff estimate for the regulated service "Supply of heat power" for the 1st half of 2020 (22 July 2020).
4. The report on the activities of Astanaenergosbyt LLP on the supply of heat power for the 1st half of 2020 to consumers and other stakeholders (30 July 2020).

Information about the public hearings was posted in the media of Akmola region and on the official accounts of the company.

## WORKING WITH THE MEDIA AND THE PUBLIC

In 2020, CAEPCO Group of Companies regularly informed stakeholders about its activities by updating the corporate websites of the Corporation and its subsidiaries, posting information in the media and social networks, responding to requests, organising public hearings, press tours, round tables and other events. The Holding's PR service issued 50 corporate publications.

In 2020, the Holding Company organised 9 press tours, published and aired 10,393 notes about the activities of CAEPCO Group of Companies in the media and social networks, including 720 notes for CAEPCO JSC, 5,238 notes for PAVLODARENERGO JSC, 979 notes for SEVKAZENERGO JSC, 1,486 note for AEDC JSC, 2600 notes for Astanaenergosbyt LLP.

During the year, information and explanatory work was carried out for stakeholders.

# HUMAN RESOURCES AND SOCIAL POLICY

## PERSONNEL MANAGEMENT POLICY

The personnel management policy of CAEPCO JSC corresponds to the strategic development goals of the Corporation in terms of developing an energy company with an effective corporate governance system with constant work to create opportunities for realising the potential of employees. The Corporation strengthens its personnel management policy by attracting professional employees of various levels, creating conditions for retaining highly professional employees, continuous professional training and staff development, providing opportunities for professional growth of proactive young employees, creating an employee pool and talent management.

## STRUCTURE AND HEADCOUNT

Headcount in the Corporation at 31 December 2020 was 10,441 persons, which is less than in 2019 by 1.1 % and than in 2018 by 3.2 % due to implementation of measures for optimisation of the numerical strength of the subsidiaries of CAEPCO JSC and the suspension of hiring in 2020 due to restrictive quarantine measures (COVID-19 pandemic).

## STAFF STRUCTURE BY CATEGORY AND GENDER

The structure of the Corporation's personnel, due to the peculiarities of its activities, is characterised by a high proportion of male employees, i.e. 60.6 %. The production personnel mainly consists of the Workers category, where men make up 74.4 %.

Personnel category	Total		of them			
			men		women	
	persons	%	persons	%	persons	%
Headcount	10,441	100	6,327	60.6	4,114	39.4
Management	1,538	14.3	1,133	73.7	405	26.3
Professional employees/white collar employees	3,396	30.3	1,097	32.3	2,299	67.7
Blue collar employees	5,507	55.4	4,097	74.4	1,410	25.6

Dynamics in change in headcount, persons



Distribution of the headcount by enterprises of CAEPCO JSC at the end of 2020

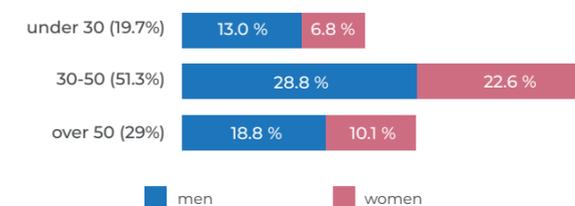
Company name	Number of employees, persons
CAEPCO JSC	84
PAVLODARENERGO group of companies	4,879
SEVKAZENERGO group of companies	2,543
AEDC group of companies	2,396
ASTANAENERGOSBYT LLP	539
<b>Total</b>	<b>10,441</b>

## PERSONNEL STRUCTURE BY AGE

At the end of 2020, the main share of the personnel comprised of the most experienced workers aged 30-50 (51.3 %), which is 1.6 % more than in 2019. The share of personnel under 30 (19.7 %) is 2.1 % less than in 2019. The share of personnel over 50 (29 %) increased by 0.6 % compared to 2019. Taking into account these indicators, the Corporation's enterprises carry out activities aimed at attracting young specialists and developing mentoring to ensure continuity and transfer of professional knowledge and skills, and gradual rejuvenation of personnel to achieve an optimal combination of young proactive workers and experienced, highly professional employees.

The average age across the Holding is 40.

Age composition of personnel

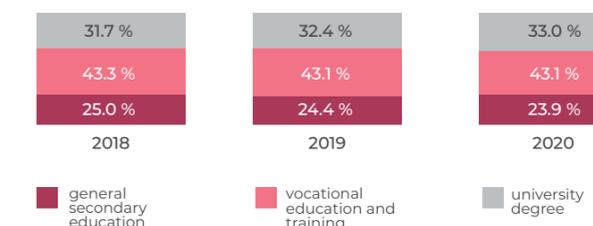


## PERSONNEL STRUCTURE BY EDUCATION

In general, in the dynamics of 2018-2020, the Corporation records an increase in the share of employees with university degree and a decrease in the share of employees with general secondary education, which is associated with a set of measures aimed at motivating staff to improve their level of education, including within implementation of measures under the corporate program PROFENERGY. The share of employees with vocational education and training remains at the level of 2019.

Every year, about 300 employees of the Corporation study at universities and colleges, including industry-specific disciplines. Regardless of participation in the events of PROFENERGY, enterprises provide support to students and graduates of an educational institution. In 2020, 80 employees defended their theses, including 62 employees in the profile specific for the enterprise.

Dynamics of the educational level



## THE TOTAL NUMBER OF EMPLOYEES BY TYPE OF EMPLOYMENT AT THE END OF 2020

At the end of 2020, the share of employees attracted under an employment agreement totalled 99.9 %. To perform certain types of work or seasonal work, enterprises attract part-time employees, the share of which totalled 0.1 % of the total workforce. Part-time employment totalled 1.7 % of the number of employees of the Group of Companies.

Indicator	Value (persons)	including	
		men	women
<b>Headcount at the end of the reporting period (full-time)</b>			
by agreement term:	10,441	6,312	4,129
Working under an agreement for an unspecified term	8,339	5,195	3,144
Working under a fixed-term agreement	2,102	1,117	985
by type of employment:	10,441	6,326	4,115
Full-time employees	10,262	6,229	4,033
Part-time employees	179	104	75
<b>Supervised workers (part-time)</b>	12	2	10
<b>Total headcount</b>	<b>10,453</b>		

## EMPLOYEES HIRED IN 2020

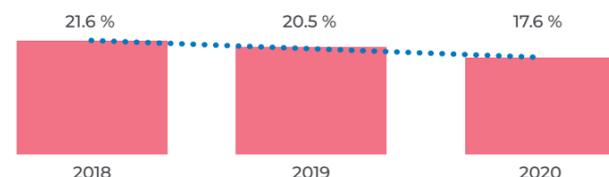
In the reporting period, 1,844 employees were hired, which amounted to 17.6 % of the average number of employees in the Corporation.

Indicator	Total		of them			
	persons	%	men		women	
			persons	%	persons	%
Hired, of them:	1,844	100	1,078	58.5	766	41.5
under 30	701	38.0	474	67.6	227	32.4
from 30 to 50	832	45.1	424	50.0	408	49.0
over 50 years	311	16.9	180	57.9	131	42.1

Decrease in the turnover ratio for hiring personnel by 2.9 % compared to 2019 is due to:

- > Implementation of measures to optimise processes and staffing levels;
- > Suspension of hiring due to restrictive quarantine measures (COVID-19 pandemic).

### Hiring turnover rate



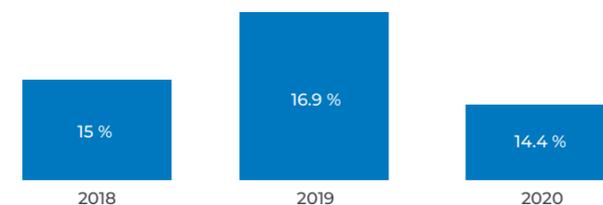
## STAFF TURNOVER

At the end of 2020, the Corporation's staff turnover rate decreased by 2.5 % compared to 2019. In the dynamics of past years, staff turnover increases annually. In 2020, the sanitary and epidemic situation (the COVID-19 pandemic) affected the decrease in staff turnover.

### The main reasons for personnel leaving the Holding remain:

- > Migration of personnel within Kazakhstan (urban/rural settlements);
- > Migration of personnel outside Kazakhstan (CIS countries, including Russian Federation);
- > Pay dissatisfaction;
- > Family circumstances, caring for young children/grandchildren, sick or elderly family members.

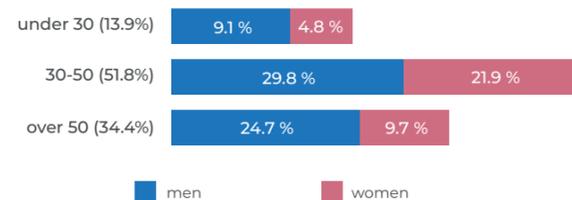
### Turnover rate



## NUMBER OF PEOPLE WHO LEFT AS PART OF STAFF TURNOVER IN 2020, BROKEN DOWN BY AGE IN THE CONTEXT OF MEN AND WOMEN

In 2020, 2,075 labour agreements with employees of the Corporation were terminated, which is 19.3 % less than in 2019. One of the reasons that influenced the decrease in staff resignation is the introduction of restrictive quarantine measures (COVID-19 pandemic). As part of turnover, 1,509 people have quit, of which the main share is among employees at the most productive age for professional work, i.e. 30-50 (51.8 %).

### Number of job leavers as part of turnover, broken down by age and gender



### In order to reduce the turnover rate, implementation of the following activities continued in 2020:

- > Identification of the reserves of the wage fund and allocation of the released funds for increasing wages;
- > Improving mentoring processes and the support system for young professionals;
- > Material and non-material incentives for qualified employees;
- > Improving conditions and social guarantees in accordance with collective agreements.

## STAFF TRAINING AND DEVELOPMENT

### The training and development system in the Corporation provides for the following areas:

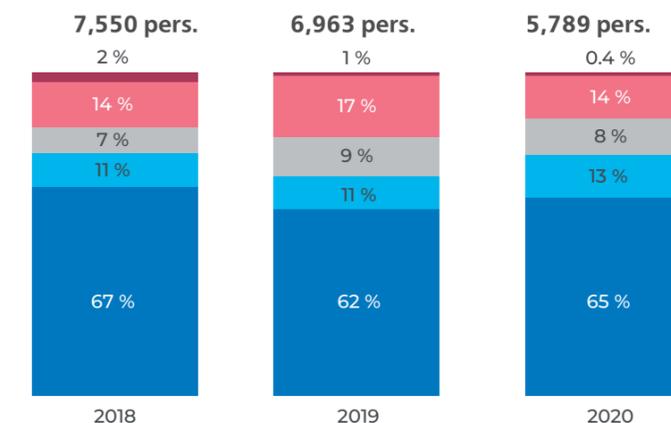
- > Mandatory, prescribed technical safety rules and maintenance training;
- > Versatility training;
- > Advanced training for the development of professional and managerial competencies.

In order to increase the efficiency of activities and create safe working conditions at the Corporation's enterprises, training is conducted in a corporate format and according to individual development plans, remote forms of training are being introduced. The Group of Companies practices training on corporate programs in its own training centers, as well as training in third-party companies.

In 2020, 5,789 people were trained, which is 55.5 % of the total number of employees. The number of employees trained at the Corporation's training centers in 2020 amounted to 3,319 people (74.4 % of the total number of those trained). The total number of trained employees in 2020 is less than in 2018-2019, due to the established frequency of training and restrictions imposed during the quarantine period.



The main direction is primary and periodic technical safety rules and operating procedures training: in 2020, 3,761 persons were trained. (65 % of all trained employees). In order to expand the professional profile of the Corporation's employees and prepare them for secondary professions, 731 employees (13 % of all trained employees) were trained in 2020. Professional development in the prior year was organized for 832 employees (14 % of the total number of trained employees).



- ISO9001, ISO14001, OHSAS1800 quality management systems training (including environmental matters, internal audit and risk management)
- Advanced training, seminars, trainings
- Occupational health and safety, civil defence and emergency situations
- Versatility training
- Rules of occupational health and safety, fire safety, maintenance

### Average number of training hours per employee



The average number of hours of training per male employee is 21.8 hours, female - 6.2 hours. Training for employees of production units in accordance with their positions and professions, regulatory requirements and corporate components in training programs, features of training programs prevails in the corporation.

## EMPLOYEE POOL

To ensure the necessary reserve for holding managerial positions at different levels, in 2020, employee pool of senior, middle and lower management levels for 782 managers was formed in the subsidiaries of CAEPCO JSC.

Development of employee pool is carried out on the basis of individual programs of professional and organisational and managerial training of succession candidates,

including training, also in in-house training centers, advanced training, internship, mentoring, performing managerial functions, temporary relocation of an employee. During 2020, 97 people from among the employees who are in the employee pool were transferred to senior positions.

Every year, work is carried out to form an external employee pool, including from among graduates of educational institutions.

458 young specialists work at the Corporation's enterprises, which is 4.4 % of the total number of employees. In 2020, 133 young employees were hired, including 73 persons in the positions of lead specialists. At that, the number of persons hired with vocational education and training is 65 persons, with university degree – 63 persons.

## ATTRACTING YOUNG SPECIALISTS AND STAFF DEVELOPMENT

Since 2016, the PROFENERGY project has been implemented in the subsidiaries of CAEPCO JSC to support young specialists and improve the educational level of staff. The program is aimed at attracting graduates of educational institutions to key / crucial professions of enterprises and promotion of the energy profession, staff development and improvement of the educational level of personnel, retention of key employees. The Corporation's enterprises cooperate with 17 universities and colleges in the regions of their operations.

Regular work is carried out to inform about the contents and conditions of the Program, meetings with students and tours to production facilities are held, employees of enterprises participate in the examination boards and the state attestation commission for final exams and the defence of graduation works.

During implementation of the program, 2,230 students took part in the events, including:

- > 192 students undertook a paid internship and signed an agreement on further employment at the Corporation's enterprises after getting a degree
- > 1,914 students completed unpaid industrial placement and pre-graduation internship
- > 105 students were employed during the summer holidays;
- > Based on the results of the competition of scientific papers, 19 students were awarded a nominal corporate scholarship.

To raise the interest of graduates of educational institutions to work at the Corporation's enterprises, the Program is constantly being improved, the conditions are adjusted with due account for students' needs, the capabilities of enterprises and the peculiarities of the

labour market in the regions of operations.

The Program also provides for activities that encourage employees to receive industry-specific education. In the period from 2016 to 2020, more than 1,030 employees took advantage of the available opportunity:

- > 696 employees were granted paid study leave
- > 175 employees were paid bonuses for successful completion of educational institutions
- > 130 employees were provided with an interest-free loan to pay for training;
- > The Corporation paid for training of 2 employees.

As part of the PROFENERGY project, a mentoring project is being developed. The purpose of the project is to transfer professional knowledge and skills to students, as well as fast and effective adaptation of young specialists. For 5 years, a pool of mentors has been formed from among highly qualified employees of subsidiaries of CAEPCO JSC, including those of retirement and preretirement age. More than 500 employees are appointed as mentors every year.

## MOTIVATION AND REMUNERATION OF PERSONNEL

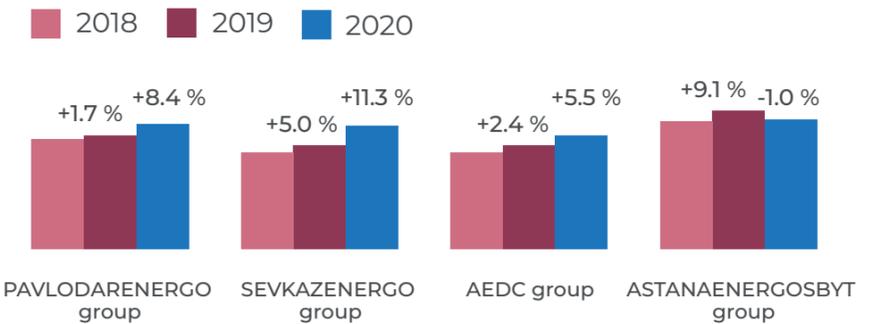
The Group of Companies has a unified system of remuneration and incentives for employees. The salary level is set in accordance with the unified tariff grid, which is a grading system of remuneration for all categories of employees, regardless of their gender identity.

Due to the unfavourable epidemiological situation and the introduction of restrictive quarantine measures, in 2020, a production downtime regime was introduced in structural units, the specifics of which are due to direct contact with consumers, as well as the lack of the need for full staffing due to a decrease in production volumes.

Incentives and remuneration in the Corporation are aimed at improving the efficiency and effectiveness of each employee's work. Every year, the enterprises of CAEPCO JSC make a differentiated increase in wages within the approved budgets and tariff estimates, taking into account the importance and significance of the personnel and the contribution to the results of work.

During 2020, the salary indexation was performed in the Group of Companies with an emphasis on production and working personnel (from 5 to 18 % increase). On average, the Corporation's salary level increased by 10 %.

## GROWTH RATE OF AVERAGE INCOME IN THE CONTEXT OF SUBSIDIARIES OF CAEPCO JSC



## INTANGIBLE INCENTIVES

Every year, events are held at the Holding's enterprises, where the most distinguished, honoured employees, as well as long-service employees of enterprises are honoured. In 2020, 267 employees and long-service employees of enterprises were put in for awarding for strong performance and contributing to the development of the energy industry in the Republic of Kazakhstan, including 96 persons with state, departmental and industry awards, and 131 employees with corporate awards of CAEPCO JSC and enterprises. On the occasion of the celebration of the 100th anniversary of the State Commission for Electrification of Russia (GOELRO) plan, 40 employees were awarded with memorial badges.

## EMPLOYEE-MANAGEMENT RELATIONS

In relations with employees, the Corporation complies with all the requirements of labour legislation and the Code of Business Ethics, respects personal freedom and human rights, provides everyone with equal opportunities and does not allow discrimination in labour, as well as does not use child labour in any of its businesses.

The minimum period for notifying employees of significant changes in the Corporation's activities is made in accordance with the legislation of the Republic of Kazakhstan and in accordance with internal regulatory documents.

The minimum period for notifying employees upon termination of employment relations due to a reduction in force is one month in accordance with the Labour Code of the Republic of Kazakhstan.

Labour disputes at the Corporation's enterprises are resolved in accordance with the current legislation, as well as within the framework of Collective Agreements and the provisions on the grievance committee for individual labour disputes with the participation of representatives of the employer and employee. The procedure for applying and receiving feedback on labour disputes is determined by the internal regulatory document of the enterprise which is presented to employees during employment.

The composition of the grievance committee is approved by the organisational and administrative document for enterprises. In the event of a labour dispute, before applying to the grievance committee, an employee has the right to apply:

- 1) To the head of the human resources department
- 2) To the chairman of the trade union/employee representative
- 3) To the chief executive officer of the enterprise

In 2020, four cases of employees applying to the grievance committee for the settlement of a labour dispute were established. All appeals were reviewed and settled. Discrimination of employees on any basis and cases of violation of the rights of employees were not revealed.





## INTERACTION WITH TRADE UNIONS

Trade unions operate at the Corporation's enterprises, and labour relations with employees are regulated by collective agreements. In SEVKAZENERGO group of enterprises, a single collective agreement was concluded for 2018-2020, at the enterprises of AEDC group – for 2019-2021, in PAVLODARENERGO group of enterprises - for 2020-2025. The principles of the collective agreement are represented by economic feasibility, sufficiency, joint responsibility and transparency. Collective agreements regulate measures of social responsibility for employees and their families, regardless of their membership in a trade union.

**As part of social partnership, with the participation of enterprises and trade unions, the following events are held annually:**

- > Sports and recreational
- > Organisation of leisure and recreation, mass cultural events
- > Sponsorship of anniversaries and holidays
- > Charitable support

Name	2018	2019	2020
Number of employees participating in a trade union, persons	5,696	5,196	4,699
Share of the total headcount, %	53	49	45

In the dynamics of the past years, a decrease in the share of employees who are members of a trade union is observed at all enterprises of the Corporation, which is due to a decrease in the number of employees in the Corporation and the influence of global processes of individualisation of social and labour relations.

## SOCIAL SUPPORT, GUARANTEES AND COMPENSATORY PAYMENTS

The social policy of CAEPCO JSC is determined jointly with employees and their representatives, i.e. trade unions, and is provided at the expense of the financial capabilities of the Corporation's subsidiaries.

Objectives	Social package
Incentives for personnel for long-term work	Additional professional pension contributions in the amount of 5 % Award for professional competitions Remuneration on the occasion of anniversaries and holidays
Effective compensation and preferential system	Compensation of housing maintenance and utilities expenses, dormitory discounts, residential lease Motor transport services for transportation of workers to and from work Coal supply at cost to employees living in houses with stove heating Compensation of vouchers to camps for children under 15 New Year's gifts for children
Supporting fitness for work and health of the staff	Insurance against accidents and diseases at work Mandatory medical insurance Reimbursement of costs for health resort preventive treatment
Social support for employees	Financial aid for the birth of a child Financial aid for funeral services Financial aid to large and low-income families Paid study leave Retirement benefits The company's long-service employees support program Other aid
Sports and recreational activities	Reimbursement of expenses for meals to participants of sports competitions Reimbursement of expenses for holding cultural events and collective recreation

## SOCIAL ASSISTANCE DUE TO MATERNITY OR PATERNITY

The Corporation regularly provides social support to veterans and former employees of enterprises who have reached retirement age. As part of the Collective Agreement, financial assistance is provided, leisure time is organised for holidays, etc.

CAEPCO JSC is an active participant in social projects aimed at supporting the population in the regions of its presence.



Company name	Number of employees who have issued maternity leave / childcare leave during a year			Number of employees on maternity leave / childcare leave at the year-end	Number of employees who returned from maternity leave / childcare leave during the year
	women	men	total		
CAEPCO JSC	3	0	3	8	1
PAVLODARENERGO group of companies	100	0	100	212	73
SEVKAZENERGO group of companies	33	0	33	88	19
AEDC group of companies	34	0	34	50	14
Astanaenergoby LLP	40	0	40	91	11
<b>Total</b>	<b>210</b>	<b>0</b>	<b>210</b>	<b>449</b>	<b>118</b>

## OCCUPATIONAL HEALTH AND SAFETY

The main principle in all types of activities of the Group of Companies is the priority of the life and health of employees in relation to the results of production activities. The personnel of the Group of Companies is the main resource in creation of a high production culture.

The plan also provides for the distribution of experimental measures that have shown their effectiveness to all enterprises of CAEPCO JSC and its subsidiaries.

**According to the Plan, the implementation of the following activities continued in 2020:**

- > Practical implementation of video recorders in electric grid companies (EDC) for recording the team's admission to work, instructing the team, preparing workplaces;
- > Traditionally, in order to promote safe work, events dedicated to the World Day for Safety and Health at Work were held in the Corporation's subsidiaries;
- > Implementation of integrated automation of all aspects of occupational safety (Safety walk), which allows to consolidate and automate activities in occupational health and safety in the following areas: audits, incident management, occupational health and safety risks, occupational health and safety training, contractor management (control of contractors' access to facilities and detection of violations of the contractor's security requirements).

## STRATEGIC GOALS IN OCCUPATIONAL HEALTH AND SAFETY AND CARRIED OUT ACTIVITIES

**The strategic goals of CAEPCO JSC and its subsidiaries in occupational health and safety are:**

- > Prevention of fatal injuries, accidents, occupational diseases and industrial accidents
- > Minimising the risks associated with possible damage to the life and health of employees
- > Development and support of employees' abilities, orientation to personal potential, level and quality of knowledge and skills, competence in occupational health and safety, education of employees at all levels of a culture of occupational safety, a responsible attitude to compliance with the norms and rules of occupational health and safety

Achievement of the established goals is carried out through the implementation of preventive measures and the introduction of best practices in occupational health and safety.

**The following activities have been carried out in the Corporation's subsidiaries:**

- > SEVKAZENERGO JSC has created a Hotline, through which each employee can provide photos and videos of the detected violations/inconsistencies, etc. (all received messages are processed by the Department of Occupational Health and Safety, measures are developed on their basis);
- > In order to comply with the occupational health and safety standard "Safety requirements for the interaction of vehicles and pedestrians at production sites and facilities", video cameras are installed on the perimeter and in the premises of SEVKAZENERGO JSC at the PAVLODARENERGO CHP-2 to monitor compliance with the speed limit of vehicles, compliance by employees with the rules on safety and labour protection, fire safety;

> **Petropavlovsk Heat Networks LLP:**

- New type of fencing has been purchased
- EK-Par overalls with protective properties against the effects of steam and hot water were purchased
- Major repairs of showers and changing rooms in the welding shop were carried out

> At the CHP-2 and CHP-3 of PAVLODARENERGO JSC, according to the schedules of capital and current repairs, the maintenance sites, protective fences have been brought into compliance with the requirements of the occupational health and safety, and ash sluiceways have been closed

> In order to practice the skills of providing first aid by personnel, a robot simulator Anton-1.01 was purchased for the occupational health and safety training class;

In 2020, it was managed to reduce the total number of accidents by **30 %** compared to 2019.

In April 2020, a new corporate Action Plan for occupational health and safety of CAEPCO JSC for 2020-2021 was adopted. The main activities of the Plan are aimed at maintaining and developing the measures taken in the period from 2016 to 2019 to prevent industrial injuries.

### PLANS FOR 2021

**In 2021, implementation of the personnel management policy aimed at attracting and developing the professional staff of the Corporation will continue. As part of this direction, it is planned:**

1. To further develop the PROFENERGY project in the following areas:
  - > A system for supporting young professionals and improving the educational level of personnel
  - > Mentoring project development
  - > Key personnel development program
  - > Crucial professions program
2. Improvement of key performance indicators for achieving the strategic and operational goals of the Corporation
3. Implementation of programs to improve the living conditions of employees of key and crucial professions
4. Further automation of HR processes related to staff development: adaptation, evaluation, training, etc.
5. Implementation of ENBEKENERGY project to attract personnel from the manpower-surplus regions of the Republic of Kazakhstan and labour management at the enterprises of the Group of Companies
6. Improvement of the system of corporate training, training and retraining of personnel amid shortage of the labour market, improvement of qualitative indicators of training, introduction of a system for monitoring the effectiveness of training results

> In AEDC JSC, in order to update and strengthen the knowledge of personnel in terms of safe operation and repair of electrical installations, demonstration admissions of working teams were carried out in the winter period;

> The reconstruction of bathrooms has been completed in the administrative building of AEDC JSC.

**Due to quarantine restrictions, the following events were cancelled and postponed in 2020:**

> Mutual audits of occupational health and safety at the enterprises of SEVKAZENERGO JSC and AEDC JSC.

> The second corporate-wide competition of professional skills among operational and repair personnel for the operation of distribution networks (power distribution zone).

## OCCUPATIONAL HEALTH AND SAFETY COUNCIL

Each subsidiary has established an Occupational Health and Safety Council. The Council is headed by a chairman from among the employees of the enterprise. The council consists of representatives of the employer, representatives of the trade union organisation, including technical labour inspectors. The occupational health and safety council studies the causes of occupational injuries and occupational diseases, analyses the effectiveness of measures taken on labour conditions and safety; considers proposals to eliminate the identified violations; makes proposals for the introduction of more advanced technologies into production; informs employees of the organisation about the measures taken to improve labour conditions and safety, prevention of industrial injuries; participates in the consideration of issues of financing measures for labour protection in the organisation, mandatory social insurance against industrial accidents and occupational diseases; monitoring the expenditure of the organisation's funds aimed at improving labour protection conditions, and more.

## HEALTH AND SAFETY TECHNICAL INSPECTORS

Technical labour protection inspectors work in each subsidiary. In their activities, technical labour protection inspectors interact with the heads of departments, the labour safety and health service, the operation inspection, the inspection for supervision of industrial safety facilities, as well as with state labour inspectors, state supervision and control.

### The actual costs of implementing measures on occupational health and safety, improving working conditions in 2020 amounted to 1.34 billion tenge.

Financial resources have been invested in providing the Corporation's employees with the necessary personal protective equipment, including electrical protective equipment, special food, medicines, vaccination, staff training, in the purchase of information posters, publications of regulatory and technical documents and signs on occupational health and safety, in the purchase of fire extinguishing equipment, as well as the implementation of measures for additional lighting of workplaces, repair of ventilation and air conditioning systems, repair of buildings and structures, and others.



## COVID-19

In 2020, the main threat to the safety of the Group's personnel was coronavirus infection (**COVID-19**). During the reporting year, especially during periods of increasing morbidity, the management of CAEPCO JSC and its subsidiaries took the necessary measures for the safety of personnel and uninterrupted provision of heat and electric energy to the population. To prevent the incidence and spread of infection, the following main activities were carried out:

> Work plans have been developed for various scenarios in the context of a pandemic

> In-line thermal imaging monitoring devices have been purchased and installed at the CHP

> The holding's enterprises are provided with non-contact thermometers

> The staff is provided with the necessary protective equipment (masks, gloves) and disinfection means (disinfecting liquids and solutions)

> Automatic disinfection tunnels were manufactured and installed at the entrance units of enterprises

> At the enterprises of PAVLODARENERGO JSC, in cooperation with Meray-A LLP, a sanitary and epidemiological audit was conducted for compliance with the requirements of sanitary and epidemiological norms

> Regular notification of personnel about protection measures against **COVID-19** was carried out through the instruction and placement of information posters

> Treatment of premises and transport with disinfectant solutions, and many others

The implementation of the above and other measures in accordance with the resolutions of the state body authorised in the area of sanitary and epidemiological supervision prevented the spread of coronavirus infection at the Corporation's enterprises. Despite the complex of measures, 2 employees were infected with **COVID-19** outside of production site and did not cope with the dangerous disease.

## TYPES AND LEVEL OF OCCUPATIONAL INJURIES

In the reporting year, 7 accidents were recorded at the enterprises of the Corporation, 2 of them with a mild outcome, 4 with a severe outcome and 1 with a fatal outcome. Every year, the Corporation conducts a detailed analysis of industrial injuries, including statistics on the severity and number of injuries in CAEPCO JSC and its subsidiaries, data on the accident frequency coefficient, the dynamics of injury indicators, diagrams of the distribution of the number of accidents by the time of their occurrence during the day, the distribution of the number of accidents by the age of the injured person's, the distribution of the number of accidents by the length of work of the injured person's, the causes of accidents, a classifier by types of accidents that resulted in the accident, comparison of the level of injuries by companies with a similar field of activity, etc.

The Corporation strives to minimise industrial injuries and pays great attention to both the state of safety at workplaces and the elimination of the causes that resulted in accidents.

**Classification of accidents by type of accidents in 2020:**

> The injured person's fall from a height – 2 cases

> The injured person's fall – 2 cases

> Exposure to harmful and dangerous industrial factors and substances – 1 case

> Electric shock – 1 case

> Other types of accidents – 1 case.

**The causes of accidents were:**

- > Unsatisfactory organisation of work
- > Gross negligence of the injured person
- > Unsatisfactory organisation of work and gross negligence of the injured person
- > Equipment malfunction
- > Violation of safety requirements (production instructions and instructions for occupational health and safety).

**A set of measures was carried out for each accident:**

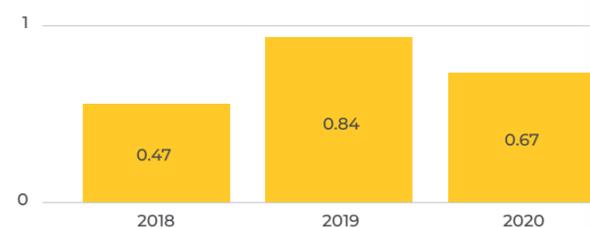
- > A detailed investigation to identify the root and systemic causes and prevent the recurrence of such incidents
- > Familiarisation of the staff with the circumstances and causes of accidents
- > Elimination of the causes of the accident
- > Instructing staff, etc.

The level and coefficients of occupational injuries in the Corporation are shown in the table and diagrams below.

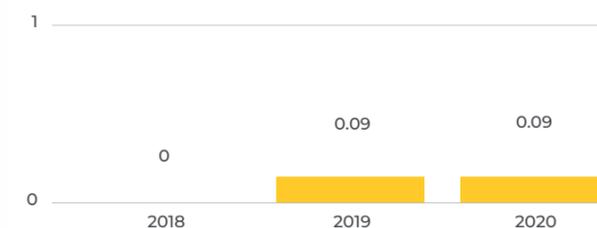
**Level of occupational injuries**

	2018	2019	2020
List number of personnel	10,704	10,704	10,441
Number of traumatic cases	5	9	7
Number of injured persons / of them women	5/2	9/0	7/0
Number of fatal cases	0	1	1

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



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



The frequency coefficient of all accidents and injuries at work (TIFR) per 1,000 employees was calculated using the formula:

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

*n* – the total number of injured persons of industrial accidents during the reporting period;

*N* – is the average number of employees.

Fatality Incident Frequency Rate (FIFR) per 1,000 employees was calculated using the formula:

$$kh_1 = \frac{n_1 \times 1,000}{N}, \text{ where}$$

*n1* – the number of fatal industrial injuries during the reporting period;

*N* – is the average number of employees.

**EMPLOYEES OF THE CORPORATION WHOSE PROFESSIONAL ACTIVITY IS ASSOCIATED WITH A HIGH RISK OF INJURY**

The maintenance and repair of power equipment is associated with high risks. To ensure safety during the work in electrical installations, personnel training, organisational and technical measures are carried out, and their implementation is monitored. The personnel is provided with the necessary personal protective equipment, electrical protective equipment and others.

**In recent years, a number of measures have been taken to improve safety during work in electrical installations:**

The system of registration, reporting and notification of accidents operating in the Corporation complies with the requirements of the legislation of the Republic of Kazakhstan and the International Labour Organisation.

**In order to prevent occupational injuries, monitor and account for cases of violations of safety and labour protection requirements, the following work is carried out in the Corporation and its subsidiaries:**

- > - Investigation of micro-injuries, incidents, potentially dangerous incidents that are the basis for more serious injuries and damage
- > - Preparation of newsletters on the results of accidents and informing the personnel of all enterprises of the Corporation's subsidiaries about them in order to bring the causes and prevent the recurrence of similar cases in the future
- > Training of personnel on occupational health and safety, electrical safety and knowledge testing
- > Implementation of internal regulatory documents on occupational health and safety
- > Carrying out planned and sudden checks of the state of occupational health and safety
- > Conducting occupational health and safety days
- > Holding meetings on occupational health and safety
- > Bringing workplaces in line with the requirements of occupational health and safety
- > Providing workplaces with information posters and safety signs
- > Conducting professional competitions
- > Carrying out events on an indicative outfit-admission, etc.

- > Electrotechnical personnel of CAEPCO JSC are provided with the best personal protective equipment and special clothing for protection from electric arc.

- > To increase the labour discipline and responsibility of production personnel involved in operational switching during admission to work, preparation of workplaces, installation/removal of earthing at workplaces, etc. mobile video recorders are used by personnel in the Company's management department.

- > The EDC staff is provided with touch voltage detectors designed for remote monitoring of the presence of dangerous voltage in order to prevent electric shock to personnel servicing electrical installations and overhead lines of 6-10 kV, and a number of others.

Nevertheless, in 2020, 1 case of electric shock / burns from the occurrence of an electric arc during the maintenance of electrical installations was registered.

All cases of electrical injuries have been investigated in detail, and preventive measures have been taken.

In accordance with the requirements of the Law of the Republic of Kazakhstan "On compulsory insurance of an employee against accidents in the performance of his / her labour (official) duties", all employees of the Corporation's enterprises are insured against accidents.



## CONTRACTING ENTITIES

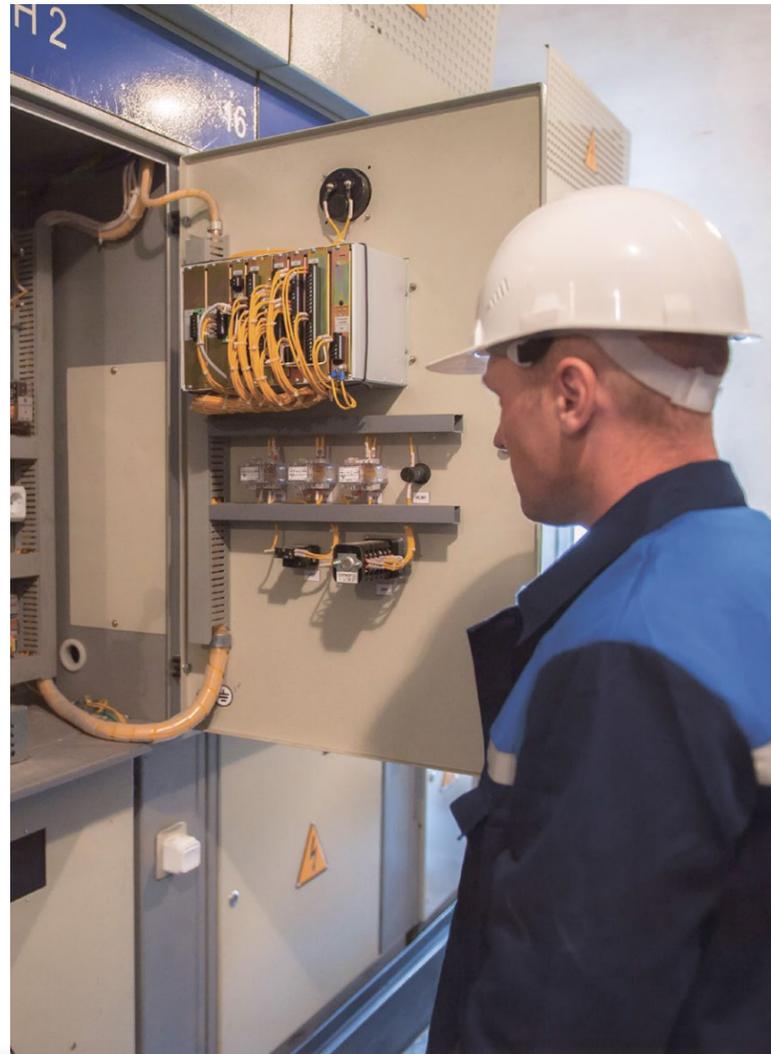
The activities of contractors involved in the production facilities of the Corporation are monitored: specialists of the subsidiaries conduct inspections in contractors, briefings for contractors' personnel, meetings with contractors. Interaction with contractors of CAEPCO JSC in terms of the requirements in the area of safety, labour protection and ecology imposed on contractors when performing works or services on the territory of the subsidiaries, as well as when delivering goods/materials, is carried out in accordance with the Rules approved by the Company for interaction with contractors in occupational health and safety and ecology.

In order to prevent injuries and promptly respond to accidents committed by the contractor, the same work is carried out as in the production units of CAEPCO JSC.

In 2020, the contractor had 2 accidents, 1 with a light and 1 with a severe outcome.

## CONSUMER SAFETY

The Corporation cares about the safety and health of its consumers. For this purpose, systematic public awareness efforts, as well as inspection of equipment, are carried out. The Corporation's subsidiaries are introducing advanced technologies, as well as implementing measures for the safe production of works.



### OCCUPATIONAL SAFETY PLANS FOR 2021

In 2021, work will continue on the implementation of best practices in the area of occupational health and safety, such as:

- > Implementation of the occupational health and safety procedure: Work Safety Analysis. The procedure will describe in detail the process of risk assessment before starting work, instructing personnel before performing work, etc.
- > Holding events dedicated to the World Day for Safety and Health at Work
- > Conducting mutual audits at the enterprises of PAVLODARENERGO JSC and SEVKAZENERGO JSC
- > Carrying out work within the framework of the Company's internal regulatory documents:
  - Methods of organising the activities of working groups on the certification of workplaces ("Quick victories")
  - Regulations on the signal sheet on safety and labour protection
  - Album – additional safety signs in the energy sector and their requirements
  - The standard for "Safety requirements for the interaction of vehicles and pedestrians at production sites and facilities"
  - The standard for "Working at height"
  - Guidelines for "On safety measures when performing work in confined spaces"
  - Standard for "Isolation of energy sources"
  - Instructions on the procedure and control of the use of mobile video recorders.

## PUBLIC AWARENESS EFFORTS

The management of each district subdivision of the Corporation's electric grid enterprises, together with specialists of occupational health and safety services, conduct information and explanatory work among the population on the topic of compliance with safety rules near existing electrical installations and power transmission lines.

Extracurricular hours on electrical safety are held annually in educational institutions (in the regions of operation). Letters are sent to the Department of Education of the akimat of North-Kazakhstan, Pavlodar and Akmola regions, the State Institution Department of Education of Petropavlovsk and Pavlodar, heads of district education departments with a memo of the basic rules of electrical safety and measures to prevent electrical injuries among children for further distribution. These activities are carried out in order to prevent injuries among third parties, namely among school-age children and college students.

In order to warn the public and personnel about the danger, safety signs and inscriptions are placed on all electrical installations operated by subsidiaries, all equipment is protected from unauthorised entry, there are appropriate fences and locks.

Regional and district mass media publish articles aimed at preventing injuries, including children's injuries, and protecting the health of the population.

## ENSURING THE SAFETY AND HEALTH OF CONSUMERS IN SALES ENTERPRISES

In 2020, in order to prevent the spread of coronavirus infection, social distance zones (markings on stairwell landings and inside the premises) are specified in the service centers of energy sales organisation of the Group of Companies, body temperature of visitors is measured, replenishment and control over availability of disinfection products are carried out, as well as informing of the population about the possibility of paying for services via the Internet, and other resources.



**In order to ensure the safety and health of consumers, the service centers of energy marketing enterprises of CAEPCO JSC are equipped / provided with:**

- > Anti-slip rubber mats on the entrance units to prevent visitors from falling
- > Ramps or call buttons for staff to help customers with disabilities
- > Video surveillance systems
- > Medical first-aid kits with the necessary medicines
- > Air conditioning systems
- > Fire and security alarm systems and primary fire extinguishing means, emergency plans and safe emergency exits.

# ENVIRONMENTAL POLICY

An important goal of the Corporation's investments is to reduce the negative environmental impact inherent in energy production.

## ENVIRONMENTAL PROTECTION MEASURES

To improve the efficiency of activities in the area of environmental protection, CAEPCO Group of Companies plans and implements environmental protection measures aimed at reducing the level of impact of its activities on the environment and improving the environmental efficiency and safety of its enterprises. The total amount of expenses for the implementation of such measures in 2020 amounted to 5,530.789 million tenge.

The list of such measures includes the reconstruction and overhaul of the main and auxiliary technological equipment in the generation, transmission and distribution of energy, waste management, industrial environmental control.

For all new construction and reconstruction projects, a project is being developed on the topic of the Environmental Impact Assessment (EIA), the materials of which are brought to the attention of local communities and the interested public in the form of public hearings. To confirm compliance with the environmental standards of the Republic of Kazakhstan, all projects undergo state environmental expertise in the territorial supervisory authorities in the area of environmental protection.



Costs for environmental protection measures\*

№	Description of costs	Amount, million tenge		
		2018	2019	2020
	CAEPCO JSC	5,188.625	5,259.676	5,530.789
PAVLODARENERGO JSC				
1	Investment costs	2,684.95	2,613.091	3,600.752
2	Cost of overhaul repair of key assets intended for environment protection	70.810	431.929	20.906
3	Operating costs	665.889	196.625	317.942
SEVKAZENERGO JSC				
1	Investment costs	570.178	981.923	1 217.167
2	Cost of overhaul repair of key assets intended for environment protection	200.592	266.600	306.824
3	Operating costs	214.911	228.987	55.983
AEDC JSC				
1	Investment costs	730.854	518.343	-
2	Cost of overhaul repair of key assets intended for environment protection	-	-	-
3	Operating costs	50.441	22.178	11.215

\* more information about the environmental measures carried out is provided in the following sections

### In the period from 2009 to 2020, the Corporation reduced the amount of ash emissions by 74 %.

At the end of 2008, before the launch of the investment program, the concentration of emissions of coal ash, nitrogen oxides and sulphur oxides into the atmosphere by the enterprises of CAEPCO JSC was fixed at 1,093.0, 678.0 and 1,425.0 mg/nm<sup>3</sup>, respectively. At the end of 2020, these indicators amounted to 297.0, 393.0 and 1,264.0 mg/nm<sup>3</sup>, respectively.

In 2009-2014, second-generation titanium emulsifiers were installed at all boiler units at the stations of PAVLODARENERGO JSC and SEVKAZENERGO JSC, which allowed to increase the degree of flue gas purification and reduce the costs of enterprises for environmental payments.

In the reporting year, SEVKAZENERGO JSC installed a third-generation emulsifier with an efficiency of 99.6 % on the spacecraft No. 8. The modernisation consists in installing the second-highest belt of blade devices in the cells of the existing swirler unit, i.e. double flue gas cleaning is carried out within one swirler. Ash concentrations decreased from 310 mg/nm<sup>3</sup> to 257 mg/nm<sup>3</sup>. In order to ensure the continuity of the technological cycle of the plant and the storage of ash and slag waste for up to 25 years, work is being carried out on the construction of ash dumps using innovative material that prevents harmful substances from entering the soil.

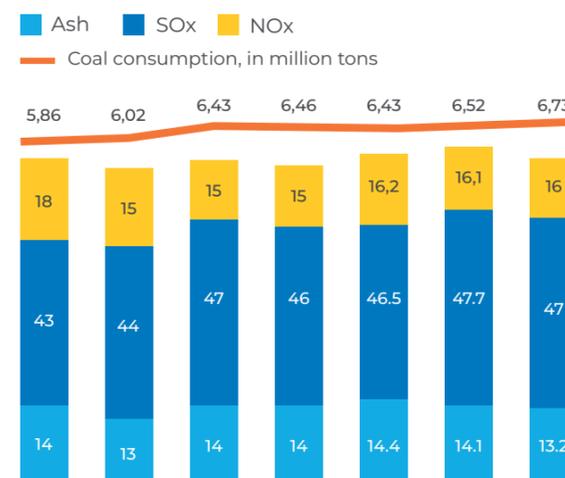
## ATMOSPHERE AIR PROTECTION

In 2020, CAEPCO Group of Companies generated 7,035 million kWh of electricity and 6,203.2 thousand Gcal of heat power. 6,729.4 thousand tons of Ekibastuz coal and 9,961 thousand tons of fuel oil were spent on energy production. The sources of raw materials are non-renewable.

From the end of 2008 to 2020, the total volume of emissions of pollutants into the atmosphere from the enterprises of CAEPCO JSC decreased by 25.2 % (from 108.5 thousand tons to 81.2 thousand tons, including other emissions).

The greatest impact on reducing the Corporation's emissions is the replacement of outdated generating facilities with low energy and environmental efficiency with new capacities that meet modern requirements in the area of environmental protection.

### Gross emissions of pollutants into the atmosphere in 2014-2020 thousand tons



### Specific emissions of pollutants into the atmosphere in 2014-2020, mg/MWh thousand tons



In the reporting year, compared to 2019, there was a decrease in production (by 1.3 %) with an increase in the volume of burned fuel by 3.2 %, while gross emissions of pollutants decreased by 2.1 %. Of these, emissions of sulphur oxides (SO<sub>x</sub>) decreased by 1.6 %, emissions of solid particles (coal ash) decreased by 6.4 %, emissions of nitrogen oxides (NO<sub>x</sub>) decreased by 1.2 %. Specific emissions for nitrogen oxides (NO<sub>x</sub>) and sulphur oxides (SO<sub>x</sub>) remained at the level of prior year, for coal ash decreased by 4.1 %.

Among the most significant environmental measures for the protection of atmospheric air implemented in 2020, the following projects were carried out:

- > Restoration of boiler heating surfaces that ensure effective cleaning, disposal, neutralisation, suppression and neutralisation of pollutants in gases

- > Capital and current repairs of dust and gas cleaning installations (repair of worn-out elements of ash-collecting installations and flues, repair of aspiration millionand measurement of their operation efficiency,

repair of thermal insulation and walling of burners, repair and replacement of burners during capital repairs of boiler units

- > Ensuring the functioning of existing automated systems of industrial environmental monitoring
- > Modernisation of battery emulsifiers of the boiler unit of station No. 8 of the Petropavlovsk CHP-2
- > Reconstruction of fuel supply of Petropavlovsk CHP-2.

In addition, a pre-design survey and development of design and estimate documentation for equipment with automated systems for monitoring emissions of significant sources of pollution (chimneys) were carried out at all generation facilities of CAEPCO JSC.

As part of the discussion of the National Plan "Zhasyl Kazakhstan", the Corporation conducted a preliminary consolidated assessment of the necessary investment volume for the introduction of the best available technologies at its generation facilities. To achieve environmental indicators close to the OECD countries, the Corporation will need to spend about 220.0 billion tenge. The specified amount will include the cost of installing modern gas cleaning equipment, the operation of which will reduce emissions of sulphur oxides, nitrogen and solid particles (coal ash) by 50-70 %.

The discussion of the financing mechanism for the introduction of the best available technologies at energy enterprises has begun.

## GREENHOUSE GAS (CO<sub>2</sub>) EMISSIONS

The Corporation has organised work on preparing for the inventory of greenhouse gas emissions and consumption of ozone-depleting substances.

To monitor greenhouse gases, a calculation method was used, according to the guiding regulatory documents, which provides for accounting for emissions from normal (regular) production activities, special practices (commissioning, process stops, repair and maintenance) and emergency situations.

Within the framework of the trilateral agreement (2016-2019) on the implementation of projects for the modernisation and restoration of the district heating system of Pavlodar, Ekibastuz and Petropavlovsk within the framework of the state program "Nurly Zhol", 17.8 billion tenge was allocated for modernisation projects. Modernisation projects are aimed at improving energy efficiency, reducing losses and improving environmental standards (reducing CO<sub>2</sub> emissions by saving coal consumption associated with reducing heat losses during

transmission through networks). Thus, the volume of reduction of gross CO<sub>2</sub> emissions in 2020 compared to 2010 amounted to 425 thousand tons and by 2.5 % in terms of specific emissions in 2020 relative to the level of 2010.

An additional organisational tool for reducing greenhouse gas emissions is the Energy Saving Program and increasing overall fuel efficiency associated with increasing the share of generation by new power units, as well as the introduction of the ISO 50001 energy management system (energy saving measures) at enterprises, the purpose of which, along with improving the energy efficiency of production processes, is also to reduce greenhouse gas emissions. Thanks to the implementation of the measures of this program, a reduction in greenhouse gas emissions by 467.3 thousand tons of CO<sub>2</sub> was achieved in 2020.

The gross volume of greenhouse gas emissions from fuel combustion in 2020 compared to 2019 increased by 1.76 % due to an increase in the volume of burned fuel (coal by 3.2 %, fuel oil by 7.6 %). Specific indicators of greenhouse gas emissions also increased by 3.1 %.

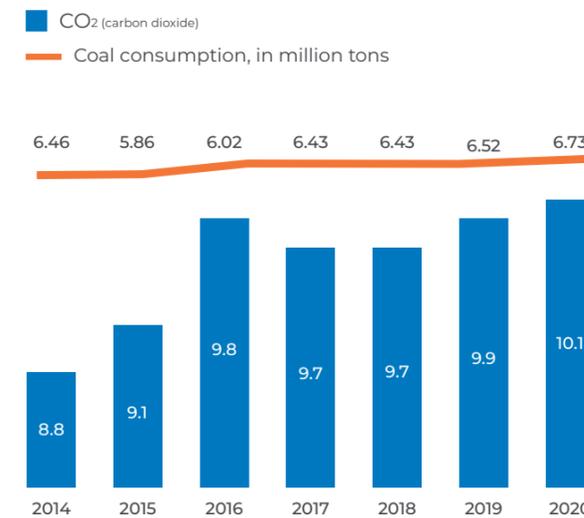
**According to the results of the National Plan for the distribution of quotas for greenhouse gas emissions in 2018-2020, one of the subsidiaries of the Corporation has a shortage of quotas for greenhouse gas emissions, which has developed for two reasons:**

- > Refusal to issue additional quotas for greenhouse gas emissions formed due to an increase in production capacity from the reserve of additional quotas of the National Plan due to its depletion.
- > Excess of the actual specific emission factors for greenhouse gases of the approved specific coefficients for coal generation in Kazakhstan.

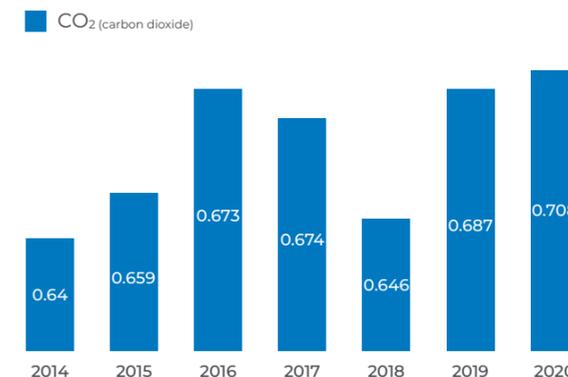
It is possible to pay off the resulting deficit by buying quotas on the exchange, if they are available in the required quantity. The costs of purchasing quotas for greenhouse gas emissions will be a loss for the enterprise, since they are not included in the tariff for electric and heat power and the mechanism for financing these costs is not defined.



### Gross CO<sub>2</sub> emissions in 2014-2020 million tons



### Specific CO<sub>2</sub> emissions per unit of energy produced in 2014-2020 tons/MW•h



**Among the most significant measures of the Energy Saving Program aimed at reducing greenhouse gas emissions implemented in 2020, the following can be distinguished:**

- > Replacement of the 3 GT PCHP-2 transformer of SEVKAZENERGO JSC
- > Replacement of PSV-500-3-23 No. 1 and No. 2 TA-7 PCHP-2 of SEVKAZENERGO JSC
- > Cleaning of turbine condensers and cleaning of the boiler core by the UNG PCHP-2 installation of SEVKAZENERGO JSC
- > Replacement of tubular air preheater cubes, insulation of the brickwork on the boiler unit of station No. 9 of the ECHP of Ekibastuzteploenergo LLP
- > Reconstruction of the insulation of the brickwork, tubular air preheater at the boiler unit of station No. 13 of the ECHP of Ekibastuzteploenergo LLP

> Modernisation of the air heater cubes of the boiler unit BKZ-420-140 of the station No. 2 of CHP-3 of PAVLODARENERGO JSC

> Repair of the T-120/130-130PR2 turbine unit of the station No. 4 of the CHP-3 of PAVLODARENERGO JSC

> Installation of energy-saving lamps at CHP-3, CHP-2 of PAVLODARENERGO JSC

> Repair of safety valves of the boiler unit of stations No. 2,3 of CHP-2 of PAVLODARENERGO JSC

## STATE ENVIRONMENTAL CONTROL

In 2020, no inspections were carried out by the authorised body in the area of ecology in the Group of Companies of CAEPCO JSC. No financial or non-financial sanctions were imposed on the enterprises of the CAEPCO group in the reporting year for violation of environmental legislation.

## WATER MANAGEMENT AND WATER RESOURCES CONSERVATION

The use of water resources is an integral part of the production processes of enterprises and plays a key role in the cooling process of equipment. At the generating facilities of the CAEPCO Group of Companies, closed water use is used, i.e. a revolving system of technical water supply with cooling ponds (in Petropavlovsk) or cooling towers (in Pavlodar).

Also, the enterprises of CAEPCO Group of Companies have systems of drinking water supply, stormwater and municipal sewage. Water supply for household, drinking, fire needs and wastewater disposal is carried out centrally, at the expense of city water supply and sewerage networks under the contract.

All the water used by CAEPCO JSC is fresh water. Sensitive water sources are not used.

In 2020, 703,204.809 thousand m<sup>3</sup> of water was used for water supply purposes, the main share of which is water from circulating water supply systems. In the reporting period, the volume of water disposal amounted to 3,116.1 thousand m<sup>3</sup>.

### The total amount of water used, broken down by sources, thousand m<sup>3</sup>

Indicator	2018	2019	2020
Total water used, including:	905,512.9	973,424.3	703,204.8
from surface water bodies	153,828.5	222,224.0	7,787.5
from third-party suppliers	53,067.4	23,515.5	24,282.5
in close water consumption systems	698,617.0	727,685.3	671,134.8

### Volumes of waste disposal, thousand m<sup>3</sup>

Indicator	2018	2019	2020
Total waste water generated	477.036	1 927.4	3 116.1
Discharged to third-party organisations	471.736	648.100	600.000
Discharged to surface water bodies	5.3	1279.3	2 516.1

#### Among the most significant environmental measures in the area of water use and sanitation implemented in 2020, the following can be distinguished:

- > modernisation of circulating water supply systems for industrial purposes, reused water, a system that excludes pollution and depletion of water resources of SEVKAZENERGO JSC;
- > maintenance and repair of rotating grids at the central pumping station, ongoing repairs of artesian and drainage pumps of the coastal pumping station, pumps of the central pumping station, maintenance of the make-up pump of the circular pumps, cleaning of the discharge channel of SEVKAZENERGO JSC were carried out;
- > an inspection of the underwater part of the ante-chambers of the central pumping station was carried out, the make-up pumps and the artesian pump of SEVKAZENERGO JSC were repaired;
- > monitoring over the quantitative and qualitative characteristics of water (water analysis was carried out according to the approved schedule) of SEVKAZENERGO JSC and PAVLODARENERGO JSC;
- > organisation of measures to improve the quality of the discharged water, increase the efficiency of treatment facilities (cleaning of the installed booms of permanent buoyancy of the Rubezh 45 brand was carried out) of SEVKAZENERGO JSC;
- > repair of pipelines, shut-off and control valves of technical and household water of CHP-3 and CHP-2 of PAVLODARENERGO JSC;

> replacement and repair of shut-off valves of industrial water pipelines, fire pipeline and heating of ECHP of Ekibastuzteploenergo LLP;

> reconstruction of the station's water supply system using a 6,000 m<sup>3</sup> potable water supply tank as a process water supply tank.

In addition, the Committee on Water Resources of the Ministry of Ecology, Geology and Natural Resources of the Republic of Kazakhstan agreed on the specific norms of water consumption and sanitation of SEVKAZENERGO JSC with a validity period from December 2020 to December 2025.

### EFFICIENT INDUSTRIAL WASTES MANAGEMENT

Ash and slag waste, which makes up 99 % of the total volume of waste, is stored in specially equipped hydraulic structures of the plain type – ash dumps. Compliance with the environmental legislation of the Republic of Kazakhstan when creating a new container for storing ash and slag waste allows to prevent environmental pollution with ash and slag waste from production and ensure stable operation of the CHP.

In 2020, the total volume of waste generation at the enterprises of CAEPCO JSC amounted to 2,842.5 thousand tons, of which ash and slag waste – 2,831.7 thousand tons, industrial and municipal – 10.80 thousand tons.

The increase in the volume of waste generation compared to 2019 by 152.4 thousand tons is due to an increase in the consumption of burned fuel.

### Total mass of waste generation, thousand tons

Indicator	2018	2019	2020
Ash and slag	2,608.1	2,677.8	2,831.7
Other types of waste	7.500	12.307	10.800

### Waste by hazard level, thousand tons

Indicator	2018	2019	2020
Waste generated:	2,615.6	2,690.1	2,842.5
“green” list	2,615.2	2,689.8	2,842.3
“amber” list	0.45	0.25	0.20

### Waste by methods of handling, thousand tons

Indicator	2018	2019	2020
Waste generated:	2,615.6	2,690.1	2,842.5
including ash and slag	2,608.1	2,677.8	2,831.7
Waste management at the enterprise	0.424	2.839	0.335
Neutralised waste	0.04	0.04	0.03
Transferred waste to third-party organisations*	7.148	9.978	10.575
Waste is placed at the company's own facilities	2607.8	2 676.7	2 831.3

In 2020, 637.12 tons of light fly ash fraction from the ash dumps of SEVKAZENERGO JSC and PAVLODARENERGO JSC were sold on a contractual basis.



**The most significant waste management measures implemented in 2020 are aimed at improving the industrial and environmental safety of ash and slag dumps and other waste disposal facilities:**

- > Construction of the enclosing dams of section No. 3 of the ash dump No. 2 of the PCHP-2 phase of SEVKAZENERGO JSC (phase 1)
- > Construction of dams of the 1st section of the ash dump and construction of the phase 3 of the ash dump
- > PAVLODARENERGO JSC CHP-3
- > Construction of phase 2 of the ash dump of the ECHP of Ekibastuzteploenergo LLP
- > Organisation of storage sites for waste generated during the reconstruction and construction of energy facilities (equipment of sites, arrangement of containers)
- > Sale of ash and slag waste (microspheres) to reduce the volume of their formation
- > Implementation of the mechanism of separate collection of waste that is not subject to placement at the landfill: waste paper, paper and cardboard, plastic and glass waste
- > Development of an EIA project for the Technological Regulations on the procedure for collecting and selling microspheres (fly ash of a light fraction) from the ash dump surface with a positive conclusion of the state environmental expertise for PCHP-2 of SEVKAZENERGO JSC.

In addition, SEVKAZENERGO JSC signed a trilateral long-term memorandum with the Department of Ecology for North-Kazakhstan Region and National Company KazAvtoZhol JSC on the use of ash and slag waste as a construction material in road construction.

During the construction of new ash dump maps, the latest technology of an anti-filtration screen in the ash dump bed – the Canadian polysynthetic geomembrane was used. The use of a special geomembrane film will allow achieving 100 % waterproofing. This is a reliable and durable anti-filtration screen that protects soils and underground water from contamination by chemical components contained in the clarified water of the reverse hydraulic ash transport system.

## ENVIRONMENTAL MANAGEMENT SYSTEM

The presence of an environmental management system developed, successfully functioning and certified for compliance with the ISO 14001 series standards is the most important indicator of systematic, effective work in the area of environmental management, contributing to the growth of the Corporation's competitiveness, increasing the market value of shares, forming a positive image in relations with external stakeholders.

In addition to the environmental management system, the Corporation also successfully operates a quality management system (ISO 9001), a health and safety management system (ISO 45001) and an energy management system (ISO/CD 50001).

During the reporting period, TÜV Rheinland Kazakhstan conducted supervisory and certification audits of subsidiaries of CAEPCO JSC for compliance with the requirements of international standards ISO 14001 (Environmental Management System), ISO 9001 (Quality Management System), ISO 45001 (Health and Safety Management System), ISO/CD 50001 (Energy Management System). As a result, certificates of the integrated management system (IMS) were obtained and its efficiency, effectiveness and focus on improvement were confirmed.

## PLANS FOR IMPLEMENTATION OF ENVIRONMENTAL POLICY FOR 2021

As part of the implementation of the environmental policy and the requirements of the new Environmental Code, the Corporation plans further work aimed at improving the environmental efficiency and safety of its enterprises, minimising the negative impact of their activities on the environment, and introducing the best available technologies.

To this end, it is planned to implement environmental protection plans and energy saving programs, further modernise outdated equipment, comply with the requirements of the reformed environmental legislation, participate in the approval of subordinate regulatory legal acts to the new Environmental Code, participate in the development of national reference books on the best available technologies.



On 2 January 2021, the President of the Republic of Kazakhstan signed a new Environmental Code, which will enter into force on 1 July 2021.

**After the introduction of the new Environmental Code of the Republic of Kazakhstan, the operation of enterprises of the 1st hazard category will be regulated by the following newly introduced requirements:**

- > Mandatory equipping of significant emission sources with an automated emission monitoring system with real-time data transmission to the server of the authorised body in environmental protection
- > Tightening of the maximum environmental standards for emissions into the environment
- > Mandatory receipt of a comprehensive environmental permit and, within the framework of such a permit, introduction of expensive (and not always technically feasible and applicable) best available technologies at the Group's energy-producing enterprises that have a significant harmful impact on the environment, aimed at reducing the negative impact of production on the environment
- > Step-by-step increase of reducing coefficients when calculating the fee for emissions into the environment (in case of non-receipt of a comprehensive economic permit)
- > Increase in administrative fines for non-compliance with the requirements of environmental legislation by 2 or more times
- > Strengthening of sanctions for repeated offences (recidivism)
- > Increasing the statute of limitations and the period of recidivism
- > Provision of financial support for the consequences of liquidation of the operation of category I facility to the authorised body for the environmental protection system.

# FINANCIAL STATEMENTS

## FINANCIAL AND ECONOMIC INDICATORS

The consolidated financial statements of CAEPCO JSC Group for 2020 have been prepared in accordance with International Financial Reporting Standards and comprise of the financial statements of subsidiaries from the date of their acquisition. The principles of accounting policy are the same for all enterprises of the Group. The key financial and economic indicators demonstrate the results of operating and financial activities, as well as implementation of the main directions of CAEPCO JSC Group strategic development.

INDICATORS	2018	2019	2020
Income from core activities	143,880	137,195	149,149
Cost	-114,310	-116,318	-130,192
Gross profit	29,570	20,878	18,956
Expenses for the period	-12,667	-11,085	-12,156
Profit from operating activities	16,903	9,793	6,800
Total EBITDA for the year*	29,405	20,004	21,706
Total EBITDA for the year, margin in %	20.44 %	14.58 %	14.55 %
Loss from impairment of goodwill	0	-282	0
Foreign exchange losses	-5,479	-10	1,153
CIT expense	-2,232	-1,829	-3,034
Net profit for the year	1,600	-5,044	-5,472
Assets	314,089	319,211	375,010
Equity	144,665	136,342	123,535
Capital expenditures on property, plant and equipment	21,118	16,832	14,880

\*Total EBITDA is indicated without impact of foreign exchange differences

### INCOME FROM SALE OF PRODUCTS/SERVICES

By the end of 2020, the Group produced electric power and heat, taking into account the transfer and sale of purchased energy for a total of **149,149** million tenge, an increase by 11,954 million tenge or 8.7 % compared to the results of 2019, including:

- > Revenue from the sale and transmission of electric power increased by **9,203** million tenge (9.4 %)
- > Revenue from the sale and transmission of heat increased by **2,716** million tenge (7.0 %)
- > Income from other activities increased by **34** million tenge

The key factors that influenced the increase in the level of income from the sale of electric power and heat in 2020 compared to the prior period are as follows:

- > An increase in tariffs for electric power by an average of 12 % increased the income of CAEPCO JSC

Group by **7,540** million tenge, including income of Pavlodarenergo JSC by 2,910 million tenge, income of Sevkazenergo JSC by 2,147 million tenge, income of Astanaenergosbyt LLP by 2015 million tenge, and AEDC JSC by 468 million tenge.

- > An increase in the volume of electric power in the capacity market in Pavlodarenergo JSC and an increase in tariffs for capacity resulted in growth of income by **393** million tenge.
- > An increase in tariffs for the transmission of electric power by an average of 6 % affected the increase in the income of CAEPCO JSC group by **1,270** million tenge.
- > An increase in tariffs for heat by an average of 13 % increased income by **4,056** million tenge.
- > A decrease in the volume of heat transmission by 178.5 thousand Gcal (4 %) and a decrease in the tariff by an average of 11 % in PAVLODARENERGO JSC resulted in a decrease in income by **1,339** million tenge (15 %).

## COST OF SALES

The cost of electric power and heat sold in 2020 amounted to 130,192 million tenge, which is 13,875 million tenge (12 %) more than in 2019. This increase was caused by higher operating expenses under the following items:

- > Fuel (12 %)
- > Labour Remuneration (9 %)
- > Purchased Electric Power (25 %)
- > Purchased Heat (11 %)
- > Electric Power Selling Services (13 %)
- > Heat Selling Services (13 %)
- > FSC Capacity Purchase (35 %)

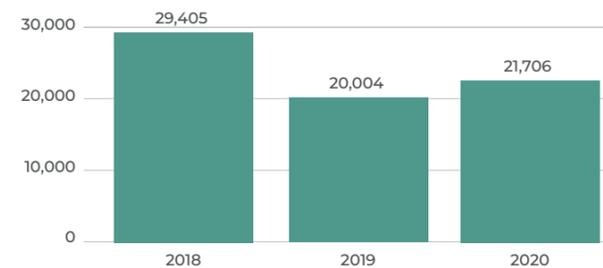
In 2020, the cost structure of the Group is dominated (19 %) by fuel (coal, fuel oil) costs. An increase in the price for coal, taking into account railway transportation, averaged 9 %, price for fuel oil increased by 3 %, which affected an increase in expenses under "Fuel" item by 2,641 million tenge, or 12 %. Labour costs increased by 1,129 million tenge, or 9 %, in order to reduce the turnover rate of qualified personnel. An increase in the cost for purchased electric power by 3,256 million tenge is due to an increase in its price by an average of 12 % and an increase in the purchase volume of electric power by RES FSC by 81 million kWh. Tariffs for purchased heat increased by an average of 8 %, which increased costs by 900 million tenge, increase in the purchase volume of heat by 206 thousand Gcal resulted in an increase in costs by 278 million tenge. The cost of heat selling services increased by 1,747 million tenge due to the increase in tariffs for KEGOC JSC services by an average of 13 %. For heat selling services, the increase in costs amounted to 951 million tenge due to an increase in the volume of heat transmission up to 10 % and an increase in tariffs by an average of 3 %. The main reason for the increase in the cost of services for ensuring readiness of electric power to bear load (FSC capacity purchase) by 2,143 million tenge is the increase in the tariff of FSC by 30 % (from 613,413 to 799,869 tenge/MW per month).



## EBITDA DYNAMICS, TOTAL

The total EBITDA for 2020, excluding foreign exchange gain, amounted to 21,706 million tenge, an increase compared to 2019 was 1,702 million tenge or 8.5 %. The key factor for increase of the operational efficiency indicator is the growth of income from other activities.

Total EBITDA for the year, million tenge



\*Total EBITDA is indicated without impact of foreign exchange differences

The operating EBITDA indicator was chosen as the main indicator when evaluating the Corporation's production activities. This performance indicator does not take into account other income, finance income, non-monetary component of foreign exchange liabilities, depreciation, amortisation and non-recurring or non-permanent items that do not affect the basic production activities of the Corporation. The Corporation's operating EBITDA for 2020 amounted to 22,859 million tenge, an increase of 2,866 million tenge, or 14 % compared to 2019 as a result of the following factors:

> In the structure of the operating EBITDA indicator, the leading (primary) marginal segment is represented by the production of electric power and heat (16,949 million tenge), an increase from 2019 by 1,589 million tenge (or 10 %) due to an increase in gross profit for this type of activity and a decrease in foreign exchange loss.

> There was an increase by 2,122 million tenge (or 33 %) in Transmission and Distribution of Electric Power segment due to an increase in profit from operating activities and a decrease in foreign exchange loss.

> In Transmission and Distribution of Heat Power segment, the EBITDA indicator decreased by 794 million tenge (or 23 %) due to a decrease in profit from operating activities.

> In Electric Power and Heat Sale segment, the EBITDA indicator decreased by 4,273 million tenge mainly due to a decrease in profit from operating activities.

## DYNAMICS OF NET INCOME/LOSS

Profit from operating activities for 2020 amounted to 6,800 million tenge (margin of 4.6 % to sales income), a decrease in profit from operating activities by 2,993 million tenge (or 31 %) compared to 2019 is mainly due to the following:

> Increase in production cost by 13,875 million tenge (12 %).

> Increase in expenses for the period by 1,072 million tenge (10 %).

The comprehensive loss for 2020 based on the results of the audit amounted to 5,472 million tenge, which is 429 million tenge (9 %) more than in 2019 due to:

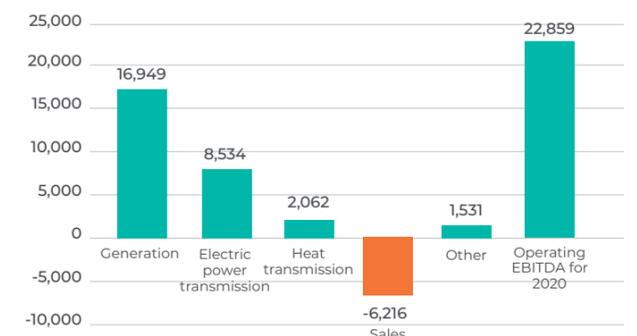
> Decrease in the balance of finance income and cost by 396 million tenge or 5 %.

> Increase in income tax expense by 1,204 million tenge.

> Increase in the balance of foreign exchange gain and loss by 1,163 million tenge.

> Increase in the balance of gain and loss from other activities by 1,538 million tenge.

Operating EBITDA by segment, million tenge



Financial and economic indicators by segment for 2020, million tenge

Indicators	Electric power and heat production	Electric power transmission and distribution	Heat transmission and distribution	Sale of electric power and heat	Other	Total
Income from core activities	72,041	27,157	7,542	106,338	66	149,149
Cost	-58,520	-20,499	-6,573	-107,969		-130,192
Gross profit	13,521	6,658	969	-1,630	66	18,956
Expenses for the period	-4,851	-2,175	-1,361	-3,831	-854	-12,156
Profit from operating activities	8,670	4,483	-391	-5,461	-787	6,800
Finance cost, net	-5,979	-1,818	-907	-17	3,705	-8,499
Foreign exchange gain/loss	373	835	-24	-194	163	1,153
Impairment/recovery of financial assets, goodwill	-1,761	-722	-278	-476	207	-3,131
Other (expenses) / income, net	862	245	768	-530	23	1,238
Income tax expenses	-1,886	-300	-131	-1,326	-517	-3,034
Net profit for the year	278	2,723	-963	-8,004	2,793	-5,472
<b>Operating EBITDA by segment</b>	<b>16,949</b>	<b>8,534</b>	<b>2,062</b>	<b>-6,216</b>	<b>6,714</b>	<b>22,859</b>

## ASSETS, LIABILITIES AND EQUITY

The currency of the Group's balance sheet as at 31 December 2020 is 375,010 million tenge, which is 55,799 million tenge or 17 % more than in 2019.

The Corporation's assets are divided into current and non-current. Non-current assets include property, plant and equipment, the value of which as at 31 December 2020 amounted to 267,051 million tenge, or 71.2 % of the value of all assets. Investments in property, plant and equipment for 2020 amounted to 14,880 million tenge.

### Assets, billion tenge



Other financial assets are represented by deposits with flexible option for partial replenishment and withdrawal. Deposits are represented by cash accumulated by the Group for servicing loans, financing the investment program and maintaining working capital.

The declared authorised capital of the Group is 50 million ordinary shares. As at 31 December 2020, the value of fully paid ordinary shares amounted to 46,043 million tenge.

Non-current and current liabilities comprise of, among other things, commitments to the European Bank for Reconstruction and Development, Sberbank of Russia SB JSC, VTB Bank JSC (Europe). The loans were raised to finance an investment program for reconstruction and modernisation of facilities of the Group of Companies and the purchase of a stake in other entities.

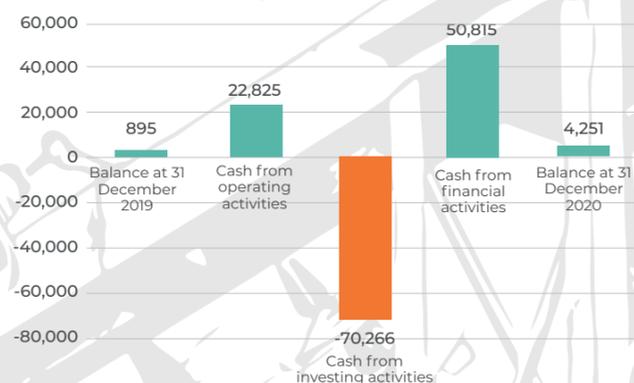
### Liability and equity, billion tenge



## CASH FLOW

Net cash from operating activities in 2020 amounted to 22,825 million tenge, which is 6,050 million tenge (or 36 %) more than in 2019. Increase in cash from operating activities is due to an increase in revenue following an increase in tariffs for the production and sale of electric power and heat. Net cash used in investing activities amounted to 70,266 million tenge. Cash outflow is associated with implementation of the investment program and payment of accounts payable. Net cash received from financing activities amounted to 50,815 million tenge. The movement in financing activities is associated with the attraction and repayment of bank loans. The cash balance at the end of 2020 is 4,251 million tenge.

### Cash flow, million tenge



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

### STATEMENT OF MANAGEMENT'S RESPONSIBILITIES FOR THE PREPARATION AND APPROVAL OF THE CONSOLIDATED FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER 2020

Management is responsible for the preparation of the consolidated financial statements that present fairly the consolidated financial position of Central-Asian Electric Power Corporation Joint Stock Company (hereafter the "Company") and its subsidiaries (collectively - the "Group") as at 31 December 2020, the consolidated results of its operations, consolidated cash flows and consolidated changes in equity for the year then ended, in compliance with International Financial Reporting Standards ("IFRS").

In preparing the consolidated financial statements, management is responsible for:

- properly selecting and applying accounting policies;
- presenting information, including accounting policies, in a manner that provides relevant, reliable, comparable and understandable information;
- providing additional disclosures when compliance with the specific requirements in IFRSs are insufficient to enable users to understand the impact of particular transactions, other events and conditions on the Group's consolidated financial position and financial performance; and
- making an assessment of the Group's ability to continue as a going concern.

Management is also responsible for:

- designing, implementing and maintaining an effective and sound system of internal controls, throughout the Group;
- maintaining adequate accounting records that are sufficient to show and explain the Group's transactions and disclose with reasonable accuracy at any time the consolidated financial position of the Group, and which enable them to ensure that the consolidated financial statements of the Group comply with IFRS;
- maintaining statutory accounting records in compliance with legislation of the Republic of Kazakhstan and IFRS;
- taking such steps as are reasonably available to them to safeguard the assets of the Group; and
- preventing and detecting fraud and other irregularities.

The consolidated financial statements of the Group for the year ended 31 December 2020 were approved by the management of the Group on 17 September 2021.

Signed on behalf of the Group's management

B.Y. Oral  
 Chairman of the Management Board

17 September 2021  
 Nur-Sultan, Republic of Kazakhstan



N.V. Buksha  
 Chief Accountant

17 September 2021  
 Nur-Sultan, Republic of Kazakhstan

**CENTRAL-ASIAN ELECTRIC POWER CORPORATION JOINT STOCK COMPANY  
 AND ITS SUBSIDIARIES**
**CONSOLIDATED STATEMENT OF FINANCIAL POSITION  
 AS AT 31 DECEMBER 2020  
 (in thousands of Tenge)**

	Note	31 December 2020	31 December 2019
<b>ASSETS</b>			
<b>NON-CURRENT ASSETS:</b>			
Property, plant and equipment	6	267,050,953	263,940,484
Goodwill	8	1,405,202	1,405,202
Intangible assets	9	1,517,948	1,764,085
Deferred tax assets	36	25,503	983,455
Loans given	10	1,923,266	11,065,201
Other financial assets	11	40,601	539,413
Advances given	13	6,176,062	7,736,850
Investments in associates	7	47,999,737	-
Other non-current assets	15	1,329,874	1,662,459
<b>Total non-current assets</b>		<b>327,469,146</b>	<b>289,097,149</b>
<b>CURRENT ASSETS:</b>			
Inventories	12	5,695,742	5,099,159
Trade receivables	14	20,102,546	15,023,978
Advances given	13	463,929	1,602,348
Income tax prepaid		470,480	772,431
Other current assets	15	2,582,139	3,165,560
Loans given	10	12,540,459	2,903,462
Other financial assets	11	1,434,725	652,418
Cash	16	4,251,137	894,566
<b>Total current assets</b>		<b>47,541,157</b>	<b>30,113,922</b>
<b>TOTAL ASSETS</b>		<b>375,010,303</b>	<b>319,211,071</b>
<b>EQUITY AND LIABILITIES</b>			
<b>EQUITY:</b>			
Share capital	17	46,043,272	46,043,272
Additional paid-in capital		1,348,105	1,348,105
Revaluation reserve for property, plant and equipment		34,315,020	36,607,620
Retained earnings		41,828,696	52,342,715
<b>Total equity</b>		<b>123,535,093</b>	<b>136,341,712</b>

**CENTRAL-ASIAN ELECTRIC POWER CORPORATION JOINT STOCK COMPANY  
 AND ITS SUBSIDIARIES**
**CONSOLIDATED STATEMENT OF FINANCIAL POSITION (CONTINUED)  
 AS AT 31 DECEMBER 2020  
 (in thousands of Tenge)**

	Note	31 December 2020	31 December 2019
<b>LIABILITIES</b>			
<b>NON-CURRENT LIABILITIES:</b>			
Bonds issued	18	14,897,451	13,244,969
Long-term borrowings	19	64,469,805	-
Deferred revenue	22	6,292,412	6,885,923
Lease liabilities	23	971,735	1,380,582
Deferred tax liabilities	36	38,042,113	38,029,150
Ash dump reclamation obligations	21	2,149,654	1,192,343
Employee benefit obligations		113,318	114,368
Other long-term accounts payable		767,957	27,520
Other liabilities and accrued expenses		297,056	303,481
<b>Total non-current liabilities</b>		<b>128,001,501</b>	<b>61,178,336</b>
<b>CURRENT LIABILITIES:</b>			
Bonds issued	18	929,060	5,963,431
Borrowings	19	72,265,017	82,374,864
Deferred revenue, current portion	22	136,784	139,747
Current portion of lease liabilities	23	506,326	551,609
Trade payables	24	39,364,740	23,463,760
Advances received	25	3,083,483	2,405,256
Current portion of ash dump reclamation obligations	21	1,061,915	927,879
Current portion of employee benefit obligations		14,774	14,586
Financial guarantees	20	-	1,872,553
Loan from third parties		1,039,011	-
Other liabilities and accrued expenses	26	5,072,599	3,977,338
<b>Total current liabilities</b>		<b>123,473,709</b>	<b>121,691,023</b>
<b>TOTAL LIABILITIES</b>		<b>251,475,210</b>	<b>182,869,359</b>
<b>TOTAL EQUITY AND LIABILITIES</b>		<b>375,010,303</b>	<b>319,211,071</b>

Signed on behalf of the Group's management

 B.Y. Oral  
 Chairman of the Management Board

 17 September 2021  
 Nur-Sultan, Republic of Kazakhstan

 N.V. Buksha  
 Chief Accountant

 17 September 2021  
 Nur-Sultan, Republic of Kazakhstan

The notes on pages 14-83 form an integral part of these consolidated financial statements. Independent Auditor's Report is on pages 2-7.

**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 2020  
 (in thousands of Tenge)**

	Note	2020	2019
Revenue	27	149,148,733	137,195,299
Cost of sales	28	(130,192,498)	(116,317,593)
<b>GROSS PROFIT</b>		<b>18,956,235</b>	<b>20,877,706</b>
General and administrative expenses	29	(9,721,887)	(8,656,614)
Selling expenses	30	(2,434,543)	(2,428,287)
Finance costs	31	(12,407,970)	(10,207,280)
Finance income	32	3,909,201	2,104,129
Loss on impairment of financial instruments, net	35	(3,131,082)	(4,311,747)
Foreign exchange gain/(loss), net	33	1,153,245	(10,033)
Impairment loss on goodwill	8	-	(281,939)
Other expenses	34	(1,176,640)	(1,128,098)
Other income	34	2,350,658	827,982
Share of profit of associates	7	64,297	-
<b>LOSS BEFORE TAXATION</b>		<b>(2,438,486)</b>	<b>(3,214,181)</b>
INCOME TAX EXPENSES	36	(3,033,643)	(1,829,363)
<b>LOSS FOR THE YEAR</b>		<b>(5,472,129)</b>	<b>(5,043,544)</b>
<b>OTHER COMPREHENSIVE LOSS FOR THE YEAR</b>			
<i>Items that will not be reclassified subsequently to profit or loss:</i>			
Changes in estimates related to provision for ash dump reclamation obligations		-	(34,061)
<b>TOTAL COMPREHENSIVE LOSS FOR THE YEAR</b>		<b>(5,472,129)</b>	<b>(5,077,605)</b>
<b>LOSS PER SHARE</b>			
Loss per share for the year, in tenge	40	(148)	(136)

Signed on behalf of the Group's management:

B.Y. Oral  
 Chairman of the Management Board

17 September 2021  
 Nur-Sultan, Republic of Kazakhstan



N.V. Buksha  
 Chief Accountant

17 September 2021  
 Nur-Sultan, Republic of Kazakhstan

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**CENTRAL-ASIAN ELECTRIC POWER CORPORATION JOINT STOCK COMPANY  
 AND ITS SUBSIDIARIES**
**CONSOLIDATED STATEMENT OF CHANGES IN EQUITY  
 FOR THE YEAR ENDED 31 DECEMBER 2020  
 (in thousands of Tenge)**

	Share capital	Additional paid-in capital	Revaluation reserve for property, plant and equipment	Retained earnings	Total equity
As 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)
<b>Total comprehensive loss for the year</b>	-	-	<b>(34,061)</b>	<b>(5,043,544)</b>	<b>(5,077,605)</b>
Amortisation of revaluation reserve for property, plant and equipment	-	-	(2,357,173)	2,357,173	-
Operations with shareholder (Note 10)	-	-	-	(2,445,613)	(2,445,613)
Dividends declared (Note 16)	-	-	-	(800,055)	(800,055)
As at 31 December 2019	46,043,272	1,348,105	36,607,620	52,342,715	136,341,712
Loss for the year	-	-	-	(5,472,129)	(5,472,129)
<b>Total comprehensive loss for the year</b>	-	-	-	<b>(5,472,129)</b>	<b>(5,472,129)</b>
Amortisation of revaluation reserve for property, plant and equipment	-	-	(2,292,600)	2,292,600	-
Adjustment to financial guarantees less deferred tax (Note 20)	-	-	-	1,347,527	1,347,527
Adjustment of borrowings to fair value, net of deferred tax (Note 10)	-	-	-	(925,191)	(925,191)
Loss from acquisition of investments in associate from an entity under common control (Note 7)	-	-	-	(7,756,826)	(7,756,826)
As at 31 December 2020	46,043,272	1,348,105	34,315,020	41,828,696	123,535,093

Signed on behalf of the Group's management:

B.Y. Oral  
 Chairman of the Management Board

17 September 2021  
 Nur-Sultan, Republic of Kazakhstan



N.V. Buksha  
 Chief Accountant

17 September 2021  
 Nur-Sultan, Republic of Kazakhstan

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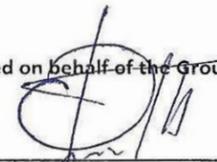
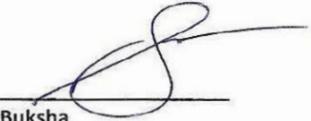
**CENTRAL-ASIAN ELECTRIC POWER CORPORATION JOINT STOCK COMPANY  
 AND ITS SUBSIDIARIES**
**CONSOLIDATED STATEMENT OF CASH FLOWS  
 FOR THE YEAR ENDED 31 DECEMBER 2020  
 (in thousands of Tenge)**

	Note	2020	2019
<b>OPERATING ACTIVITIES:</b>			
Loss before taxation		(2,438,486)	(3,214,181)
Adjustments for:			
Depreciation and amortisation	6, 9	12,889,705	13,000,529
Finance costs	31	12,407,970	10,207,280
Loss on impairment of financial instruments, net	35	3,131,082	4,311,747
Loss on impairment of advances given		812,342	-
Accrual of allowance for obsolete inventories	12	163,752	173,433
Loss/(gain) on disposal of property, plant and equipment	34	342,003	(213,173)
Loss on impairment of goodwill		-	281,939
Accrual of provision for unused vacation		57,684	92,911
Foreign exchange (gain)/loss, net	33	(1,153,245)	10,033
Finance income	32	(3,909,201)	(2,104,129)
Gain on write-off of accounts payable		-	(58,911)
Share of profit of associates	7	(64,297)	-
Income from subsidies		(231,930)	(117,663)
Other		64,551	502,322
<b>Operating cash flow before movement in working capital</b>		<b>22,071,930</b>	<b>22,872,137</b>
Changes in inventories		(755,749)	(520,966)
Changes in trade receivables		(6,957,939)	246,546
Changes in advances given		745,720	(245,914)
Changes in other current assets		2,595,964	640,823
Changes in trade payables		15,123,567	6,446,531
Changes in long-term payables		1,000,000	-
Changes in deferred revenue		(456,727)	(356,702)
Changes in advances received		678,227	(119,312)
Changes in other liabilities and accrued expenses		1,052,726	(930,873)
Changes in ash dump reclamation obligations		-	(137,962)
<b>Cash generated by operations</b>		<b>35,097,719</b>	<b>27,894,308</b>
Income tax paid		(1,655,192)	(1,949,409)
Interest paid	18,19,23	(10,617,141)	(9,170,338)
<b>Net cash from operating activities</b>		<b>22,825,386</b>	<b>16,774,561</b>

**CENTRAL-ASIAN ELECTRIC POWER CORPORATION JOINT STOCK COMPANY  
 AND ITS SUBSIDIARIES**
**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)  
 FOR THE YEAR ENDED 31 DECEMBER 2020  
 (in thousands of Tenge)**

	Note	2020	2019
<b>INVESTING ACTIVITIES:</b>			
Purchases of property, plant and equipment		(16,871,588)	(12,573,481)
Purchases of intangible assets		(102,541)	(141,629)
Placement of cash to deposit accounts		(26,228,770)	(30,953,689)
Withdrawal of cash from deposit accounts		26,045,629	30,921,691
Interest received on placed deposits		197,822	128,141
Interest received on loans given		29,159	43,945
Proceeds from disposal of property, plant and equipment		39,932	-
Return of cash given for investments/(cash given for investments)		1,098,318	(3,300,000)
Loans given	10, 37	-	(89,500)
Repayment of loans given	10, 37	1,541,009	1,518,090
Acquisition of financial assets		-	36,999
Acquisition of associate	7	(55,692,266)	-
Cash returned from guarantee fees		(27,333)	(23,177)
Loans given to shareholder	10, 37	(5,598,203)	(10,195,820)
Proceeds from loans given to shareholders	10, 37	5,303,041	90,500
<b>Net cash used in investing activities</b>		<b>(70,265,791)</b>	<b>(24,537,930)</b>
<b>FINANCING ACTIVITIES:</b>			
Proceeds from bank borrowings	19	93,930,849	80,710,056
Proceeds from third party borrowings		1,039,011	-
Repayment of borrowing	19	(39,386,062)	(70,803,838)
Proceeds on issue of bonds	18	5,000,000	-
Bonds redemption	18	(9,244,690)	(1,134,684)
Lease paid	23	(523,971)	(532,072)
Dividends paid	17	-	(800,055)
<b>Net cash from financing activities</b>		<b>50,815,137</b>	<b>7,439,407</b>
<b>NET INCREASE/(DECREASE) IN CASH</b>		<b>3,374,732</b>	<b>(323,962)</b>
Cash at the beginning of the year	15	894,566	1,301,810
Effect of exchange rate changes on cash balances in foreign currencies	33	(5,543)	(15,510)
Effect of changes in allowance for expected credit losses for cash		(12,618)	(67,772)
Cash at the end of the year	15	4,251,137	894,566

Signed on behalf of the Group's management

  
 B.Y. Oral  
 Chairman of the Management Board
17 September 2021  
Nur-Sultan, Republic of Kazakhstan
  
 N.V. Buksha  
 Chief Accountant
17 September 2021  
Nur-Sultan, Republic of Kazakhstan

The notes on pages 14-83 form an integral part of these consolidated financial statements. Independent Auditor's Report is on pages 2-7.

# ABOUT THE REPORT

The Annual Report of Central-Asian Electric Power Corporation JSC (CAEPCO JSC) has been issued on an annual basis since 2013. The annual report is one of the main communication channels with stakeholders, and therefore the Corporation pays special attention to preparation of this document.

The report presents information on the activities of CAEPCO JSC and its subsidiaries in 2020. The document contains a Sustainable Development Report drafted in accordance with GRI G4 guideline. During the preparation, the main version of information disclosure and the GRI application for the electric power industry were used.

## MATERIAL ASPECTS AND BOUNDARIES

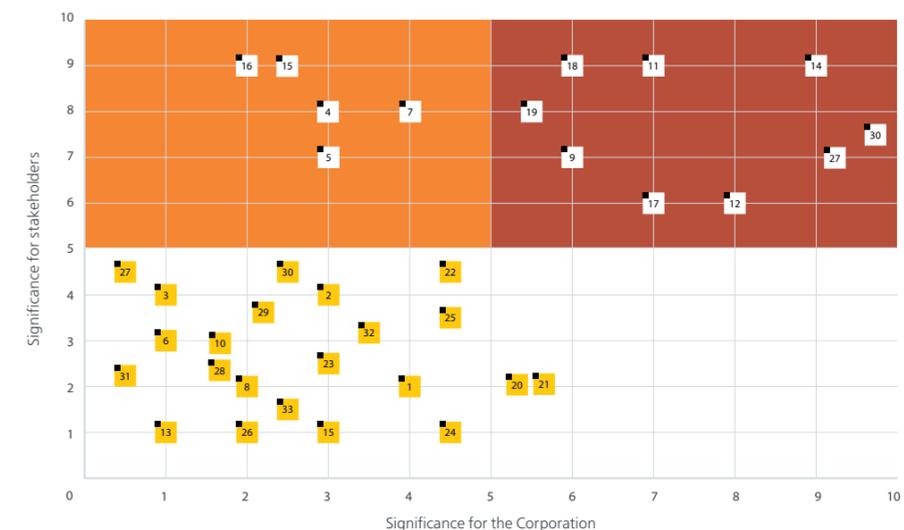
In accordance with the Principles for defining the report content as per the GRI Standards, the assessment of materiality of topics disclosed in the Report was carried out. The materiality assessment procedure includes the following main steps:

**Step 1.** Identification of the widest range of potentially important topics related to sustainable development based on the GRI Standards.

**Step 2.** Analysis of the extent of impact of the listed topics within and outside the Corporation. Selection of topics for further disclosure taking stakeholder engagement into consideration. Furthermore, priority analysis of topics in terms of their impact on the Company's activities and development strategy.

**Step 3.** In accordance with stakeholders' opinion and strategic plans of the Corporation, key topics were ranked to determine priorities and develop the Materiality Map. An average score was attributed to each aspect of activity depending on its impact on the Corporation (horizontal axis) and its stakeholders (vertical axis). The highest priority was determined for aspects within the red zone; they were given priority during preparation of the Report. Also, the report partially discloses aspects of the orange zone.

## LIST OF TOPICS AND MATERIALITY MAP



## INDEX OF GRI ELEMENTS

Ser.	Aspects	Ser.	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 practice	21.	Freedom of association and collective bargaining
5.	Anti-Corruption Management	22.	Child labour
6.	Obstacle to competition	23.	Forced or compulsory labour
7.	Materials	24.	Security practices
8.	Energy	25.	Rights of indigenous and small-numbered peoples
9.	Water	26.	Assessment of human rights observance
10.	Biodiversity	27.	Local communities
11.	Emissions	28.	Assessment of suppliers' compliance with social criteria
12.	Discharges and waste	29.	Public policy
13.	Assessment of suppliers' compliance with environmental protection criteria	30.	Customer health and safety
14.	Compliance with environmental requirements	31.	Labelling of products and services
15.	Employment	32.	Personal privacy of consumers
16.	Relationships between employees and management	33.	Violations of socio-economic legislation
17.	Health and safety in the workplace		

# INDEX OF GRI ELEMENTS

GRI standard and year of publication	Indicator	Page number, section and/or URL	Exemptions/ Comments
<b>GRI 101: Principles of reporting (2016)</b>			
<b>GRI 102: General information (2016)</b>	<b>ORGANISATION PROFILE</b>		
	102-1 Name of the organisation	Corporation profile section, p. 6	
	102-2 Areas of activity	Corporation profile section, p. 6 and Business model section, p. 16	
	102-3 Location of the head office	Contacts section, p. 123	
	102-4 Geography of operations	Geography of operations section, p. 9	
	102-5 Form of ownership	Corporate Structure section, p. 28	
	102-6 Sales markets	Geography of operations section, p. 9 Subsidiaries section, p. 18	
	102-7 Scale of the organisation	Key Performance Indicators, p. 12	
	102-8 Personnel information	Human resources and Social section, p. 76	
	102-9 Supply chain	Business model section, p. 16	
	102-10 Significant changes in the Company's work	Organisational structure section, p. 27 Share capital section, p. 28	
	102-11 Precautionary Principles	Environmental protection measures section, p. 92	
	102-12 Support for external initiatives	Environmental impact management section, p. 92 Greenhouse gas (CO <sub>2</sub> ) emissions section, p. 94 Environmental management System section, p. 98	
102-13 Membership in associations	–	The Corporation is a member of the Kazakhstan Electric Power Association (KEA)	
<b>STRATEGY</b>			
102-14 Management Statement	Address of the Chairman of the Board of Directors section, p. 4 Address of the Chairman of the Management Board section, p. 5		
<b>Ethics and Integrity</b>			
102-16 Values, principles, standards and norms of behaviour	Compliance with the Corporate Governance Code section, p. 36		

GRI standard and year of publication	Indicator	Page number, section and/or URL	Exemptions/ Comments
<b>Corporate governance</b>			
	102-18 Management structure	Organisational structure section, p. 27 Performance of the committees under the Board of Directors section, p. 33	
<b>Stakeholder Engagement</b>			
	102-40 List of stakeholders	Stakeholder Engagement, p. 71	
	102-41 Collective agreements	Interaction with trade union organisations section, p. 82	
	102-42 Identification and selection of stakeholders	Stakeholder Engagement, p. 71	
	102-43 Approaches to interaction	Stakeholder Engagement, p. 71	
	102-44 Key topics and concerns raised	Stakeholder Engagement, p. 71	
<b>Information about the report</b>			
	102-45 Basis of consolidation	About the Report, p. 82	
	102-46 Defining the report content and boundaries	List of Topics and Materiality Map, p. 113	
	102-47 List of significant topics	List of Topics and Materiality Map, p. 113	
	102-48 Recalculation of data from prior periods	–	The indicators have not been changed and are comparable with the data provided in the previous annual reports of the Corporation
	102-49 Changes in the content of the report	–	No changes
	102-50 Reporting period	About the Report, p. 82	
	102-51 Date of last publication	About the Report, p. 82	
	102-52 Reporting cycle	About the Report, p. 82	
	102-53 Contact information for questions about the content of the report	Contacts section, p. 123	

GRI standard and year of publication	Indicator	Page number, section and/or URL	Exemptions/ Comments
	102-54 Level of compliance with GRI standards	About the Report, p. 82	
	102-55 GRI content index	Index of GRI Elements section, p. 113	
	102-56 External assurance	About the Report, p. 82	
<b>Material topics</b>			
<b>Economy</b>			
<b>GRI 103: Management Approach (2016)</b>	103-1 Explanation of the Material Topic and its Boundary	List of Topics and Materiality Map, p. 113	
	103-2 The Management Approach and Its Components	Financial and economic indicators section, p. 101	
	103-3 Evaluation of the Management Approach	–	Not conducted
<b>GRI 203: Indirect economic impacts (2016)</b>	203-1 Infrastructure support	Key events of the year, including social projects, p. 10	
	203-2 Significant indirect economic impacts	Attracting young professionals section, p. 80	
<b>Ecology</b>			
<b>GRI 103: Management Approach (2016)</b>	103-1 Explanation of the Material Topic and its Boundary	List of Topics and Materiality Map, p. 113	
	103-2 The Management Approach and Its Components	Environment Impact Management, p. 92	Comprehensive environmental impacts management policy covers all major topics in this area.
	103-3 Evaluation of the Management Approach	–	Not conducted
<b>Materials</b>			
<b>GRI 301: Materials (2016)</b>	301-1 Consumed materials by weight or volume	Environment Impact Management, p. 92	

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<b>Water</b>			
	303-1 Use of water resources	Water Management and Water Resources Conservation, p. 95	
<b>GRI 303: Water and Discharges (2016)</b>	303-3 Water Intake	Water Management and Water Resources Conservation, p. 95	
	303-4 Water discharge	Efficient Industrial Wastes Management, p. 96	
<b>Emissions</b>			
<b>GRI 305: Emissions (2016)</b>	305-1 Direct greenhouse gas emissions	Greenhouse gas (CO <sub>2</sub> ) emissions section, p. 94	
	305-4 Intensity of greenhouse gas emissions	Greenhouse gas (CO <sub>2</sub> ) emissions section, p. 94	
	305-5 Reduction of greenhouse gas emissions (COR2R)	Greenhouse gas (CO <sub>2</sub> ) emissions section, p. 94	
	305-7 Emissions of NO <sub>x</sub> , SO <sub>x</sub> and other significant pollutants	Atmosphere air protection section, p. 93	
<b>Waste</b>			
<b>GRI 306: Discharges and waste (2016)</b>	306-2 Total mass of waste by type and method of disposal	Efficient Industrial Wastes Management, p. 96	
<b>Compliance with requirements</b>			
<b>GRI 307: Compliance with requirements (2016)</b>	307-1 Information on non-compliance with environmental legislation and regulatory requirements	Greenhouse gas (CO <sub>2</sub> ) emissions section, p. 94	
<b>Social category</b>			
<b>GRI 103: Management Approach (2016)</b>	103-1 Explanation of the Material Topic and its Boundary	List of Topics and Materiality Map, p. 113	
	103-2 The Management Approach and Its Components	Personnel Management Policy section, p. 76	A comprehensive personnel policy covers all the main topics in this area
	103-3 Evaluation of the Management Approach	–	Not conducted

GRI standard and year of publication	Indicator	Page number, section and/or URL	Exemptions/ Comments
<b>Employment</b>			
<b>GRI 401: Employment (2016)</b>	401-1 Hired employees and staff turnover	Staff turnover section, p. 78	
<b>Relations between employees and management</b>			
<b>GRI 402: Relations between employees and management (2016)</b>	103-1 Существенность и границы	List of Topics and Materiality Map section, p. 113	
<b>Health and Safety</b>			
<b>GRI 403: Health and Safety (2018)</b>	403-1 Representation of employees in official joint health and safety committees with the participation of representatives of management and employees	Occupational health and safety Council, p. 86	
	403-2 Types and level of injury, occupational diseases, lost day rate and the rate of absenteeism, and total number of deaths related to work	Types and the level of industrial injuries section, p. 87	
	403-3 Workers with high injury and a high risk of morbidity associated with their types of activities	Employees of the Corporation whose professional activity is associated with a high risk of injury section, p. 89	
<b>Training</b>			
<b>GRI 404: Training (2016)</b>	404-2 Skills Development Programs	Staff training and development, p. 79	
<b>Diversity and equal opportunities</b>			
<b>GRI 405: Diversity and equal opportunities (2016)</b>	405-1 Composition of governing bodies	Staff structure by category and gender section, p. 76	

GRI standard and year of publication	Indicator	Page number, section and/or URL	Exemptions/ Comments
<b>Local communities</b>			
<b>GRI 103: Management Approach (2016)</b>	103-1 Explanation of the Material Topic and its Boundary	List of Topics and Materiality Map, p. 113	
	103-2 The Management Approach and Its Components	Stakeholder Engagement, p. 71	
	103-3 Evaluation of the Management Approach	-	Not conducted
<b>GRI 413: Local Communities (2018)</b>	413-1 Programs of interaction with local communities, assessment of the impact of activities on local communities and development of local communities	Stakeholder Engagement, p. 71	
<b>Customer health and safety</b>			
<b>GRI 103: Management Approach (2016)</b>	103-1 Explanation of the Material Topic and its Boundary	List of Topics and Materiality Map, p. 113	
	103-2 The Management Approach and Its Components	Customer Safety, p. 90	
	103-3 Evaluation of the Management Approach	-	Not conducted
<b>GRI 416: Customer health and safety (2016)</b>	416-1 Product safety assessment for the consumer	Customer Safety, p. 90	
<b>Additional information</b>			
<b>Industry Protocol on Electric Power Industry GRI G4</b>	G4-EU1 Installed capacity	Installed electric power, p. 20	
	G4-EU2 Power generation	Key Performance Indicators, p. 12	
	G4-EU3 Number of personal accounts of household, industrial, institutional and commercial consumers	Number of customers by regions, p. 21	
	G4-EU4 The length of aboveground and underground transmission and distribution lines of electricity, broken down by regulation modes	PTL length, p.20	
	G4-EU5 Distribution of quotas for COR2R emissions or equivalents	Greenhouse gas (CO <sub>2</sub> ) emissions section, p. 94	

# GLOSSARY, ABBREVIATIONS

<b>Overhead power line</b>	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.
<b>Overhead transmission lines</b>	shall mean the structures intended for transmission of electric power over a distance by wires.
<b>Gigacalorie</b>	shall mean a unit of measurement of thermal energy used for assessment in the heat power industry, heating systems and the utilities sector.
<b>Gigacalorie per hour</b>	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.
<b>Cooling tower</b>	shall mean a structure shaped like an exhaust tower providing air stack effect.
<b>Goodwill</b>	shall mean the difference between the price of a company and the fair value of all its assets.
<b>Ash</b>	shall mean an incombustible residue (in the form of dust) which consists of mineral impurities left after complete combustion of fuel.
<b>Ash dump site</b>	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.
<b>Calorie or cal</b>	shall mean an off-system unit for measuring the amount of heat. Boiler shall mean a device for generating pressurised steam or hot water through fuel combustion, use of electric power, heat of exhaust gas or technological process.
<b>Boiler unit</b>	shall mean a device for generating pressurised steam or hot water through fuel combustion, use of electric power, heat of exhaust gas or technological process.
<b>Power transmission line or PTL</b>	shall mean a structure consisting of wires (cables) and auxiliary devices for transmission of electric power from power plants to consumers.
<b>Megawatt</b>	shall mean a unit of power measurement in electric power production.
<b>Pavlodar HNs</b>	shall mean Pavlodar heat networks.
<b>Pump</b>	shall mean a device for pressure movement (suction, discharge) of fluid (primarily) as a result of energising (kinetic or potential energy).
<b>Pumping station</b>	a pump set with ancillary equipment mounted according to a certain model that ensures operation of the pump.
<b>Substation</b>	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.
<b>Combined heat and power plant or CHP or cogeneration unit</b>	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.
<b>Transformer</b>	shall mean a device for converting any significant properties of energy (e.g., electric transformer, torque converter) or objects (e.g., photo transformer).
<b>Turbine generator</b>	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.
<b>Installed capacity</b>	shall mean an effective value of the turbine generators' rated capacity.

<b>Installed heat capacity of the plant</b>	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.
<b>Installed electrical capacity of the energy system</b>	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.
<b>Emulsifier</b>	shall mean a wet ash and dust cleaning device operating in the phase inversion mode.
<b>COSO</b>	shall mean the Committee of Sponsoring Organisations of the Treadway Commission.
<b>EBITDA</b>	shall mean an analytical indicator, which means earnings before interest, taxation, depreciation and amortisation.
<b>ESAP</b>	shall mean Environmental and Social Action Plan.
<b>ISO</b>	shall mean International Organisation for Standardisation.
<b>KEGOC</b>	shall mean Kazakhstan Electricity Grid Operating Company JSC.
<b>OHSAS</b>	shall mean International occupational health and safety management system.
<b>JSC</b>	shall mean a joint-stock company.
<b>Subsidiaries</b>	shall mean subsidiary organizations.
<b>AEDC or Akmola EDC</b>	shall mean Akmola Electric Distribution Company JSC.
<b>ASCAHE</b>	shall mean automatic system for commercial accounting for heat energy.
<b>ASCAE</b>	shall mean automatic system for commercial accounting of electricity.
<b>GDP</b>	shall mean gross domestic product.
<b>OHL</b>	shall mean overhead lines.
<b>Pollutants</b>	shall mean contaminants.
<b>Gcal</b>	shall mean gigacalorie.
<b>Gcal-hr</b>	shall mean gigacalorie per hour.
<b>GTPP</b>	shall mean gas turbine power plant.
<b>HEPP</b>	shall mean hydroelectric power plant.
<b>EBRD</b>	shall mean European Bank for Reconstruction and Development.
<b>FARD</b>	shall mean fly ash removal device.
<b>kWh</b>	shall mean shall mean kilowatt per hour.
<b>MW</b>	shall mean megawatt.
<b>MNE RK</b>	shall mean the Ministry of National Economy of the Republic of Kazakhstan.
<b>EP</b>	shall mean environment protection.

NGO	shall mean a non-governmental organisation.
Pavlodar EDC	shall mean Pavlodar Electric Distribution Company JSC.
PCHP-2	shall mean Petropavlovsk combined heat and power plant No. 2.
PE	shall mean PAVLODARENERGO JSC.
RK	shall mean the Republic of Kazakhstan.
PGA	shall mean power grid area.
ICS	shall mean internal control system.
BoD	shall mean the Board of Directors.
SSIW	shall mean self-supporting insulated wire.
ABC	shall mean aerial bundled conductor.
NK EDC	shall mean North-Kazakhstan Electric Distribution Company JSC
SKE	shall mean SEVKAZENERGO JSC.
MM	shall mean mass media.
RMS	shall mean risk management systems.
INR	shall mean inventories.
SPS	shall mean solar power station
LLP	shall mean a limited liability partnership.
TPP	shall mean a thermal power plant.
CHP	shall mean a 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.

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