Annual report 2018

PAVLODARENERGO

JOINT-STOCK COMPANY

PAVLODARENERGO
JOINT-STOCK COMPANY

TABLE OF CONTENTS

LETTER OF THE MANAGEMENT

DYUSSENBAY TURGANOV

Chairman
of the Board of Directors of PAVLODARENERGO JSC

Dear shareholders and partners!

This is the Annual Report of PAVLODARENERGO JSC which provides an overview of the Company's operating results for 2018, including performance indicators and social projects.

In the reporting year, the Company completed a number of events, the most significant of which was a comprehensive renovation of a turbine no. 6 at Pavlodar CHP-3. Implementation of the project allowed the Company to increase the installed capacity of the plant to 555 MW. It should be noted that the Company used technologies thanks to which the project became unique in Kazakhstan and the CIS. Replacement of the turbine became possible due to cooperation of PAVLODARENERGO JSC with Ural Turbine Plant, ELSIB Research and Production Association (Novosibirsk), GERB company (Germany) and Sevkazenergoprom Design Institute.

Besides the turbine no. 6, modernization and renovation operations were carried out at turbines no. 1, 2, 4, 5. Thus, the turbine workshop of the plant was upgraded by 90 percent. The total cost exceeded KZT 35 bln. The performance of such an extensive work became possible thanks to the limiting electricity rate program implemented in 2009-2015, as well as the support from shareholders of Central-Asian Electric Power Corporation JSC.

In the reporting year, the Company completed construction, installation and commissioning work at 220/110 kV Promyshlennaya substation as part of strengthening the connection between Pavlodar electrical generation system and the unified energy system of Kazakhstan. Besides, the Company constructed an 220 kV open switchgear and renovated the existing 110 kV cells. The allocated funds amounted to KZT 3.4 bln. The project is expected to become effective immediately after the completion of work by KEGOC JSC in 2019. This will be a significant event since Promyshlennaya substation is an essential component of the system: it supplies electricity to such major industrial enterprises of Pavlodar as Pavlodar Petrochemical Plant, KSPSteel, Kazakhstan Temir Zholy and Casting Production Fund LLP.

The investment project of 2018, which includes the reconstruction of the heating main to the swimming pool in Usolsk district of the city of Pavlodar, is of particular social importance. The heating main supplies heat to the new swimming pool and will also be used to reserve heat load, taking into account further active development of the district.

In 2018, PAVLODARENERGO JSC continued to introduce digital technology at its enterprises. A total of 22,553 ASCAE devices were installed at Pavlodar EDC JSC for households with the use of LPWAN wireless technology. In general, 2,928 consumers were provided with ASCAE devices in 2018.

The introduction of smart power-supply systems is closely associated with the establishment of direct contacts with consumers. An active development of this area is confirmed by the participation of Pavlodarenergosbyt LLP in the Open Pavlodar project implemented by the Akimat of Pavlodar city. As a result, a new service center was opened where consumers can make payments and receive answers to their questions regarding the activities of enterprises of PAVLODARENERGO Group of companies.

All of the above projects make a significant contribution to the achievement of the main goals of the Company: quality, reliable and uninterrupted power supply in Pavlodar region. PAVLODARENERGO JSC performs its work in line with the fundamental principles of business transparency and responsibility.

OLEG PERFILOV

General Director of
PAVLODARENERGO JSC

Dear colleagues and partners!

In 2018, PAVLODARENERGO JSC continued to provide uninterrupted supply of electricity and heat to consumers in the region. In the reporting period, the Company produced a total of 3,814 mln kWh of electricity and 4,981.353 thous. Gcal of heat. Revenue from sales of core services increased by KZT 2,086 mln and amounted to KZT 51,970 mln. In the reporting period, the number of electricity consumers increased by 0.86% compared to the previous year reaching nearly 224,675. Today, the number of heat consumers is 169,312, which is 1.3% more compared to 2017. Electricity sales in 2018 amounted to 1,379 mln kWh, which is 3.5% more compared to 2017.

Implementation of the investment program aimed at modernization and renovation of fixed assets was continued. The Company completed the third stage of the largest investment project - renovation of the turbine no. 6 at Pavlodar CHP-3 with the replacement of high and medium pressure cylinders, as well as a generator. This allowed the Company to increase the turbine capacity from 110 MW to 125 MW and minimize the gap between the installed and available capacity of the plant. Renovation of the equipment at CHP-3 made it possible to reduce per-unit fuel consumption by 8.1%, with the heat generation by 6.1%, by increasing the efficiency of turbines and boilers.

Other large projects in 2018 include: at CHP-3 - the first stage of construction of a new chimney no. 2 and renovation of a condenser of the turbine no. 1 with an increase in the thermal efficiency of the turbine. At CHP-2 - modernization of equipment of the fuel and transport workshop, which included the acquisition and installation of electronic railway scales, as well as renovation of boiler unit no. 5.

In 2018, large-scale works were performed in the city of Pavlodar to replace thermal insulation with polyurethane foam at sections of the heating mains no. 37a and no. 39 with a total length of 4.4 km. The investment program included the development of design and estimate documentation for projects, including the construction of a heat network section and extension of an off-site heat network in Dachny microdistrict. The necessity and significance of the project are caused by the rise of groundwater and reservation of the heat load for the new Dostyk microdistrict.

The Company continued works in Ekibastuz to remove 2,516 km of district heating networks from the private areas of low-rise buildings. Separate laying of cold water and heat supply pipelines improves the quality of providing consumers with heat, ensures even distribution of heat and hot water supply, reduces pipe corrosion and direct excess losses.

In 2018, a new 35 kV L-69 Galkino-Karabidai overhead power line with a length of 22.655 km was constructed to replace the existing one. The line provided a reliable electricity supply to consumers of Shcherbakty district. In connection with the annual increase in load, the project of renovation of 0.4-10 kV distribution networks in Pavlodar region and construction of modern 10/0.4 kV substations and 0.4-10 kV power lines with a higher transmission capacity and with a length of 35 km is of great importance. Modernization of equipment was carried out at the following substations: 220/110kV Promyshlennaya, 10/35/6 kV Maykain-64, 110/10 kV Vostochnaya Gorodskaya, and 220/35/6 kV NS-12. The Company started the construction of 110/10 kV Severnaya Gorodskaya substation with the installation of two 40 MVA power transformers in the city of Pavlodar.

The Company still pays great attention to work with consumers. In 2018, we implemented a new campaign to inform the public about the need to prepare house heating systems for the autumn and winter season. As part of the campaign, various communication channels were used to reach the maximum number of consumers. Also, we held the Open Day for Condominiums, which provided a possibility to optimize collaboration with representatives of the city condominiums.

Social projects of PAVLODARENERGO JSC were implemented in 2018 as part of its traditional policy aimed at participating in the social life of the region as well as maintaining and developing a system of social benefits and guarantees for employees.

First of all, this includes the emergence of new socially significant subsidiaries in the structure of PAVLODARENERGO JSC: Energetik health care center and Energetik recreation center. The purpose of both facilities is to provide services primarily to employees of PAVLODARENERGO Group of companies. In the health care center, we updated the equipment and expanded the range of services. To ensure the convenience of payment and the possibility of obtaining timely medical care, a medical fund was introduced at the enterprises with the consent of the team. The recreation center was also subjected to transformations which included primarily the improvement of service quality and expanding the types of recreation services.

In 2018, within the framework of the memorandum of joint implementation of social projects concluded between the Akimat of Pavlodar region and Central-Asian power-energy company JSC, we continued the construction of a high-rise apartment house for employees of PAVLODARENERGO JSC Group of companies, the commissioning of which is expected in the second half of 2019.

Our company remains a guarantor of stable energy supply in the region, therefore we take all measures to ensure high-quality and uninterrupted energy supply to our consumers.

KEY INFORMATION

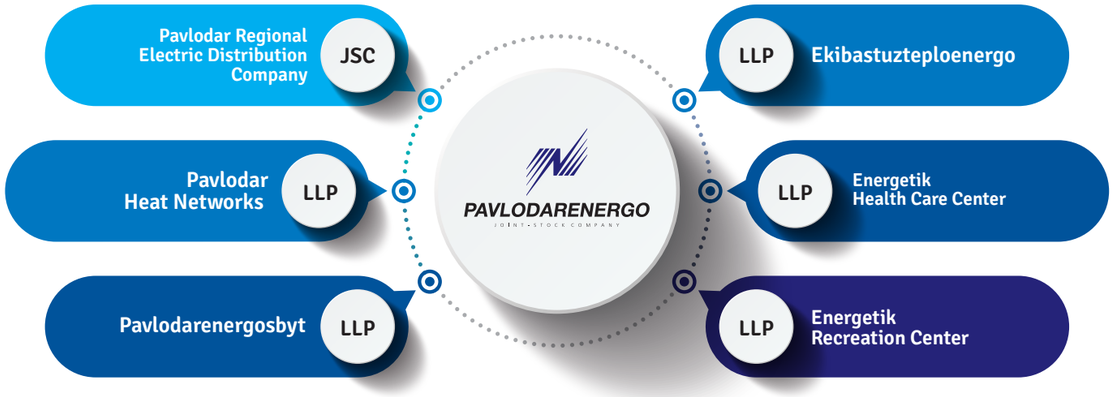
Business profile

PAVLODARENERGO Joint-Stock Company is a vertically integrated company consisting of generation, transmission and sales enterprises.
The Company is part of Central-Asian Electric Power Corporation (CAEPCO) JSC.
PAVLODARENERGO JSC has implemented corporate governance standards and improves its business processes and practices in accordance with current international standards in the field of production, environmental protection, occupational safety and welfare.

Over 5,000 employees
Over 270,000 consumers
3.6 % – share of the Company in the electricity generation market in 2018

677 MW– installed electricity capacity
2,268 Gcal/h – installed heat capacity

KEY INFORMATION



COMPANY RATING

On July 23, 2018, Fitch Ratings international rating agency confirmed ratings of PAVLODARENERGO JSC at “B+” level with “Stable” outlook.

Long-term issuer default ratings in foreign and national currencies were affirmed at “B+” level with “Stable” outlook. National long-term rating was affirmed at “BBB(kaz)” level with “Stable” outlook. Senior unsecured rating in national currency was affirmed at “B+” level with “RR4” recovery rating.

MAIN PRODUCTION CHARACTERISTICS

CHP production parameters

CHP	Installed generating capacity, MW	Renovation of equipment since 2009, %	Year of foundation
Pavlodar CHP-3	555	91	1972
Pavlodar CHP-2	110	0	1961
Ekibastuz CHP	12	100	1956

Power transmission lines, km

PTL type	Length, km
220 kV	14.3
110 kV	2,798.0
35 kV	2,395.5
6-10 kV	5,721.3
0.4 kV	4,429.6
Total	**15,358.7**

Substations

Substation type	Number, unit
220 kV	4
110 kV	74
35 kV	102
6-10 kV	3,585
Total	**3,765**

Total heat network length, km

Pavlodar	419.9
Ekibastuz	342.3
Total:	**762.2**

Number of consumers as of January 1, 2019

Electricity	Heat
224,675	169,312

KEY PERFORMANCE INDICATORS

Sales

Year	Sales (KZT bln)
2016	45.1
2017	49.9
2018	52.0

EBITDA, KZT bln

Year	EBITDA KZT (bln)
2016	15.9
2017	17.4
2018	11.3

Net profit, KZT bln

Year	Net profit (KZT bln)
2016	6.5
2017	7.6
2018	2.3

EBITDA margin, %

Year	EBITDA margin %
2016	35
2017	35
2018	22

Energy generation

Year	Electricity (mln kWh)	Heat (thous. Gcal)
2016	3,829	4,568
2017	4,074	4,445
2018	3,815	4,981

Assets

Year	Current assets, KZT bln	Non-current assets, KZT bln
2016	13.0	119.4
2017	13.9	126.2
2018	11.6	133.8

Investments

Year	Investments, KZT bln
2016	11.8
2017	10.5
2018	11.7

KEY EVENTS FOR THE REPORTING PERIOD

PAVLODARENERGO
JOINT-STOCK COMPANY

JANUARY

Based on the performance results for 2017, 26 employees of PAVLODARENERGO JSC were awarded diplomas of the Emergency Department of Pavlodar region and the Emergency Office of the city of Pavlodar.

FEBRUARY

According to Forbes Kazakhstan magazine, PAVLODARENERGO JSC was included in the rating of the 50 largest private companies of our country.

Representatives of the Public Relations Department of PAVLODARENERGO JSC took part in the anti-crisis PR training arranged by the Thomson Foundation and the Legal Media Center of Kazakhstan with the support of the British Embassy.

MARCH

One of the stages of Koktem-2018 republican command-and-staff exercise on flood control was held in Kenzhekol village. Emergency technical teams of Pavlodar Regional Electric Distribution Company JSC and Pavlodar Heat Networks LLP took part in the review of special equipment.

APRIL

A memorandum of mutual cooperation was signed between the Labor Administration of Pavlodar Region and the Local Trade Union of Energy System Workers of PAVLODARENERGO Public Association.

As part of the World Safety Day, a competition of young specialists was held with the participation of teams representing all energy subsidiaries of CAEPCO JSC. Representatives of PAVLODARENERGO JSC became the winners.

On April 23-24, the normal mode of the heating season of 2017-2018 ended in Pavlodar and Ekibastuz.

MAY

The structure of PAVLODARENERGO JSC Group of companies included Energetik Health Care Center LLP and Energetik Recreation Center LLP primarily intended for health improvement and recreation of the Group's employees.

Employees of PAVLODARENERGO JSC completed training to work with INFOPRO system in order to plan the optimal composition and operating modes of the power plant equipment.

A briefing with the participation of General Director of PAVLODARENERGO JSC was held at the site of the regional communications service of Pavlodar region. The main topic of the briefing was the implementation of environmental protection plans and measures by the company.

JUNE

On June 6, the meeting in the Open Day format was held for the first time between top managers of condominiums and Pavlodar Heat Networks LLP.

The team of PAVLODARENERGO JSC won the second place in the summer Presidential all-around at the 47th sports and athletic contest among industrial enterprises of Pavlodar.

According to the results of the survey conducted among employees of PAVLODARENERGO enterprises, the project of a medical fund was restored to provide a wide range of services at Energetik Health Care Center to employees of the Group.

On June 22, a press lunch with the participation of General Director of PAVLODARENERGO JSC and journalists from leading regional and republican mass media was organized with the support of the regional communications service of Pavlodar region.

JULY

A steel frame of the upper structure of the turbine no. 6 foundation with a total weight of 358 tons was installed at Pavlodar CHP-3.

The construction of a new distribution substation was started in Aksu to ensure uninterrupted supply of electricity to the city.

AUGUST

Service centers of Pavlodarenergosbyt LLP introduced a push-button system for assessing the quality of customer service. The customer interaction system provides the possibility to monitor the quality of work of specialists and cashiers of the service center.

A generator stator was installed at the turbine no. 6 of Pavlodar CHP-3 using two paired 100-ton bridge cranes.

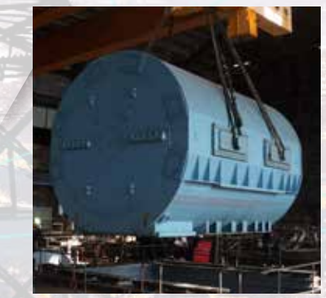
SEPTEMBER

A press tour to facilities of PAVLODARENERGO Group of companies was arranged to cover the implementation of investment projects.

Pavlodarenergosbyt LLP was certified to verify compliance with ISO-9001.2015 standard in the field of provision of services for sales of heat and electricity.

The Friendship special interest club of the Council of Veterans of PAVLODARENERGO JSC celebrated its 10th anniversary.

The heating season of 2018-2019 started on September 14 in Ekibastuz and on September 17 in Pavlodar.



At the end of 2018, PAVLODARENERGO JSC ranked 18th among the 50 largest private companies of Kazakhstan, rising from the 25th line held in 2017 according to Forbes Kazakhstan experts.

OCTOBER

On October 1, a new subsidiary of PAVLODARENERGO JSC - Ekibastuzteploenergo LLP was established in the city of Ekibastuz. The new company combined Ekibastuz CHP and Ekibastuz Heat Networks.

A simplified registration procedure in the Personal Account service was introduced on the website of PAVLODARENERGO JSC.

On October 3, members of the Board of Directors of Central-Asian Electric Power Corporation JSC visited facilities of PAVLODARENERGO JSC as part of the working trip.

A press tour was arranged to facilities of Pavlodar Heat Networks LLP during which the heating season aspects and the implementation of the investment program were discussed.

A press conference was held with the participation of top managers of Ekibastuzteploenergo LLP to discuss the heating season issues in Ekibastuz.

NOVEMBER

A comprehensive renovation of the turbine no. 6 at CHP-3 was completed by changing T-100/120-130 type to T-120/130-130 PR2 type, as a result of which the installed capacity of the turbine increased by 15 MW.

The third annual competition of scientific projects in candidacy for the corporate scholarship of PAVLODARENERGO JSC was started. This project is intended for students of higher and secondary special educational institutions of Pavlodar region who study industry-specific disciplines.

An off-site meeting of the Coordinating Council of representatives of local trade unions of Pavlodar region was held at PAVLODARENERGO JSC.

A briefing with the participation of top managers of PAVLODARENERGO JSC was held at the site of the regional communications service of Pavlodar region during which environmental protection measures implemented by the company were discussed.

DECEMBER

As part of the Open Pavlodar project implemented by the Akimat, a new service center was opened in Pavlodar where customers can make payments, get advice on energy supply issues and submit applications for obtaining specifications for connection to electric and heat networks.

A new 50-meter Ertis OLYMPIC swimming pool was opened in Usolsk district of Pavlodar city. Central-Asian power-energy company JSC (CAPEC) was among the companies participated in the implementation of the social project: its subsidiary PAVLODARENERGO JSC installed external utilities - electricity, water supply, sewage and heat supply systems.

COMPANY OVERVIEW

HISTORY

1965
By the Decree no. 688 of the Council of Ministers of the Kazakh SSR, a regional energy department was reorganized into Pavlodarenergo Production Association.

1971
Pavlodar Heating Network Enterprise was created, which made it possible to centralize the city's district heating processes and gave a boost to the development of Pavlodar's heating infrastructure.

1995-1997
PAVLODARENERGO Production Association becomes a republican state enterprise. In 1997 , the assets of Pavlodar CHP-2 and CHP-3 were purchased by Central-Asian power-energy company (CAPEC JSC).

2002
PAVLODARENERGO Open Joint-Stock Company is created; in 2003, it is reorganized into a joint-stock company. Pavlodar CHP-2 and CHP-3 form the generating capacity of the system. Pavlodar Electric Distribution Company JSC joins PAVLODARENERGO JSC. In the same year, Energocenter JSC joins the Company and in 2011 it was reorganized into Pavlodarenergosbyt LLP.

2005
The Company includes Pavlodar Heat Networks and forms Pavlodar Heat Networks JSC, which in 2011 became a Limited Liability Partnership.

2007
Ekibastuz CHP and Ekibastuz Heat Networks join PAVLODARENERGO JSC.

2008-2009
CAPEC JSC transferred the stock of PAVLODARENERGO JSC to the authorized capital of its subsidiary - Central-Asian Electric Power Corporation (CAEPCO JSC). The shareholders of CAEPCO JSC include CAPEC JSC and international development institutions such as the European Bank for Reconstruction and Development and Islamic Infrastructure Fund.

2018
Ekibastuzteploenergo LLP was founded, which included Ekibastuz Heat Networks and Ekibastuz CHP.
In the same year, Energetik Health Care Center LLP and Energetik Recreation Center LLP were included in PAVLODARENERGO JSC group of companies.

MISSION

Improving the living standards for consumers and creating favorable conditions for economic growth in Pavlodar region by providing high-quality energy supply services for households, businesses and organizations.

The Company is pursuing this goal by operating in accordance with international standards in the field of production, environmental protection, occupational safety and welfare.

The Company's performance efficiency is based on its employees, whose value lies in their high professionalism and the ability to work as a team with a focus on results.

VISION

PAVLODARENERGO JSC is one of the largest enterprises in North-Eastern Kazakhstan in the field of production, transmission and distribution of electricity and heat. PAVLODARENERGO JSC supplies electricity and heat to Pavlodar, Ekibastuz, Aksu and districts of Pavlodar region. Some of the electricity produced by the Company is supplied to other regions of Kazakhstan.

The Company successfully uses the advantages of the holding structure by combining dynamism and flexibility of its business units (enterprises within the Group) with stability and reliability of centralized management.

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

BUSINESS MODEL

CAPITAL

FINANCIAL CAPITAL
Authorized capital - KZT **16,664** mln

PRODUCTION CAPITAL
Three CHPs
Heat networks: **419.9** km in Pavlodar and **342.3** km in Ekibastuz
15,358.7 km of electricity networks
Sales company

NATURAL CAPITAL
Coal consumption - **3** mln **697** thous. tons
Heating oil consumption - **5.3** thous. tons
Water consumption - **55,637,846** m³

HUMAN CAPITAL
5,108 employees
1,596 employees with a college degree
581 people – talent pool
11.9% staff turnover
PROFENERGY program

INTELLECTUAL CAPITAL
Ellipse, Mobility, ASCAE, ASCAHE, Thesis process automated control system, billing, boiler and turbine generator automated control system, Infopro

SOCIAL CAPITAL
9 stakeholder groups
Social policy

ACTIVITY

CORE ACTIVITIES

Generation of heat and electricity – combined heat and electricity production at three CHPs of the Company.

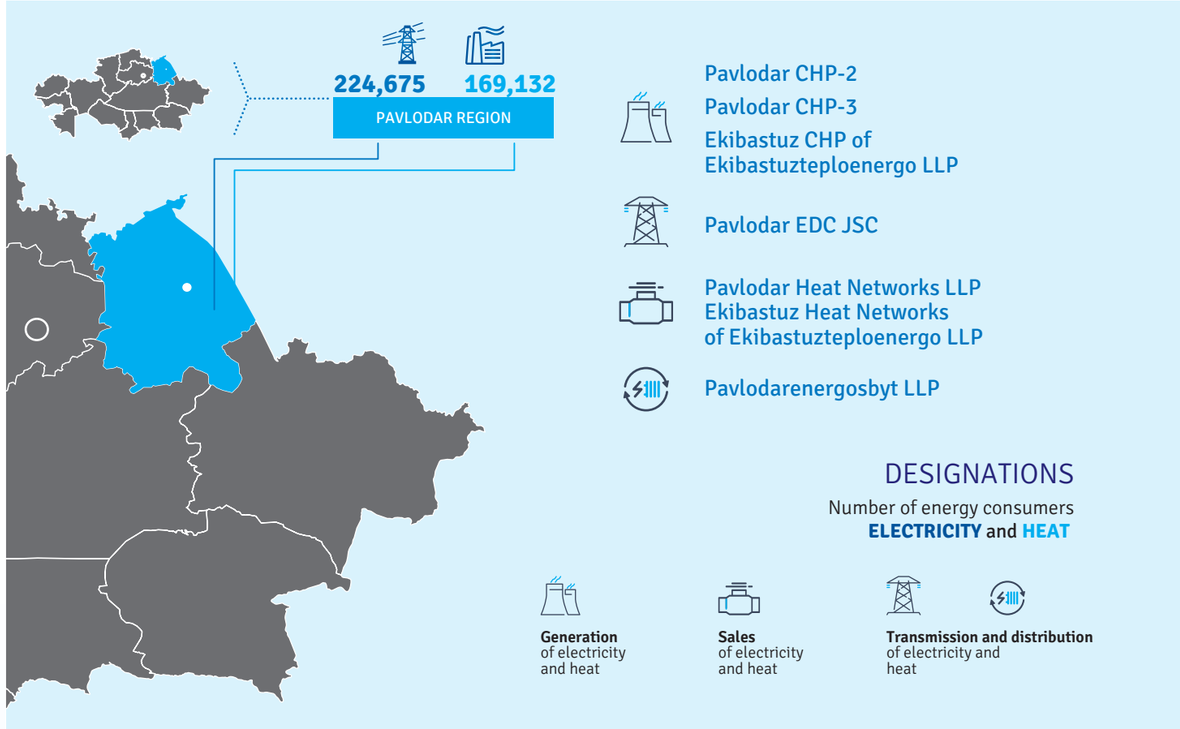
Transmission and distribution of heat and electricity – energy transmission from generating facilities to consumers is carried out through electrical grids, which include power converters, power transmission lines and switchgears.

Sales of heat and electricity – activities aimed at selling electricity and heat to consumers.

INVESTMENT ACTIVITIES
- Renovation of power equipment
- Reconstruction of heat and power networks
- Process automation

GEOGRAPHY OF OPERATIONS

The Company supplies electricity and heat to consumers in Pavlodar city, electricity to districts of Pavlodar region and Aksu city, and heat to Ekibastuz city.



RESULTS FOR 2018

- Investments in the modernization of production facilities - KZT 11.7 bln.
- Electricity production - 3,814 mln kWh
- Heat production - 4,981.353 thous. Gcal
- Commissioning of a turbine No. 6 at Pavlodar CHP-3
- KZT 3,257.810 mln - environmental protection expenses
- Implementation of the Environmental and Social Action Plan
- Injury rate reduction by 40%
- 0 occupational deaths
- 2,928 thous. consumers are equipped with ASCAE
- 273 heat meters installed
- Implementation of the Stakeholder Engagement Plan

PAVLODARENERGO JSC is a vertically integrated company comprising all elements of the energy supply chain in Pavlodar region (generation, transmission and sales of energy resources).

PAVLODARENERGO JSC consists of:

- Pavlodar CHP-2;
- Pavlodar CHP-3;
- Pavlodar Heat Networks LLP;
- Pavlodar Regional Electric Distribution Company JSC;
- Pavlodarenergosbyt LLP;
- Ekibastuzteploenergo LLP (Ekibastuz CHP and Ekibastuz Heat Networks);
- Energetik Health Care Center LLP;
- Energetik Recreation Center LLP.

Pavlodar CHP-3 of PAVLODARENERGO JSC

is the biggest energy generating facility of the Company. The plant's installed electricity generation capacity is 555 MW. CHP-3 supplies electricity to industrial enterprises of the city, local service entities and households. The plant is one of the most modern in Kazakhstan: since 2009, 91% of its facilities have been upgraded. Modernization of the plant will continue until 2020.

Pavlodar CHP-2 of PAVLODARENERGO JSC

The plant's installed electricity generation capacity is 110 MW. CHP-2 supplies electricity to industrial enterprises of the city, local service entities and households. It has the country's highest rate of using the installed electricity generating capacity during the heating season of nearly 93%.

Ekibastuz CHP of Ekibastuzteploenergo LLP

The plant's installed electricity generation capacity is 12 MW. Ekibastuz CHP is the only source of heat supply in Ekibastuz and one of the oldest industrial facilities in the region: in 2018, the plant celebrated its 62nd anniversary.

Pavlodar Regional Electric Distribution Company JSC

The core activity of the Company is transmission and distribution of electricity in 11 districts of Pavlodar region, as well as in the cities of Pavlodar and Aksu. The production facilities are located in Pavlodar city and in Pavlodar region. The serviced area is 105.9 thous. km2.
The total length of power lines of Pavlodar EDC JSC is 15,359 km, including 14,574 km of overhead power transmission lines and 785 km of cable lines.

Pavlodar EDC JSC connects to the Unified Energy System of Kazakhstan and Russian grids through the network of Kazakhstan Electricity Grid Operating Company JSC (KEGOC JSC), which allows the Company to transmit electricity generated by Pavlodar CHPs no.1, 2 and 3. CHP-1 belongs to Aluminum of Kazakhstan JSC, while CHP-2 and CHP-3 belong to PAVLODARENERGO JSC.

Most of industrial enterprises in Pavlodar region are connected to the electric networks of Pavlodar EDC JSC. About 5,000 enterprises of various ownership forms are located in this regions and its population is 747,100 people.
Pavlodar EDC JSC consists of enterprises performing maintenance and repair of 0.4-10 kV electricity distribution lines and 35-220 kV substations:

- Western power network enterprise: Aktogay, Bayan-Aul, Irtysh, Maysk district power networks and Aksu power networks (left shore);
- Eastern power network enterprise: Zhelezinsk, Kachirsk, Akkuly, Pavlodar, Uspensk, Scherbaktinsk district power networks (right shore);
- Municipal Electrical Utility operates and carries out maintenance of 0.4-10 kV distribution networks in the city of Pavlodar;
- Production and Repair Enterprise operates and carries out maintenance of 35-220 kV high-voltage power transmission lines in Pavlodar region and repair of 10-220 kV high-voltage equipment at substations of structural units;
- Municipal Intra-House Network Enterprise, which does not provide regulated services and works under the contract for maintenance of 0.4 kV networks of high-rise buildings in Pavlodar and Aksu cities;
- Production departments, services and units.

Pavlodar Heat Networks LLP

Pavlodar Heat Networks LLP transmits and distributes heat to consumers in the city of Pavlodar. The Company focuses on improving operational reliability of heat networks and coordination of heat generation, transmission and consumption processes.
A total length of heating networks in Pavlodar is 742.2 km, including consumer networks:
– main heating networks – 115 km;
– district heating networks – 281.9 km;
– hot water supply networks – 23 km;
– consumer networks - 322.3 km;
– pumping stations – 11;
– central heating points - 22.

Ekibastuz Heat Networks of Ekibastuzteploenergo LLP

The enterprise transmits and distributes heat to consumers of Ekibastuz. The Company focuses on improving operational reliability of heat networks and coordination of heat generation, transmission and consumption processes.
A total length of heating networks in Ekibastuz is 422 km, including consumer networks:
– main heating networks – 37.6 km;
– district heating networks – 304.7 km;
– consumer networks - 80.2 km;
– central heat distribution station – 1;
– discharge pumping stations – 4.

Pavlodarenergosbyt LLP

Pavlodarenergosbyt LLP supplies electricity and heat to consumers in Pavlodar region and the cities of Pavlodar, Ekibastuz and Aksu.
The Company supplies:

- electricity and heat in the city of Pavlodar;
- electricity in districts of Pavlodar region and the city of Aksu;
- heat in the city of Ekibastuz.

Pavlodarenergosbyt LLP implements the policy of improving the quality of customer service using modern technologies. For customer comfort, bills can be paid at second-tier banks, online and via ATMs and POS terminals. Agreements for accepting payments were signed with 7 commercial banks, Kazpost JSC branch, Astana-Plat LLP and Kazakhstan Interbank Settlement Center of the National Bank of the Republic of Kazakhstan.

Average electricity rates
of Pavlodarenergosbyt LLP for 2016–2018

Electricity	1.01.2016	3.05.2017	1.09.2017	1.10.2018
KZT/kWh, excluding VAT	12.30	12.37	12.92	12.39
KZT/kWh, including VAT	13.776	13.854	14.47	13.877

Average heat rates of Pavlodarenergosbyt LLP for 2016–2018
Pavlodar

	01.01.2016	01.07.2016	01.01.2017	01.04.2017	01.01.2018	01.05.2018	01.12.2018–31.12.2018
Heat	2,953.66	2,992.12	3,309.63	3,309.63	3,685.55	3,738.4	3,731.12

Ekibastuz

	01.01.2016	01.07.2016	01.01.2017	01.04.2017	01.01.2018	01.05.2018	01.12.2018–31.12.2018
Heat	3,884.98	3,924.73	4,662.49	4,662.49	5,339.13	5,379.60	5,379.60

The strategic goal of PAVLODARENERGO JSC is to build an advanced energy company that ensures a balanced and sustainable development of the energy system of Pavlodar region to promote economic growth. The Company actively introduces advanced global practices and operates in accordance with international standards in the field of production, environmental protection, occupational health and social responsibility. By improving efficiency, PAVLODARENERGO JSC strives to increase the market value of its assets and investment attractiveness.

Main strategic goals of PAVLODARENERGO JSC:

- market expansion with guaranteed sales and low risk;
- improving the production efficiency due to streamlined production and renovation of the main production facilities and infrastructure;
- introduction of promising projects through cautious innovation development;
- introduction of best management standards through continuous employee training in the field of new efficient technologies in operations and enterprise management.

To achieve its strategic goal, the Company is implementing the following projects:

- renovation and modernization of equipment at power generation facilities through implementation of investment programs, reduction of accident risks and elimination of downtimes;
- reduction of excessive losses during transmission of heat and electricity;
- minimization of per-unit generation costs for heat and electricity;
- introduction of energy-saving and energy-efficient technologies in energy production and transmission;
- updating certification for compliance with international environmental, occupational health and safety standards;
- continuous employee training to enhance professional skills;
- introduction of an automated enterprise management system.

PROSPECTS OF THE 2020 INVESTMENT PROGRAM

PAVLODARENERGO JSC implements one of the most large-scale investment programs among the power industry enterprises of Kazakhstan in terms of capital expenditures for renovation and reconstruction of production facilities. The Company plans to invest a total of KZT 124.5 bln during the period from 2010 to 2020. In accordance with the 2016–2020 Development Strategy, the Company implements the investment program in three areas: increasing generation; saving energy, including the reduction of transmission losses for electricity and heat; improving environmental performance.

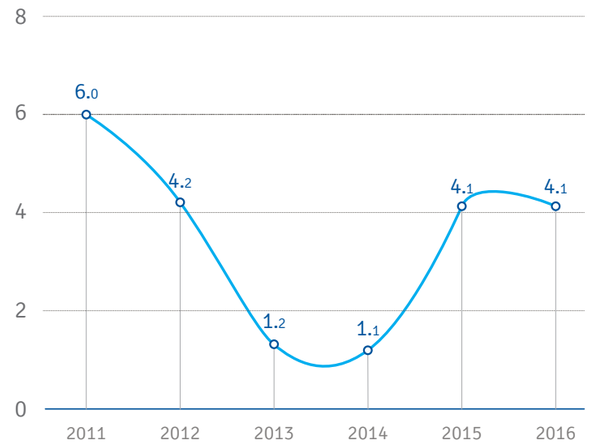
MARKET ANALYSIS

PAVLODARENERGO
JOINT-STOCK COMPANY

ECONOMIC OVERVIEW

In 2018, the economy of Kazakhstan was growing against the background of the favorable economic environment. The growth was positively affected by trends in oil prices, which increased by 31% from USD 54 in 2017 to USD 71 dollars per barrel (average spot price according to US EIA data). Other positive factors included the growth in demand and the conclusion of an agreement for oil production quotas by the largest oil exporters within OPEC+. The accelerated growth of the Russian Federation's economy (2.3%), keeping high growth rates in China (6.6%) and a stable moderate growth in the euro zone (1.6%), which are the key foreign trade partners of the Republic of Kazakhstan - promoted an increase in Kazakhstan's exports in terms of value and volume.

GDP dynamics in Kazakhstan, %
Source: SC MNE RK

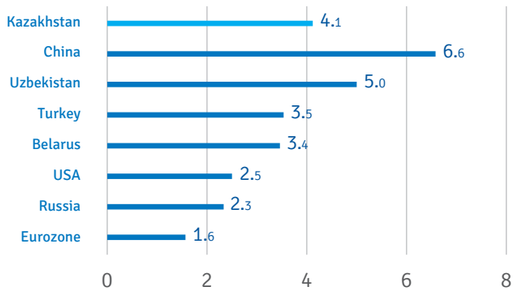


These factors contributed to 4.1% GDP growth in Kazakhstan in 2018. The growth was evenly distributed across all key economic sectors. The growth was driven by the 4.1% industry growth. The agricultural output increased by 3.4%, construction volumes also showed an increase by 4.1%. The service sectors grew by 4.0%. The growth dynamics of fixed capital expenditures reached the peak value over the past five years - 17% after 5.5% in 2017. At the same time, the annual inflation rate decreased from 7.1% to 5.3%.

A 26% increase in Kazakhstan exports (up to USD 60 bln) caused a further improvement in the trade balance and a reduction in the current account deficit from -5.1 bln US dollars to -52 mln US dollars. Instability in emerging markets, declining confidence in currencies of developing countries and sanctions against the Russian Federation were among negative macroeconomic factors. Despite the favorable external economic conditions, the exchange rate of tenge raised from an average of 326 KZT/USD in 2017 to 345 KZT/USD in 2018.

GDP dynamics of certain economies in 2018, %

Source: SC MNE RK, Federal State Statistics Service, World Bank



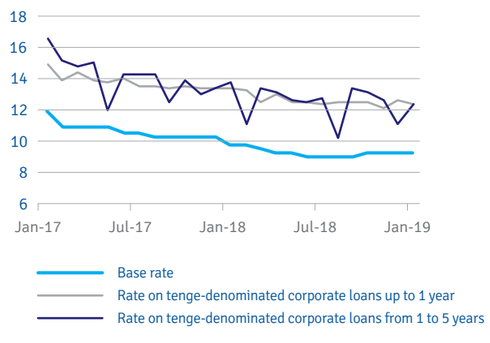
Monetary policy

In 2018, the monetary policy of the National Bank of the Republic of Kazakhstan (NB RK) remained within the boundaries of the inflation targeting regime. The NB RK reached the inflation target for 2018, which was within the range of 5-7%, and three times reduced the base rate - from 10.25% to 9.00%. However, in the face of the growing instability in foreign markets, in October 2018 the rate was increased to 9.25%. During the year, interest rates on short-term corporate loans decreased by about 3 percentage points (p.p.) from 15% to 12%, for long-term loans - by 5 p.p. from 17 to 12%.

Two trends remained unchanged in the banking sector - reorganization and concentration: pursuant to the decision of the NB RK, three banks were liquidated. The takeover of Kazkommertsbank JSC by Halyk Bank of Kazakhstan JSC was completed, which resulted in appearance of a market player concentrating more than a third of all bank assets.

Base NB RK rate and business loan rates in RK, %

Source: NB RK



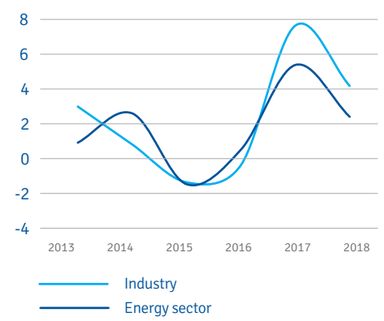
INDUSTRY

The accelerated industry growth was affected by three factors. A 4.8% growth in oil production (increase in oil production at Kashagan field from 8.4 to 13.2 mln tons) caused a general growth acceleration in the mining complex up to 4.6% per year. The manufacturing sector grew by 4.0% per year due to the completion of major investment projects and the output to the planned capacity of petrochemical and non-ferrous industry enterprises.

The growth dynamics in the energy sector (electricity and heat, as well as gas distribution) was caused by an overall economic output growth and high rates in the industry: electric power industry demonstrated a 4.1% increase, heat power grew by 1.5%, and the gas sector output declined by 1.3%. In the water supply and sewage sector, a slight decline (-1%) was noted.

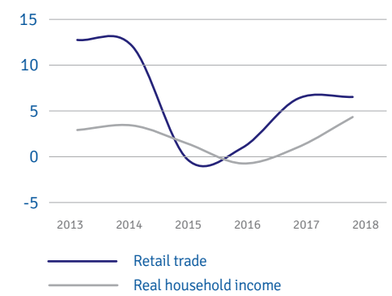
Production and energy sector dynamics, %

Source: SC MNE RK



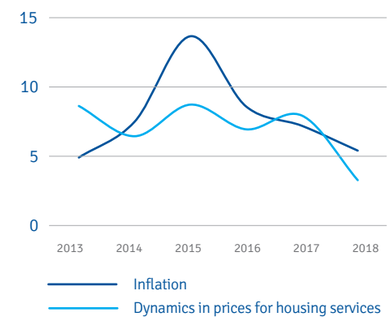
Dynamics of retail trade and real household income, %

Source: SC MNE RK



Inflation in RK, %

Source: SC MNE RK



2019 OUTLOOK

In 2019, despite the steadily growing investment, the Ministry of National Economy of the Republic of Kazakhstan expects economic slowdown from 4.1 to 3.8%. International financial institutions and rating agencies forecast a growth in the range of 3.0-3.5%. According to the Ministry of Energy of the Republic of Kazakhstan, oil production in 2019 will decrease from 90 mln tons to 89 mln tons with reducing oil prices. The World Bank expects oil prices to fall by an average of 3% while the International Energy Agency does not exclude that prices could fall by 14%. The rate of fixed capital expenditures may decline compared to the 2018 level. High rates in the economy will restrict private sector investment in the SME segment. The consumer sector will be negatively affected by the external inflation background.

ENERGY SECTOR OVERVIEW

In 2018, the electric power sector of Kazakhstan kept growing having upgraded the capacities of electricity generation and consumption due to investments previously made by market participants. The production using renewable energy sources also continued to grow.

At the end of 2018, the regulatory authority decided to adjust the rate policy: starting from 2019 a seven-year period of fixed rates will commence for energy-producing enterprises. The market structure becomes more sophisticated: the rate mechanism with an investment component is replaced by the capacity market. Starting from July 2019, the common electricity market will be introduced in Kazakhstan to expand the export potential of domestic power industry.

Production and consumption

In 2018, the energy sector of Kazakhstan continued to grow: according to the national power system operator KEGOC JSC, electricity production at all 138 power plants of Kazakhstan increased by 4.3% and reached the level of 106.8 bln kWh. The generation structure by sources practically did not change: approximately 8 out of 10 kilowatts of energy are produced at coal-fired power plants while the share of renewable energy sources (RES) is growing but still insignificant in the energy balance.

Electricity production by source, mln kWh

	2017	2018	Change, %	2018 ratio, %
TPP	82.420	86.795	5%	81.3%
GTPP	7.410	9.119	23%	8.5%
HEPP	11.610	10.343	-11%	9.7%
RES	428	540	26%	0.5%

Sources: KEGOC, KOREM

Over 96% of all electricity produced is consumed domestically. Kazakhstan is a net exporter: in 2018, the negative balance flow (net exports) to the Russian Federation amounted to 3.6 bln kWh (-21% against the level of 2017), to the Central Asian countries - 2.8 mln kWh (in 2017, imports exceeded export by 1.2 mln kWh).

Historically, the power system of Kazakhstan includes three zones: North, South and West. North zone includes regions with energy-intensive industry; it produces and consumes 2/3 of total electricity volume (66%) and has a surplus of electricity. South and West (21% and 13% of consumption, respectively) zones experience shortage of electricity and receive the missing volumes through trunk PTLs (North - South, North - East - South, North - West), or from neighboring countries: Russia (West) and Uzbekistan (Central Asia).

In 2018, the consumption grew by 5.3% (up to 103.0 bln kWh) in all three zones. Consumption in the North zone increased by 4.6% due to the growth in demand among major consumers: Aksu Ferroalloy Plant, Kazakhstan Electrolysis Plant, SSGPO JSC, Ust-Kamenogorsk Titanium-Magnesium Plant and Kazzinc enterprises. In the South zone, consumption grew by 6.2% due to demand from Kazphosphate. The increase in output of Aktobe Ferroalloy Plant, Atyrau Refinery and other large enterprises promoted a 7.6% consumption growth in the West zone.

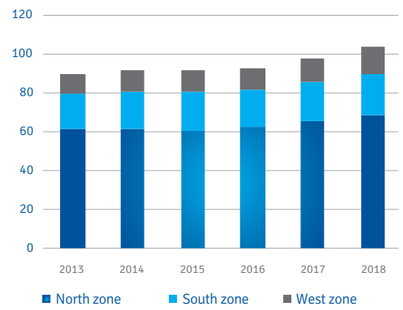
As of January 1, 2019, the total installed capacity of power plants in Kazakhstan amounted to 21,902 MW with the available capacity of 18,895 MW. With the annual maximum fixed in 2018 at 14,823 MW (a 4.4% increase to 2017), the Republic of Kazakhstan still has a 22% surplus of available capacity.

The electricity generation segment consists of one major player owned by the government and several private companies. Samruk-Energy JSC (Ekibastuz GRES-1 and 2, AlES JSC, Moinak HEPP, etc.) produces up to 30% of total electricity generated in Kazakhstan. ERG-owned plants control at least 16%, CAEPCO JSC - almost 7%, and Kazakhstan Utility Systems - 4%.

As for individual power plants, two largest enterprises increased generation during the year: Ekibastuz GRES-1 by 30%, EEC - by 3%. High growth rates of Ekibastuz GRES-1 were achieved due to the fact that the plant met the growing demand in Pavlodar region and exported electricity to the Russian Federation, but also sold electricity to the south regions of the country - Almaty and Zhambyl regions, where the total consumption increased by 1.5 bln kWh.

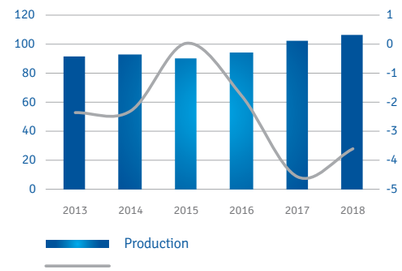
Electricity consumption in RK, bln kWh

Source: KOREM



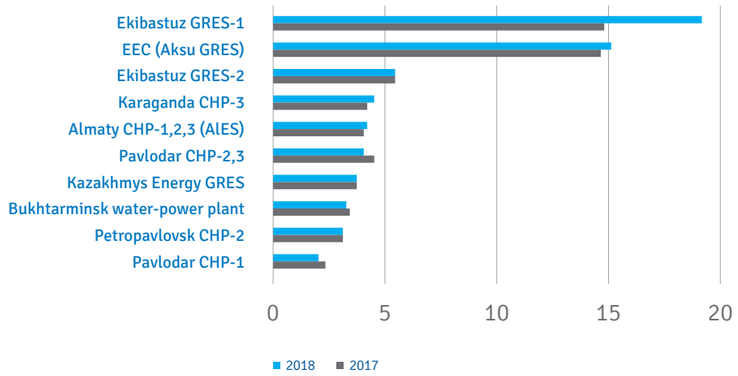
Electricity production in RK and net power flow to UES of Kazakhstan, bln kWh

Source: KEGOC



Electricity production at individual power plants of RK, bln kWh

Source: calculations based on KOREM data



PRICING POLICY

In 2018, retail consumer prices for electricity rose by 1.1%, and prices for heat - by 2.6%, which is one of the lowest values in the entire history of independent Kazakhstan. This became possible due to measures taken by the government of the Republic of Kazakhstan in the end of 2018. According to the comprehensive analysis results, rates for heat and electricity were reduced depending on the region from 3 to 37% and from 2 to 22%, respectively.

As a result, the Ministry of Energy of the Republic of Kazakhstan decided to fix limiting rates for each group of power plants for a seven-year period at the level of 2019. The Ministry of National Economy of the Republic of Kazakhstan announced the transition to a "stimulating rate setting policy": the rate and the profit of the entity will depend on the quality, reliability and efficiency indicators set by the monopolist.

INDUSTRY INVESTMENT

In 2018, the fixed capital expenditures in the energy sector decreased by 13%. The completion of major investment programs, keeping a surplus of generating capacities, a disincentive effect of the reduction or freezing of rates - all these factors caused a decrease in overall capital expenditures. Foreign investment in the sector sharply increased (more than 8 times to 2017).

The increase in the industry investment was affected by several factors: launch of the capacity market and enhancement of the operational efficiency at existing facilities.

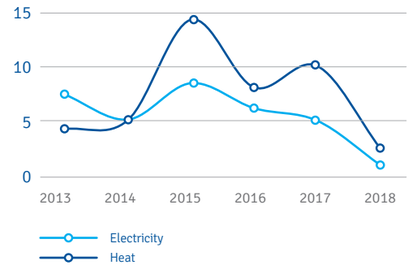
MARKET OUTLOOK

The forecast balance until 2025 implies a 40% growth in electricity output in the seven-year term relative to the actual figures of 2018 (including a 11% increase in 2019) with a 31% growth in consumption (9% in 2019). The RES ratio in the energy balance will continue to increase and by 2025 it will reach 5%. Renewable energy sources will account for about 25% in the structure of the total newly introduced capacity.

The maximum electrical load in the forecast period will increase from 17,093 to 20,262 MW (+18.5%), while a surplus of capacity (taking into account the reserve) will decrease from 1,229 MW in 2019 to 391 MW in 2023, and by 2025 it will amount to 934 MW.

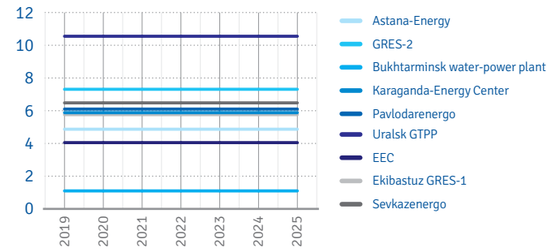
Growth dynamics of retail electricity and heat rates in Kazakhstan, %

Source: SC MNE RK



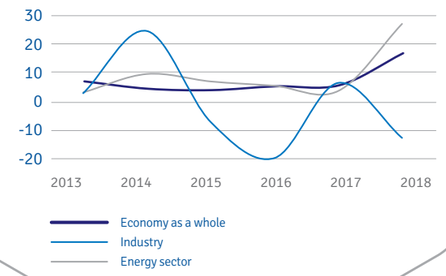
Limiting electricity rates for individual energy-producing enterprises, KZT/kWh

Source: Ministry of Energy of RK



Dynamics of fixed capital expenditures in RK, %

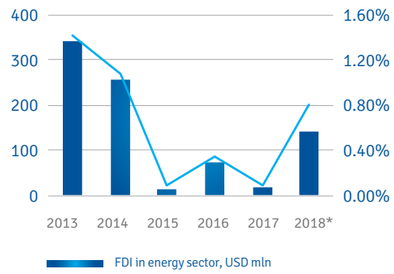
Source: SC MNE RK



Gross FDI inflow in energy sector of Kazakhstan

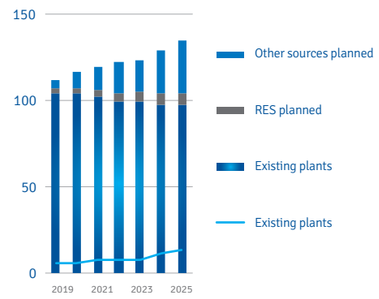
*-at the end of 3Q 2018

Source: SC MNE RK



Forecast of electricity market balance for 2019-2025, bln kWh

Source: Ministry of Energy of RK



OPERATION RESULTS AND DEVELOPMENT PROSPECTS OVERVIEW

INCREASED GENERATION

As part of the investment program, in 2018 the Company continued to implement a number of large-scaled equipment modernization projects in order to increase generation, reduce transmission losses for electricity and heat and improve environmental performance. In 2018, the Company allocated KZT 11.7 bln to implement the investment program.

Electricity sales in 2018 amounted to 1,379 mln kWh, which is 3.5% more compared to 2017. Sales of heat in 2018 amounted to 3,598.562 thous. Gcal, which is 4.8% more compared to 2017.

Thanks to commissioning of new equipment in 2009–2018, the Company is able to significantly increase its capabilities to meet the growing needs for heat and electricity in the region and contribute to the progressive development of business projects and industry in Pavlodar region.

Name	2016	2017	2018
Installed electricity generation capacity, MW	662	662	677
Electricity generated, mln kWh	3,829	4,074	3,814
Share in total electricity generation in Kazakhstan, %	4.1	4.0	3.6
Electricity transmitted, mln kWh	2,544	2,612	2,375
Electricity sold, mln kWh	3,058	3,245	3,023
Installed heat generation capacity, Gcal	2,240	2,240	2,268
Heat supplied, thous. Gcal	4,568	4,445	4,981
Heat transmitted, thous. Gcal	3,225	3,195	3,355
Heat sold, Gcal	4,192	4,175	4,797

CHP	2018
Pavlodar CHP-3 of PAVLODARENERGO JSC	The project for modernization of the turbine no. 6 was completed and the installed electricity generation capacity was increased by 15 MW to 125 MW. All the works were performed in full in November 2018. The construction of a new chimney no. 2 was started. The preparatory phase of the work was completed and the following work was performed: assembly of the foundation reinforcement cages, installation of a complex configuration formwork, concrete pouring of the formwork.
Pavlodar CHP-2 of PAVLODARENERGO JSC	A condenser of the turbine no. 1 was renovated. As a result, the thermal efficiency of the turbine increased due to decreased temperature head in the condenser and improved vacuum efficiency. Modernization of equipment of the fuel and transport workshop, which included the acquisition of electronic railway scales in order to weigh fuel with minimal errors and automatic recording of results. Renovation of the boiler unit no. 5. These measures will increase the operational reliability the boiler and plant equipment as a whole.
Ekibastuz CHP of Ekibastuzteploenergo LLP	The II stage of construction of the ash dump site of Ekibastuz CHP in the bed of Lake Tuz was continued. The units of boilers no. 7, 11, 12, 13, 14, as well as the pipelines of water-heating devices were renovated.

TRANSMISSION OF ELECTRICITY

In 2018, Pavlodar EDC JSC performed construction, renovation and re-equipment of 0.4-10 kV power lines with a total length of 35 km, including 22 km of aerial bundled conductor lines. The Company built 23 km of 35 kV power lines and installed 2,928 ASCAE devices. In the reporting year, Pavlodar EDC JSC completed a number of projects to reduce electricity transmission and distribution losses, as well as to improve the reliability of supply to consumers. In 2018, technical losses amounted to 8.78% with a planned indicator of 8.68%.

In 2018, the Company completed the construction of new 10 kV power distribution substations in Pavlodar (PDS-2) and Aksu (PDS-1). The Company installed two modular transformer substations including power transformers with dry insulation and vacuum circuit breakers in the territory of Pavlodar. These substations are equipped with modern security and fire alarm systems. Five 10/0.4 kV oil-immersed power transformers were replaced with new ones having greater capacity. The Company developed projects for renovation of two 110 kV substations in Pavlodar and construction of 35 kV power line in Kachirsk district. Three substations were renovated: in Pavlodar - replacement of oil circuit breakers with SF6 circuit breaker at six cells; in Bayanaul district - replacement of oil circuit breakers with SF6 circuit breaker at two cells; in Ekibastuz district - installation of 220 kV SF6 circuit breaker.

TRANSMISSION OF HEAT

In 2018, in accordance with the investment program for the development and renovation of heating networks, the following activities were implemented in the city of Pavlodar at the cost of depreciation deductions:
- renovation of the heat main from the heating chamber no. 868 to the swimming pool in Usolsk microdistrict, 1a (section from the heating chamber no. 868 to the section no. 3) with a length of 357 m;
- replacement of thermal insulation on the main no. 37a from NP no. 17 to NP no. 19 as well as on the main no. 39 from NP no. 24 to NP no. 26 with a length of 4,373 m.

The Company prepared design and estimate documentation and passed the state expert examination for facilities under the investment program at the cost of depreciation deductions:
- renovation of the heat main from the heating chamber no. 868 to the swimming pool in Usolsk microdistrict, 1a;
- renovation of the pumping station no. 3 and re-equipment of the central heat substation to ensure heat supply to Lesozavod village;
- renovation of the heating network from the heat chamber no. 221/10 to the heat chamber no. 221/8;
- construction of a new heating network no. 21 to No. no. 21/8 and extension of the off-site heating network from UP no. 8 along Kamzin street to Ladozhskaya street, along Ladozhskaya street to Nazarbayev avenue to reserve the heat load for the new Dostyk microdistrict;
- renovation of the heating network from the heat chamber no. 137 to the heat chamber no. 137/2.

The implementation of these projects allowed the Company to improve the quality of heat supply to consumers connected to its heat networks, increase the operational reliability of heat networks, extend the service life of pipelines, reduce heat losses, and improve the water-pressure regime.

In 2018, in accordance with the investment program for the development and renovation of heating networks, the following measures were implemented in the city of Ekibastuz at the cost of depreciation deductions:
- renovation of thermal insulation on the main no. 1 from the Central Heat Distribution Facility (CHDF) to NO no. 5B ø820 mm, the second stage (replacement of mineral wool with polyurethane insulation) with a length of 469 m;
- removal of district heating networks from private areas of low-rise buildings;
- construction of block heat points;
- installation of 17 metering devices in 25, 26, 27 microdistricts of Ekibastuz.

Development of design and estimate documentation and state expert examination of facilities under the investment program at the cost of depreciation deductions:
- renovation of the heating main no. XII from HC no. 4A to No no. 41A;
- renovation of the heating main no. II from HC no. 19L to HC no. 24L;
- renovation of the heating main No. V from the pavilion no. 2 to the pavilion no. 3;
- renovation of the heating main no. VIII from the pavilion no. 3 to HC no. 4A;

The implementation of these projects allowed the Company to improve the quality of heat supply to consumers connected to its heat networks, increase the operational reliability of heat networks, extend the service life of pipelines, reduce heat losses, and improve the water-pressure regime.

PLANS FOR EQUIPMENT RENOVATION AND MODERNIZATION FOR 2019

In 2019, as part of the investment program, the Company will continue to implement a number of equipment modernization projects to increase generation, reduce transmission losses for electricity and heat, as well as to improve environmental performance.

In 2019, PAVLODARENERGO JSC plans to produce electricity at the level of 2018, i.e. up to 3,990 mln kWh, and expects a 3.7% decrease in heat supply from heat collectors compared to 2018 due to the planned heat consumption by consumers.

In 2019, Ekibastuzteploenergo LLP plans to generate electricity in the amount of 61.5 mln kWh and expects to supply heat from collectors at the level of 1,253.8 thous. GCal based on consumers' demands for heat.

In 2019, the Company intends to spend a total of KZT 6,771.481 mln on investment projects.

PAVLODARENERGO JSC plans to construct stage III of the ash dump site and build up I stage at CHP-3, develop the project for the main electrical circuit of the plant and conserve the foundation of the chimney no. 2.

Pavlodar CHP-2 plans to renovate its boiler no. 1 and a condenser of the turbine no. 2, as well as to build up II stage of the ash dump.

The Company will also continue to build II stage of the ash dump at Ekibastuz CHP.

In 2019, as part of investment programs, Pavlodar EDC JSC plans to carry out construction, renovation and technical re-equipment of 0.4-10 kV power networks with a total length of 72.8 km, to build 35-110 kV overhead power lines with a total length of 22.1 km, to start renovation of two 110 kV substations in Aksu district, to continue the construction of 110/10 kV Severnaya Gorodskaya substation, to complete the construction of 220 kV outdoor switchgear at 220/110 kV Promyshlennaya substation, to complete renovation of 110/10 kV substation in the city of Pavlodar and 110/10 kV substation in Aksu district.

In accordance with the tripartite agreement signed between the European Bank for Reconstruction and Development, the Ministry of National Economy of the Republic of Kazakhstan and Pavlodar Heat Networks LLP, renovation of the heating main no. 37 from NP no. 15 to NP no. 18 is planned for 2019 in the city of Pavlodar with an increase in diameter from 800 mm to 1,000 mm with a length of 2,448.5 m.

As part of the investment program for the development and renovation of heating networks, the following activities are planned for 2019 in the city of Pavlodar at the cost of depreciation deductions: renovation of the pumping station no. 3 by installing a central heating station for Lesozavod microdistrict and construction of a heating main no. 31 from TK no. 309 to TK no. 839; as well as renovation of the heating main no. 37 from NP no. 15 to NP no. 18.

The Company plans to build and renovate in 2019 a total of 2.7 km of heating pipelines in the city of Pavlodar using pre-insulated pipes.

As part of the investment program for the development and renovation of heating networks, the following measures are planned for 2019 in the city of Ekibastuz at the cost of depreciation deductions:
- construction and installation work for II stage of the ash dump at Ekibastuz CHP in the bed of Tuz Lake, adjustment of the project and commissioning of the first start-up complex of II stage of the ash dump;
- renovation of the CHP chimney with a height of 120 m;
- renovation of buildings and structures;
- technical strengthening of the facility in accordance with the anti-terrorism security requirements;
- installation of 32 heat metering devices;
- acquisition of fixed assets;
- renovation of 25 stop valves of the main heating networks with a diameter from 100 mm to 1000 mm;
- installation of 8 automatic air vents;
- design work and introduction of an automated system for commercial accounting of electricity (ASCAE).

PROCESS AUTOMATION

In 2018, the work was performed at Pavlodar CHP-3 to equip the boiler no. 6 with an automated process control (APC) system. The main goal of equipping boilers with the APC system is to ensure complete automation of combustion processes, thus providing prompt, reliable and continuous information to the management and CHP staff, improving the efficiency and safety of boiler operation and control of the boiler operation process, and burning less coal.

The data processing and computing software was put into commercial operation at Pavlodar CHP-3 to facilitate production process control. The goal of this project is to improve economic efficiency through optimal composition and operation mode of the plant as well as to automate time-consuming calculations, modernize the software and hardware of the plant.

ELLIPSE

In 2018, PAVLODARENERGO JSC introduced an automated control system for management of the production infrastructure based on Ellipse 8 (Ellipse enterprise resource planning system). Ellipse ERP system is an integrated solution for operation and repair of fixed assets and infrastructure allowing for making decisions regarding the impact on the equipment based on system data, including:

– recording of all repair costs (materials, time, work) and comparing them against the planned figures;

– control by engineers and technicians of all equipment repair activities by means of clear planning;

– prompt responding to any deviations from the specified parameters and making rational and effective decisions.

ASCAE

In 2018, the Company continued to implement the project of an automatic system for commercial accounting of electricity (ASCAE), which involves modernization and full automation of metering devices at facilities to automatically collect and transfer online reliable electricity transmission and consumption data. This system can automatically detect points of energy losses and promptly eliminate them. ASCAE allows the Company to significantly reduce electricity losses.

In 2018, the Company installed and started commercial operation of ASCAE devices for households using wireless LPWAN technology. As part of the pilot project, 107 ASCAE devices were installed in Pavlodar EDC JSC.

Thanks to this technology, there is no need to collect and transfer data from each transformer substation. There is only one base station for the entire settlement, and all metering devices equipped with a radio module with a built-in battery transfer readings to this base station once every 24 hours. From the base station, the data is uploaded to a server where it is stored. Customers can log-in to their accounts via Internet browser using their user names and passwords and get readings for the required period.

Pavlodar EDC JSC started implementation of ASCAE project in 2013. As of the end of 2018, a total of 22,000 consumers were equipped with ASCAE devices.

ASCAHE

In 2018, the Company continued to implement the automatic system for commercial accounting of heat energy (ASCAHE) aimed at modernization and automation of metering equipment. Installation of metering devices improves the accuracy and reliability of data and settlements between suppliers and consumers based on the existing and prospective rate systems, and also reveals the actual state of heat consumption in households.

ASCAHE devices improve the efficiency of heat data collection to monitor consumption of heat and reduce overdue payments by customers. Thanks to this system losses can be detected quickly, and appropriate measures can be taken promptly to prevent such losses and save heat in households.

In addition, the project of process modernization and automation in the city of Ekibastuz included the construction of block heating units. Such a need arose in connection with the renovation of intra-district heating networks and their removal from private areas of low-rise buildings. The purpose of construction of block heating units is to increase reliability of heat transmission and distribution and improve the quality of heat supply to consumers in Ekibastuz. In total, seven block heating units will be built in the city, which will reduce heat losses. Moreover, this will allow the Company to maintain the required temperature regime in consumption systems for the rational distribution of heat carrier.

THESIS grid-connection monitoring system

In 2018, PAVLODARENERGO JSC started commercial operation of an automated system to control internal documentation.

A great advantage of the system is the intermediate control that makes it possible to see at what stage and who of the process participants has the documents. The system effectively supports enterprise operation by introducing accountability and control and approval of documents.

PLANS FOR PROCESS AUTOMATION IN 2019

ASCAE/ASCAHE

In 2019, the Company plans to install 20 ASCAE devices for Ekibastuzteploenergo LLP. 932 devices will be installed by Pavlodar EDC JSC.

The Company will continue to operate 1,255 devices transmitting data from heat meters in Pavlodar and 444 devices in Ekibastuz.

BILLING

Transition to a uniform billing system will allow the Company to automate and standardize the accounting of heat and electricity consumption, as well as to provide better customer services through prompt calculations of the actual cost of electricity and heat consumed, plus customers will be able to log in to their accounts and check consumption data at any time.

Mobility

In 2019, Pavlodar EDC JSC expects to duplicate Mobility smartphone app fully integrated with Ellipse ERP system.

IMPLEMENTATION OF PROJECTS IN THE SALES COMPANY

In 2018, Pavlodarenergosbyt LLP was certified to verify compliance with ISO-9001.2015 standard in the field of provision of services for the sale of heat and electricity, which demonstrates that the quality of services provided by the organization meets the international standards.
Pavlodarenergosbyt LLP continues to improve face-to-face and remote customer service centers. Every day, from 8:00 to 22:00, without breaks, contact center agents provide advisory support to individuals regarding energy supply. Every year, up to half a million incoming calls are handled.

In the reporting year, the partnership simplified the process of registration in the Personal Account service. Today, users do not need to contact personally the company's service centers for obtaining a login and password to enter the system. The keys to the Personal Account are sent to the user's email address indicated upon registration based on the identity documents attached in electronic form.

In August 2018, service centers of Pavlodarenergosbyt LLP introduced a push-button system for assessing the quality of customer service. By using this system, customers can evaluate the work of service staff. The customer interaction system provides the possibility to monitor the quality of work of specialists and cashiers of the service center and the level of customer satisfaction.

Given that performance of energy companies directly depends on the timeliness and completeness of payment for the energy used, the sales company implements a number of activities to improve the payment discipline.

In 2018, Pavlodarenergosbyt LLP together with private enforcement agents worked on 514 debt cases, where the property of debtors was seized and their electricity was cut off. Also, five apartments (three one-bedroom, one two-bedroom and one three-bedroom) were sold through the online auction.
Six debtors' vehicles were placed at the impoundment lot.

For failure to fulfil a final judgment, four citizens were found guilty of committing administrative offenses under Article 669 of the Administrative Code of the Republic of Kazakhstan and incurred an administrative punishment in the form of arrest for a period of one day. In addition, criminal proceedings were initiated against 47 malicious non-payers for failure to fulfil a final judgment for more than six months.

Some of issues related to the activities of Pavlodarenergosbyt LLP are still being resolved with the help of regional and city authorities in accordance with an Action Plan developed to reduce the arrears to utilities.

PLANS FOR 2019

In 2019, Pavlodarenergosbyt LLP plans to further expand its Single Payment Center with the participation of utilities, condominium administration bodies and other organizations providing services to consumers in Pavlodar region.
Other plans include the expansion of the Personal Account service in the software implemented by EnSoft LLP in all cities of Pavlodar region, as well as the creation of additional Personal Accounts for consumers who use energy for non-household purposes.
Alongside with the development of existing services, Pavlodarenergosbyt LLP will introduce and expand services such as SMS notifications and smartphone apps. Currently, the city administration unites and improves Smart City and Zero Tolerance apps and plans to introduce a Unified Payment Center tab containing the data of utilities thanks to which a user will be able to view information on charges, debts, make payments, etc.
It is also planned to put a new 1C:Billing software into commercial operation.
To improve and expand public services, PAVLODARENERGO JSC plans to develop design and estimate documentation for the construction of an extension to the high-rise residential building in Usolsk microdistrict of Pavlodar.

PROCUREMENT AND SUPPLY

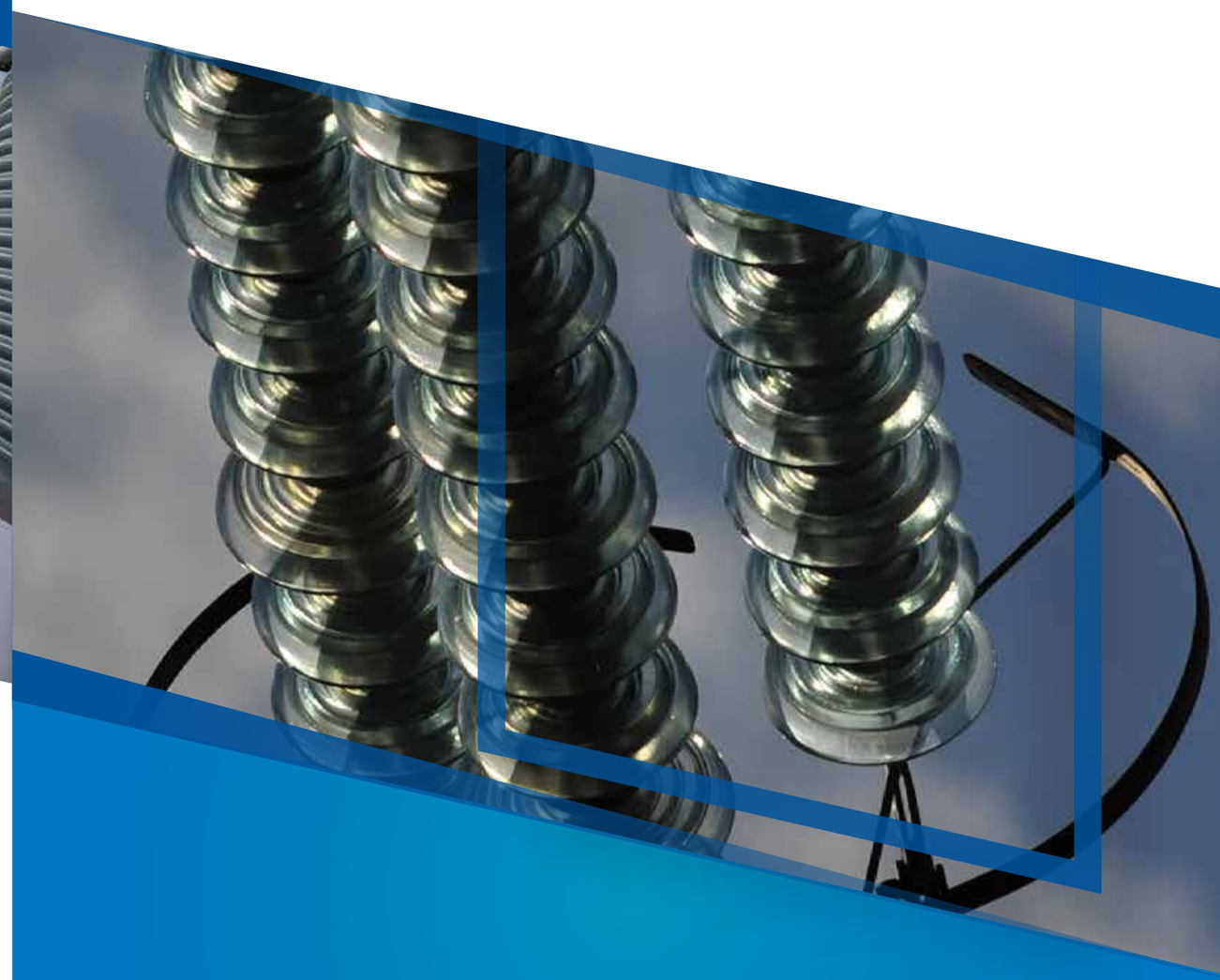
Building an effective procurement system remains one of the important goals of the Company with a view to improving operational efficiency. The key priorities in the field of procurement include ensuring transparency during tenders, attracting more vendors to ensure the maximum economic effect and reduce costs.

In the reporting year, the Company concluded 1,272 contracts with a 82% share of contracts signed with residents. The total budget for inventories for 2018 was over KZT 7,970,852,676. During 2018, the Company implemented measures to improve transparency and implement an effective procurement planning system, KPI evaluation and supplier pre-qualification system, updating internal documents regulating procurement processes. At the end of the reporting period, the following objectives were accomplished:

- implementation of the annual procurement plan;
- introduction of KPI evaluation system;
- introduction of a supplier pre-qualification system (supplier base);
- revision of processes and approval of internal procurement regulations;
- implementation of Tezis electronic document management system;

PROCUREMENT PLANS FOR 2019:

- implementation of the Procurement Requests block through Tezis EDMS.
- introduction of an automated procurement management system;
- introduction of an electronic trade platform to purchase goods, works and services.



The consolidated financial statements of the Company for 2018 were prepared in accordance with the International Financial Reporting Standards. The accounting principles are equal for all enterprises of the Company.

The key financial and economic indicators of the Company demonstrate the effectiveness and efficiency of operational and financial activities, as well as achievement of the Company's strategic development targets.

INDICATORS	2016	2017	2018
Income from core activities	45,069	49,885	51,971
Prime cost including period expenses	(34,786)	(37,952)	(42,254)
Income from operating activities	10,283	11,933	9,716
Total EBITDA for the year*	15,868*	17,418	11,307
Total EBITDA for the year, margin in %	35.2%	34.9%	21.8%
Income tax expenses	(1,909)	(2,121)	(1,448)
Net profit for the year	(6,475)	7,617	2,348
Assets	132,850	140,472	145,855
Equity	68,849	73,424	71,832
Capital expenditures for fixed assets	8,979	9,774	11,694

*Total EBITDA excludes exchange rate difference

INCOME FROM SALE OF PRODUCTS/SERVICES

In 2018, the Company sold electricity and heat, including the purchased energy, for a total amount of KZT 51,970 mln, which is 4.2% more compared to 2017 due to increased production and transmission of heat and growth in rates for heat (production and transmission) and electricity (transmission).

The main factors affecting the income from sales in 2018 compared to the previous period are as follows:

- revenue from sales of electricity increased by KZT 2,908 mln or 36.3% compared to 2017 due to increase in heat consumption by 559 Gcal (17%);
- revenue from transmission of heat increased by KZT 1,184 mln, or 21.9% due to increase in energy transmission by 5.8% and growth in transmission rates by 16.1%;
- revenue from transmission of electricity decreased compared to 2017 by KZT 584 mln (6%) due to reduction in transmission by 237 mln kWh (9%) and decrease in the limit rate for IV quarter of 2018 from 3.938 KZT/kWh to 3.524 KZT/kWh.

COST OF GOODS/SERVICES SOLD

The cost of electricity and heat sold in 2018 amounted to KZT 42,254 mln, which is KZT 4,302 mln or 11.3% more compared to 2017. This increase is due to higher operating expenses under such items as Fuel, Water for Process Needs, Fuel and Lubricants for Vehicles, Repair, Labor Costs and other expenses.

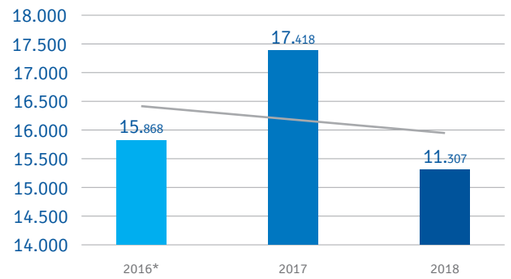
The cost structure of the Company is dominated (24%) by the cost of fuel. In 2018, the coal price, including transportation expenses, increased by 9%. As a result, the fuel costs increased by KZT 528 mln, or 5.6%.

Expenses under Fuel and Lubricants for Vehicles item increased by KZT 44 mln due to higher fuel prices (gasoline, diesel fuel, oil, etc.). Expenses under Water for Process Needs item increased by 19.4% (KZT 173 mln) due to growth in rates by an average of 27% across the Company. The increase in costs under Repair item by KZT 817 mln (23.9%) was caused by an increased scope of repairs in accordance with the rate estimates approved for the year. Expenses under Labor Costs item increased by KZT 966 mln, or 12.2%.

DYNAMICS OF TOTAL EBITDA*

In 2018, total EBITDA amounted to KZT 11,307 mln, which is KZT 6,111 mln or 35.1% less compared to 2017. The main factors of reducing the operational efficiency include an increase in exchange rate losses (increase in the currency exchange rate against tenge) and the accrual of reserves for doubtful receivables in accordance with the IFRS.

Total EBITDA for the year, KZT mln



*Total EBITDA excludes the exchange loss

OPERATING EBITDA BY SEGMENT

Operating EBITDA was chosen as the main indicator for evaluation of the Company's operational efficiency. This performance indicator does not account for other income, revenue from financing, a non-monetary component of exchange rate difference-related liabilities, depreciation, amortization and non-recurrent or erratic cost items that do not affect the core operations of the Company.

In 2018, the Company's operating EBITDA amounted to KZT 14,832 mln, which is KZT 2,140 mln or 12.6% less compared to 2017. The main (high-priority) margin segment in the operating EBITDA structure is the production of electricity and heat (KZT 10,832 mln). In 2018, this indicator decreased by KZT 1,255 mln or 104% compared to 2017. For transmission and distribution of heat, operating EBITDA decreased by KZT 3,320 mln (65.7%) due to reduced transmission of electricity and higher prime cost (labor costs, services of third-party organizations, accrual of reserves, etc.). Also, in 2017, additional income was earned due to recalculation for 2015 (issuance of additional electricity transportation invoices according to the court decision), which had a significant positive effect on EBITDA.

For transmission and distribution of heat, operating EBITDA decreased by 167%, or KZT 888 mln due to 21.1% increase in transmission rates. For sales of electricity and heat, operating EBITDA increased by KZT 1,536 mln, or 220.5%.

Indicators	Production of electricity and heat	Transmission and distribution of electricity	Transmission and distribution of heat	Sales of electricity and heat	Other	Total
Income form sales	32,914	8,946	6,628	3,482	0.084	51,971
Prime cost	-23,662	-7,451	-4,619	-1,676	-0.063	-37,408
Gross profit	9,251	1,495	2,009	1,807	0.021	14,562
Period expenses	-1,924	-662	-1,269	-991	0.000	-4,846
Income from operating activities	7,328	833	740	816	0.021	9,716
Financial expenses	-1,674	-272	-387	-62	0.000	-2,395
Financing income	78	5	10	1	0.000	95
Loss from exchange rate difference	-1,604	-341	-359	0	0.000	-2,304
Other income	182	100	0	173	0.000	454
Other expenses	-652	-30	-654	-92	-63.393	-1,491
Impairment of financial assets	-111	3	-130	-41	0.000	-279
Income tax expenses	-1,517	-115	-97	281	-0.039	-1,448
Income/loss for the year	2,029	183	-876	1,075	-63.333	2,348
Operating EBITDA by segment	10,832	1,730	1,420	839	10.916	14,832

CHANGES IN NET INCOME/LOSS

Income from operating activities for 2018 amounted to KZT 9,716 mln (18.6% margin to income from sales). Income decreased by KZT 2,216 mln due to 4.7% decline in electricity production and higher prime cost of products.

ASSETS AND LIABILITIES

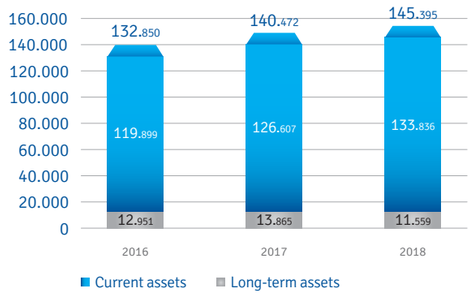
As of December 31, 2018, total assets of the Company amounted to KZT 145,855 mln, which is 4% more compared to 2017.

As of December 31, 2018, the value of fixed assets was KZT 126,890 mln, or 87% of the value of all assets. As part of the investment program, the amount of KZT 11,023 mln was spent in 2018 on unfinished construction and purchase of fixed assets. The amount allocated for commissioning of new and upgraded facilities of the current period and from previous years was equal to KZT 13,397 mln.

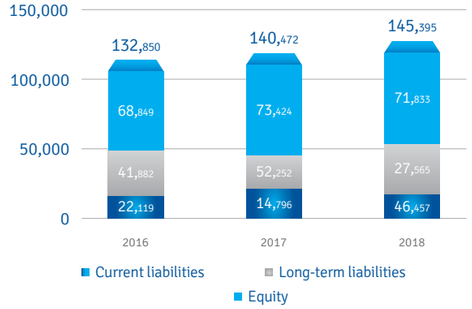
Other financial assets include deposits in the amount of KZT 103 mln accumulated by the Company to service loans and to finance the investment program.

Long-term loans mostly include loans granted by the EBRD and Sberbank of Russia JSC to finance the long-term investment program for renovation and modernization of the Company's assets.

Assets, KZT mln



Liabilities, KZT mln



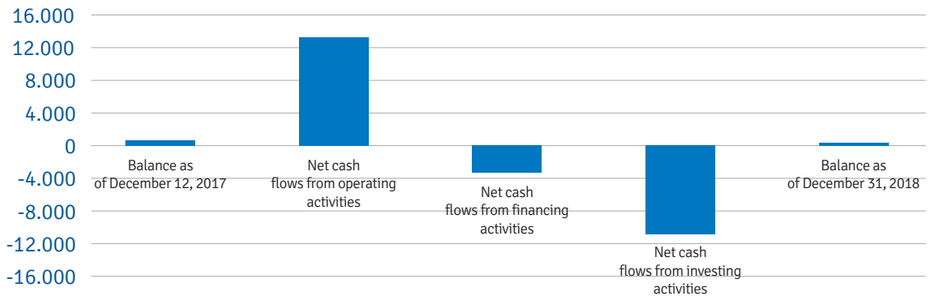
CASH FLOW

In 2018, there was an upward trend in cash flows from operating activity due to increased volumes of production and transmission of heat and growth of rates for heat production and transmission as well as rates for electricity transmission. The net inflow from operating activity amounted to KZT 15,599.717 mln. Changes in the working capital are associated with increase in reserves and trade receivables. Increase in payables caused mainly by large deliveries under the investment program resulted in increase in the working capital.

The most significant cash outflows from investment activities in 2018 were caused by the implementation of the investment program for the current period, as well as by the payment of debts for facilities completed in 2017.

Funds were placed on deposit accounts to repay the bond loan and loans from the EBRD.

Cash flows, KZT mln



CORPORATE GOVERNANCE

PAVLODARENERGO JSC has an effective and transparent corporate governance system that meets the national and international standards. Advanced corporate governance system is a requisite for attracting investments, strengthening the Company's competitive position and increasing shareholder value. The corporate governance system of PAVLODARENERGO JSC regulates the process of interaction between the management bodies, the Company's internal control body, shareholders and other stakeholders, and ensures a balance between the interests of all the above listed parties.

The Board of Directors includes independent directors to ensure effectiveness and transparency of corporate governance. The Company complies with all applicable codes and standards and strives to follow the principles of business ethics to ensure sustainable development.

GENERAL MEETING OF SHAREHOLDERS

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

Shareholders of the Company may make suggestions to the agenda of the annual General Meeting, nominate candidates to the Board of Directors and its Committees, and convene meetings of the Board of Directors.

SHARE CAPITAL STRUCTURE

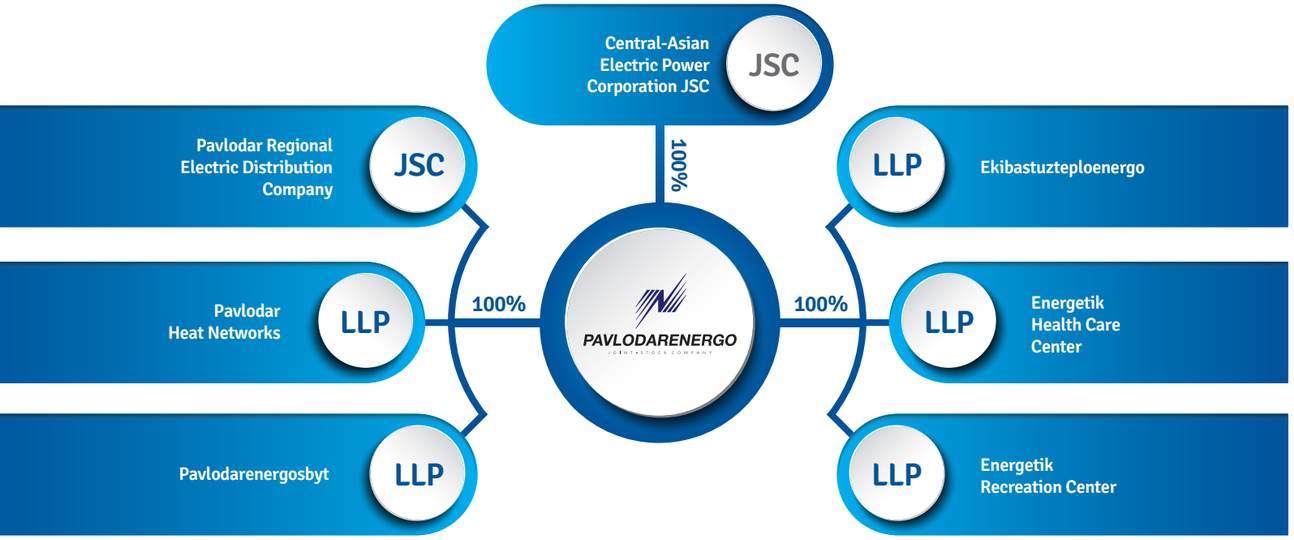
As of December 31, 2018, according to the financial statements, the authorised capital of the Company was equal to KZT 16,664 mln. The sole shareholder owning 100% stake is Central-Asian Electric Power Corporation JSC.

Holder name	Ordinary shares		Preferred shares	Total shares	
	number	share		number	share
Central-Asian Electric Power Corporation JSC	166,639,957	100%	–	166,639,957	100%

RESULTS OF THE GENERAL MEETING OF SHAREHOLDERS

In 2018, the Company held one annual and three extraordinary General Meetings of Shareholders at which the following issues were addressed: approval of the financial statements of PAVLODARENERGO JSC, determination of the net income distribution procedure, consideration of shareholders' appeals regarding actions of PAVLODARENERGO JSC, determination of an audit organization to audit the financial statements of PAVLODARENERGO JSC and its subsidiaries, participation of PAVLODARENERGO JSC in the creation of a new legal entity, and conclusion of a major related-party transaction by PAVLODARENERGO JSC by signing a loan agreement with the Eurasian Development Bank, CAEPCO JSC, SEVKAZENERGO JSC, Akmola Electric Distribution Company JSC and Astanaenergosbyt LLP.

ORGANIZATIONAL STRUCTURE



INFORMATION ON DIVIDENDS

The Company's policy regarding distribution, announcement, size, form and terms of dividend payment is set out in the Charter.

The basic principles of the Company's dividend policy include:
• balance between the interests of the Company and its shareholders in determining dividend payouts;
• increasing investment attractiveness, financial sustainability, capitalization and liquidity of the Company;
• ensuring the market return on invested capital;
• respect for and strict observance of the rights of shareholders and promoting their prosperity.

The Company intends to allocate a certain portion of its net income to pay dividends in the amount that would allow the Company to keep sufficient funds for its further development. A decision on dividend payout is made by the annual General Meeting of Shareholders based on the recommendation of the Board of Directors. In case of any unforeseen circumstances having a negative effect on the Company, the Board of Directors should recommend the General Meeting of Shareholders to refrain from dividend payout (announcement).

In 2018, the annual General Meeting of Shareholders decided to pay dividends to shareholders of PAVLODARENERGO JSC for 2017 fiscal year in the amount of KZT 2,285,000,418.

BOARD OF DIRECTORS

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

To increase the transparency of the Company's activities, the Board of Directors includes two independent directors, who are not affiliated with the Company. The Board of Directors is headed by the Chairman, who convenes meetings of the Board of Directors and presents their agenda based on the recommendations received from members of the Board of Directors and its Committees.
To achieve the performance goals, the Board of Directors is guided by the following principles:
• making decisions based on a collegial and thorough discussion of issues using reliable and complete information on the Company's activities in line with the highest standards of doing business;
• non-admission of restrictions on the legitimate interests and rights of shareholders to participate in the management of the Company, receive dividends, reports and information about the Company;
• ensuring a balance between the interests of shareholders of the Company and maximum objectivity of decisions made by the Board of Directors in the best interests of shareholders;
• providing the Company's shareholders with reliable and timely information.

Remuneration for the Board of Directors and the executive body is determined by the decision of the General Meeting of Shareholders of CAEPCO JSC. The total amount of remuneration paid to the Board of Directors and the executive body in 2018 was KZT 310,582 thous.

SELECTION AND APPOINTMENT

Members of the Board of Directors of PAVLODARENERGO JSC are elected by the decision of the General Meeting of Shareholders of CAEPCO JSC. Pursuant to the Charter of PAVLODARENERGO JSC, the Board of Directors should consist of at least three persons, of whom at least one third should be independent directors. A member of the Board of Directors of CAEPCO JSC should be an individual only, who is elected from among:
• shareholders - individuals;
• persons recommended to be elected to the Board of Directors as representatives of shareholders' interests;
• individuals who are not shareholders of the Company and who are not proposed for election to the Board of Directors as representatives of shareholders' interests.

General Director of PAVLODARENERGO JSC may also be elected as a member of the Board of Directors, however, may not act as the Chairman of the Board of Directors.
The Chairman of the Board of Directors of PAVLODARENERGO JSC is elected from among its members by a majority vote of the total number of members of the Board of Directors by show of hands.

The term of office of members of the Board of Directors is determined by the General Meeting of Shareholders of CAEPCO JSC. The term of office of the Board of Directors expires on the date 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 any number of times.

Dyussenbay Turganov
Chairman of the Board of Directors

First Deputy General Director
of CAEPCO JSC

(born in 1959)

15.01.2018 – Chairman of the BoD of PAVLODARENERGO JSC.
15.01.2018 – Chairman of the BoD of SEVKAZENERGO JSC.
15.01.2018 – Chairman of the BoD of Akmola EDC JSC.

Oleg Perfilov
Member of the Board of Directors

General Director
of PAVLODARENERGO JSC

(born in 1968)

05.09.2016 – member of the BoD of PAVLODARENERGO JSC.
10.09.2014 – General Director of PAVLODARENERGO JSC.
15.12.2016 – member of the BoD of Pavlodar EDC JSC.

Alexander Nigai
Member of the Board of Directors

Deputy General Director of CAEPCO JSC
for Commercial Affairs

(born in 1984)

15.01.2018 – Member of the BoD of PAVLODARENERGO JSC.
15.01.2018 – Member of the BoD of Akmola EDC JSC.
03.05.2012 – Director for Strategic Development
of ComTradeProduct LLP.

Andrey Karyagin
Member of the Board of Directors

(born in 1967)

15.01.2018 – Member of the BoD of PAVLODARENERGO JSC.
15.01.2018 – Member of the BoD of Akmola EDC JSC.
25.12.2017 – Chairman of the BoD of Astana
Invest Investment House JSC;
06.12.2017 – Vice-President of CAEPCO JSC
for Economy and Finance.

Gennady Andreyev
Member of the Board of Directors, Independent Director

Not affiliated with PAVLODARENERGO JSC
and has not been as such
for the past three years

(born in 1943)

05.09.2016 – member of the BoD
of PAVLODARENERGO JSC, Independent Director.
15.01.2018 – member of the BoD of Akmola DC JSC,
Independent Director.
13.11.2017 – member of the BoD of CAEPCO JSC,
Independent Director.
02.07.2015 – Honorary President of KazNIPIEnergoprom
Institute JSC.

Eldar Tabanov
Member of the Board of Directors, Independent Director

Not affiliated with PAVLODARENERGO JSC
and has not been as such
for the past three years

(born in 1968)

22.02.2013 – Member of the BoD of SEVKAZENERGO JSC.
14.11.2014 – Member of the BoD of Akmola EDC JSC.
09.09.2015 – Deputy Chairman of the Management Board of Astana
Community Entrepreneurship Corporation NC JSC.
29.09.2017 – Director of City Box LLP.
13.11.2017 – Member of the BoD of CAEPCO JSC.

Bagdat Oral
Chairman of the Board of Directors of PEDC JSC.

Not affiliated with PAVLODARENERGO JSC
and has not been as such
for the past three years

(born in 1986)

29.06.2012 – Project Manager, Chief Project Manager
of Samruk-Green Energy LLP.
18.03.2014 – Head of Prospective Development Department
of Samruk-Green Energy LLP.
18.08.2014 – Director of CAPEC Green Energy LLP.
03.07.2018 – Vice President of CAEPCO JSC for energy sales.

Members of the Board of Directors

Name, legal organizational form	Members of the Board of Directors	Position	Date of election/expiry of powers
PAVLODARENERGO JSC	Dyussenbay Turganov	Chairman of the Board of Directors	15.01.2018 – 14.01.2020
	Andrey Karyagin	Member of the Board of Directors	15.01.2018 – 14.01.2020
	Oleg Perfilov	Member of the Board of Directors	15.01.2018 – 14.01.2020
	Alexander Nigai	Member of the Board of Directors	15.01.2018 – 14.01.2020
	Gennady Andreyev	Independent Director	15.01.2018 – 14.01.2020
	Eldar Tabanov	Independent Director	15.01.2018 – 14.01.2020
Pavlodar Regional Electric Distribution Company JSC	Bagdat Oral	Chairman of the Board of Directors	03.08.2018 – 13.06.2020
	Oleg Perfilov	Member of the Board of Directors	14.06.2017 – 13.06.2020
	Eldar Tabanov	Independent Director	15.01.2018 – 13.06.2020

PERFORMANCE OVERVIEW OF THE BOARD OF DIRECTORS

In 2018, the Board of Directors held 11 in-person meetings with 100% attendance. The Board of Directors focused on the following key issues:
- election of the Chairman of the Board of Directors of PAVLODARENERGO JSC, members of the Committees under the Board of Directors;
- joining PAVLODARENERGO JSC and its subsidiaries to the Anti-Corruption and Fraud Policy of CAEPCO JSC;
- payment of bonuses to employees of PAVLODARENERGO Group of companies based on the performance results for 2017;
- consideration of performance results and work plans of the Risk Management Department and the Internal Audit Department;
- consideration of performance results of the Personnel, Remuneration and Social Affairs Committee; introduction of amendments and additions to the Charter of Pavlodarenergosbyt LLP;
- approval of the consolidated budget of PAVLODARENERGO JSC for 2018;
- purchase by PAVLODARENERGO JSC of 100% stake in authorized capitals of Energetik Health Care Center LLP and Energetik Recreation Center LLP;
- approval of the new organizational structure of PAVLODARENERGO JSC; approval of the annual consolidated financial statements of the Company;
- introduction of a new participant - Pavlodar Heat Networks LLP to the structure of Ekibastuzteploenergo LLP;
- provision of charitable assistance to the Entrepreneurship Initiatives Development Fund;
- approval of the agreement signed by PAVLODARENERGO JSC for the construction of a water supply and sewage pipeline for the swimming pool in Usolsk microdistrict of the city of Pavlodar.

Name	Tasks	Members	Performance results
Strategic Committee 3 members	– enhancement of corporate governance efficiency; – monitoring of project implementation; – monitoring of implementation of the Company's development strategy; – assisting the Board of Directors in improving the Company's planning and business development mechanisms.	E. Tabanov Chairman D. Turganov O. Perfilov	In 2018, the Committee had no meetings.
Audit and Risk Management Committee 5 members 2 meetings in 2018	– assisting the Board of Directors in the effective performance of regulatory and oversight functions; – improvement and strengthening of the internal audit and risk management systems; – advising the Board of Directors on matters requiring actions on its part.	E. Tabanov Chairman O. Perfilov A. Karyagin Zh. Rakhimberlinova A. Stanbayeva	The Committee addressed issues relating to activities of Internal Audit and Risk Management Departments, including t review of relevant activity reports of departments, approval of budgets, work plans, introduction of amendments and additions to relevant corporate regulations and procedures, etc.
Personnel, Remuneration and Social Affairs Committee 4 members 2 meetings in 2018	– development and implementation of a uniform human resources policy for the Company and its subsidiaries, building an effective corporate governance system and implementation of its principles.	G. Andreyev Chairman O. Perfilov A. Nigay N. Konstantinova	The Committee addressed issues relating to the personnel management in PAVLODARENERGO JSC, election of the Chairman of the Board of Directors of PAVLODARENERGO JSC and members of the committees of the Board of Directors.

EXECUTIVE BODY

General Director is the sole executive body of the Company responsible for managing operations of PAVLODARENERGO JSC. General Director is governed by the Regulations on General Director of PAVLODARENERGO JSC. General Director manages day-to-day operations of the Company and implements the strategy determined by the Board of Directors and shareholders. General Director operates based on the principles of action in the best interests of shareholders, integrity, diligence, prudence and vigilance.

Oleg Perfilov

General Director
of PAVLODARENERGO JSC

BRIEF BIOGRAPHY

Oleg Perfilov was born on July 15, 1968 in Pavlodar region. In 1992, he graduated from Pavlodar Industrial Institute with a degree in Automatic Control of Electric Power Systems.

He started his career in the energy sector in 1992. During his labor activity, he held various positions at energy enterprises of Pavlodar from an ordinary worker to the manager. From 2002 to 2007, he headed CHP-2 and CHP-3 of PAVLODARENERGO JSC.

On November 11, 2007, he was appointed Deputy General Director for Production at AccessEnergo LLP, which was renamed as North-Kazakhstan Energocenter LLP (Petropavlovsk) on February 29, 2008. In 2009, he held the position of Deputy General Director for Production at SevKazEnergo Petropavlovsk LLP, which was later restructured into SEVKAZENERGO JSC. From 2013 to June 2013, he held the position of Deputy Chairman of the Management Board for Production of SEVKAZENERGO JSC.

In January 2013, he was appointed acting Chairman of the Management Board of PAVLODARENERGO JSC. Currently, he is General Director of PAVLODARENERGO JSC.

In 2005, Mr. Perfilov was awarded a certificate of merit from the Ministry of Energy and Mineral Resources of the Republic of Kazakhstan. In 2011, for his contribution to the development of the electrical power industry of the CIS countries, Oleg Perfilov was awarded the title Honored Power Engineer of the CIS. In 2018, he was awarded a medal for contribution to the energy sector from the Ministry of Energy of the Republic of Kazakhstan.

Executive bodies of the Company's subsidiaries include: Pavlodar Regional Electric Distribution Company JSC, Pavlodar Heat Networks LLP and Pavlodarenergosbyt LLP, Energetik Health Care Center LLP, Energetik Recreation Center LLP, Ekibastuzteploenergo LLP are separate entities and each has its own General Director.

No.	Name, legal organizational form	Sole executive body	Position	Date of election/expiry of powers
1.	PAVLODARENERGO JSC	Oleg Perfilov	General Director	10.09.2014 – 10.09.2021
2.	Pavlodar Regional Electric Distribution Company JSC	Fyodor Bodrukhin	General Director	07.10.2011 – 26.04.2021
3.	Pavlodar Heat Networks LLP	Marat Imanayev	General Director	01.06.2015 – 01.06.2020
4.	Pavlodarenergosbyt LLP	Talgat Arginov	General Director	01.11.2013 – 01.11.2020
5.	Ekibastuzteploenergo LLP	Aleksandr Zakhariyan	General Director	01.10.2018 – 01.10.2021
6.	Energetik Recreation Center LLP	Aleksandr Zamotin	General Director	03.05.2018 – 03.05.2021
7.	Energetik Health Care Center LLP	Tatyana Kandybayeva	General Director	03.05.2018 – 03.05.2019

REMUNERATION POLICY

Remuneration to the executive body is determined by the decision of the Board of Directors of PAVLODARENERGO JSC.

Remuneration for General Director is determined based on the following requirements:
– remuneration consists of fixed and variable parts;
– the variable part of remuneration depends on key performance indicators of General Director, his/her qualification level and personal contribution to the Company's performance results for a certain period with a view to motivating General Director to work as per the highest quality standards;
– social benefits, guarantees and compensation payments shall be provided to General Director in accordance with the laws, internal regulations of the Company and the employment contract.

CORPORATE ETHICS

The Company has a Code of Corporate Ethics approved by General Director in 2016.
The document combines international standards of regulating business relations in four directions:
- business and professional ethics
- organizational ethics
- corporate governance
- social responsibility of the company.

Compliance with business ethics across the Group of companies is monitored by executive officers through the organization of activities in accordance with prescribed ethical principles and standards.

All employees of the Company adhere to standards and provisions of the Code.

EXTERNAL AUDIT

After change of management in CAEPCO JSC, the auditor rotated from Deloitte LLP to PWC Kazakhstan LLP. The audit service agreement was signed with the company until 2021.

CONFLICT OF INTEREST

Conflict of interest is regulated by the Code of Ethics. This document provides for responsibilities of employees, abuse of official position, activities of employees inside and outside the Company.
The principle of minimization of conflict of interest is among the fundamental anti-fraud and corruption guidelines of the Fraud and Corruption Prevention Policy. Pursuant to this principle, the Company reduces a conflict of interest through effective distribution of powers and responsibilities by building a transparent organizational structure.
Activities of members of the Board of Directors are governed by the relevant Regulations. Avoidance of a conflict of interest between members of the Board of Directors is stated in the section "Rights and Responsibilities of Members of the Board of Directors".

To improve business processes and enhance the effectiveness of decisions made, the Company has established internal control mechanisms. To ensure independence and objectivity of its activities, the Internal Audit Office (IAO) reports directly to the Board of Directors of the Company and is supervised by the Audit and Risk Management Committee, which monitors decisions made and processes to ensure the reliability of financial reporting and to coordinate internal control and risk management systems.

In 2018, the IAO operated in accordance with the annual work plan approved by the Board of Directors: it conducted evaluation of effectiveness of the internal control system (ICS) in PAVLODARENERGO JSC Group of companies for the following business processes: “Investment Management”, “Tax Accounting”, “Accounting of Fixed and Intangible Assets”, “Management of Procurement, Contracts and Payables”. Also, the IAO monitored the implementation of its recommendations and conducted random inventory of fixed assets and inventories. The Internal Audit Office submitted an annual report and the activity report for 10 months to the Board of Directors and the Audit Committee.

The IAO operates in accordance with the International Standards on Auditing (ISA) developed by the Institute of Internal Auditors, as well as in line with the current laws and regulations of the Republic of Kazakhstan and the Code of Ethics of internal auditors of PAVLODARENERGO JSC.

Internal auditors adhere to the following principles in the course of their activities: integrity, objectivity, confidentiality and professionalism.

The IAO acts in accordance with the requirements of the Internal Audit Department of the holding company and complies with the audit methodology and practices.

Since 2018 the Company has been using a functional system of internal controls, which provides reasonable assurance of effectiveness at all levels of control, including financial and operational control, compliance with laws and regulations.

CORPORATE GOVERNANCE CODE COMPLIANCE REPORT

The corporate governance system of PAVLODARENERGO JSC regulates the process of interaction between the management bodies, the Company’s internal control body, shareholders and other stakeholders, and ensures a balance between the interests of all the above listed parties.

The corporate governance system is regulated by the internal documents of the Company published on its corporate website. A summary of the corporate governance principles is provided in the Corporate Governance Code of PAVLODARENERGO JSC adopted in 2010 by the Company’s Board of Directors.

The Code is in full compliance with the Law on Joint-Stock Companies of the Republic of Kazakhstan: the document is based on the current international practices in the field of corporate governance and recommendations on application of corporate governance principles by joint stock companies in Kazakhstan.

Adherence to the principles of the Corporate Governance Code is aimed at formulating and implementing in the Company’s day-to-day operations the standards and traditions of corporate behavior that meet international standards and contribute to creating a positive image of the Company in the eyes of its shareholders, customers and employees to achieve the fullest realization of the rights of shareholders and improve their awareness about the Company’s activity, as well as to control and reduce the risks, maintain sustainable improvement of the Company’s financial performance and successful pursuit of its statutory goals.

The Company’s corporate governance practices in 2018 were fully consistent with the provisions of the Corporate Governance Code.

KEY PRINCIPLES OF THE CORPORATE GOVERNANCE CODE

In 2018, corporate governance practices of the Company fully met the requirements of the Corporate Governance Code developed in accordance the Joint-Stock Companies Act of the Republic of Kazakhstan. The document is also based on the current international practices in the field of corporate governance and recommendations on application of corporate governance principles by joint stock companies in Kazakhstan.

The principles of the Corporate Governance Code are aimed at formulating and implementing in the Company’s day-to-day operations the standards and traditions of corporate behavior that meet international standards and contribute to creating a positive image of the Company in the eyes of its shareholders, customers and employees to achieve the fullest realization of the rights of shareholders and improve their awareness about the Company’s activity, as well as to control and reduce the risks, maintain sustainable improvement of the Company’s financial performance and successful pursuit of its statutory goals.

Fundamental principles of the Corporate Governance Code:
- Justice
- Accountability
- Responsibility
- Transparency
- Environmental protection and social responsibility
- Effectiveness
- Control

In 2018, all the fundamental principles of the Corporate Governance Code were respected.

Participation in annual general meetings of shareholders is the primary way for shareholders to exercise their rights as reflected in the Charter of the Company. The General Meeting of Shareholders is held annually; extraordinary meetings are also held by decision of the Board of Directors or at the initiative of the executive body. Shareholders of the Company may make suggestions to the agenda of the annual General Meeting, nominate candidates to the Board of Directors and its Committees, and convene meetings of the Board of Directors.

RISK MANAGEMENT

The main goals of PAVLODARENERGO JSC Group of companies in the field of risk management are to reduce the negative impact of events occurring in the course of activities of the Corporation, as well as to pursue opportunities.

CORPORATE RISK MANAGEMENT SYSTEM

To accomplish these goals, the Company has a corporate risk management system (RMS) aimed at identification, assessment and monitoring of all significant risks. Risk management is carried out at all levels: industrial enterprises, business units and at the level of the Company.

Risk groups

Strategic risks	Financial risks	Operational risks	Legal risks
• Regulatory risks • Investment risks • Project risks • Credit risks • Reputation risks • Market risks • Managerial risks	• Managerial risks • Interest risks • Liquidity risk • Credit risks • Price risks • Foreign exchange risks	• Commercial risks • Technological risks • Professional risks • Reputation risks • Procurement and supplies • Regulatory risks • Fuel risks • Social risks • Property risk • Managerial risks • Interaction with contractors • IT and information security risks • Emergencies • Human resources risks • Environmental risks	• Regulatory risks • Environmental risks • Human resources risks • Tax risks • Violation of law • Corruption and fraud risk • Property risk • Collection risks

Risks are identified, evaluated and monitored.

ORGANIZATION OF RMS ACTIVITIES

Risk identification	Risk analysis and assessment	Risk management	Risk monitoring
Detection of risks and their inclusion in the Company's Corporate Risk Register for further assessment and management.	Determining the seriousness of risk impact on production, financial and economic performance of the Company.	Identification, evaluation and selection of the most effective method for achieving goals by maximizing the positive and minimizing the negative events that have an impact on the activities of the Company.	Ensuring that risk management plans are implemented regularly, promptly and properly.

The Company has an Internal Control System (ICS) which includes policies, processes, procedures and standards of behaviour and actions combined into a single continuous process, which is part of the Company's management process exercised by the Board of Directors, as well as all executive and supervisory bodies and employees to ensure a reasonable confidence in achieving the operational goals of the Company and minimization of risks in the course of activities.

The Company has a three-level Internal Control System:

Operational	Financial	Compliance
Applies to the core business objectives of the organization, including productivity, profitability and preservation of resources.	Refers to the preparation of reliable financial statements to be published, including the interim, condensed financial statements, as well as any data derived from reports (for example, income data) which are publicly available.	Focuses on compliance with laws and regulations governing the operations of the organization.

ANALYSIS OF SIGNIFICANT RISKS AFFECTING PERFORMANCE

Seventy-nine risks affecting the Company's performance were identified in 2018 based on the corporate Risk Register and the Risk Map updated in accordance with the approved Risk Management Policy.

No.	Risk	Factors	Risk level	Change	Description of the risk change	Risk minimization measures
Strategic risks						
1.	Damage to the corporate reputation	1. Negative public reaction, absence of counter/positive media publications. 2. Increase in the number of customer complaints, including those caused by poor service level, as well as employees' failure to comply with the corporate code of ethics.		〈 〉	In 2018, negative information was published in social and mass media. In addition, there were complaints from customers due to untimely/improper heat supply.	In August 2018, Pavlodarenergosbyt LLP introduced a quality management system which is operating in accordance with ISO 9001:2015 standard to ensure customer satisfaction, as evidenced by certificate No. 011001819001 issued by TUV Rheinland Kazakhstan. Monitoring of customer satisfaction is carried out based on information received from the customer service quality evaluation panels installed in 2018 in service centers of Pavlodarenergosbyt LLP. The official website of PAVLODARENERGO JSC contains detailed information on measures planned for 2019 to enhance the operational reliability of heating networks and improve the quality of heat supply to consumers. PAVLODARENERGO JSC conducts awareness-raising activities regarding the forms of feedback with consumers via mass media, social networks and official website of the Company.
2.	Introduction of the electrical capacity market and the balancing electricity market	1. Imperfection of the law in terms of operation the electrical capacity market and the balancing electricity market. 2. Lack of a full ASCAE system recording the actual consumption rate for electricity. 3. Lack of statistics on consumer load profiles.		〈 〉	Taking into account the introduction of the electrical capacity market from 2019 and the existing unresolved issues, the risk remained in the critical risk zone, i.e. crucial attention is required.	Numerous measures are taken to manage this risk, including: - Cooperation with the Ministry of Energy of the Republic of Kazakhstan and the Committee for Regulation of Natural Monopolies, Protection of Competition and Consumer Rights; - cooperation with the Ministry of National Economy of the Republic of Kazakhstan for making proposals and comments to regulations governing the operation of the electrical capacity market and the balancing electricity market; - Development of ASCAE system for wholesale consumers; - Introduction of the software to work on the electrical capacity market and the balancing electricity market; - Working with consumers for providing daily schedules; - Monitoring of actual electricity consumption via ASCAE system.
3.	Reducing the rate by a competent authority.	1. Imperfection of legislation. 2. Poor communications with an authorized body. 3. Failure to fulfil investment commitments.		︿	In 2018, pursuant to the authorized body's order, the rates were reduced. As a result, the risk was changed from significant to critical.	1. Promoting and defending the interests of the Group through associations and communities (Kazakhstan Electricity Association, Atameken National Chamber of Entrepreneurs of Kazakhstan, etc.); 2. Participation in the development of industry-specific laws and regulations by submitting proposals. 3. Control over fulfilment of investment commitments at all levels.

Operational risks						
1.	Injuries/incidents	1. Violations by employees of process requirements stipulated by OHS rules and regulations during the performance of work. 2. Poor knowledge of OHS instructions and requirements among individual employees. 3. Unsatisfactory organization of work practices. 4. Equipment failures, accidents at work.	●	﹀	In 2018, compared to 2017, the rate of injuries reduced across the Group.	1. The Group conducts mutual audits with the participation of representatives of OHS Departments of CAEPCO JSC subsidiaries. 2. The internal regulatory documents were updated. By order of the enterprise, the Regulation "Procedure for Investigation and Registration of Occupational Accidents and Incidents" was introduced. 3. In the framework of updating the Regulation for registration of cases of labor and production discipline violation, the Company approved the List of main violations of the OHS rules, including disciplinary penalties and a variable amount of deduction from wages depending on the type of violation. 4. Overhaul and routine repairs of equipment were scheduled. More detailed information is provided in the Occupational Health and Safety section of this Report.
2.	Excessive heat losses	1. High tear and wear rate of heat networks. 2. Technological failures and accidents on heating mains. 3. The value of normative losses in consumer networks was excluded from the rate from January 1, 2010 by the Pavlodar Regional Department of the Committee for Regulation of Natural Monopolies and Protection of Competition of the Ministry of National Economy of the Republic of Kazakhstan.	●	﹀	In 2018, compared to 2017, there was a reduction in above-standard heat losses of the Company. However, the rate of above-standard losses is still subject to constant monitoring.	1. In 2018, to minimize this risk, the following measures were implemented: - overhaul and current repairs of heat networks in accordance with the approved schedules; - renovation and modernization of heat networks using foamed polyurethane pipelines; - switching and configuration of operation modes; - inspection of heat networks for process failures. 2. Installation of additional heat meters on consumer networks. 3. Holding meetings between top managers of heat supplying organizations with condominium administrations within the framework of the Open Day campaign.
3.	Failure of the Data Processing Center (DPC, Pavlodar)	1. Power supply interruption 2. Communication channel failure 3. Disturbance of the containment area microclimate 4. Server/network equipment failure 5. Man-made disasters. 6. Social and political factors.	●		The risk was identified in 2018	1. Testing of the IT infrastructure restoration; 2. Development of an emergency IT infrastructure restoration plan for corporate information systems; 3. Development of procedures in subsidiaries for emergency operation and interaction in the manual mode in case of failure of the key IT systems.
Financial risks						
1.	Growth of overdue receivables.	1. Low level of payment discipline among customers. 2. Decline in basic macroeconomic indicators that affect the solvency of counterparties.	●	〈 〉	In 2018, there was a reduction in the ratio of overdue receivables (over three months) in the total volume of receivables. However, the amount of overdue receivables is subject to constant monitoring.	1. As part of the Quality Management System operating in accordance with ISO 9001:2015 standard, goals were set in the field of quality aimed, inter alia, at reducing the level of overdue receivables. 2. To manage this risk, the following effective measures are implemented on a constant basis: - applications for debtors' electricity cut-off are sent to the Energy Supply Department; - schedules for debt repayment in installments are prepared; - claim-related work is carried out; - enforcement agents are involved to visit non-payers. During such visits, household appliances and vehicles are seized; - information on employees' overdue debt for utilities is sent to enterprise; - debtors' property is seized; - departure of debtors outside the Republic of Kazakhstan is restricted; - debt is collected from the source of financing (deduction from wages and pension contributions); - change in the debt collection method on the basis of which the debtor's property (housing or vehicle) is evaluated for sale through a bidding process.
2.	Change in the national currency/foreign currency exchange rate	1. Changes on the currency exchange, decrease or increase in the national currency rate. 2. Conclusion of contracts to supply inventories and services in foreign currency. 3. Conclusion of loan agreements in foreign currency.	●	〉	At the end of 2018, KZT/USD exchange rate decreased by 13% and during the year it showed a great volatility; as a result, the risk impact on the Company's activities increased.	The Company monitors the trends in exchange rates and other indicators affecting the changes in exchange rates: prices for oil, raw materials, etc. To manage this risk, the Company uses a method of natural hedging by placing available funds on dollar-denominated deposits and monitors the effectiveness of long-term investment programs.
3.	Credit risk in relation to counterparty banks	1. Placement of funds with STBs with a low credit rating. 2. Changes in the law. 3. Deterioration of the financial position in the country.	●	〈 〉	Risk remains in the critical zone. This is caused by negative processes in the banking system of Kazakhstan: development of unfavorable scenarios (withdrawal of licenses) in certain STBs in 2018.	To manage this risk, the Group constantly implements the following measures: - placement of all deposits and other funds with STBs having at least B+ rating; - monitoring of STB's financial position by requesting information from rating agencies, review of opinions in reputable financial publications.
Legal risks						
1.	Damage to the Company due to fraud actions of employees or third parties	Creation of external and internal threats to the Group's interests as a result of illegal actions of employees and/or third parties in relation to the Group's assets, infliction of damage as a result of inappropriate and inefficient use of resources.	●	〈 〉	Risk probability remained unchanged.	1. To implement a number of measures aimed at ensuring access control and preventing theft of goods and materials, unauthorized entry and other illegal actions, the Regulations on interaction between PAVLODARENERGO JSC and security organizations were approved and put into effect at facilities of PAVLODARENERGO JSC. 2. The Regulations on access control in PAVLODARENERGO JSC Group of companies were revised. 3. To create and implement an effective strategy preventing corruption and fraud, as well as to promote an appropriate culture of behavior and a negative attitude towards all corrupt and fraud practices among employees and management bodies, the Group implements the Anti-Corruption and Anti-Fraud Policy approved by the Board of Directors

﹀ - risk impact decreased
〈 〉 - no changes in risk probability
〈 - risk probability decreased
﹈ - risk impact increased
〉 - risk probability increased
● - average risk

Risk management activities in the Company are carried out by the Risk Management Department, which reports to the Board of Directors. The Department operates in accordance with the annual work plan approved by the Board of Directors.

Work performed in 2018	Work planned for 2019
Updating of the Risk Register and the Risk Map of the Group	Updating of the Risk Register and the Risk Map of the Group
Risk management training for key employees of business units and executives of the Group.	Risk management and internal control training for key employees of business units and executives of the Group.
Updating the list of business processes exposed to the risk of corruption and fraud.	Updating the list of business processes exposed to the risk of corruption and fraud.
Analysis and testing of the ICS effectiveness in business processes: – Control of distribution and metering of electricity consumption, energy monitoring; – Control of distribution and metering of heat consumption, energy monitoring; – Human resources management; – Payroll accounting.	Analysis and testing of the ICS effectiveness in business processes: – Investment activities; – Warehouse stock management; – Control of maintenance and repairs.

SUSTAINABLE DEVELOPMENT

The strategic goal of PAVLODARENERGO JSC is to build a leading private energy company in strict compliance with the established principles of sustainable development such as provision of high-quality services to customers, compliance with the international industrial and environmental standards, improvement of corporate governance, carrying out an anti-corruption activity.

The Company's goals and objectives in the area of sustainable development include:

- improvement of stakeholder engagement system;
- improvement of economic efficiency and sustainability;
- technology modernization of production;
- supporting the development of regions where the Company operates;
- corruption prevention.

STAKEHOLDER ENGAGEMENT

Stakeholder engagement is an important element of the sustainable development system. The principle of stakeholders' identification and selection is governed by a regional aspect. Keeping in mind a high public significance of its operations, PAVLODARENERGO JSC implements a number of activities to expand and improve effective stakeholder engagement in accordance with such principles of corporate behavior as openness, reliability and completeness of information on the Company's activities, complete respect for interests of all stakeholders and prompt responding to any concerns. Ensuring sustainable development and pursuing strategic goals of the Company is achieved upon observance of interests and responsible conduct with respect to all stakeholders. In 2018, the Company prepared a report on SEP (Stakeholder Engagement Plan) implementation. During preparation of the Report, top managers of PAVLODARENERGO JSC were snap polled and based on results of the poll the Company prepared and analyzed a stakeholders ranking map. Primarily, cooperation is established with those stakeholders who significantly affect the Company's operations, and also with those who would have a significant influence in the mid-term during the implementation of the Company's strategic initiatives. In addition, the impact of the Company's operations on stakeholders was taken into consideration.

Social responsibility	Environmental protection	Occupational health and safety	Economic security
Employees	Non-governmental organizations (NGOs)	Employees	Shareholders
Government agencies and regulatory authorities	Government agencies and regulatory authorities	Suppliers, Contractors	Local communities
Local communities	Local communities	Trade union	

Key of stakeholders	Engagement process	Issues raised
Employees	The engagement process is carried out through the corporate newspaper and Internet website, personal blog of the Company's General Director. There are e-mail boxes and phone hotline for employees' appeals. Meetings are held between the Company management and employees. Labor disputes are resolved by grievance committees with the participation of representatives of both the employer and the employee.	Respecting occupational health and safety standards. Informing employees about the Company's activities. Assistance in professional development.
Local communities	The Company has a comprehensive system for processing customer queries and providing feedback with the help of Internet sites and email, a contact center and a personal blog of the Company's General Director. Public hearings, round-table discussions and other events are held.	Processing of applications and adoption of rates for monopoly-controlled services. Implementation of the investment program. Assurance of quality of services provided to customers, monitoring of fulfillment of the requirements, for example, installation of household energy meters, and obtaining technical specifications.
Government agencies and regulatory authorities	Requests from governmental and regulatory authorities are processed: some requests are answered, while others are used for notification purposes only. Employees of the Company participate in specialized and general meetings. Visits of official delegations are arranged.	Mitigation of a negative impact of industrial facilities on the city and the region. Ensuring readiness for the heating season. Fulfilment of investment commitments. Compliance with the law, including environmental and nature protection requirements.
Suppliers, contractors and customers	Tenders, meetings with contractors and customers are arranged and held. Company's web-site provides feedback.	Promoting a mutually beneficial partnership. Ensuring transparency of tender processes.
Educational institutions	Meetings are held with representatives of higher education institutions of Pavlodar region. Employees of the Company participate in the activities of examination boards and certification commissions, as well as in accreditation of educational programs. Profenergy program is designed to support promising young graduates from universities and vocational schools, with the possibility of employment in the Company.	Staff recruitment for enterprises. Internship and employment of graduates.
Mass media	Every year, enterprises of the Company conduct press tours, press conferences, circulate press releases and promptly respond to information requests.	Promoting cooperation. Provision of information on the implementation of the investment program for assets modernization and renovation. Compliance with environmental standards. Implementation of social projects.
Non-governmental organizations (NGOs)	Representatives of NGOs are regularly invited to participate in press tours and public hearings held during the year. Employees of the Company participate in public meetings with representatives of small and medium business. Meetings are held with leaders of NGOs who support socially vulnerable people as well as with representatives from the consumer right protection associations.	Assistance in addressing environmental and social issues.
Trade union	Interaction with trade unions is carried out through arrangement of meetings and handling requests in the course of activities.	Compliance with the terms of a collective labor agreement. Assistance in arrangement of leisure time and recreational activities for employees.

INFORMATION POLICY

The information policy of PAVLODARENERGO JSC is a set of actions, measures and regulations to manage dissemination of corporate information and create a consistent image of the Company among its target audience.

The Policy covers internal and external communications. External communication implies informing the public about the Company's activities by publishing reports, messages, documents and other materials. The purpose of internal communications is to inform all employees of the Company about the current situation, promote corporate loyalty, regulate access of various employees and divisions to corporate information.

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

In 2018, PAVLODARENERGO Group of companies regularly provided information on its activities to the above stakeholders by updating web-sites of the Company and its subsidiaries, providing information to mass media, responding to requests, and arranging public hearings, press tours, round tables and other events.

In 2018, a total of 1,971 materials about activities of PAVLODARENERGO Group of enterprises were published in mass media, including 376 printed publications in local and republican media, 1,317 Internet publications (news agencies, websites, news aggregators, portals), 278 stories on local and republican TV channels, 1,321 social media posts. In addition, 24 issues of Energetik corporate newspaper were released.

Announcements of the Company's important events, news, invitations to press conferences, comments and information about the Company's activities are posted in social networks. The website is developed as the main source of information on the Company for external stakeholders.

Press tours are arranged for officials of the Committee for Regulation of Natural Monopolies of the Ministry of Industry and Infrastructure Development of the Republic of Kazakhstan in Pavlodar region.

During the summer, an active campaign was conducted to raise awareness of the importance of preparing the internal system of houses and apartments for the heating season. Audio and video advertisements were launched into rotation in public transport and the media, and "How to Prepare Housing for the Heating Season" brochure was distributed among representatives of the media and condominiums of Pavlodar and Ekibastuz. The electronic version was posted in the Preparing for the Heating Season column on the corporate website. The Open Day project was initiated to optimize the interaction between Pavlodar Heat Networks LLP and condominium administrations.

In 2018, a total of 142 materials were published in the Company News section on the corporate website of PAVLODARENERGO JSC.

In the reporting year, the Public Relations department of PAVLODARENERGO JSC provided information support to sports, sponsorship and festive events.

PLANS FOR 2019:

As part of the information policy, the Company intends to implement measure to ensure timely and regular disclosure of all material facts regarding its activities. This includes:
- awareness-raising measures for customers on popular topics;
- improving communication channels within PAVLODARENERGO Group of companies;
- improving external communication channels.

ENVIRONMENTAL IMPACT MANAGEMENT

Environmental protection (EP), consistent improvement of nature protection performance and energy efficiency are the key strategic priorities of PAVLODARENERGO JSC and an integral part of its sustainable development. In 2018, the Company produced 3,814.543 mln kWh of electricity and 4,981.353 thous. Gcal of heat. To generate energy, the Company burned 3,697.389 thous. tons of Ekibastuz coal and 5.289 thous. tons of fuel oil.

To minimize its environmental impact, the Company consistently implements the Environmental Policy provided for by its Development Strategy in order to comply with the environmental law requirements and use the latest achievements in science and technology. The priority areas of the environmental activity of PAVLODARENERGO JSC are based on the key environmental impacts of its operations.

These impacts include:
– harmful emissions into the atmosphere;
– greenhouse gas (CO_2) emissions into the atmosphere;
– impact on water bodies due to water consumption and water discharge;
– industrial waste disposal.

Significant environmental aspects are managed through regular monitoring of environmental performance and assessment of compliance with legislative and corporate requirements. Responsibility for control, accounting and analysis of the listed environmental impacts of PAVLODARENERGO JSC is assigned to the Environment Department.

Information about environmental activities is provided by publishing on the website of PAVLODARENERGO JSC of the IMS policy, environmental management tasks and objectives and reporting documents such as corporate reports, drafts of Environmental Impact Assessment (EIA) sections to developed projects for reconstruction and modernization, minutes of public hearings, nature protection action plans, and non-technical summary of projects.

In addition, PAVLODARENERGO JSC informs its contractors about the applicable legislative and normative requirements by including such requirements in agreements, specifications and requirements for contractors.

The Company intends to make every possible effort to prevent a negative environmental impact and implement operating methods that meet ISO 14001 requirements in all spheres of its activity.

Starting from 2009, PAVLODARENERGO JSC has been implementing the Environmental and Social Action Plan (ESAP) as a part of its investment program and in accordance with the Environmental Protection Policy of the European Bank for Reconstruction and Development which applies to EBRD-financed projects. Actions of the Environmental and Social Action Plan are aimed at improving the environmental performance during the production, as well as the health and safety policy at enterprises of PAVLODARENERGO JSC. In the framework of the ESAP, the Company provides a public report on an annual basis.

ATMOSPHERIC AIR PROTECTION

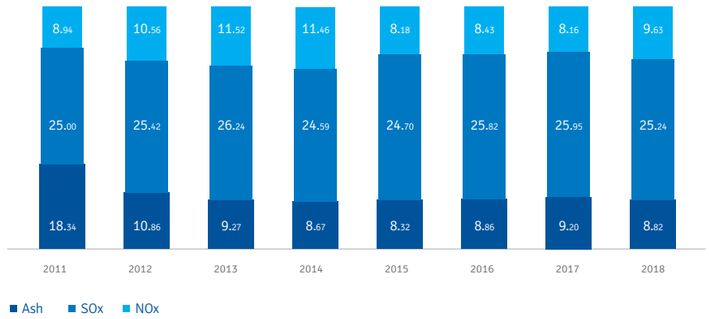
Atmospheric emissions are one of the main environmental impacts of thermal power plants.

Replacement of obsolete generating equipment having low energy and environmental efficiency with modern facilities that meet current environmental standards is the most important factor in reducing emissions. To improve its environmental performance, in 2009-2014, as part of the investment program PAVLODARENERGO JSC renovated its fly ash scrubbers at all boilers of its power plants. As a result, gas filtering efficiency increased from 97% to 99.5%. This allowed the Company to reduce total annual coal ash emissions from 29.9 thous. tons to 8.7 thous. tons (7.9%).

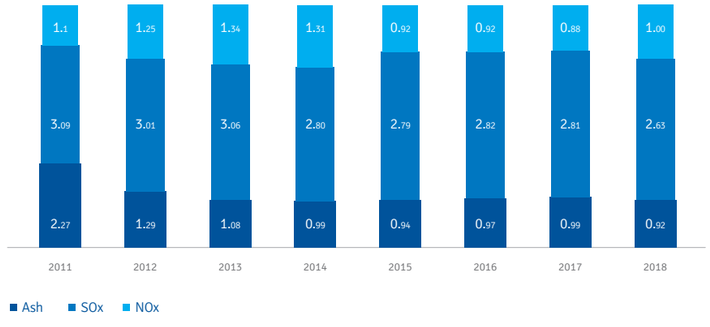
At the end of 2008, the year when the investment program was launched, PAVLODARENERGO JSC produced a total of 65.9 thous. tons of harmful emissions into the atmosphere (including other emissions), which in 2018 fell to 44.6 thous. tons (32.8%).

The amount of burned fuel (coal, heating oil), gross and per-unit emissions of solids (coal ash) and sulphur oxide (SOx) reduced in 2018 compared to 2017 (coal ash by 4.1%, SOx by 2.7% (ton/year), per-unit emissions of coal ash by 7%, SOx - by 6.4%).

Gross atmospheric pollutant emissions in 2011-2018, thous. tons



Specific atmospheric pollutant emissions in 2011-2018, mg/MWh



MITIGATION OF ENVIRONMENTAL IMPACT, ENVIRONMENTAL PROTECTION MEASURES

In 2018, the following main measures were implemented to mitigate environmental impacts:
- replacement, renovation and modernization of the main equipment ensuring efficient treatment, disposal, neutralization, suppression and decontamination of pollutants in gases released from pollutant emission sources, reducing energy consumption for in-house needs, improvement of fuel consumption accounting, reducing specific fuel indicators per unit of products generated;
- overhauls and routine repairs of dust and gas trapping units (repair of worn-out elements of scrubbers and ductwork) ensuring that scrubbers operate at their design capacity of 99.5%, repair of aspiration units and measuring their performance parameters, restoring thermal insulation and burner brickwork, repair and replacement of burners during boiler overhauls;
- replacement of used lamps with energy-saving ones;
- routine repairs to ensure that operating parameters of the main equipment comply with the Technical Regulations of the Republic of Kazakhstan (no. 1232 dated December 14, 2007);
- installation of the chimney no. 2 at CHP-3;
- building-up I stage dams of the ash dump site at CHP-3, construction of the III stage of the ash dump site at CHP-3;
- construction of stage II of the ash dump site at Ekibastuz CHP;
- renovation of the household sewage system from the sewage collector of PK RZ JSC to the pumping station at CHP-3;
- renovation of equipment of the fuel and transport workshop (purchase and installation of aspiration units) at CHP-3 of PAVLODARENERGO JSC.

GREENHOUSE GAS (CO_2) EMISSIONS

After the Kyoto Protocol entered into force for the Republic of Kazakhstan on September 17, 2009, the Company arranged work to prepare for taking inventory of greenhouse gas emissions and consumption of ozone depleting substances.

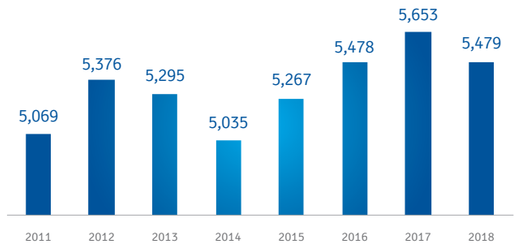
To monitor greenhouse gas emissions, the Company uses a calculation method in accordance with the guideline regulatory documents, which provides accounting of emissions from normal (regular) production operations, special practices (commissioning works, process shutdown, repair and maintenance) and emergencies.

In 2016, the Company signed a tripartite agreement to implement projects for modernization and renovation of the district heating systems in Pavlodar, Ekibastuz and Petropavlovsk between the EBRD, the Ministry of National Economy of the Republic of Kazakhstan and the Central-Asian Electric Power Corporation JSC within the framework of Nurly Zhol state program. Pursuant to the agreement, the amount of KZT 25.95 bln was allocated in 2016–2018 for the development of the district heating systems of Pavlodar, Ekibastuz and Petropavlovsk. Modernization projects are aimed at increasing energy efficiency, reducing losses and improving environmental performance (reduction of CO_2 emissions by burning less coal thanks to reduced transmission losses of heat in pipelines). As a result, gross CO_2 emissions reduced in 2018 by a total of 255.097 thous. tons compared to 2010, while per-unit emissions decreased by 4% compared to 2010.

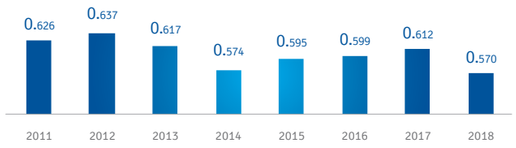
Another organizational tool used to reduce greenhouse gas emission is the Energy Saving and Fuel Efficiency Program, which implies new generating capacities making up an increasing share of generated energy, as well as the implementation of ISO 50001 energy management system (energy saving measures), the purpose of which is not only to increase energy efficiency of production processes but also to reduce greenhouse gas emissions. Thanks to this program, in 2018 greenhouse gas (CO_2) emissions decreased by 15.299 thous. tons.

Due to decrease in production and fuel (coal, heating oil) consumption, gross greenhouse gas emissions decreased slightly in 2018 compared to the level of 2017 (3%) and amounted to 5.479 mln tons of CO_2. Per-unit greenhouse gas emissions also decreased slightly (6.8%).

Gross CO_2 emissions in 2011–2018, thous. tons



Per-unit CO_2 emissions in 2011-2018, ton/MWh



3.282 3.443 3.553 3.403 3.555 3.705 3.818 3.697

Coal consumption, mln tons in 2011-2018

ENVIRONMENTAL PROTECTION EXPENDITURES

To enhance efficiency of environmental protection, PAVLODARENERGO JSC provides financing for environmental initiatives. In 2018, total expenditures amounted to KZT 3,257.810 mln. A special Environmental Impact Assessment (EIA) section is included in every new construction and renovation project: its provisions are communicated to local communities and interested parties in the form of public hearings. To confirm compliance with the environmental standards of the Republic of Kazakhstan, all projects undergo the state environmental examination in local environmental regulatory authorities.

Environmental expenditures, KZT mln

Expenditure	Amount, KZT mln		
	2016	2017	2018
Investment expenditures	958.5	836.600	2,617.95
Expenses for overhaul of fixed assets intended for nature protection purposes	60.8	59.05	72.86
Current expenses	837.5	602.25	642.088

In 2018, Pavlodar Regional Ecology Department conducted an unscheduled audit in PAVLODARENERGO JSC to verify compliance with environmental requirements when disposing of production and consumption wastes, which did not reveal any violations of environmental regulations and other regulatory requirements in the field of waste management.

WATER MANAGEMENT AND WATER RESOURCES CONSERVATION

Use of water resources is an integral part of production processes of PAVLODARENERGO JSC. The main water unit exposed to the Company's operations is Irtysh river. Water for technical needs is supplied from third party organizations on a contractual basis.

The main technological systems consuming the most part of water are cooling systems, hydraulic ash removal and water treatment plants.

In accordance with the production monitoring program of PAVLODARENERGO JSC for 2015-2019 approved in 2014 by the Environmental Regulation and Monitoring Committee of the Ministry of Energy of the Republic of Kazakhstan, monitoring of quality of water discharged to the ash dump as well as the level and quality of underground water is carried out through a network of observation wells. Reports on implementation of the production environmental monitoring program are submitted to the Pavlodar Regional Ecology Department on a quarterly basis. For technological purposes, monitoring of quality of (initial) technical water is carried out by corresponding laboratories.

The key goal of water use management is to use water more efficiently in order to reduce a negative environmental impact.

PAVLODARENERGO JSC has drinking water supply systems, as well as storm and domestic sewerage systems. Water for domestic, drinking and fire-fighting needs is supplied and discharged in a centralized manner via water supply and sewage networks of outside organizations on a contractual basis. Water for production needs is supplied via a closed-circuit water system.

In 2018, PAVLODARENERGO JSC consumed a total of 582,914 thous. m3 of water, mostly via the closed-circuit water systems. In the reporting period, water discharge in PAVLODARENERGO JSC amounted to 305.105 thous. m^3.

Total water consumption by source, thous. m^3

Indicator	2016	2017	2018
Total water consumption, including:	529,982.768	652,568.961	564,649.314
from surface water bodies	–	–	–
from third-party suppliers	24,313.469	23,662.189	21,870
from circulating water supply systems	491,645.221	613,936.441	527,464.1
recycling	14,024.078	14,970.331	15,315.214

Waste water discharged, thous. m^3

Indicator	2016	2017	2018
Total waste water generated	346.127	332.371	325.981
Discharged to third parties	346.127	332.371	325.91

The most important environmental activities implemented in 2018 in the field of water use and water discharge include the following:
- modernization of industrial circulating water supply systems and water recycling system preventing contamination and depletion of water resources;
- monitoring of qualitative and quantitative parameters of water (water analysis was carried out in accordance with the approved schedule);
- repair of pipelines, stop and control valves for industrial, service and drinking water at CHP-3 and CHP-2;
- replacement and repair of stop valves of service water pipelines, fire-fighting water pipelines and heating networks at Ekibastuz CHP.

EFFICIENT MANAGEMENT AND DISPOSAL OF PRODUCTION WASTES

The main type of waste generated by PAVLODARENERGO JSC is coal combustion residuals. They represent 99% of the total amount of waste and are stored at specially equipped hydraulic engineering facilities – coal ash dump sites. Compliance with the environmental regulations of the Republic of Kazakhstan in creating new ash dump sites allows preventing environment contamination by ash production waste and ensuring stable CHP operation. Other types of industrial waste are transferred for further processing, recycling or final disposal to specialized organizations operating in the Republic of Kazakhstan. The most significant action aimed at soil protection from production and consumption wastes is compliance with the temporary waste storage regulations and disposal methods.

In 2018, facilities of PAVLODARENERGO JSC produced a total of 1,471.746 thous. tons of waste, including 1,465.15 thous. tons of coal combustion residuals and 6.596 thous. tons of industrial and household waste. Decrease in waste generation by 108.789 thous. tons compared to 2017 is due to reorganization of Ekibastuz CHP and its withdrawal from PAVLODARENERGO JSC. The volume of industrial and household waste delivered in 2018 to third-party organizations for disposal or recycling increased by 0.746 thous. tons compared to 2017 due to increase in waste generation at facilities of PAVLODARENERGO JSC.

In 2018, the most important waste management actions aimed at improving industrial and environmental safety of ash dump sites and other waste disposal facilities included:
- building-up the 1st section dams of the ash dump site at CHP-3 (PAVLODARENERGO JSC);
- construction of the 3rd stage of the ash dump site at CHP-3;
- construction of the 2nd section of the ash dump at Ekibastuz CHP-2 of PAVLODARENERGO JSC;
- arrangement of sites for storage of wastes generated during renovation and construction of power facilities (preparation of sites, installation of containers).

It should be noted that new ash dump sites are constructed using the latest technology of an impervious screen in the ash dump bed - the Canadian polysynthetic geomembrane. The use of a special geomembrane film will allow achieving 100% waterproofing. It is a reliable and durable landfill liner ensuring protection of soil and ground water against contamination with chemicals contained in clarified water of the hydraulic ash removal system.

Total weight of generated waste, thous. tons

Indicator	2016	2017	2018
Coal combustion residuals	1,465.965	1,513.489	1,465.15
Other types of waste	5.778	4.754	6.596

Waste by hazard level, thous. tons

Indicator	2016	2017	2018
Waste generated:	1,471.743	1,518.243	1,471.746
Green list	1,471.333	1,517.901	1,471.338
Amber list	0.41	0.342	0.408

Wastes by method of handling, thous. tons

Indicator	2016	2017	2018
Waste generated	1,471.743	1,518.243	1,471.746
including coal combustion residuals	1,465.965	1,513.489	1465.15
Waste used at the enterprise	0.443	0.409	0.423
Waste decontaminated	–	–	0
Wastes transferred to third party organizations	5.278	4.340	6.096
Waste disposed at enterprise's own sites	1,465.965	1,513.489	1,465.15
including coal combustion residuals	1,465.965	1,513.489	1,465.15

ENVIRONMENTAL MANAGEMENT SYSTEM

PAVLODARENERGO JSC was among the first companies in Kazakhstan that obtained a certificate of compliance with the ISO 14001 international environmental management standard.

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

During the reporting period the TÜV Rheinland Kazakhstan company (a leader in the independent examination and certification industry) carried out supervisory and re-certification audits in CAEPCO JSC subsidiaries to verify compliance with ISO 14001 (Environmental Management System), ISO 9001 (Quality Management System), OHSAS 18001 (Occupational Health and Safety Management System), ISO/CD 50001 (Energy Management System). As a result, certificates of integrated management system (IMS) were granted to confirm that the Company's system is robust, efficient and focused on improvement.

PUBLIC APPRAISAL OF ENVIRONMENTAL PROTECTION ACTIVITIES

To meet environmental requirements of the Republic of Kazakhstan, in 2018 PAVLODARENERGO JSC held two public hearings attended by representatives of local executive bodies and the public - regional offices of the Environmental Protection Department of Pavlodar region of the Environmental Regulation and Supervision Committee of the Ministry of Energy of the Republic of Kazakhstan and the Office for Subsoil Use, Environment and Water Resources of Pavlodar region to review the following environmental projects:
- EIA "Building-up the dams of II stage of the ash dump at CHP-3 of PAVLODARENERGO JSC and the Environmental Protection Action Plan for the period of building-up the dams of II stage of the ash dump at CHP-3 of PAVLODARENERGO JSC (February 28 2018);
- EIA "Commercial development of clay rocks at Beta site in the northern industrial area of Pavlodar city" and the Environmental Protection Action Plan for the period of commercial development of clay rocks at Beta site in the northern industrial area of Pavlodar city (April 28, 2018);

The main goal of public hearings is to determine the environmental impact during the implementation of the above projects, evaluate possible environmental and socio-economic effects, as well as to develop environmental emission limits for renovation and construction operations. The sources of environmental impact, volumes of harmful emissions during the performance of works, and the amount of waste generation were addressed in detail during the hearings.

Announcements about the public hearings were published in the Kazakh and Russian languages in Zvezda Priirtyshiya and Saryarka Samaly newspapers, as well as on the websites of the Office for Subsoil Use, Environment and Water Resources of Pavlodar region.

PLANS FOR 2019

Development of draft emission quotas and waste disposal standards for CHP-2, CHP-3 and Ekibastuz CHP of PAVLODARENERGO JSC.
Conducting public hearings on projects stipulated by investment programs of PAVLODARENERGO JSC for 2019.

HUMAN RESOURCES MANAGEMENT POLICY

The human resources management policy of PAVLODARENERGO Group of enterprises is a comprehensive system of interaction with employees aimed at achieving strategic goals of the Company.

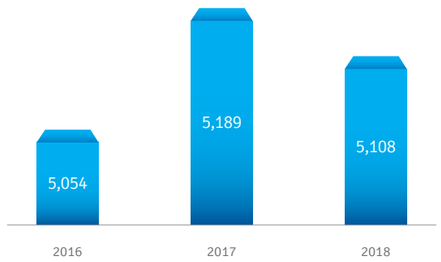
The goal of the human resources management policy is to build a company with an efficient corporate governance system providing opportunities for maximizing employee potential. The Company is strengthening its human resources management policy by hiring professional employees at various levels, retaining highly qualified staff, conducting continuous personnel professional training and development, providing opportunities for professional growth of proactive young specialists, creating a talent pool and succession planning.

EMPLOYEE HEADCOUNT AND SKILL LEVEL

As of December 31, 2018, the Company's headcount was equal to 5,108 persons.

A decrease of 1.6% compared to 2017 was caused by the implementation of actions to optimize the headcount of enterprises as well as by an increased turnover rate.

Changes in headcount, persons



Payroll headcount distribution by enterprises of PAVLODARENERGO JSC in 2018

Company name	Headcount
PAVLODARENERGO JSC	1,451
Pavlodar EDC JSC	2,007
Pavlodar Heat Networks LLP	464
Pavlodarenergosbyt LLP	477
Ekibastuzteploenergo LLP	709
Total:	5,108

EMPLOYEE STRUCTURE BY CATEGORY AND GENDER

Due to the nature of activities, the Company's employee structure is dominated by men with a share of 62.3%. Production personnel are mostly blue-collar workers with a share of men amounting to 72%.

In 2018, the share of managers made up 14.7% of the total headcount, which is an optimal rate.

Employee category	Total		including:			
			men		women	
	persons	%	persons	%	persons	%
Headcount	5,108	100	3,184	62.3	1,924	37.7
Managers	753	14.7	597	79.3	156	20.7
White-collar workers	1,320	25.8	401	30.4	919	69.6
Blue-collar workers	3,035	59.5	2,186	72.0	849	28.0

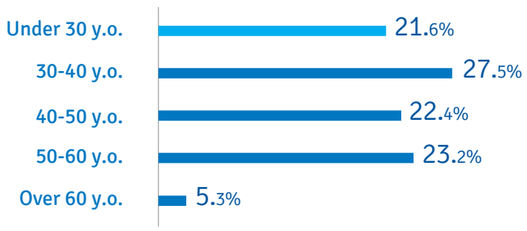
EMPLOYEE AGE STRUCTURE

The age structure of the Company's employees is characterized by a proportion of employees who are in the most productive age for professional work - under 40 years old – they make up 49.1% of the total headcount. The share of employees over 60 years is 5.3%.

As a part of the human resources management policy, the Company implements actions aimed at gradual reduction of personnel's average age to achieve an optimal ratio between young initiative employees and experienced, highly qualified employees in order to ensure succession and transfer of professional knowledge and skills.

The average age of the Company's employees is 41 years old.

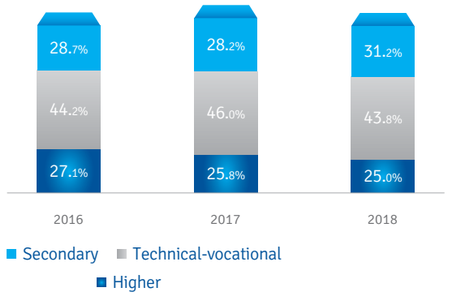
Employee age structure



EMPLOYEE EDUCATION STRUCTURE

In 2017-2016, the share of employees with professional education was growing across the Company, while the share of employees with secondary education was declining during 2016-2018. The share of employees with technical/vocational education declined in 2018 compared to 2017-2016.

Trends in education level



In 2018, 19 employees obtained university degrees by correspondence training, including 17 employees majoring in job related disciplines; 21 employees finished technical/vocational colleges by correspondence training with majors in job related fields.

In 2018, 79 employees continued to study at higher education institutions by correspondence training, including 59 workers who majored in professionally relevant disciplines; 51 employees were obtaining technical/vocational education by correspondence training, 38 of them - in professionally relevant disciplines.

EMPLOYEE TRAINING AND DEVELOPMENT

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

- compulsory, normative training;
- development of leadership skills;
- development of professional competencies.

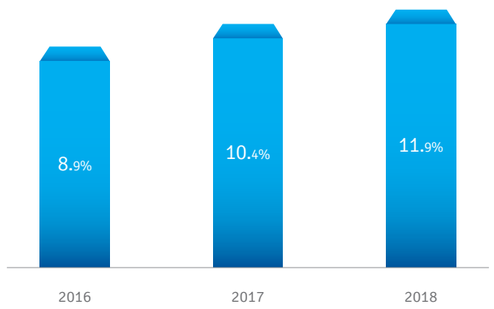
To improve the effectiveness of activities and create safe working conditions, the Company provides training in the corporate format based on individual development plans.

In 2018, a total of 5,545 persons were trained, including 4,351 production workers (85.2% of the total headcount) who completed compulsory training. The number of employees trained in the Company's own training center in 2018 amounted to 3,437 persons (62.0% of the total number of employees trained).

To develop professional competencies, 781 employees received advanced training in 2018. In connection with the introduction of the new ISO 45001:2018 standard, 59 internal auditors authorized according to the IMS were trained.

Name	2016	2017	2018
Number of employees who received training, retraining, or advanced training, including:	**5,569**	**5,917**	**5,545**
Safety precautions, fire safety guidelines and operating procedures (initial training, proficiency testing, certification/re-certification), courses for managers	4,221	4,548	4,351
ISO9001, ISO14001, OHSAS1800 quality management systems trainings (including environmental protection, internal audit and risk management issues)	39	12	59
Related occupations training	320	308	349
Civil defense and emergency training	22	0	5
Other (professional development, seminars, workshops, etc.)	967	1,049	781

Turnover rate



STAFF TURNOVER

In 2018, the turnover rate across the Company increased by 1.5% compared to 2017-2016 and reached 11.9%. Such an increase in the turnover rate was due to the following reasons:
- relocation outside Kazakhstan (CIS countries, including Russia);
- relocation within Kazakhstan (city/rural settlements);
- dissatisfaction with remuneration;
- violation of labor and production discipline.

To reduce the turnover rate, the following activities were further implemented in 2018:
- annual salary raises;
- promoting mentoring;
- training, advanced training and corporate training funded by the Company;
- financial and non-financial incentives for workers.

TALENT POOL

In 2018, in order to ensure availability of the required personnel reserve for various managerial positions, PAVLODARENERGO Group of companies created a talent pool of 581 senior, middle and junior managers. Succession planning is based on individual programs of professional and managerial training of succession pool members, including training in the Company's own training center, skills improvement, internship, mentoring, performance of management functions and temporary employee relocation. In 2018, 83 persons from the talent pool were appointed to management positions. External talent pool is also created, including from among graduates. A total of 1,022 young specialists work at enterprises of PAVLODARENERGO JSC, of which 132 people were employed in 2018, including 77 persons - for leading positions and professions. These include 78 employees (59.1%) with technical/vocational training and 54 persons (40.9%) with a college degree.

ATTRACTING YOUNG SPECIALISTS

In 2018, as part of PROFENERGY project, the Company continued to implement the Program aimed at supporting young specialists and improving their professional level in order to attract graduates to key/critical positions in the enterprises, encourage training and retain key employees of PAVLODARENERGO JSC.

The following activities were implemented as part of the Program:
1. A contest of science projects for a personal corporate scholarship of PAVLODARENERGO JSC was arranged and held among six students, as a result of which one winner was elected - a student of Ekibastuz College of the Engineering Institute;
2. Ten students were employed during the summer vacation;
3. As many as 285 students completed internship and pre-graduation training, of whom 11 people received payment and signed employment contracts effective after graduation;
4. Employees of CHP-3 took part in the work of examination and state attestation boards responsible for conducting graduation exams and assessment of graduation projects;
5. 8 employees received bonuses for successful graduation;
6. 44 employees were granted paid study leaves;
7. 7 employees were granted interest-free loan for study payment.

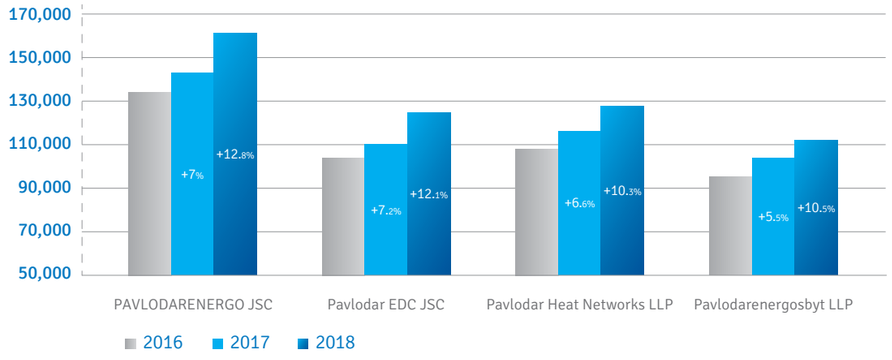
In 2018, in the framework of interaction with educational institutions, 4 lecturers of the Department of Energy, Metallurgy and Information Technology of the Innovative Eurasian University completed internship at CHP-3 of PAVLODARENERGO JSC in order to improve the quality of training for specialists in Pavlodar region.

EMPLOYEE MOTIVATION AND REMUNERATION

The purpose of the Company's motivation and remuneration system is to attract, retain and motivate employees in order to ensure that the Company can accomplish its mission and achieve business targets at an optimal cost.

In 2018, the average income level across PAVLODARENERGO Group of companies increased by 12.1% compared to the level of 2017.

AVERAGE INCOME GROWTH IN ENTERPRISES OF PAVLODARENERGO JSC



NON-FINANCIAL INCENTIVES

To increase motivation for efficient performance, every year the Company grants awards, certificates of merit and honorary titles for achieving high production results. Relevant information is published in corporate information sources.

In 2018, 77 employees and veterans of PAVLODARENERGO JSC Group of enterprises received awards for performance efficiency: 40 employees received corporate awards, including awards from CAEPCO JSC - 17 employees; state awards – 12 employees, awards from the Ministry of Energy of the Republic of Kazakhstan - 4 employees; awards from the KEA Council of Veterans – 18 employees, awards from Kazakhstan Energy Association – 5 employees, of which one employee was awarded the Honored Power Engineer title, one employee was awarded the Distinguished Power Engineer title; 2 employees received awards from the CIS Electric Power Council, of which one employee was awarded the CIS Honored Power Engineer title.

INTERACTION WITH TRADE UNIONS

PAVLODARENERGO JSC Group of enterprises has signed a uniform collective agreement for 2016-2019. In developing the terms of the collective agreement, the Company adheres to the principles of economic feasibility, sufficiency, joint responsibility and transparency. The collective agreement provides social benefits and guarantees for employees of PAVLODARENERGO JSC Group and their families.

Interaction with trade unions of PAVLODARENERGO JSC Group of companies includes:
• Monitoring of fulfillment of the terms of the collective agreement;
• Control of working hours and rest time of employees in accordance with the labor contract, internal working guidelines and other regulations of the employer;
• Remuneration to employees in accordance with the Uniform Remuneration Regulation and other local remuneration regulations;
• Work in the Reconciliation Commission;
• Participation in the work of commissions conducting comprehensive surveys of occupational health and safety, workplace certification;
• Working with the Council of Veterans;
• Suggesting the required industrial sanitation activities based on employees' proposals.

Name	2016	2017	2018
Number of employees in trade unions, person	3,616	3,229	2,869
Percentage of total headcount, %	71.5	62.2	56.2

SOCIAL SUPPORT, GUARANTEES AND COMPENSATION

The social policy of PAVLODARENERGO Group of enterprises is determined jointly with employees and their representatives - trade unions - and is implemented at the cost of the Group's enterprises.

Goals	Social package
Personnel motivation for long-term employment	Additional professional pension contributions at the rate of 5%; Bonus payment for participation in professional competitions; Rewards to celebrate anniversaries and holidays.
Effective compensation and benefits policy	Partial compensation for camp vouchers for children under 14 years old; New Year gifts to employees' children; Transport services for the delivery of employees to/from work.
Support of employee working efficiency and health	Insurance against occupational accidents and diseases; Compulsory health insurance; Regular medical examinations; Reimbursement of sanatorium and preventive treatment expenses;
Social support of employees	nancial assistance in case of childbirth; Financial assistance for funeral services; Paid study leave; Cash reward upon retirement; Additional paid leave in case of first marriage of employees and death of close relatives.
Sports and recreational activities	Reimbursement of food expenses to participants of sports competitions; Reimbursement of expenses for cultural events and group recreation.

SOCIAL SUPPORT IN CASE OF MATERNITY OR PATERNITY

Company name	Number of employees who took maternity/child care leave during the year			Number of employees who were on maternity/child care leave as of the end of the year	Number of employees who returned from maternity/child care leave during the year
	women	men	**total**		
PAVLODARENERGO Group of companies	111	3	**114**	204	46

To perform social work with pensioners, the terms of the collective agreement require the allocation of funds to the Council of Veterans of PAVLODARENERGO JSC. Every year, the Company honors World War II veterans, Afghan War veterans, participants in the rectification of the consequences of the accident at the Chernobyl Atomic Electric Power Station and homefront workers and provides them material support for the Victory Day. The Company provides material aid to non-working retirees in the form of food packages, cash rewards and coal supplies. Veterans are provided with home care and invited to concerts and gala dinners during the Victory Day (9 May), International Day of Older Persons (1 October) and the Power Engineer Day (22 December) celebrations. Organizing a tourist trip to the city of Nur-Sultan for energy sector veterans for one day with compensation for travel, excursion and meal expenses.

In September 2018, renewed canteens with modern specialized equipment and tableware were opened at five enterprises of PAVLODARENERGO JSC.

In December 2018, in anticipation of the Independence Day of the Republic of Kazakhstan, a new 50-meter Ertis OLYMPIC swimming pool was opened in Usolsk district of Pavlodar city. Central-Asian power-energy company JSC (CAPEC) and its subsidiary - PAVLODARENERGO JSC were among the companies participated in the implementation of the social project. It was the second project implemented under the memorandum concluded in 2016 between the Akimat of Pavlodar region and CAPEC JSC for joint implementation of social projects focused on the corporate social responsibility of businesses.

In 2018, the Company continued to build a nine-story 96-apartment building for employees of PAVLODARENERGO Group of companies. The completion of construction is expected in the second half of 2019 - this is the third stage of the memorandum implementation.

SPORTS AND RECREATIONAL EVENTS

To promote healthy lifestyle, the following activities are carried out at the Company's enterprises:
- Providing fitness club memberships;
- Organization of active leisure;
- Development of collective traditions;
- Holding of annual sports events, professional competitions.

A total of 2,765 employees visit sports facilities such as swimming-pool, football and volleyball sections, etc.

Every year, employees of PAVLODARENERGO Group of companies actively participate in sports and recreational activities held across the enterprise as well as at district and regional levels. The practice of holding sports events within the enterprises allows teams to take award-winning places in external competitions. The Group's favorite sports include volleyball, cross-country skiing, fall cross-country running, football, arm-wrestling, chess, fishing.

In 2018, competitions were held in eight sports, in which 270 employees took part. 60 people participated in city sports days held in enterprises of the region, where they took the second team place.

PLANS FOR 2019

In 2019, the Company will continue to implement HR policies aimed at employee engagement and professional development. To this end, measures will be taken to support young professionals. Additionally, the Company continues to implement key performance indicators and automation of HR processes. This includes:

1. Further implementation of PROFENERGY project in the following areas:
- Support of young professionals and promotion of employee training and education;
- Promoting mentoring;
- Key personnel development program;
- Critical occupations program.

2. Development and introduction of key performance indicators (KPIs) to achieve strategic and operational goals of the Company.

3. Providing the Company's employees with social benefits and guarantees under the Uniform Collective Agreement of PAVLODARENERGO JSC Group of companies.

4. Further implementation of programs to improve the living conditions of production workers.

5. Unification of HR processes and development of internal HR guidelines.

6. Development of automated processes for personnel record keeping, employee assessment and labor economics.

STRATEGIC GOALS AND IMPLEMENTED MEASURES IN THE FIELD OF OCCUPATIONAL HEALTH AND SAFETY

In 2018, the following activities were implemented across PAVLODARENERGO JSC Group of companies:
– development of sketches for OHS banners and posters placed on OHS information stands in the territory of enterprises;
– according to routine and overhaul schedules, platforms and handrails were adjusted to meet OHS requirements and toe boards were restored;
– in anticipation of the World Safety Day a competition of young specialists was held across CAEPCO JSC Group of companies, where the team of Ekibastuz CHP of PAVLODARENERGO JSC became a winner; a Safety and Labor Protection Day was held for employees' family members; a drawing contest "My Parents Work Safely" was organized and the best occupational health and safety workers were encouraged;
- the Company purchased an automatic external defibrillator for CHP-2 and CHP-3 to provide timely and effective first aid to injured persons in case of a sudden cardiac arrest before the ambulance crew arrives;
- an instruction was developed and implemented to ensure control of the quality of personal protective equipment, organize the work of the commission and determine the PPE suitability and write-off out-of-service PPE in structural units of PAVLODARENERGO JSC;
- the standards for issue of special clothing and other personal protective equipment to employees of PAVLODARENERGO JSC Group of companies were revised and approved;
- the production monitoring program was developed and implemented in PAVLODARENERGO JSC in accordance with the requirements of sanitary norms and rules;
- a sanitary and epidemiological opinion was obtained for CHP-3, CHP-2 and related ash dumps;
- OHS training on the topics "Interaction of Vehicles and Pedestrians at Production Sites and Facilities" and "Ensuring Safety During Work at Heights" was conducted for managers and employees of contracting organizations working in the territory of PAVLODARENERGO JSC;
- digital cameras were purchased for OHS Departments of PAVLODARENERGO JSC and Pavlodar EDC JSC to record violations during unscheduled and comprehensive inspections;
- to improve labor discipline and responsibility of the production personnel of Pavlodar EDC JSC involved in operational switching, preparation of workplaces, installation/removal of grounding at workplaces, etc., video recorders with 32 GB memory cards were purchased as a pilot project in 2018 (using the funds saved under OHS item),
- Pavlodar EDC JSC purchased ten helmet-type voltage signaling devices (Radius) as additional protection means to warn personnel working at electrical installations of a dangerous distance to live parts under voltage of 6-10 kV;
- Pavlodar Heat Networks LLP purchased 11 overalls and 4 insulated overalls for protection against thermal risks of an electric arc;
- Pavlodar Heat Networks LLP purchased "Caution! Sill Plate" and "Caution! Wet Floor" safety signs, as well as anti-slip pads for footwear;
- Pavlodar Heat Networks LLP conducted electrical safety training and knowledge assessment for its non-electrical and electro-technology personnel in the training center of PAVLODARENERGO JSC with the participation of OHS representatives of PAVLODARENERGO JSC;
- in 2018, employees of OHS Departments of PAVLODARENERGO JSC, Pavlodar EDC JSC, Pavlodar Heat Networks LLP, Pavlodarenergosbyt LLP and Ekibastuzteploenergo LLP conducted 639 OHS inspections across PAVLODARENERGO JSC Group of companies.

During the commissioning of the turbine no. 6 at Pavlodar CHP-3, no accidents involving employees of the Company or contracting organizations were reported. "Zero injuries" rate is the result of effective work of all project participants - from managers to employees responsible for project implementation.

TECHNICAL INSPECTORS

PAVLODARENERGO JSC Group of companies employs technical occupational safety inspectors, who interact with heads of departments, occupational health and safety services, operation inspectors, industrial safety inspectors, as well as with state labor inspectors, state supervision and control authorities.

The main responsibilities of the technical occupational safety inspectors include:
– Protection of employees' rights and interests;
– Participation in the development and submission of proposals to the Occupational Health and Safety section of the collective agreement, as well as to integrated programs and plans of priority measures to improve occupational safety practices developed by authorities;
– Monitoring of compliance with occupational safety guidelines at work places:
– Representation of trade unions in state authorities, NGOs, courts of various instances when dealing with labor disputes where the Occupational Safety section of the Labor Code applies.

OCCUPATIONAL HEALTH AND SAFETY COUNCIL

PAVLODARENERGO JSC Group of companies has established occupational health and safety councils. The council is headed by a chairman elected from among employees of the enterprise. The council consists of representatives of the employer and the trade union, including technical labor inspectors.

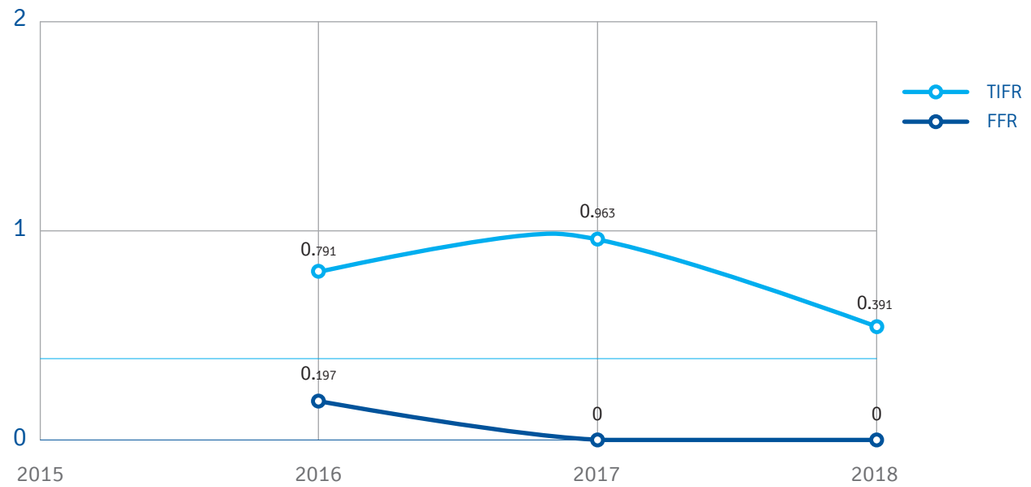
The occupational health and safety council performs the following functions:
– Examines the causes of occupational injuries and diseases, analyzes the effectiveness of occupational safety measures implemented, reviews information and analytical materials about the actual state of occupational safety in the organization;
– Analyzes the results of employee workplace certification, participates in the preparation of business units and the Company as a whole for brining work places into compliance with occupational safety regulations;
– Reviews proposals for elimination of the revealed violations in the field of occupational health and safety and creation of safe working conditions in the organization, formulation of programs, recommendations, decisions, etc. to preserve the life and health of workers in the course of employment;
– Assists in carrying out timely and proper employee training on occupational health and safety issues, as well as knowledge assessment in the field of occupational health and safety, regular training and advanced training of employees and trade union representatives on relevant occupational safety regulations;
– Submits proposals for the introduction of more advanced technologies and new equipment to ensure safe working conditions and eliminate heavy physical work;
– Informs employees of the organization on activities implemented to create better working conditions and occupational safety practices, prevent occupational accidents and diseases, as well as on the applicable regulations regarding certified special clothing, footwear and personal protective equipment and correct methods of using them;
– Participates in the review of occupational safety budgets of the Company, compulsory social insurance against industrial accidents and occupational diseases; monitors expenditures of the Company spent on improving occupational safety practices;
Measures to create safe working conditions include outreach efforts, inspection of equipment, introduction of advanced technologies, as well as activities aimed at enhancing safety at work places.

TYPES AND INCIDENCE OF OCCUPATIONAL INJURIES

In 2018, PAVLODARENERGO JSC Group of companies had 2 cases with minor injuries. There were no occupational fatalities in the reporting year.

Occupational injury rates

	2016	2017	2018
Headcount	5,054	5,189	5,108
Number of injuries	4	5	2
Number of injured persons	4	5	2
Number of fatalities	1	0	0



PLANS FOR 2019

- phased transition to overalls made of heat-protective fabrics like NOMEX®, which have the properties of protection against high temperatures and flame, thermal effects of an electric arc, and electrical insulation;
- automation of OHS processes, i.e. creation of a number of automated processes that make it possible to plan, control and analyze OHS processes.

The Company will continue to perform the following work:
- certification/bringing workplaces into a safe condition;
- notification by sending letters to families of employees who have violated occupational health and safety requirements;
- transition to harnesses, so-called parachute-type belts;
- implementation of Signal Sheets.

In 2018, PAVLODARENERGO Group of enterprises held a number of measures to organize leisure activities and maintain the principles of corporate social responsibility: rent of a sports hall and a swimming pool in the Neptune fitness center for doing sports (volleyball, swimming); provision of financial aid from the medical accumulation fund at employees' requests; preparation and holding of the competition in fishing. In 2018, three gyms, summer stadiums, a ski stadium and a chess club were rented by the trade union for competitions and training. The amount of KZT 2.142 mln was allocated from the trade union funds for sports events.

In 2018, the Local Trade Union of Energy System Workers of PAVLODARENERGO Public Association held seven sports events. Winners were awarded diplomas and money prizes.

During the year, the trade union held events for employees with a total budget of KZT 18.115 mln, which were devoted to the following holidays: Children's Day, International Women's Day, Knowledge Day, Defender of the Homeland Day, Nauryz, Victory Day, Chemical Industry Worker's Day, Environmental Protection Day, Labor Day, Power Engineer Day, New Year, International Day of Older Persons, as well as honoring of anniversary celebrants and retirees.

In anticipation of the Independence Day, a discount program was launched for trade union members thanks to which they can receive discounts in large trading companies when purchasing food products, building materials, furniture, as well as other goods and services when visiting a number of medical institutions.

A competition of young specialists was held in Pavlodar in the framework of promotion and popularization of occupational health and safety safety. The competition was attended by the teams representing all energy-producing subsidiaries of the parent corporation CAEPCO JSC. The team of PAVLODARENERGO JSC became the winner.

In 2018, the management of the Company, at the request of employees, resumed the medical fund by improving and expanding the range of services for employees.

On May 1, 2018, Energetik Recreation Center in the village of Michurino and Energetik Health Care Center in the city of Pavlodar joined PAVLODARENERGO JSC Group of companies. Lada-Largus and Lada-Vesta vehicles were purchased for Energetik Health Care Center. The equipment of the health care center was upgraded and the services of the recreation center were expanded.

On June 22, the regional communications service of Pavlodar region arranged a press lunch with the participation of General Director of PAVLODARENERGO JSC. At the meeting with media representatives, topical issues of heat and electricity supply in Pavlodar and Ekibastuz were discussed. In addition, power engineers presented their new project - a "Heat for Everybody!" collection containing recommendations and technical specifications for preparation for the heating season.

Energetik Recreation Center hosted the annual Irtysh Dawns 2018 motorcycle festival gathering about 400 Kazakh and Russian bikers.

The Friendship special interest club of the Council of Veterans of PAVLODARENERGO JSC celebrated its 10th anniversary.

On December 20, 2018, a solemn event dedicated to the 10th anniversary of CAEPCO JSC was held, where a number of employees were awarded medals and titles. On December 26, employees of PAVLODARENERGO Group of enterprises were honored in the anticipation of the Day of the Power Engineer Day.

SOCIAL PARTNERSHIP

PAVLODARENERGO JSC is implementing a social policy aimed at supporting the population in the regions of operations. In 2018, in the framework of the Memorandum of Joint Social Projects signed between the Akimat of Pavlodar region and CAPEC JSC (a shareholder of CAEPCO JSC and a parent company of PAVLODARENERGO JSC), a new 50-meter Ertis OLYMPIC swimming pool was opened in Usolsk district of Pavlodar city. During the construction, PAVLODARENERGO JSC installed external utilities - electricity, water supply, sewage and heat supply systems. The total cost of the project amounted to KZT 814,839,000, of which more than KZT 516 mln were spent on the installation of a heating main with a total length of 1,603 m. The heating main is used to supply heat to the pool and to reserve the heat load, taking into account further development of the district.

In 2018, pursuant to this memorandum, PAVLODARENERGO JSC continued to implement another large-scale social project in Pavlodar. The Company is building a nine-floor multi-apartment residential building for its employees in Usolsk district. Completion of construction is expected in the second half of 2019.

The Company's charity activities mainly include provision of aid to veterans of the Company: financial aid to retirees, home visits to sick people, purchasing coal and honoring veterans-retirees of the Company. To perform social work with pensioners, collective agreements provide for the allocation of funds to councils of veterans, which operate at all enterprises of PAVLODARENERGO JSC Group. Every year, the Company honors World War II and labor veterans and provides material support to retirees. Veterans are provided with home care, invited to concerts and celebratory dinners during World War II Victory Day celebrations.

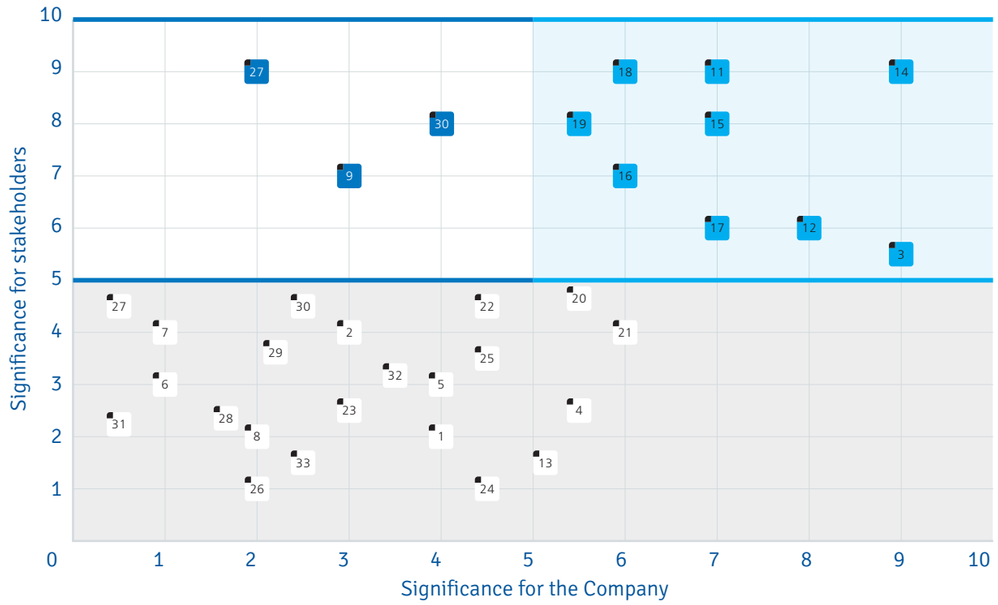
In 2018, PAVLODARENERGO JSC took part in the republican campaign "Road to School" under the motto "The Happy Childhood Territory". Every year, the Company takes an active part in the campaign and provides targeted assistance to orphans.

ABOUT THE REPORT

This Report was prepared by PAVLODARENERGO JSC based on the results achieved in 2018. The Report provides information about the activities of PAVLODARENERGO JSC and its subsidiaries. The document includes a Sustainable Development Report prepared in accordance with the GRI Standards: "The main scenario of conformity". The report is prepared on an annual basis. The previous Annual Report, which included 2017 Sustainable Development Report, was published in August 2018.

No substantial changes to the content of the report were made, and the Company currently follows the GRI Standards for information disclosure. Section "Index of GRI Elements" contains a table explaining where to find standard reporting elements and performance data. This Report was not certified externally.

List of topics and Materiality Map



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

GRI STANDARD AND YEAR OF PUBLICATION	INDICATOR	PAGE NUMBER, SECTION AND/OR URL	EXCEPTIONS/ COMMENTS
GRI 101: REPORTING PRINCIPLES (2016)			
GRI 102: GENERAL INFORMATION (2016)	Organization profile		
	102-1 Organization name	Section “Business Profile”, p. 5	
	102-2 Areas of activity	Section “Business Profile”, p. 5 and section “Business Model”, p. 16	
	102-3 Head office location	Section “Contacts”, p. 106	
	102-4 Geography of operations	Section “Geography of Operations”, p. 17	
	102-5 Form of ownership	Section “Company Structure”, p. 7	
	102-6 Sales markets	Section "Geography of Operations", p. 17 Section "Subsidiaries", p. 18	
	102-7 Company scale	Section “Key Performance Indicators”, p. 9	
	102-8 Personnel information	Section "Human Resources and Social Policy", p. 76	
	102-9 Supply chain	Section "Business Model", p. 16	
	102-10 Significant changes in the Company’s operations	Section "Organizational Structure", p. 48 Section "Share Capital Structure", p. 48	No changes
	102-11 Precautionary principles	Section "Environmental Protection Expenditures", p. 72	
	102-12 Support of external initiatives	Section "Environmental Impact Management", p. 68 Section "Greenhouse Gas Emissions", p. 71 Section "Environmental Management System", p. 75	
	102-13 Association membership	—	The Company is a member of Kazakhstan Electricity Association (KEA)
	Strategy		
	102-14 Management statement	Section "Letter of the Chairman of the Board of Directors", p. 3 Section "Letter of the General Director", p. 4	
	Ethics and Integrity		
	102-16 Values, principles, standards and rules of conduct	Section "Corporate Governance Code Compliance Report", p. 57	
	Corporate governance		
	102-18 Management structure	Section "Organizational Structure", p. 48 Section "Performance Overview of the Committees of the Board of Directors", p. 52	
	Stakeholder engagement		
	102-40 List of stakeholders	Section “Stakeholder Engagement”, p. 65	
	102-41 Collective bargaining agreements	Section "Interaction with Trade Unions", p. 82	
	102-42 Identification and selection of stakeholders	Section “Stakeholder Engagement”, p. 65	

GRI STANDARD AND YEAR OF PUBLICATION	INDICATOR	PAGE NUMBER, SECTION AND/OR URL	EXCEPTIONS/ COMMENTS
GRI 102: GENERAL INFORMATION (2016)	102-43 Approaches to engagement	Section “Stakeholder Engagement”, p. 65	
	102-44 Key topics and concerns raised	Section “Stakeholder Engagement”, p. 65	
	About the report		
	102-45 Consolidation basis	Section "About the Report", p. 93	
	102-46 Determining the content of the report and boundaries	Section "List of Topics and Materiality Map", p. 94	
	102-47 List of material topics	Section "List of Topics and Materiality Map", p. 94	
	102-48 Recalculation of data from past periods	—	Indicators were not changed and are comparable with the data provided in previous annual reports of the Company
	102-49 Changes in the report content	—	No changes
	102-50 Reporting period	Section "About the Report", p. 93	
	102-51 Last publication date	Section "About the Report", p. 93	
	102-52 Reporting cycle	Section "About the Report", p. 93	
	102-53 Contact information for questions about the report content	Section “Contacts”, p. 106	
	102-54 GRI compliance level	Section "About the Report", p. 93	
	102-55 GRI content index	Section "GRI Element Index", p. 95	
	102-56 External assurance	Section "About the Report", p. 93	
SIGNIFICANT TOPICS			
ECONOMICS			
GRI 103: MANAGEMENT APPROACH (2016)	103-1 Materials and boundaries	Section "List of topics and Materiality Map", p. 94	
	103-2 Management approach	Section "Financial and economic indicators", p. 39	Comprehensive economic policy covers all major topics in this area
	103-3 Management assessment	—	Not conducted
GRI 203: INDIRECT ECONOMIC IMPACTS (2016)	203-1 Infrastructure support	Section "Corporate events", p. 90	
	203-2 Significant indirect economic impacts	Section "Attracting young specialists", p. 81	
ENVIRONMENT			
GRI 103: MANAGEMENT APPROACH (2016)	103-1 Materiality and boundaries	Section "List of topics and Materiality Map", p. 94	
	103-2 Management approach	Section "Environmental impact management", p. 68	Comprehensive economic policy covers all major topics in this area
	103-3 Management assessment	—	Not conducted
Materials			
301-1 MATERIALS USED BY WEIGHT OR VOLUME	301-1 Materials used by weight or volume	301-1 Materials used by weight or volume, p. 68	

GRI STANDARD AND YEAR OF PUBLICATION	INDICATOR	PAGE NUMBER, SECTION AND/OR URL	EXCEPTIONS/ COMMENTS
Water			
GRI 303: WATER AND DISCHARGE (2016)	303-3 Water intake	Section "Water Management and Water Resources Conservation", p. 73	
	303-1 Use of water resources	Section "Water Management and Water Resources Conservation", p. 73	
	303-4 Water discharge	Section "Water Management and Water Resources Conservation", p. 73	
Emissions			
GRI 305: EMISSIONS (2016)	305-1 Direct greenhouse gas emissions	Section “Greenhouse Gas Emissions”, p. 71	
	305-4 Intensity of greenhouse gas emissions	Section “Greenhouse Gas Emissions”, p. 71	
	305-5 Reduction of greenhouse gas emissions (COR2R)	Section “Greenhouse Gas Emissions”, p. 71	
	305-7 NOx, SOx and other significant harmful emissions	Section "Atmospheric Air Protection", p. 68	
Waste			
GRI 306: EFFLUENTS AND WASTE (2016)	306-2 Total waste mass by type of disposal	Section "Efficient management and disposal of production wastes", p. 74	
Compliance			
GRI 307: COMPLIANCE (2016)	307-1 Information on non-compliance with environmental laws and regulations	Section “Greenhouse Gas Emissions”, p. 71	
SOCIAL CATEGORY			
GRI 103: MANAGEMENT APPROACH (2016)	103-1 Materiality and boundaries	Section "List of Topics and Materiality Map", p. 94	
	103-2 Management approach	Section "Human Resources Management Policy", p. 76	Comprehensive HR policy covers all major topics in this area
	103-3 Management assessment	—	Not conducted
Employment			
GRI 401: EMPLOYMENT (2016)	401-1 Headcount and staff turnover	Section "Staff Turnover", p. 80	
Employee/management relations			
GRI 402: EMPLOYEES AND MANAGEMENT RELATIONS (2016)	402-1 Minimum period of notice regarding significant changes in organization activities	Section "Human resources and social policy", p. 76	
Health and safety			
GRI 403: HEALTH AND SAFETY (2016)	403-1 Representation of employees in official joint health and safety committees with the participation of representatives of management and employees	Section "Strategic Goals and Implemented Measures in the Field of Occupational Health and Safety", p. 86	
	403-2 Types and frequency of workplace injuries, occupational diseases, lost work day rate, absenteeism rate in the workplace, total number of work-related fatalities	Section "Types and Incidence of Occupational Injuries", p. 89	
	403-3 Employees with high injury rates and high risk of occupational diseases	Section "Employees of the Corporation Exposed to High Injury Risk", p. 86	

GRI STANDARD AND YEAR OF PUBLICATION	INDICATOR	PAGE NUMBER, SECTION AND/OR URL	EXCEPTIONS/ COMMENTS
Training			
GRI 404: TRAINING AND EDUCATION (2016)	404-2 Professional development programs	Section "Personnel Training and Development", p. 79	
Diversity and equal opportunities			
GRI 405: DIVERSITY AND EQUAL OPPORTUNITIES (2016)	405-1 Composition of governing bodies	Section "Personnel Structure by Category and Gender", p. 78	
Local communities			
GRI 103: MANAGEMENT APPROACH (2016)	103-1 Materiality and boundaries	Section "List of Topics and Materiality Map", p. 94	
	103-2 Management approach	Section "Stakeholder Engagement", p. 65	
	103-3 Management assessment	—	Not conducted
GRI 413: LOCAL COMMUNITIES (2016)	413-1 Programs aimed at local community engagement, local community impact assessment and local community development	Section "Stakeholder Engagement", p. 65	
Customer health and safety			
GRI 103: MANAGEMENT APPROACH (2016)	103-1 Materiality and boundaries	Section "List of Topics and Materiality Map", p. 94	
	103-2 Management approach	Section "Customer Safety", p. 86	
	103-3 Management assessment	—	Not conducted
GRI 416: CUSTOMER HEALTH AND SAFETY (2016)	416-1 Evaluation of product safety for the consumer	Section "Customer Safety", p. 86	
Additional information			
POWER INDUSTRY PROTOCOL GRI G4	G4-EU1 Installed capacity	Section “Key Performance Indicators”, p. 9	
	G4-EU2 Power generation	Section “Key Performance Indicators”, p. 9	
	G4-EU3 Number of household, industrial, institutional and commercial customer accounts	Section “Geography of Operations”, p. 17	
	Length of aboveground and underground power transmission and distribution lines by control mode	Section "Main Production Characteristics", p. 8	
	Allocation of COR2R or equivalent emissions allowances	Section “Greenhouse Gas Emissions”, p. 71	

FINANCIAL STATEMENTS

PAVLODARENERGO JOINT STOCK COMPANY AND ITS SUBSIDIARIES

CONSOLIDATED STATEMENT OF FINANCIAL POSITION AS AT 31 DECEMBER 2018

(in thousands of Tenge)

	Note	31 December 2018	31 December 2017
ASSETS			
NON-CURRENT ASSETS:			
Property, plant and equipment	6	126,890,292	120,167,271
Goodwill	7	1,687,141	1,687,141
Intangible assets	8	531,958	457,713
Advances paid	9	4,417,584	2,923,346
Other financial assets	10	84,159	1,000
Deferred tax assets	33	466,719	363,835
Other non-current assets	11	1,590,377	1,007,172
Total non-current assets		**135,668,230**	**126,607,478**
CURRENT ASSETS:			
Inventories	12	2,413,556	2,503,466
Trade receivables	13	5,066,418	6,697,232
Advances paid	9	492,690	930,641
Income tax prepaid		443,637	33,002
Other current assets	11	1,356,302	1,463,883
Other financial assets	10	18,560	1,539,319
Cash	14	395,812	697,759
Total current assets		**10,186,975**	**13,865,302**
TOTAL ASSETS		**145,855,205**	**140,472,780**
EQUITY AND LIABILITIES			
EQUITY:			
Share capital	15	16,663,996	16,663,996
Additional paid-in capital	16	1,188,176	1,188,176
Revaluation reserve for property, plant and equipment		21,987,354	23,226,465
Retained earnings		31,992,978	32,345,817
Total equity		**71,832,504**	**73,424,454**
NON-CURRENT LIABILITIES:			
Bonds issued	17	1,475,528	-
Borrowings	18	-	24,326,339
Deferred income	19	4,135,679	4,345,484
Deferred tax liabilities	33	19,329,507	18,991,354
Ash dump restoration liabilities	20	1,298,758	135,280
Employee benefit obligations		65,659	77,697
Finance lease liabilities	21	1,232,169	1,410,865
Other long-term payables	24	28,206	2,965,685
Total non-current liabilities		**27,565,506**	**52,252,704**
CURRENT LIABILITIES:			
Current portion of bonds issued	17	42,651	-
Short-term borrowings and current portion of long-term borrowings	18	35,094,545	7,409,107
Current portion of employee benefit obligations		5,845	6,493
Trade payables	22	6,557,036	4,135,089
Advances received – contract liabilities	23	1,129,477	918,144
Income tax payable		-	68,681
Finance lease obligations	21	303,138	316,957
Other current liabilities and accrued expenses	24	3,324,503	1,941,151
Total current liabilities		**46,457,195**	**14,795,622**
Total liabilities		**74,022,701**	**67,048,326**
TOTAL EQUITY AND LIABILITIES		**145,855,205**	**140,472,780**

Signed on behalf of management of the Group:

Perfilov O.V.
General Director
27 June 2019
Pavlodar, Republic of Kazakhstan

Belikova S.N.
Chief Accountant
27 June 2019
Pavlodar, Republic of Kazakhstan

The notes on pages 11 to 69 are an integral part of these consolidated financial statements. Independent auditor's report is on pages 1 to 5.

PAVLODARENERGO JOINT STOCK COMPANY AND ITS SUBSIDIARIES

CONSOLIDATED STATEMENT OF PROFIT OR LOSS AND OTHER COMPREHENSIVE INCOME FOR THE YEAR ENDED 31 DECEMBER 2018

(in thousands of Tenge)

	Note	2018	2017
REVENUE	25	51,970,528	49,884,794
COST OF SALES	26	(37,408,158)	(33,635,865)
GROSS PROFIT		**14,562,370**	**16,248,929**
General and administrative expenses	27	(4,087,118)	(3,648,877)
Distribution costs	28	(759,059)	(667,398)
Finance costs	29	(2,395,047)	(2,640,610)
Finance income		94,599	143,332
Foreign exchange (loss)/gain, net	30	(2,303,631)	169,742
Net impairment losses on financial and contract assets	31	(279,350)	-
Other expenses	32	(1,490,973)	(296,260)
Other income	32	454,224	428,733
PROFIT BEFORE TAXATION		**3,796,015**	**9,737,591**
INCOME TAX EXPENSE	33	(1,447,931)	(2,120,916)
PROFIT FOR THE YEAR		**2,348,084**	**7,616,675**
OTHER COMPREHENSIVE INCOME FOR THE YEAR			
Change in estimates of asset retirement obligations		(67,049)	-
TOTAL COMPREHENSIVE INCOME FOR THE YEAR		**2,281,035**	**7,616,675**
EARNINGS PER SHARE			
Earnings per share, basic and diluted, in Tenge	**35**	**14.09**	**45.71**

Signed on behalf of management of the Group:

Perfilov O.V.
General Director
27 June 2019
Pavlodar, Republic of Kazakhstan

Belikova S.N.
Chief Accountant
27 June 2019
Pavlodar, Republic of Kazakhstan

The notes on pages 11 to 69 are an integral part of these consolidated financial statements. Independent auditor's report is on pages 1 to 5.

PAVLODARENERGO JOINT STOCK COMPANY AND ITS SUBSIDIARIES

CONSOLIDATED STATEMENT OF CHANGES IN EQUITY FOR THE YEAR ENDED 31 DECEMBER 2018

(in thousands of Tenge)

	Note	Share capital	Additional paid-in capital	Revaluation reserve for property, plant and equipment	Retained earnings	Total equity
At 1 January 2017		**16,663,996**	**1,188,176**	**24,533,989**	**26,462,967**	**68,849,128**
Profit for the year		-	-	-	7,616,675	7,616,675
Total comprehensive income for the year		**-**	**-**	**-**	**7,616,675**	**7,616,675**
Amortisation of revaluation reserve		-	-	(1,307,524)	1,307,524	-
Dividends declared	15	-	-	-	(3,237,459)	(3,237,459)
Fair value adjustment less deferred income tax	34	-	-	-	196,110	196,110
At 31 December 2017		**16,663,996**	**1,188,176**	**23,226,465**	**32,345,817**	**73,424,454**
Opening balance adjustment (IFRS 9)	3	-	-	-	(1,356,574)	(1,356,574)
Restated balance at 1 January 2018		**16,663,996**	**1,188,176**	**23,226,465**	**30,989,243**	**72,067,880**
Profit for the year		-	-	-	2,348,084	2,348,084
Other comprehensive income for the year		-	-	(67,049)	-	(67,049)
Total comprehensive income for the year		**-**	**-**	**(67,049)**	**2,348,084**	**2,281,035**
Amortisation of revaluation reserve		-	-	(1,172,062)	1,172,062	-
Dividends declared	15	-	-	-	(2,285,001)	(2,285,001)
Fair value adjustment less deferred income tax*	34	-	-	-	(231,410)	(231,410)
At 31 December 2018		**16,663,996**	**1,188,176**	**21,987,354**	**31,992,978**	**71,832,504**

Signed on behalf of management of the Group:

Perfilov O.V.
General Director
27 June 2019
Pavlodar, Republic of Kazakhstan

Belikova S.N.
Chief Accountant
27 June 2019
Pavlodar, Republic of Kazakhstan

The notes on pages 11 to 69 are an integral part of these consolidated financial statements. Independent auditor's report is on pages 1 to 5.

PAVLODARENERGO JOINT STOCK COMPANY AND ITS SUBSIDIARIES

CONSOLIDATED STATEMENT OF CASH FLOWS
FOR THE YEAR ENDED 31 DECEMBER 2018
(in thousands of Tenge)

	Note	2018	2017
Cash flows from operating activities:			
Profit before income tax		3,796,015	9,737,591
Adjustments for:			
Depreciation and impairment	6	5,115,729	5,039,480
Impairment loss on construction in progress	6	88,251	-
Loss on disposal of property, plant and equipment	32	599,263	32,228
Impairment losses on financial and contract assets	31	279,350	-
Provision for doubtful debts and advances paid	27	229,860	93,672
Ash dump restoration liability	20	419,888	-
Provision for impairment of inventories	27	63,824	95,610
Provision for unused vacations		4,379	44,450
Employee benefit costs		5,823	15,284
Finance costs	29	2,395,047	2,640,610
Finance income		(94,599)	(143,332)
Costs of value adjustment of deferred income	32	133,394	-
Foreign exchange loss/(gain), net	30	2,303,631	(169,742)
Operating cash flows before working capital changes		**15,339,855**	**17,385,851**
Changes in working capital			
Change in inventories		26,086	277,981
Change in trade receivable		653,766	(187,893)
Change in advances paid		431,415	175,994
Change in other assets		(560,940)	(826,107)
Change in trade payables		3,313,842	(163,523)
Change in deferred income		(109,970)	76,868
Change in advances received		211,333	64,514
Change in employee benefit liabilities		(18,509)	(11,252)
Change in other liabilities and accrued expenses		336,902	1,255,345
Cash from operating activities		**19,623,780**	**18,047,778**
Income tax paid		(1,286,851)	(431,002)
Interest paid	17, 18	(2,737,212)	(3,219,268)
Net cash from operating activities		**15,599,717**	**14,397,508**
Cash flows from investing activities:			
Cash repaid /(placed on deposit)		1,449,355	(378,774)
Loans to ultimate shareholder	34	800,000	-
Repayment of loans to ultimate shareholder	34	(800,000)	-
Loans to third parties		(395,638)	-
Financial aid to shareholder	34	(94,720)	-
Purchases of property, plant and equipment		(13,385,331)	(11,618,403)
Purchases of intangible assets		(198,947)	(157,049)
Proceeds from interest accrued on deposits placed		89,398	78,448
Net cash from used in investing activities		**(12,535,883)**	**(12,075,778)**

PAVLODARENERGO JOINT STOCK COMPANY AND ITS SUBSIDIARIES

CONSOLIDATED STATEMENT OF CASH FLOWS (CONTINUED)
FOR THE YEAR ENDED 31 DECEMBER 2018
(in thousands of Tenge)

	Note	2018	2017
Cash flows from financing activities:			
Proceeds from borrowings	17	11,762,448	11,777,890
Repayment of borrowings	17	(11,359,534)	(6,952,035)
Placement of bonds	16	1,440,568	100,438
Redemption of bonds	16	-	(8,388,266)
Dividends paid	14	(3,728,453)	(1,383,023)
Repayment of free-interest loan from parent	34	(1,265,000)	1,065,000
Proceeds from free-interest loan from parent	34	200,000	-
Proceeds from government grants	18	-	1,847,890
Repayment of principal on finance lease	21	(353,850)	(246,519)
Net cash from used in financing activities		**(3,303,821)**	**(2,178,625)**
NET (DECREASE)/INCREASE IN CASH		**(239,987)**	**143,105**
CASH at the beginning of the year	13	**697,759**	**557,829**
Effect of exchange rate changes on cash balances in foreign currencies		(7,985)	(3,175)
Change in provision for credit losses	13	(53,975)	-
CASH at the end of the year	13	**395,812**	**697,759**

Non-cash transactions:

- In 2018, the Group did not receive finance lease assets (2017: received finance lease assets of Tenge 1,168,572 thousand) (Note 19).

Signed on behalf of management of the Group:

Perfilov G.V.
General Director
27 June 2019
Pavlodar, Republic of Kazakhstan

Belikova S.N.
Chief Accountant
27 June 2019
Pavlodar, Republic of Kazakhstan

The notes on pages 11 to 69 are an integral part of these consolidated financial statements. Independent auditor's report is on pages 1 to 5.

GLOSSARY

Overhead power line is an electric line for transmission of electric power through the wires located in the open air and attached by means of insulators and fittings to supports or brackets.

Overhead transmission lines are meant for transmission of electric power over a distance by wires.

Gigacalorie is a unit of measurement of thermal energy used for assessment in the heat power industry, heating systems and the utilities sector.

Gigacalorie per hour is a derived unit used to specify the amount of heat produced or used by some equipment per a unit of time.

Cooling tower is a structure shaped like an exhaust tower providing stack effect.

Goodwill is the difference between the price of a company and the fair value of all its assets.

Ash is an incombustible residue (in the form of dust) which consists of mineral impurities left after combustion of fuel.

Ash dump site is a place for collection and disposal of waste ash and slag generated during combustion of solid fuel at combined heat and power plants.

Calorie (cal) is an off-system unit for measuring the amount of heat.

Boiler is a device for generating pressurized steam or hot water through fuel combustion, use of electric power, heat of exhaust gas or technological process.

Power transmission line (PTL) is a structure consisting of wires (cables) and auxiliary devices for transmission of electric power from power plants to consumers.

Megawatt is a unit of power measurement in electricity production.

Pavlodar HNs – Pavlodar heat networks

Substation is an electric installation used for conversion and distribution of electric power and consisting of transformers or other power converters, switchgear, control devices and auxiliary facilities.

Available capacity of a unit (plant) is installed capacity of a generating unit (plant) minus its capacity limitations.

Combined heat and power plant (CHPP, cogeneration heating plant) is a thermal power plant generating not only electric power, but also heat supplied to consumers in the form of steam and hot water.

Transformer (from Latin transformare – to transform, to convert) is a device for converting any significant properties of energy (e.g., electric transformer, torque converter) or objects (e.g., photo transformer).

Turbine generator is a combination of a steam turbine, electricity generator and exciter united by one shaft train; it converts potential energy of steam into electric power.

Installed capacity is an effective value of the turbine generators' rated capacity.

Installed heat capacity of the plant is the sum of all rated heating capacities for all the equipment commissioned under the act and designed for supplying heat to external consumers and steam and hot water for internal needs.

Installed electrical capacity of the energy system is total effective capacity of all turbo and hydropower generators of power plants in the energy system in accordance with their passports or specifications.

Wet scrubber is a device for wet ash and dust removal operating in the phase inversion mode.

ABBREVIATIONS

CTF – Clean Technology Fund.

EBITDA – an analytical indicator, which means earnings before interest, taxation, depreciation and amortization.

ESAP – Environmental and Social Action Plan

ISO – International Organization for Standardization

KEGOC – Kazakhstan Electricity Grid Operating Company JSC

OHSAS – International occupational health and safety management system

JSC – Joint-stock company

AEDC, Akmola EDC — Akmola Electrical Distribution Company JSC

ASCAHE – Automatic system for commercial accounting of heat energy

ASCAE – Automatic system for commercial accounting of electricity

GDP – Gross domestic product

OHL – Overhead lines

OTL – Overhead transmission lines

WPP – Wind power plant

Gcal – Gigacalorie

Gcal/h – Gigacalories per hour

SPAIID – State Program for Accelerated Industrial and Innovative Development

GRES – State district power plant

GTPP – Gas turbine power plant

HEPP – Hydroelectric power plant

EBRD – European Bank for Reconstruction and Development

FARD – Fly ash removal device

kWh – kilowatt per hour

SC MNE RK – Statistic Committee of the Ministry of National Economy of the Republic of Kazakhstan

MW – Megawatt

MNE RK – Ministry of National Economy of the Republic of Kazakhstan

NGO – Non-governmental organization

EP – Environment protection

Pavlodar EDC – Pavlodar Regional Electric Distribution Company JSC

PCHP-2 – Petropavlovsk combined heat and power plant No.2

PE – PAVLODARENERGO JSC

RK – Republic of Kazakhstan

PGA – Power grid area

ICS – Internal control system

BoD – Board of Directors

ABC – Aerial bundled conductor

SKE – SEVKAZENERGO JSC

MM – Mass Media

RMS – Risk management system

SPP – Solar power plant

INR – Inventories

LLP – Limited liability partnership

TPP – thermal power plant

ECHP – Ekibastuz CHP

CHP – Combined heat and power plant

PP – Power plant

Head Office of PAVLODARENERGO JSC:
27 Krivenko St., Pavlodar, 150012,
Republic of Kazakhstan

E-mail: pavlodarenergo@pavlodarenergo.kz
Tel.: +7 7182 39 95 06
Fax: +7 7182 32 97 88

www.pavlodarenergo.kz

Investor and shareholder relations:

Name/position	Contact details
Investor and shareholder relations:	
Albina Akhmetova – Deputy General Director for Economy and Finance, PAVLODARENERGO JSC	27 Krivenko St., Pavlodar, 150012, Republic of Kazakhstan Tel.: +7 7182 39 95 07 Fax: +7 7182 32 97 88
Svetlana Belikova - Chief Accountant, PAVLODAREN-ERGO JSC	27 Krivenko St., Pavlodar, 150012, Republic of Kazakhstan Tel.: +7 7182 39 95 05 Fax: +7 7182 32 97 88
Larisa Bykova - Corporate Secretary, PAVLODAREN-ERGO JSC	27 Krivenko St., Pavlodar, 150012, Republic of Kazakhstan Tel.: +7 7182 39 97 62 Fax: +7 7182 32 97 88
Person in charge of the Annual Report	
Public Relations Department of PAVLODARENERGO JSC	27 Krivenko St., Pavlodar, 150012, Republic of Kazakhstan Tel.: +7 7182 39 98 70

The auditor of PAVLODARENERGO JSC is PwC Kazakhstan located at:
34 Al-Farabi, 4th Floor, AFD Business Center, Almaty, A25D5F6, Republic of Kazakhstan
Tel.: +7 (727) 330 32 00
Fax: +7 (727) 244 68

Registrar:
PAVLODARENERGO JSC's registrar is Integrated Securities Registrar Joint-Stock Company (state registration certificate no. 1678-1910-02-JSC issued on January 11, 2012).
Registered office of Integrated Securities Registrar JSC: 141 Abylai-Khan Ave., Almaty.


PAVLODARENERGO
JOINT-STOCK COMPANY