PAVLODARENERGO

JOINT-STOCK COMPANY

BEHIND EVERY LIGHTED WINDOW
THERE IS WORK OF FIVE THOUSAND PEOPLE

2019
ANNUAL REPORT

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LETTER OF THE MANAGEMENT

DEAR SHAREHOLDERS AND PARTNERS!

This Annual Report of PAVLODARENERGO JSC contains an overview of 2019 operating results of PAVLODARENERGO Group of companies including its 2020 development outlook.

In the reporting year, PAVLODARENERGO JSC entered into an agreement with ROTEK (Russia) providing for installation of PRANA equipment at PAVLODAR CHP-3 valued at KZT 195.387 mln. Introduction of PRANA, a system of prognostics and remote monitoring of steam turbo generators, is one of the most significant Company's projects intended to enhance safety and turbine No. 6 performance within large-scale modernization of equipment at the Company's plants to result in 90% upgrade of Pavlodar CHP-3 turbine shop.

In 2019, the Company also installed a station coordinator at its Pavlodar CHP-3, a solution designed to automatically maintain high quality of generated power as well as stable electric and heat power load at the plant by integrating all local systems controlling boilers and turbines into a single system balancing turbine generators load and heat supply to consumers. The Company invested approximately KZT 211 mln into this critical project.

In 2019, the Company commenced the start-up of 220/110 kV Promyshlennaya Substation after its upgrade and expansion to strengthen the connection of Pavlodar load center with Kazakhstan UES. The project involved the construction of 220 kV outdoor switchgear and modernization of existing 110 kW substation cells. The Company allocated KZT 3.4 bln to implement this project. In 2019, KEGOC JSC completed its share of work being a significant event as Promyshlennaya substation is a strategic point supplying electricity to Pavlodar major industrial facilities: Pavlodar Petrochemical Works, KSPSteel, Kazakhstan Temir Zholy, Casting LLP.

The projects implemented by PAVLODARENERGO JSC in 2019 evidence its commitment to its mission of a leading power company in Pavlodar Irtysh Land promoting consumers life quality and economic development of Pavlodar region by way of rendering high quality power supply services to the population, industry and organizations.

DYUSSENBAY NURBAYEVICH TURGANOV

Chairman of the Board of Directors
of PAVLODARENERGO JSC

KEY EVENTS FOR THE REPORTING PERIOD

2019

JANUARY

Forbes Kazakhstan's experts rated PAVLODARENERGO JSC top 18 out of 50 major Kazakhstan private companies promoting the company from its 25th position based upon its 2018

performance.

Pavlodar Heat Networks LLP successfully underwent its second surveillance audit with its ISO 9001, ISO 14001, OHSAS 18001 certificates validated.

FEBRUARY

On 2 February 2019 Pavlodar Regional Electric Distribution Company JSC celebrated 55th Anniversary of its operations.

Based upon the measures taken in 2018 the management of Pavlodar Region Emergency Response Department awarded 69 PAVLODARENERGO JSC'S employees for efficient cooperation preventing emergency situations.

DEAR COLLEAGUES AND PARTNERS!

In 2019, PAVLODARENERGO Group of companies produced 3,560 mln kWh of electricity and 4,539.924 thous. Gcal of heat. Its revenues from sale of its core services fell by KZT 3,768 mln and amounted KZT 48,202 mln. The Group sales of electric power and heat were 1,343 mln kWh and 3,452.35 Gcal and decreased by 2.6% and 4.1%, respectively, compared to 2018 as the result of heat production and transmission cutback as well as electricity and heat tariffs reduction.

The Company, however, continued to implement its scheduled investment projects. During the reporting year, Pavlodar CHP-3 was fitted up with PRANA prognostics and remote monitoring system making it possible to anticipate incidents and accidents at generating facilities, to ensure failure-free operation of power units and to reduce unscheduled downtime. A station coordinator was installed at Pavlodar CHP-3 to promote stable operations and heat efficiency, attain simultaneous boilers response, coordinate boiler load and link turbines governors. The first phase of gas collecting mains upgrade at boilers 1-6 of Pavlodar CHP-3 was also included into 2019 investment projects pool. Condenser of turbine generating unit No.2 and air heater cubes at boiler No. 1 were reconstructed at Pavlodar CHP-2 to reduce fly ash wear.

In 2019, Pavlodar REDC JSC celebrated its 55th anniversary with construction of a new 35kV overhead line L No. 62 Voskressenka 2-Trofimovka securing reliable electric power supply to Terenkol region. The year-on-year increase of load further elevates the issue of reconstruction of 0.4-10 kV distribution networks in Pavlodar region together with modern 10/0.4 kV substations and 0.4-10 kV lines with higher transmission capacity. Equipment was modernized at Citi West (110/10 kV), Yermakovskaya (110/10 kV), Potanino (110/10 kV) and Kalkaman (220/35/10 kV) substations. In 2019, the Group continued construction of City North substation (110/10 kV) equipped with two 40 MVA transformers. This will allow withdrawing the restrictions over electricity output capacity supplied to the customers in the North-Eastern part of Pavlodar.

During the reporting period Pavlodar Heat Networks LLP continued its installation and construction works targeted at pumping station No3 upgrade to transform it into a central heat distribution station. Upon this project implementation the hydraulic control of consumers in Lesozavod and Radiozavod districts will be improved. Pavlodar Heat Networks LLP also completed the first phase of reconstruction of 665 m long heat main No. 37 in Pavlodar. The project is financed by a loan furnished by the European Bank for Reconstruction and Development and is aimed at reliable heat supply to consumers, improvement of heat networks hydraulic control as well as reduction of heat loss through the use of pipes with polyurethane foam industrial insulation.

In 2019, within the framework of the memorandum on joint implementation of social projects concluded between the Pavlodar Region Akimat and Central-Asian power-energy company JSC, we continued the construction of a high-rise apartment house for employees of PAVLODARENERGO Group of companies. We plan to give a number of flats in this building to our young professionals under Zhas Shanyrak project memorandum with Pavlodar City Akimat.

A new company Energetik Recreation Center LLP was established in 2019 as the result of a merger of Energetik Health Care Center and Energetic Recreation Center to streamline and refine the quality of service that lead to distinctive expansion of the services range.

We are invariably committed to ensuring high quality power supply to Pavlodar region, therefore, all PAVLODARENERGO Group of companies projects are targeted at stable power equipment operation as well as the improvement of generation, transmission and supply of heat and electricity to consumers.

OLEG VLADIMIROVICH PERFILOV

General Director of PAVLODARENERGO JSC

MARCH

PAVLODARENERGO JSC's relay team won a Pavlodar City Military and Sports Competition dedicated to the World Civil Defense Day.

Pavlodarenergosbyt LLP contact center

started to accept household electricity and hot water meter readings sent via WhatsApp and sms.

APRIL

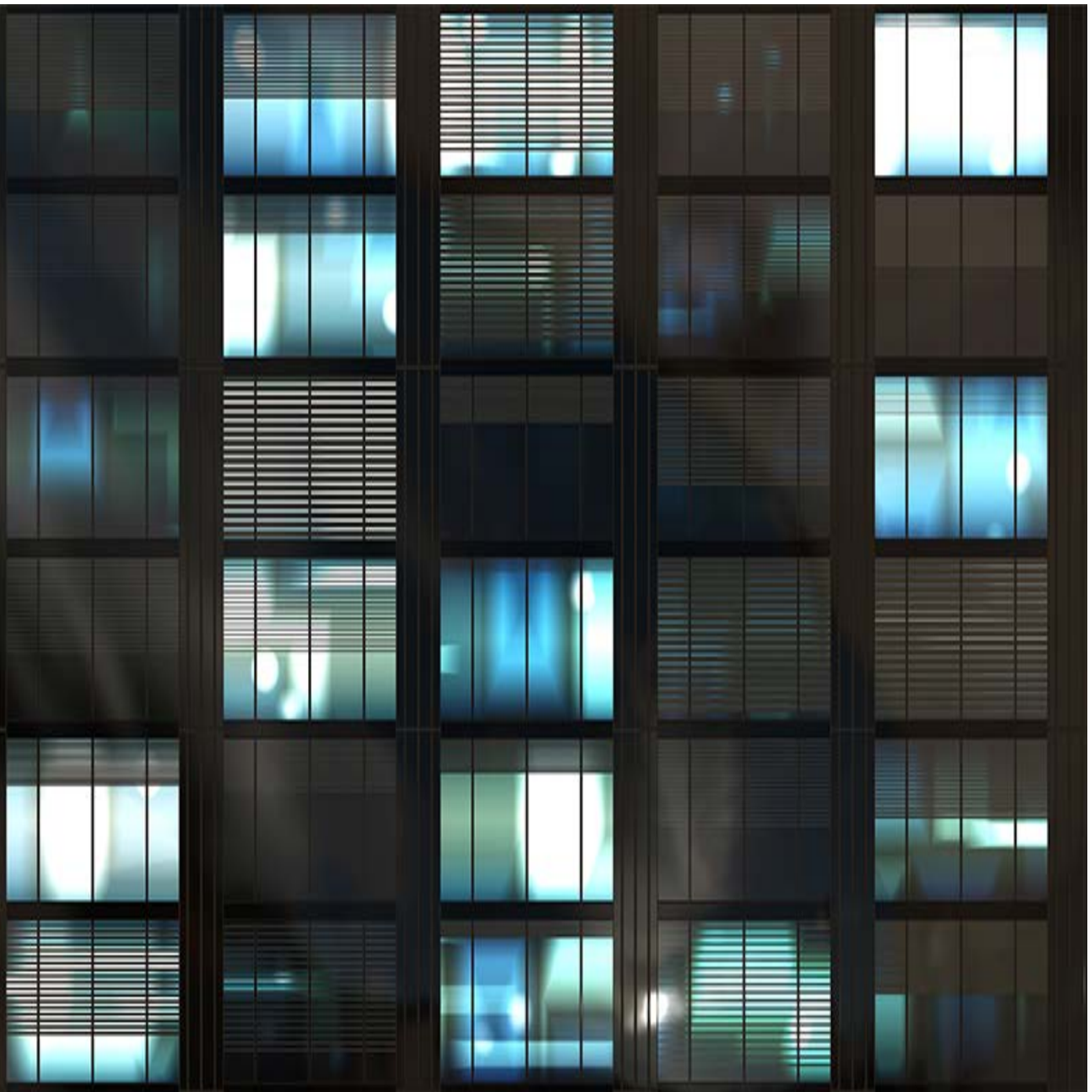
Normal mode of 2018-2019 heating season completed on 22 April in Pavlodar and on 29 April in Ekibastuz.

PAVLODARENERGO JSC and a number of other major companies in the region signed Zhas Shanyrak project memorandum with Pavlodar City Akimat. This memorandum was signed under the Presidential Address "Growing Welfare of Kazakh Citizens: Increase in Income and Quality of Life".

Pavlodarenergosbyt LLP installed payment terminals in its Pavlodar service centers making possible charge free payment of the bills issued by the Integrated Settlement Center.

Annual public hearings were conducted in Pavlodar where the representative of PAVLODARENERGO JSC informed about the operations of its group of companies and 2018 investment programs implementation.

PAVLODARENERGO TODAY



BUSINESS PROFILE

PAVLODARENERGO Joint Stock Company is a vertically integrated member of Central-Asian Electric Power Corporation JSC (CAEPCO) Group consolidating the following enterprises involved in generation, transmission and sale of electric power and heat:

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

PAVLODARENERGO JSC has implemented corporate governance standards and improves its business processes and practices in line with current international standards in the field of production, environmental protection, occupational safety and welfare.

4 916 employees
2019 staff strength

Over **270 000** consumers

3,4 %
Company share in the electricity generation market in 2019

677 MW
Installed electrical capacity

2 268 Gcal/h
Installed heat capacity

MAY

PAVLODARENERGO Group of companies held the following events to celebrate the World Occupational Safety Day: children's handcraft contest, traditional Occupational Safety Family Day, and annual honoring of the best employees in the sphere of occupational safety.

A briefing with the management of Pavlodar Heat Networks LLP took place at the Regional Communication Service regarding completed heating season, heat networks testing, and to preparation to the following 2019-2020 season

JUNE

PAVLODARENERGO JSC filmed the kids of its employees working at plants to encourage the compliance with occupational safety and published it in social media and its Internet site.

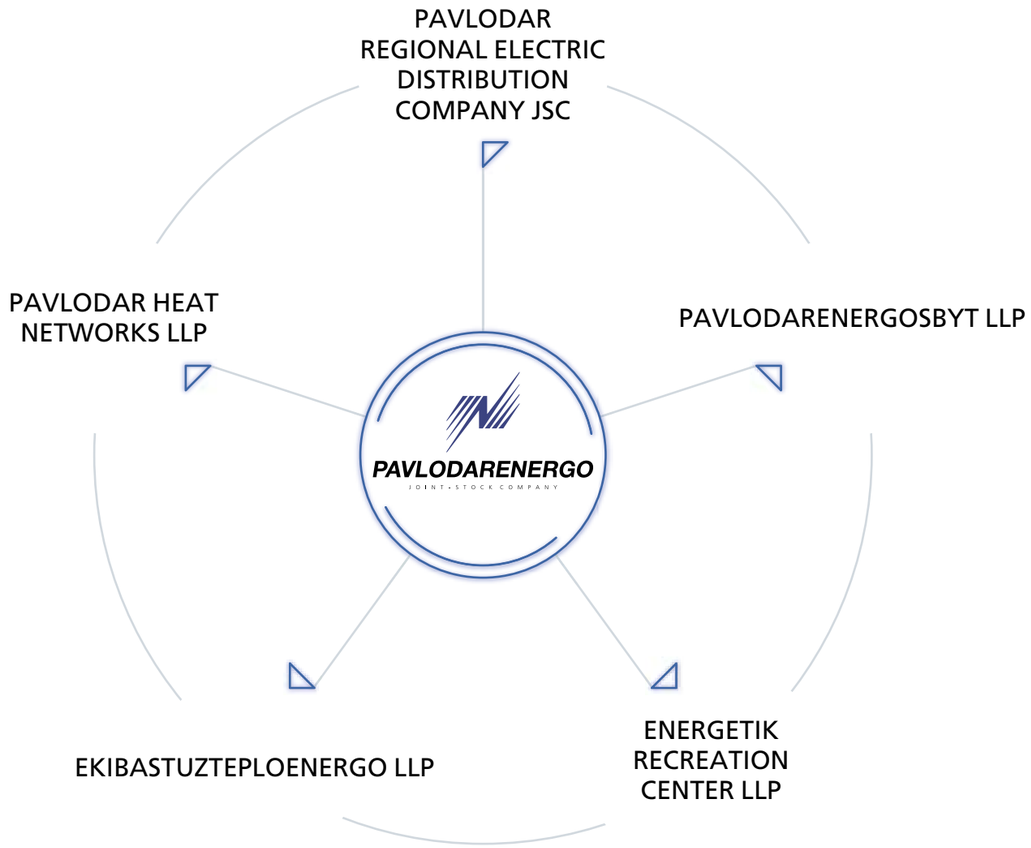
The Company determined the winner of its Annual Scientific Papers Contest conducted among third year students of

higher and secondary special educational institutions of Pavlodar region and awarded its scholarship.

A professional skills contest among operational and maintenance personnel working at CAEPCO JSC's distribution networks was held in Akmola region. Teams from the Corporation's subsidiaries including Pavlodar Electric Distribution Company JSC participated in the contest.

KEY INFORMATION

COMPANY STRUCTURE



KEY PERFORMANCE INDICATORS

Sales, in KZT bln

2016	2017	2018	2019
45,1	49,9	52,0	48,2

Net profit, in KZT bln

2016	2017	2018	2019
6,5	7,6	2,3	-2,3

EBITDA, in KZT bln

2016	2017	2018	2019
15,9	17,4	11,3	8,4

EBITDA margin, in %

2016	2017	2018	2019
35	35	22	17

Power Generation

Year	Power (in kWh mln)	Heat (in thous. Gcal)
2016	3 829	4 568
2017	4 074	4 445
2018	3 815	4 981
2019	3 560	4 540

Assets

Year	Current assets, in KZT bln	Non-current assets, in KZT bln
2016	13,0	119,4
2017	13,9	126,2
2018	10,2	135,7
2019	12,6	133,9

Investments, in KZT bln

2016	2017	2018	2019
11,8	10,5	11,7	9,3

JULY

Young CHP-3's employees participated in Wear Helmet challenge promoting occupational safety compliance and shoot a jingle commercial rotated in social media and on Internet site.

The Company's employees, plant fire safety personnel, representatives of the National Security Committee, National Anti-Terrorist Committee and Fire Fighting Service of Pavlodar Region.

AUGUST

Pavlodarenergosbyt LLP successfully underwent its first surveillance audit to verify its compliance with ISO 9001:2015 standard.

PAVLODARENERTO JSC'S and Ekibastuzenergo LLP's General Directors participated in a briefing held at Ekibastuz CHP related to preparation to 2019-2020 heating season, new forms of public-private partnerships, and tariffs.

First Deputy General Director of PAVLODARENERGO JSC presented the measures to reduce emissions, atmosphere, water and land resources protection as well as ash dump sites management at the briefing of the Regional Communication Service.

Pavlodar, Aksu and regional households regained their access to Personal Cabinet service upon integration of a new billing system, service testing and upgrade

COMPANY OVERVIEW

HISTORY

1965

Pavlodarenergo Production Association succeeded a regional energy department upon its reorganization under Decree no. 688 of the Council of Ministers of the Kazakh SSR.

1971

Pavlodar Heating Network Enterprise was created making it possible to centralize the city heating and to boost the development of Pavlodar's heating infrastructure.

1995–1997

PAVLODARENERGO Production Association became 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 was established with subsequent reorganization into a joint stock company in December 2003. Pavlodar CHP-2 and CHP-3 formed the generating capacity of the system. Pavlodar Regional Electric Distribution Company JSC became a member of PAVLODARENERGO Group. At the same time Energocenter JSC became the Company's subsidiary and was reorganized into Pavlodarenergosbyt LLP in 2011.

2005

The Company acquired Pavlodar heat networks and established Pavlodar Heat Networks JSC reorganized into a limited liability partnership in 2011.

2007

Ekibastuz CHP and Ekibastuz Heat Networks became members of PAVLODARENERGO Group.

2008–2009

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

2018

Ekibastuzteploenergo LLP was founded to comprise Ekibastuz Heat Networks and Ekibastuz CHP. In the same year, Energetik Health Care Center LLP and Energetik Recreation Center LLP were included in PAVLODARENERGO Group of companies.

2019

In October, Energetik Health Care Center LLP and Energetik Recreation Center LLP merged into Energetic Recreation Center LLP.

SEPTEMBER

A new 2019-2020 heating season commenced in Pavlodar and Ekibastuz on 16 September.

The European Bank for Reconstruction and Development furnished KZT 482.3 mln loan to finance the first phase of heating main No. 37 in Pavlodar.

CAEPCO JSC's subsidiaries conducted their regular mutual audit covering OHSE, civil defense and emergency response matters at PAVLODARENERGO JSC.

Ekibastuzteploenergo LLP's management attended at a heating season commencement briefing held at Ekibastuz City Communication Service together with the representatives of Housing and Utilities Department.

Pavlodar Heating Networks LLP held public hearings regarding construction of a 9,998 meter long heating network from the southern to the north part of Pavlodar. Upon the project completion the aggregate thermal capacity will increase by 70 Gcal/h.

Environmental impact of Pavlodar CHP-3 expansion by way of installation of boilers No. 7 and 8 as well as turbine generator No. 7 was entered into public debate. Several heat load scenarios were considered in the design materials: new heat source construction, Pavlodar CHP-2 expansion, Pavlodar CHP-3 expansion with connection of Pavlodar CHP-2 heating area and project impact on ecological situation in Pavlodar.

Heating seasons in Pavlodar and Pavlodar region were discussed at a briefing with mass media in Pavlodar Regional Telecommunication Center attended by Pavlodar Heating Networks LLP, Power, Housing and Utilities Department as well as housing inspection.

MISSION

Improving the living standards for consumers and creating favorable conditions for economic growth in Pavlodar region by providing high-quality energy supply services to 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 operations efficiency is driven by the team work of its highly professional and goal-oriented employees.

VISION

PAVLODARENERGO JSC is one of the largest enterprises in North-Eastern Kazakhstan involved in production, transmission and distribution of electricity and heat. PAVLODARENERGO JSC supplies electricity and heat to Pavlodar, Ekibastuz, Aksu and Pavlodar region. The Company also supplies electricity it generates to other Kazakhstan regions.

The Company fully takes the advantages of its holding structure combining dynamism and flexibility of its business units (Group members) 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.

VALUES

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

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

EVENTS AFTER REPORTING DATE: COVID-19 RELATED RISKS

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

OCTOBER

Ekibastuzteploenergo LLP migrated from ISO OHSAS 18001:2007 to a new version of ISO 45001:2018 international standard and underwent a certification audit for compliance with ISO 9001:2015, ISO 14001:2015, ISO45001:2018, ISO 500001:2011 international standards.

A delegation comprising Ekibastuz City Maslikhat's representatives, Ekibastuz Akimat's employees and members of the public visited Ekibastuz CHP. Repair works results were presented to the delegation and the Company's management responded to all questions.

Annual professional skills contest was conducted among electricians working at Pavlodar Regional Electric Distribution Company JSC, a city company engaged in domestic electric networks maintenance. The event was targeted at personnel upskilling and reduction of incidence of injuries.

NOVEMBER

Pavlodar CHP-2 employees together with emergency response workers and fire fighters took part in a tactical exercise related to emergency response actions and rescue protocol.

The project involving dam extension of the second phase of ash dump of Pavlodar CHP-2 was discussed at public hearings in Pavlodar.

DECEMBER

PRANA monitoring and prognostics system at T-120/130-130 of turbine No. 6 (turbine, generator, transformer, foundation) and station coordinator were commissioned.

The winners of the Best Professional City contest were determined in Youth Initiatives Development Center. Winner's certificates were presented to Pavlodar CHP-3 Chemical Shop employee and PREDC JSC's engineer.

An automated system of commercial accounting of electric power was placed into operation at Ekibastuzteploenergo LLP.

PAVLODARENERGO JSC Training Center held Best Professional contest among electricians and electrical fitter.

Business Model

CAPITAL

FINANCIAL CAPITAL

16 664 KZT mln
Authorized capital

67 152 KZT mln
Shareholder's equity

146 537 KZT mln
Assets

PRODUCTION CAPITAL

3 CHPs

411,45 km
Heat networks (Pavlodar)

342,7 km
Heat networks (Ekibastuz)

15 352,6 km
Electricity networks

1 Sales company

NATURAL CAPITAL

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

HUMAN CAPITAL

4 916
employees

32,3 % employees
with a college degree

564 people
in the talent pool

14,4 %
staff turnover

PROFENERGY
a program supporting young specialists

INTELLECTUAL CAPITAL

Implemented systems Ellipse, Mobility, ASCAE, ASCAHE, Thesis (automated process control system), billing, boiler and turbine generator automated control system, Infopro

SOCIAL CAPITAL

The Company has established trust-based relationships with communities in the region of its operations and makes a significant contribution to social and economic development of such regions being a major employer and an important industry element.

CORE OPERATIONS

GENERATION OF HEAT AND ELECTRICITY

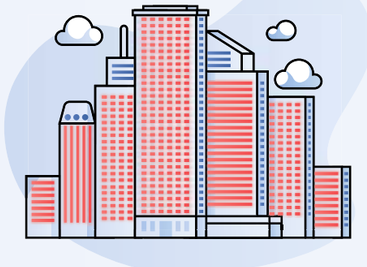
combined heat and electricity production at three CHPs of the Company.

ELECTRICITY TRANSMISSION AND DISTRIBUTION

generated electric power is supplied to its consumers through electrical grids including power converters, power transmission lines and switchgear.

HEAT TRANSMISSION AND DISTRIBUTION

produced heat is distributed to its consumers via main and submain heating networks using central and separate heating units and pump stations.

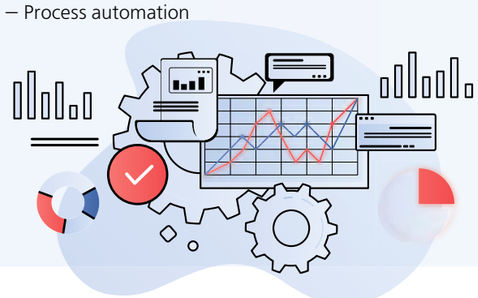


SALES OF HEAT AND ELECTRICITY

activities aimed at selling electricity and heat to consumers

INVESTMENT ACTIVITIES

- Power equipment upgrade
- Heat networks and electric grids reconstruction
- Process automation



2019 PERFORMANCE

CONSUMERS

3 560 mln kWh
Electricity generated

4 539,921 thous Gcal
Heat produced

1 554
consumers were equipped with ASCAE

198
ASCAHE devices were installed

EMPLOYEES

5 496
employees were trained, including 4,339 employees who completed mandatory courses (79% of the total number of trained persons)

851,439 KZT mln
was allocated to HSE and to improve work environment

Turbine generator No. 6 was put into operation at Pavlodar CHP-3

GOVERNMENT

685 775 KZT thous
Paid taxes

9,3 KZT bln
invested into modernization of production facilities

REGION OF OPERATIONS

Fulfillment of stakeholder engagement plan
9 groups of stakeholders

Implementation of the Environmental and Social Action Plan

2 543,845 KZT thous
Environmental protection costs

Production wastes reduced by **26,5** thous tonnes

GEOGRAPHY OF OPERATIONS

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

MAIN PRODUCTION CHARACTERISTICS

CHP	Installed capacity, in MW	Equipment Upgrade since 2009, in %	Equipment Upgrade since 2009, in %	Year of Foundation
Pavlodar CHP-3	555	1 154	91,0	1972
Pavlodar CHP-2	110	332	–	1961
Ekibastuz CHP	12	782	100	1956

Power transmission lines, in km

PTL Type	Length, in km
220 kV	13,7
110 kV	2 798,3
35 kV	2 398,9
6-10 kV	5723,0
0,4 kV	4 418,7
Total:	**15 352,6**

Substations

Substation Type	Number, unit
220 kV	4
110 kV	74
35 kV	102
6-10 kV	3 570
Total:	**3 750**

Heat networks length, in km

	Протяжённость, км
Pavlodar	411,45
Ekibastuz	342,70
Total:	**754,15**

Number of consumers as at 01.01.2020

Electricity	Heat
225 664	169 883

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. Installed electrical capacity 1 154 Gcal/hour. Pavlodar CHP-3 supplies electricity to city industry, local service sector and households. The plant is one of the most up-to-date facilities of this kind in Kazakhstan: since 2009, 91% of its equipment has been upgraded. Modernization of the plant will continue until 2020.

555 in MW
Installed electrical capacity

1 154 in Gcal/h
Installed heat capacity

Equipment renovation since 2009

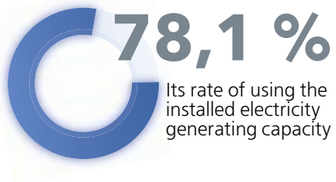
PAVLODAR CHP–2 OF PAVLODARENERGO JSC

The plant's installed electricity generation capacity is 110 MW. Installed heat capacity 332 Gcal/hour. Pavlodar CHP-2 supplies electricity to industrial enterprises of the city, local service sector and households.

Its rate of using the installed electricity generating capacity during 2018-2019 heating season was 78.1%.

110 in MW
Installed electrical capacity

332 in Gcal/h
Installed electrical capacity



Its rate of using the installed electricity generating capacity

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

769,91 km
including
heating networks in Pavlodar

consumer networks:

- main heating networks: 114.09 km;
- district heating networks: 274.24 km;
- hot water supply networks: 23.12 km;
- consumer networks: 358.46 km;
- pumping stations: 10;
- central heating points: 22.

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 and in Pavlodar region. The serviced area is 105.9 thous. km^2.

15 352,6 km
The total length
of power lines of Pavlodar REDC JSC

14 564,2 km
including
of overhead power transmission lines

788,4 km
including
of cable lines

Pavlodar REDC 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. Pavlodar CHP-1 is owned by Aluminum of Kazakhstan JSC, while Pavlodar 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 752,900 people.

Pavlodar EDC JSC consists of the following 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 bank of the Irtysh river);
- Eastern power network enterprise: Zhelezinsk, Kachirsk, Akkuly, Pavlodar, Uspensk, Scherbaktinsk district power networks (right bank of the Irtysh river);
- Municipal Electrical Utility operates and maintains 0.4-10 kV distribution networks in Pavlodar;
- Production and Repair Enterprise operates and maintains 35-220 kV high-voltage power transmission lines in Pavlodar region and repairs 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.

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 63rd anniversary.

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. The length of heating networks in Ekibastuz totals

422,9 km
including
consumer networks:

- main heating networks: 37.6 km;
- submain heating networks: 305.1 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.

2016-2019 Average Electricity Rates of Pavlodarenergosbyt LLP

Electricity	from 01.01.16	from 09.01.17	from 03.05.17	from 01.09.17	from 01.10.18	from 01.01.19
KZT/kWh, VAT exclusive	12,300	12,300	12,370	12,920	12,390	12,050
KZT/kWh, VAT inclusive	13,776	13,776	13,854	14,470	13,877	13,496

2016-2019 Average Heat Rates of Pavlodarenergosbyt LLP

Heat	01.01.16	01.07.16	01.01.17	01.04.17	01.01.18	01.05.18	01.12.18 31.12.18	01.01.19 31.12.19
Pavlodar	2 953,66	2 992,12	3 309,63	3 309,63	3 685,55	3 738,41	3 731,12	3 874,95
Ekibastuz	3 884,98	3 924,73	4 662,49	4 662,49	5 339,13	5 379,60	5 379,60	5 383,53

2020 DEVELOPMENT STRATEGY

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 the best 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 the 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 2020 INVESTMENT PROGRAM

PAVLODARENERGO JSC implements one of the most large-scale investment programs in Kazakhstan power industry 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 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.

DEVELOPMENT STRATEGY IMPLEMENTATION

2009 GOALS	2019 PROGRESS
By 2020 upon the investment program implementation the wear of generating equipment of three generating plants will be reduced from 62.65% to 61,6%;	The wear of the equipment of three generating plants reduced to 62.1%;
The share of fully modernized PAVLODARENERGO JSC'S production assets will be 76.4%;	The share of fully modernized production assets of PAVLODARENERGO JSC amounted 76.4% (91% at Pavlodar CHP-3);
Polluting emissions will be reduced by 30%;	Polluting emissions amounted 42.158 thous tonnes implying 34% reduction;
Increase of the installed electrical capacity by 127 MW or 23.1%;	Installed electrical capacity amounted 677 MW (23.1% growth);
Growth of installed heat capacity by 356 Gcal/h or 18.6%;	Installed heat capacity amounted 2,268 Gcal/h (18.6% growth);
Electricity production: 3,733 mln kWh or 23.6%;	Electricity production: 3,560 mln kWh (17.8% growth);
Heat sale: 5,405 thous Gcal or 32.1%.	Heat sale: 4,539.9 thous. Gcal (10.9% growth).
The following network loss reduction was planned in 2009-2020: • by 0.2% of electricity; • by 1.89 of heat.	All excess losses at electric grids were eliminated in 2015. Losses fell by • 0.82% for electricity; • 1.2% for heat.
Establishment of servicing centers on the basis of an integrated IT Platform.	Development of an automated production facilities and assets management system on the basis of ABB Ellipse.
Transition to an integrated billing system.	Pavlodarenergosbyt LLP fully completed its transition to integrated electricity and heat billing system for legal entities and individuals.
Maintenance of certification for compliance with OHSE international standards.	Pavlodar EDC JSC and Pavlodar Heat Networks LLP introduced data input functions used by power transmitting companies. The Company was certified for compliance with the following international standards: • ISO 9001:2008, quality management system (2008); • ISO 14001:2004, environment management system (2008); • OHSAS18001:2007, OHS management system (2011); • ISO 50001:2011, power management system (2015). In 2019, the Company developed OHS Action Plan pursuant to MC ISO 45001:2018. In October 2019, TÜV Rheinland Kazakhstan conducted an external audit for compliance with OHSAS 18001:2007 that confirmed the Company's efficiency, effectiveness and commitment to improvement.
It was planned to take measures to reduce the occurrence of occupational injuries.	During 2019, PAVLODARENERGO Group focused on OHS and during 12 Safety Days in its structural divisions, 439 briefings, 24 operational meetings and a mutual audit in Pavlodar EDC JSC and Astana EDC JSC were held.
• It was planned to employ highly professional and loyal personnel to the Company's Group: • development of management and professional competences of employees; • knowledge sharing and quick induction of new employees; • establishment of an internal and external talent pool.	In 2019, 48 employees graduated from higher educational institutions (extramural courses) with degrees in the industry related disciplines and 16 employees graduated from vocational secondary schools (extramural form of studies) in the business spheres where the Company operates. A pool of mentors was established from highly qualified employees of PAVLODARENERGO during four years. On average, 86 employees become mentors every year. In 2019, 104 employees out of 564 personnel entered into the talent pool were promoted to management positions.

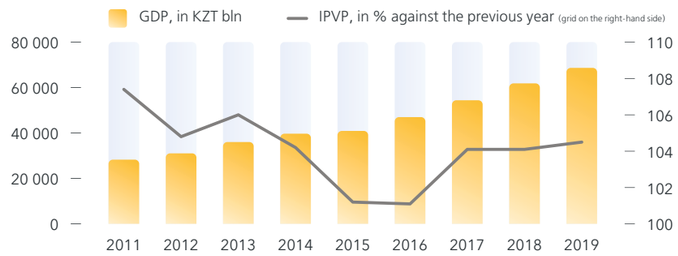
MARKET ANALYSIS

KAZAKHSTAN ECONOMY OVERVIEW

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

Gross domestic product dynamics

Source: Statistics Committee of the MNE of RK



GDP 4,5 %

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

INDUSTRY

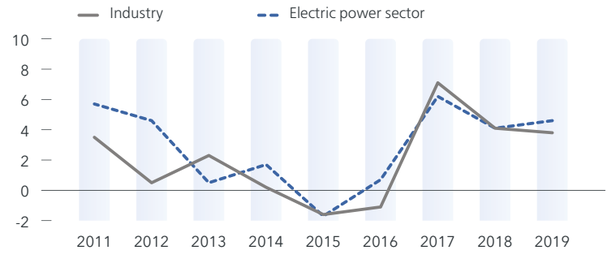
In 2019, Kazakhstan production output grew by 3.8% with mining sector increase of 3.7%, triggered, in particular, by 0.2% acceleration in oil production and 15.8% in metals mining. In 2019, oil production flatline resulted from major facilities repair and drop in oil prices. Metals industry faced a better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

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

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

Production and electric power sector dynamics, in %

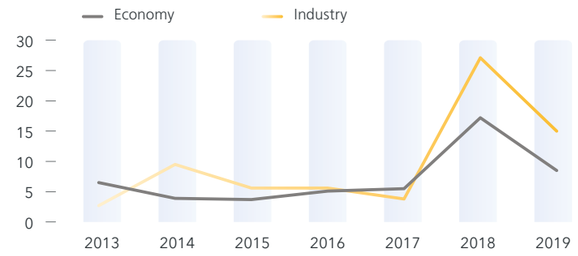
Source: SC MNE RK



INVESTMENTS

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

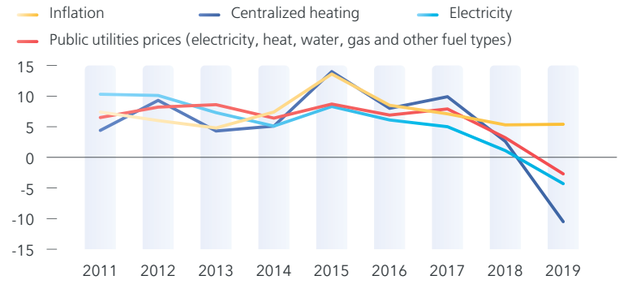
Capital investments dynamics, in %
Source: SC MNE RK



INFLATION

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

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



OUTLOOK

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

ENERGY SECTOR OVERVIEW

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

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

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

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

These changes make the electric power sector unprofitable.

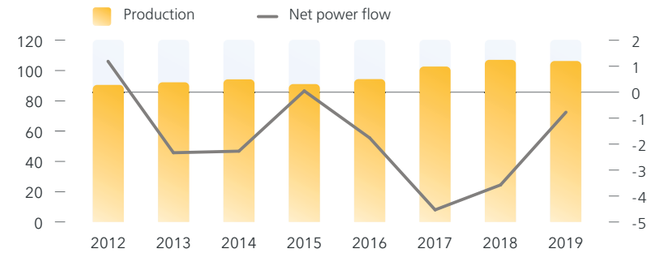
PRODUCTION

In 2019, based upon the information published by the System Operator power production in Pavlodar region reduced by 6.4% and amounted 42.7 bln kWh. This most significant reduction in Kazakhstan regions in the previous year resulted from production cut by major power producers. At the same time Pavlodar region remains the main power producing zone in Kazakhstan with the share in the aggregate generation volume exceeding 40%.

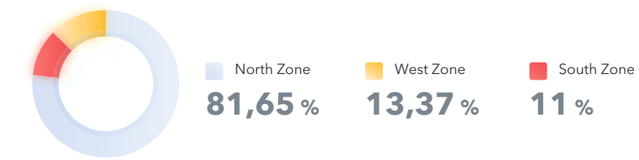
As at the beginning of the year 2020 Pavlodar region installed capacity of the electrical plants amounted 8,049 MW where PAVLODARENERGO JSC's share amounted 8.4% in Pavlodar region and 3.4% share in the aggregate production in Kazakhstan. Samruk-Energo JSC, Ekibastuz GRES-1 LLP and Ekibastuz GRES-2 JSC, are major electricity generating facilities in Pavlodar region and in Kazakhstan, requiring significant funds to upgrade their assets. Aksu GRES, a subsidiary of Eurasian Power Corporation JSC, and Pavlodar CHP-1 owned by Aluminum Kazakhstan JSC, are among main regional power producers. Pavlodar CHP-1 enjoys an advantage of having a major owner (ERG) ready to invest into its assets, however, its dependence on its key client is a disadvantage.

In 2019, electric power consumption increased by 0.5% to 19.5 bln kWh.

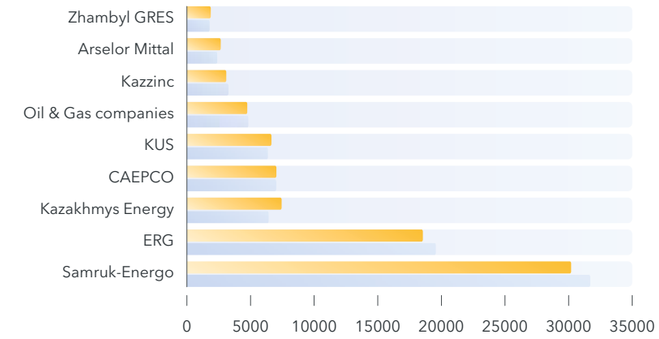
Electricity Production in RK and net power flow, in bln kWh
Source: KEGOC



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



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



Electricity generation by Source, in bln kWh
Source: KEGOC

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

CONSUMPTION

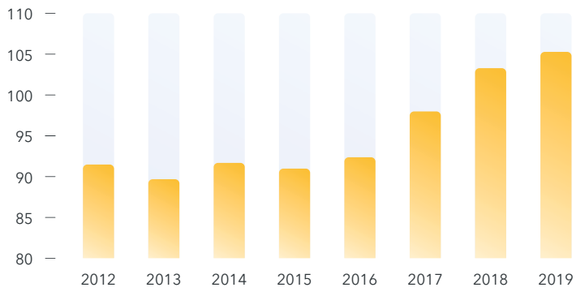
In 2019, electricity consumption grew by 1.96 bln kWh (1.9 %) and amounted 105.19 bln kWh. Consumption primarily increased in the North zone, i.e., by 1.197 bln kWh (1.8%). In the South and West zones electric power consumption grew by 0.74 bln kWh (3.4%) and 0.027 bln kWh (0.2%), respectively.

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

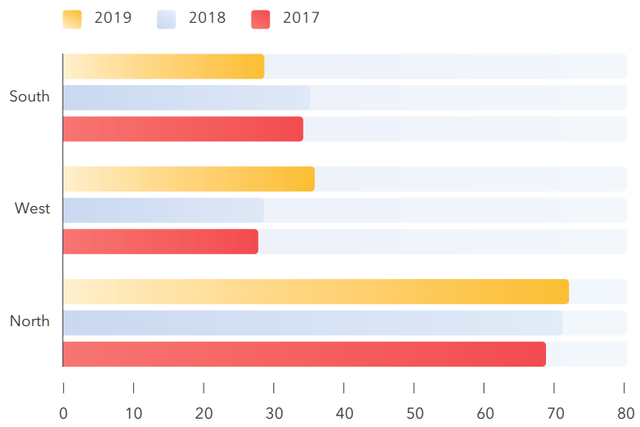
The maximum electric power consumption growth was reported in Karaganda (by 671.8 mln kWh or 3.9%) and Almaty (by 364.2 mln kWh or 3.3%) regions.

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

Electricity consumption in Kazakhstan, in bln kWh
Source: KEGOC



Electricity consumption by zones, in bln kWh
Source: KEGOC



NET POWER FLOW

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

CAPACITY

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

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

TARIFF REGULATION

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

The tariff for electric power production is divided into two elements

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

Installed and Available Capacity of Kazakhstan Power Plants, in MW (as at 1 January 2019/2020)
Source: Samruk-Energo JSC

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

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

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

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

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

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

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

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

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

ELECTRIC POWER TRANSMISSION AND DISTRIBUTION

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

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

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

The main problems faced by EDC networks are as follows:

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

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

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

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

ELECTRIC POWER SUPPLY SECTOR

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

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

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

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

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

SECTOR OUTLOOK

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

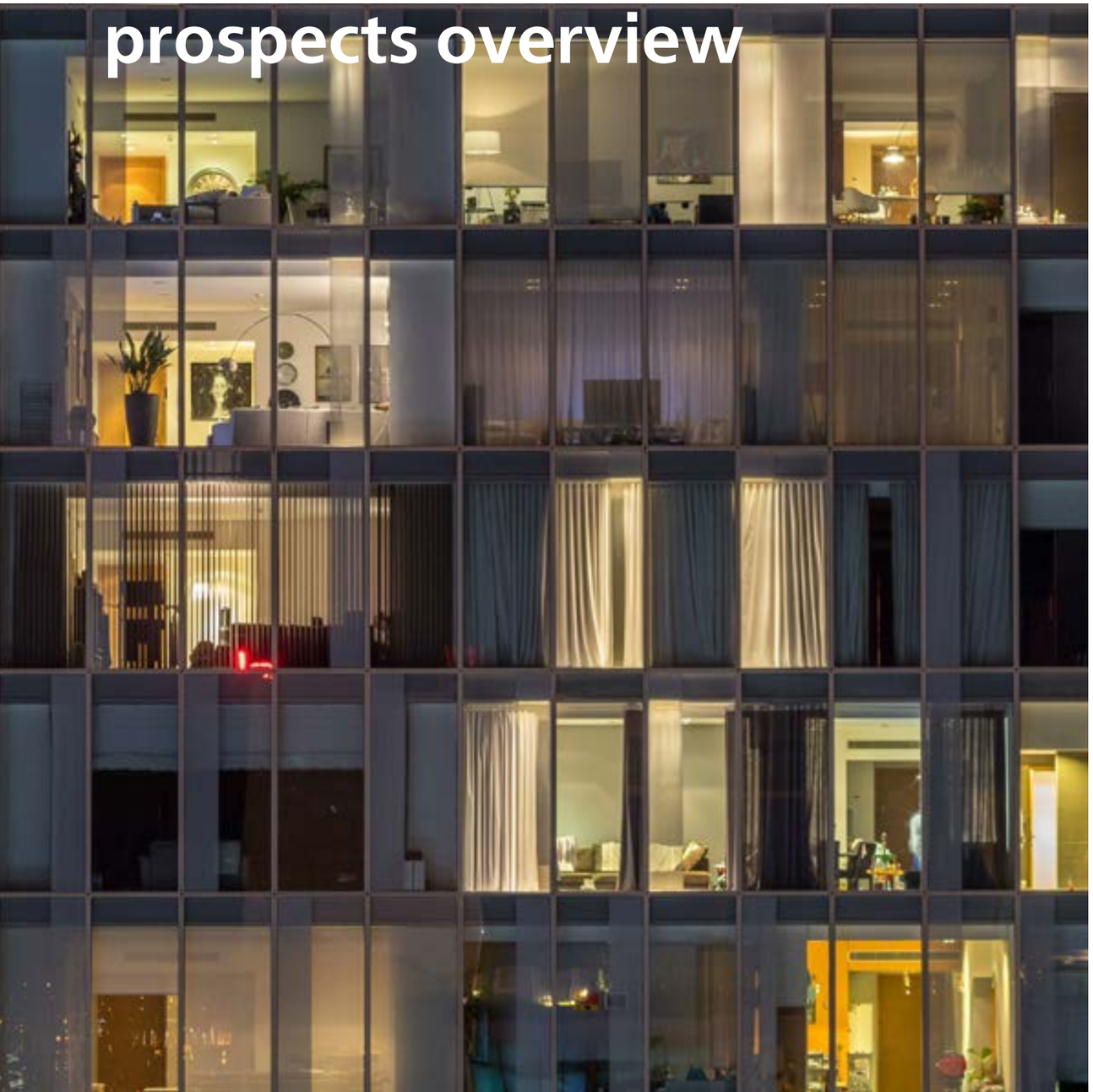
However, the deterioration of economic situation as the result of COVID-19 fighting measures as well as an unfavourable climate on external markets for core Kazakhstan exporters will adversely affect power consumption in 2020. It is against this background that inefficient sector regulation may hamper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

Forecast of UES Kazakhstan Electricity Balance, in bln kWh

Source: Ministry of Energy of the Republic of Kazakhstan

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

PERFORMANCE AND DEVELOPMENT prospects overview



GENERATION

The Company continued the implementation of a number of large-scale events to upgrade its equipment with the view to increase generation, reduce electricity and heat transmission losses and improve environmental performance. In 2019, the Company allocated KZT 9,3 bln to implement its investment program.

In 2019, electricity sales amounted 1,343 mln kWh and fell by 2.6% compared to 2018. In 2019 the sales of heat were 3,452.355 thous Gcal which is 4.1% reduction compared to the previous year.

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 and to make a contribution to the progressive development of business projects and industry in Pavlodar region.

Name	2016	2017	2018	2019
Installed electricity generation capacity, MW	662	662	677	677
Electricity generated, mln KWh	3 829	4 074	3 814	3 560
Share in the total electricity generation in Kazakhstan, %	4,1	4,0	3,6	3,4
Electricity transmitted, mln KWh	2 544	2 612	2 375	2 229
Electricity sold, mln kWh	3 058	3245	3 023	2 792
Installed generation capacity, Gcal	2 240	2 240	2268	2 268
Heat supplied, thous. Gcal	4 568	4 445	4 981	4 540
Heat transmitted, thous Gcal	3 225	3 195	3 355	3 219
Heat sold, Gcal	4 568	4 175	4 797	4 418

PAVLODAR CHP–3 OF PAVLODARENERGO JSC

The Company proceeded with phase three construction of its ash damp site and the expansion of the first phase thereof. Station coordinator as well as turbine No. 6 remote monitoring system (turbine, generator, transformer, and foundation) were introduced into operation.

The Company commenced reconstruction of gas collecting mains with replacement of reduction and cooling plant at boilers No. 1-6. The Company completed reconstruction of Boiler No. 2 gas collecting main. The works are scheduled to complete in 2020.

PAVLODAR CHP–2 OF PAVLODARENERGO JSC

The Company completed renovation of condenser of turbine No. 2 and air heater of Boiler No. 1 to reduce fly ash erosion

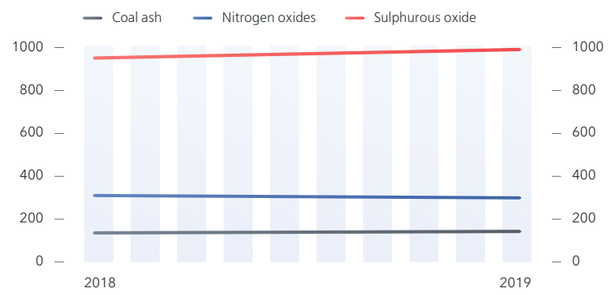
EKIBASTUZ CHP OF EKIBASTUZTEPLOENERGO LLP

The Company continued construction of the second phase of Ekibastuz CHP ash damp in Tuz lake bed.

Boilers No. 6, 9, 13, 15 as well as chimney No. 2 were reconstructed.

ADVERSE IMPACT OF GENERATION ON THE ENVIRONMENT

Flying ash, NO_2 and sulfur emissions, in mg/m³



INSTALLATION OF THE SECOND GENERATION TITANIUM EMULSIFIER

The second generation titanium emulsifiers were installed on all power boilers at PAVLODARENERGO JSC's plants enhancing stack gases purification and ensuring environment charges reduction.

ASH DUMPING SITES CONSTRUCTION

The Company constructs ash dumping sites to store wastes up to 25 years using polysynthetic membranes preventing emission of harmful substances to the underground water and soil.

TRANSMISSION OF ELECTRICITY

In 2019, Pavlodar EDC JSC completed a number of projects to reduce its transmission electricity losses as well as to improve reliability of power supply to consumers.

It constructed, renovated and retooled 6 km of 0.4-10 kV electrical grids. The Company purchased materials and equipment to replace 57 km of uncoated wire to aerial bundled conductor. During the reporting year, the Company proceeded with building a 21.7 km of 35 kV power line L-62 Voskresenka 2- Trofimovka scheduled to be commissioned in the first quarter of 2020. It also installed 1,554 ASCAE meters. As at 2019 year end the Company's technical losses amounted 8.57% against planned 9.24%.

The Company installed three modular transformer substations including power transformers with dry insulation and vacuum circuit breakers in the territory of Pavlodar during the reporting year. These substations are equipped with modern security and fire alarm systems. The Company got on with construction of 110/10 kV North City substation with two 40 MVA power transformers. It also completed reconstruction of 110/10 kV East City substation with SF6 circuit breakers in 110 kV outdoor switchgear and erected a modular substation control building and replaced 10 kV metal-clad switchgear with 10 kV vacuum circuit breakers. The Company also fully constructed 220 kV outdoor switchgear at 220/110 kV Promyshlennaya substation. The Company installed trunk radio system in Shcherbaktinsk and Zhelezinsk districts and started up radio relay communication. The Company reconstructed 46 buildings and constructions. It developed a detailed design to install antenna mast structures and reconstruct 0.4-10 kV distribution grids and purchased all necessary materials and equipment. In Aksu the Company completed the first phase of reconstruction of 110/10 kV Yermakovskaya substation, including replacement of 10.0 MVA power transformer, and renovated 10 kV switchgear at 110/10 kV Potanino substation. In Kalkaman settlement the Company modernized 220/35/10 kV Kalkaman substation replacing seven oil circuit breakers with SF6 circuit breakers.

TRANSMISSION OF HEAT

CENTRALIZED HEAT SUPPLY NETWORK MODERNIZATION PROGRAM BY PAVLODARENERGO JSC IN PAVLODAR AND BY EKIBASTUZTEPLOENERGO LLP IN EKIBASTUZ

IMPLEMENTATION PERIOD

2016 – 2020

PROJECT VALUE

KZT 8.75 bln:

- KZT 3.15 bln loan by EBRD;
- KZT 2.67 bln under Nurly Zhol Program;
- KZT 2.93 bln Company's funds.

GOALS

- Enhancement of reliability heat supply and the efficiency of power use;
- Reduction of losses and environmental standards raising in Pavlodar and Ekibastuz by way of CO_2 emissions abatement.

GOALS

The following results are anticipated upon the program implementation:

- 62.566 thous tonnes per annum fuel saving;
- 91.451 thous tonnes per annum CO2 emissions reduction.

PROJECT DISTINCTIVE FEATURES

Pre-insulated pipes used to implement the project will guarantee

- high thermal insulation characteristics;
- improved equipment reliability;
- useful life up to 25 years.

In 2019, the Company implemented the following measures under its investment program related to Pavlodar city heat networks development and modernization:

- pumping station No. 3 renovation and transformation thereof into a central heat distribution station to supply power to Lesozavod Microdistrict;
- construction of 187.7 m heating main No. 31 from HC No.309 to HC No. 839;
- reconstruction of 665 m of heat main No. 37 from PS -15 to PS-18.

The Company developed design and estimate documents and obtained a favorable state expert opinion regarding reconstruction of transformer substation No. 282 in the North Network District under its investment program.

In 2019, the Company allocated its depreciation costs to complete the following works under its Ekibastuz city development and modernization program:

- improvement of technical resistance of its facility as per anti-terrorist regulations;
- reconstruction of 25 locking valves at heating mains.

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

PLANS FOR EQUIPMENT RENOVATION AND MODERNIZATION FOR 2020

In 2020, 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 2020, PAVLODARENERGO JSC plans to produce electricity at 2019 planned level, i.e. up to 3,959 mln kWh and heat supply up to 4,466 thous Gcal. In 2019, Ekibastuzteploenergo LLP plans to generate electricity in the amount of 71.5 mln kWh and expects to supply heat from collectors at the level of 1,475.4 thous Gcal based on consumers' demand for heat.

In 2020, the Company intends to spend a total of KZT 2,147.522 mln and KZT 3,942.330 mln of borrowed funds (VAT exclusive) on investment projects.

PAVLODARENERGO JSC plans to continue construction of stage III of the ash dump site and expand the 1st stage, complete reconstruction of gas collection mains with replacement of reduction and cooling plants at Boilers No. 1-6, upgrade the condenser at turbine generator No. 5, reconstruct air heater cubes and renovate passing siding No. 1 at Pavlodar CHP-3.

Pavlodar CHP-2 plans to build up stage II of the ash dump.

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

In 2020, Pavlodar EDC JSC is planning to take the following actions under its investment programs:

- *construction, upgrade and retooling of 93 km 0.4-10 kV electric grid;*
- *assembly of nine modular 10 kV transformer substations and three 10 kV outdoor metal-clad switchgears;*
- *reconstruction of stage II of 100/10 kV Yermakovskaya substation with replacement of 10.0 MWA power transformer with a 16.0 MWA transformer;*
- *continuation of upgrade of 220/35/10 kV Kalkaman substation in Aksu district;*
- *building 110/10 kV North City substation with 110 kV Promyshlennaya- North City high-voltage power line;*
- *development of design and estimate documents related to construction of three 35kV OHLs totalling 71,4 km*

Pavlodar Heat Networks LLP plans to reconstruct 1,783 m of heating main No. 37 from PS-15 to PS-18 involving the pipeline diameter increase from 800 mm to 1,000 mm. This project will be finance from the state budget and a loan provided by EBRD.

As part of the investment program for the development and renovation of heating networks, the following activities are planned for 2020 in Pavlodar at the cost of depreciation deductions:

- *renovation of pumping station No.3 with transformation thereof into a central heat distribution station for Lesozavod microdistrict;*
- *reconstruction of heating newtork from HC No.221/10 to HC No. 221/8;*
- *reconstruction of heating network from HC no. 137 to HC No. 137/2.*

The Company plans to build and renovate in 2020 a total of 2.373 km of heating pipelines in Pavlodar using pre-insulated pipes.

For 2020 in Ekibastuzteploenergo at the cost of depreciation deductions:

- *construction and installation work for stage II of the ash dump at Ekibastuz CHP in the bed of Tuz Lake;*
- *project design works regarding reconstruction of KVTK-100-150 boilers No. 11, 12, 13, and 14 with replacement of the heating surface of the furnace chamber with gas-tight panels;*
- *reconstruction of Ekibastuz CHP potable water supply system;*
- *design works to install an automated emissions monitoring system;*
- *reconstruction of thermal insulation at 1,020 mm heating main No.3 from central heat distribution station to BP-3L;*
- *reconstruction of thermal insulation at 820 mm heating main No.1 from BP-5B to BP-8B;*
- *removal of heat networks from the private territory of low-rise residential area;*
- *construction of block heat supply substations.*

PROCESS AUTOMATION

PRANA PROGNOSTICS AND REMOTE MONITORING SYSTEM

In 2019, Pavlodar CHP-3 installed PRANA, a system of prognostics and remote monitoring, to control technical condition of its steam turbine generator No.6, 6T block transformer and foundation of turbine generator No.6. A station coordinator was also commissioned.

PRANA is a software and hardware complex ensuring remote monitoring and control over turbine generator, block transformer and the foundation of the turbine generator. PRANA troubleshoots and forecasts changes in the technical status of the above equipment based upon archived data regarding the equipment condition and production information from data collection systems installed on the equipment having no impact on operations thereof and ensuring information security of PRANA in the course of its installation and operation.

Thus, PRANA makes it possible an unbiased measuring of the equipment status; it controls the actions taken by personnel and contractors as well as enhances the efficiency of the equipment and production equipment operating practices.

The idea of cross connection CHP management using a station coordinator is to distribute load among boilers and turbines and other consumers, provided that all plant heating equipment is controlled as an integrated technology facility. The plant operator can control separate units (boilers, turbines, etc.).

The benefits of station coordinator use:

- primary and secondary control at the plant level;
- promotion of stability of the plant operations;
- reduction of fuel and steam consumption costs per unit of electric power generated;
- reduction of CO2 and NOx emissions;
- increase of plant heat efficiency;
- visualization of key parameters of operations;
- shock-free switching control modes;
- enhanced security and production practices.

COMPLEX IT SYSTEM

In 2019, Pavlodar CHP-3 introduced into operation a complex IT system supporting production processes management to boost the economic efficiency via the best scope and mode of plant operations, automation of labor intensive calculations as well as plant software applications and hardware upgrade.

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

Pavlodar EDC JSC has been implementing the project of an automatic system for commercial accounting of electricity (ASCAE) since 2013. In 2019, the Company installed 24,289 ASCAE devices. This project involves modernization and full automation of metering devices to automatically collect and transfer online reliable electricity transmission and consumption data. ASCAE device readings are taken remotely strictly on specified days on monthly basis. This system can monitor possible power theft and automatically detect points of energy losses and promptly eliminate them. ASCAE allows the Company to significantly reduce electricity losses. ASCAE devices installation made it possible to remotely (dis)connect consumers in case of outstanding accounts receivable.

In December 2019, ASCAE system was also commissioned by Ekibastuzteploenergo LLP.

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

In 2019, PAVLODARENERGO Group completed its transition to internal documents control system.

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 2020

ASCAE/ASCAHE

In 2020, the Company will continue to operate 1,255 devices transmitting data from heat meters in Pavlodar and 444 devices in Ekibastuz.

BILLING

In 2020, it is planned to connect Ekibastuz to the uniform billing system to automate and standardize the accounting of heat and to ensure prompt calculation of actual cost of electricity and heat consumed.

MOBILITY

In 2020, Pavlodar EDC JSC plans to replicate Mobility application fully integrated with Ellipse ERP system.

IMPLEMENTATION OF PROJECTS IN THE SALES COMPANY

In 2019, Pavlodarenergosbyt LLP's quality management system has successfully undergone its first surveillance audit for compliance with ISO 9001:2015 standard. This evidences high quality of services.

During the reporting year it commenced to use integrated billing system permitting Pavlodarenergosbyt LLP to automate and unify heat and electricity accounting and improve customer servicing through prompt calculation of actual cost of power consumed, gave the customers remote servicing channels and provided them with information through their personal accounts.

Pavlodarenergosbyt LLP continues the improvement of its in-person and remote servicing centers. Is call center operators advise customers on daily basis (from 08:00 until 22:00 without a break) on power supply. They process approximately 500,000 calls annually. In addition to support call center operators record household meter readings. During the reporting year the company introduced new methods of meter readings transfer and acceptance: SMS, voice mail and WhatsApp.

In 2019, Personal Account service was integrated with the billing system and used to service households in Pavlodar region and Aksu.

Service centers of Pavlodarenergosbyt LLP use 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. Now customers can copy their documents free of charge in any service center.

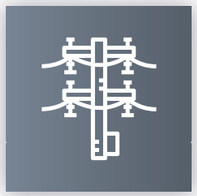
Since 2019, due to cashier rightsizing 11 payment terminals (four of them are equipped with card readers) are used in Pavlodarenergosbyt LLP for households and individuals. Nine terminals are used in Pavlodar and two terminals are operated in Ekibastuz.

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 2019, Pavlodarenergosbyt LLP together with private enforcement agents worked on 645 debt cases, where the property of debtors was seized and their electricity was cut off. Also, movable property (one vehicle and two specialized vehicles) and real property (a one bedroom apartment and a two-bedroom apartment) were sold through the online auction.

For failure to fulfil a final judgment, three 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: two people were arrested for three days and one person was awarded a penalty amounting 30 monthly specified rates.

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 the action plan developed to reduce the arrears of utility enterprises.



In 2019, Personal Account service was integrated with the billing system and used to service households in Pavlodar region and Aksu.

CONSUMERS HEALTH AND SAFETY ARRANGEMENTS AT SALES COMPANIES

Pavlodarenergosbyt LLP commits to ensuring safe and healthy environment for its consumers by having all its service centers equipped/supplied with

- ramps or personnel call buttons to help physically challenged visitors;
- video surveillance systems;
- first aid kits with necessary pharmaceuticals;
- air conditioning systems;
- fire and security alarms as well as emergency fire-fighting equipment, evacuation plans and safe emergency exits.

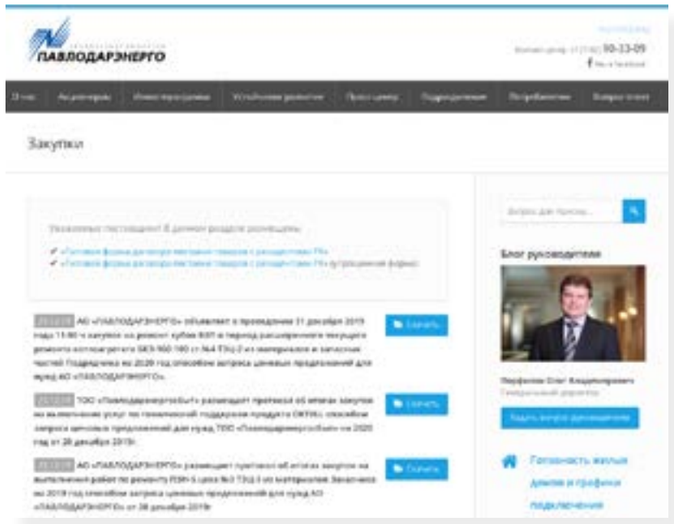
PLANS FOR 2020

In 2020, 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.

Pavlodarenergosbyt LLP plans to further replicate its 1C Billing system with respect to heat supply.

It also plans to purchase a flat located in the first entrance of a residential house being constructed by PAVLODARENERGO JSC in Ussolsk Microdistrict to establish an additional service center in 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.

During 2019, the Company implemented measures to improve transparency and introduce an effective procurement planning system, KPI evaluation and updating internal documents regulating procurement processes.

At the end of the reporting period, the following objectives were accomplished:

- implementation of the annual procurement plan;
- revision of processes and approval of internal procurement regulations;
- implementation of Thesis electronic document management system;

PROCUREMENT PLANS FOR 2020

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

In the reporting year, the Company concluded 966 contracts with a 90% share of contracts signed with residents. The total budget for inventories for 2019 was over KZT 14.6 bln, VAT exclusive.

FINANCIAL AND ECONOMIC INDICATORS

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

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

INDICATORS	2017	2018	2019
Income from core activities	49 885	51 971	48 202
Prime cost including period expenses	-37 952	-42 254	-45 154
Income from operating activities	11 933	9 716	3 049
Total EBITDA for the year*	17 418	11 307	8 383
Total EBITDA for the year, margin in %	34,9 %	21,8 %	17,4 %
Income tax expenses	-2 121	-1 448	-559
Net profit for the year	**7 617**	**2 348**	**-2 323**
Assets	**140 473**	**145 855**	**146 537**
Equity	73 424	71 833	67 152
Capital expenditures for fixed assets	**9 774**	**12 465**	**8 279**

**Total EBITDA excludes exchange rate difference*

INCOME FROM SALE OF PRODUCTS / SERVICES

In 2019, the Company sold electricity and heat, including the purchased energy, for a total amount of KZT 48,202 mln, i.e., 7.3% less compared to 2018 due to cut of production and transmission of heat and reduction of rates for heat (production and transmission) and electricity (production).

The main factors affecting the income from sales in 2019 compared to the previous period are as follows:

- revenue from sales of electricity declined by KZT 2,069 mln or 8.1% compared to 2018 due to fall in electricity consumption by 230.4 mln kWh (7.6%);
- revenue from electricity transmission reduced by KZT 150 mln or 1.7% due to decrease in energy transmission by 136.9 mln kWh (5.9%);
- revenue from heat sales fell by KZT 378 mln or 3.5% compared to 2018 which was caused by heat consumption decline by 379 Gcal (8%);
- revenues from heat transmission reduced by KZT 1,172 mln or 17.8% due to heat production and transmission tariffs decrease by 4% and 14.3%, respectively.

COST OF GOODS / SERVICES SOLD

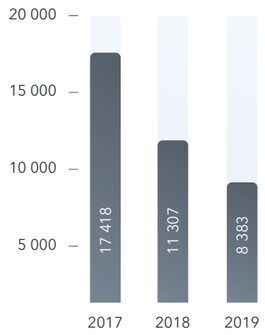
The cost of electricity and heat sold in 2019 amounted KZT 45,154 mln, that is KZT 2,899 mln or 6.9% more compared to 2018. This increase is due to higher operating expenses under such items as "Chemicals", "Repair" and "Capacity Purchase" and other expenses.

The cost structure of the Company is dominated (23%) by the cost of fuel. In 2019, the fuel costs slightly reduced by 0.5% because of production cutback. The increase in costs under Repair item by KZT 803 mln (23.9%) was caused by an increased scope of scheduled repairs in accordance with the rate estimates approved for the year. Upon introduction of capacity market in 01.01.2019 Pavlodar EDC JSC and Pavlodarenergosbyt LLP spent KZT 1,825 mln to purchase capacity from FSC.

DYNAMICS OF TOTAL EBITDA*

In 2019, total EBITDA amounted KZT 8,383 mln, i.e., KZT 2,924 mln or 25.9% less compared to 2018. 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.

EBITDA for the year, in 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, amortization and non-recurrent or erratic cost items that do not affect the core operations of the Company.

In 2019, the Company's operating EBITDA amounted KZT 9,015 mln, i.e., KZT 5,817 mln or 39,2% less compared to 2018. The main (high-priority) margin segment in the operating EBITDA structure is the production of electricity and heat (KZT 5,253 mln). In 2019, this indicator decreased by KZT 5,579 mln or 51,5% compared to 2018. For transmission and distribution of electricity operating EBITDA fell by KZT 52 mln (3%) due to electric power reduction.

For transmission and distribution of heat, operating EBITDA decreased by 47.1% or KZT 668 mln due to 21.1% increase in transmission rates. For sales of electricity and heat, operating EBITDA increased by KZT 1,057 mln, or 125.9%. Operating EBITDA for production and transmission of heat amounted KZT 580 mln.

2019 Financial and Economic Indicators by Segment, in KZT mln

Indicator	Electricity and heat production	Electricity transmission and distribution	Heat transmission and distribution	Sales of electricity and heat	Heat production and transmission	Other	Total
Income from sales	25 283	8 797	4 187	5 841	4 094	0	**48 202**
Prime cost	-22 295	-7 464	-3 256	-3 000	-4 850	0	**-40 865**
Gross profit	2 988	1 333	931	2 841	-756	0	**7 337**
Expenses of the period	-1 627	-617	-708	-971	-365	0	**-4 288**
Income from operating activities	1 361	716	223	1 870	-1 121	0	**3 049**
Financial expenses	-3 109	-278	-604	-111	-39	0	**-4 141**
Loss from exchange rate difference	403	5	79	12	0	0	**499**
Other income	-77	16	23	0	-2	0	**-40**
Income tax expenses	-1 552	-4	1 113	-122	-493	-73	**-1 131**
Profit/loss for the year	0	0	0	0	0	0	**0**
Operating EBITDA by segment	-138	-159	-137	-418	293	0	**-559**
Profit/loss for the year	-3 112	296	698	1 230	-1 362	-73	**-2 323**
Operating EBITDA by segment	**5 253**	**1 678**	**751**	**1 896**	**-580**	**16**	**9 015**

CHANGES IN NET INCOME/LOSS

Income from operating activities in 2019 amounted to KZT 3,049 mln (6.3% margin to income from sales). Income decreased by KZT 6,667 mln due to 6.2% decline in electricity production and higher prime cost of products.

ASSETS AND LIABILITIES

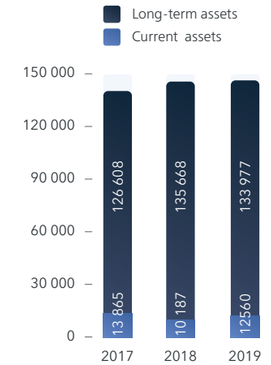
As of 31 December 2019, total assets of the Company amounted KZT 146,537 mln, that is 0.5% more compared to 2018.

As of 31 December 2019, the value of fixed assets was KZT 129,376 mln, or 88% of the value of all assets. As part of its investment program, the Company spent KZT 7,719 mln in 2019 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 equaled KZT 5,269 mln.

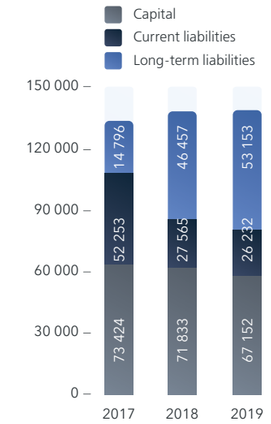
Other financial assets include deposits in the amount of KZT 53 mln accumulated by the Company to service loans and to finance its investment program.

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, in KZT mln



Liabilities, in KZT bln

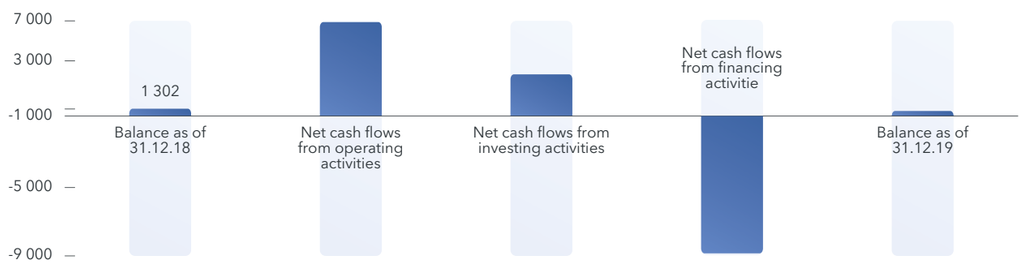


CASH FLOW

In 2018, there was a downward trend in cash flows from operating activity due to increased volumes of production and transmission of heat and electricity as well as rates for electricity production and heat transmission. The net inflow from operating activity amounted to KZT 5,460.025 mln.

The most significant cash outflows from investment activities in 2019 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 2018.

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



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.

GENERAL MEETING OF SHAREHOLDERS

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.

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.

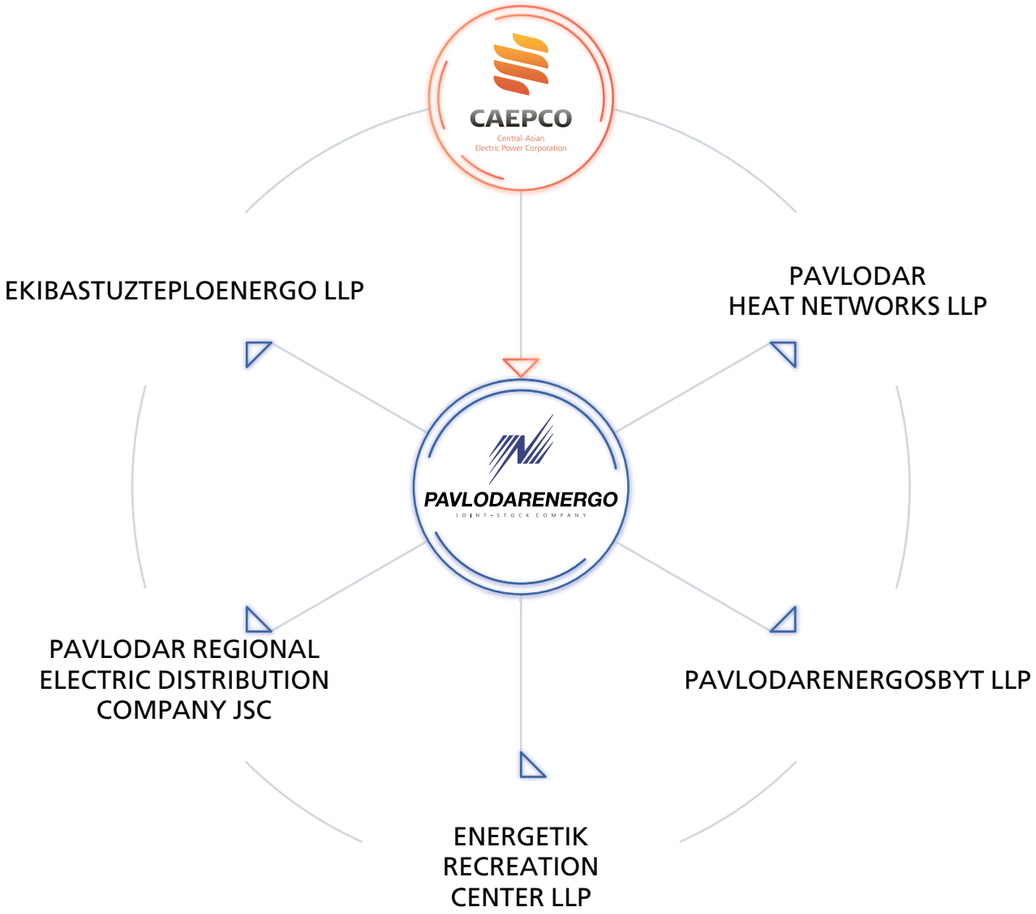
Shareholders of the Company may

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

RESULTS OF THE GENERAL MEETING OF SHAREHOLDERS

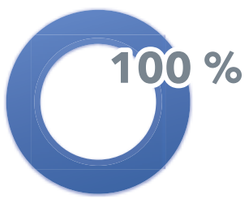
In 2019, the Company held one annual and two extraordinary General Meetings of Shareholders and two meetings of the Board of Directors where the following issues were addressed: approval of the financial statements of PAVLODARENERGO JSC, determination of the net income distribution procedure, consideration of shareholders' appeals regarding actions of PAVLODARENERGO JSC, determination of an audit organization to audit the financial statements of PAVLODARENERGO JSC and its subsidiaries, election of a new member of the Board of Directors of PAVLODARENERGO JSC, approval of amendments to facility agreement between PAVLODARENERGO JSC and Sberbank JSC SB.

ORGANIZATIONAL STRUCTURE



SHARE CAPITAL STRUCTURE

As of 31 December 2019 according to the financial statements, the authorised capital of the Company amounted **16 664** KZT mln



Central-Asian Electric Power Corporation JSC.

Ordinary shares		Preferred Shares	Total Shares	
Number	Share		Number	Share
166 639 957	100%	—	166 639 957	100 %

The sole shareholder owning 100% stake was Central-Asian Electric Power Corporation JSC.

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.

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

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

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 PAVLODARENERGO JSC. The total amount of remuneration paid to the Board of Directors and the executive body in 2019 was KZT 310,359 thous.

Term of Office in PAVLODARENERGO JSC's Board of Directors as at the end of the year 2019:

5 persons | 2-3 years

1 person | less than a year

PERFORMANCE OVERVIEW OF THE BOARD OF DIRECTORS

In 2019, the Board of Directors held 9 in-person meetings with 100% attendance and 2 meetings in absentia. The Board of Directors focused on the following key issues: amendments to Charters of Energetik Recreation Center LLP and Ekibastuzteploenergo LLP; merger of Energetic Recreation Center LLP and Energetic Healthcare Center LLP; termination of powers of Audit and Risk Management Committee; change of the name of Audit and Risk Management Committee, establishment of Risk and Control Committee of the Board of Directors of PAVLODARENERGO JSC; determination of the number, term of authority, election of the chairman and members of Risk and Control Committee and determination of the amount as well as the terms and conditions of remuneration payment; consideration of performance and action plan of Risk Management Department and Internal Audit Department; consideration of performance of Personnel, Remuneration and Social Affairs Committee; amendments to the terms and conditions of financing furnished by AL Hilal Islamic Bank JSC to PAVLODARENERGO JSC together with CAEPCO JSC, SEVKAZENERGO JSC, Akmola EDC JSC and Astanaenergosbyt LLP, approval of a new organization structure of PAVLODARENERGO JSC.

BoD Meetings	2017	2018	2019
Meetings in presentia	10	11	9
Meetings in absentia	–	–	2

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 PAVLODARENERGO JSC should be an individual only, who is elected from among:

- shareholders being 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.

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 2019, the annual General Meeting of Shareholders decided to pay dividends to the sole shareholder of PAVLODARENERGO JSC for 2018 fiscal year in the amount of KZT 1,174,042 thous.

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 VLADIMIROVICH 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 OJSC.

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 reorganized into SEVKAZENERGO JSC. From 2009 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.

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.

MEMBERS OF THE BOARD OF DIRECTORS

As of 1 July 2020, the term of office of elected members of the Board of Directors was 2 years.

Name, Legal Form	Members of the Board of Directors	Position	Date of election/expiry of powers
PAVLODARENERGO JSC	Turganov Dyussenbay Nurbayevich	Chairman of the Board of Directors	17.01.2020 – 17.01.2022
	Buksha Natalya Viktorovna	a member of the Board of Directors	30.06.2020 – 17.01.2022
	Perfilov Oleg Vladimirovich	a member of the Board of Directors	17.01.2020 – 17.01.2022
	Nigai Alexander Danilovich	a member of the Board of Directors	17.01.2020 – 17.01.2022
	Andreyev Gennady Ivanovich	Independent Director	17.01.2020 – 17.01.2022
	Tabanov Eldar Rashitovich	Independent Director	17.01.2020 – 17.01.2022
Pavlodar Regional Electric Distribution Company JSC	Oral Bagdat Yerkebulanuly	Chairman of the Board of Directors	12.06.2020 – 13.06.2022
	Perfilov Oleg Vladimirovich	a member of the Board of Directors	12.06.2020 – 13.06.2022
	Tabanov Eldar Rashitovich	Independent Director	12.06.2020 – 13.06.2022

TURGANOV DYUSSENBAY NURBAYEVICH (BORN IN 1959)

Chairman of the Board of Directors

First Deputy General Director of CAEPCO JSC

15.01.2018 – Chairman of the Board of Directors of PAVLODARENERGO JSC

15.01.2018 – Chairman of the Board of Directors of SEVKAZENERGO JSC

15.01.2018 – Chairman of the Board of Directors of Akmola EDC JSC

2. PERFILOV OLEG VLADIMIROVICH (BORN IN 1968)

a member of the Board of Directors

General Director of PAVLODARENERGO JSC

05.09.2016 – a member of the Board of Directors of PAVLODARENERGO JSC

15.12.2016 – a member of the Board of Directors of Pavlodar EDC JSC

10.09.2014 – General Director of PAVLODARENERGO JSC

BUKSHA NATALYA VIKTOROVNA (BORN IN 1966)

A member of the Board of Directors

Acting Deputy General Director for Economy and Finance of CAEPCO JSC

30.06.2020 – a member of the Board of Directors of PAVLODARENERGO JSC

01.07.2020 – acting deputy General Director for Economy and Finance of CAEPCO JSC

03.01.2019 – Chief Accountant of CAEPCO JSC

05.02.2018 – Managing Director for Accounting and Reporting of CAEPCO JSC

NIGAI ALEXANDER DANILOVICH (BORN IN 1984)

a member of the Board of Directors

Deputy General Director for Commercial Affairs of CAEPCO JSC

15.01.2018 – a member of the Board of Directors of PAVLODARENERGO JSC

15.01.2018 – a member of the Board of Directors of Akmola EDC JSC

03.05.2012 – Director for Strategic Development of ComTradeProduct LLP

ANDREYEV GENNADY IVANOVICH (BORN IN 1943)

a member of the Board of Directors, an Independent Director

05.09.2016 – a member of the Board of Directors of PAVLODARENERGO JSC, an Independent Director

15.01.2018 – a member of the Board of Directors of Akmola EDC JSC, an Independent Director

13.11.2017 – a member of the Board of Directors of CAEPCO JSC, an Independent Director

02.07.2015 – Honorary President of KazNIPIEnergoprom Institute JSC

TABANOV ELDAR RASHITOVICH (BORIN IN 1968)

a member of the Board of Directors, an Independent Director

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

13.11.2017 – a member of the Board of Directors of CAEPCO JSC

29.09.2017 – Director of City Box LLP

09.09.2015 – deputy Chairman of the Management Board of Astana Community Entrepreneurship Corporation NC JSC

14.11.2014 – a member of the Board of Directors of Akmola EDC JSC

22.02.2013 – a member of the Board of Directors of SEVKAZENERGO JSC

ORAL BAGDAT YERKEBULANULY (BORN IN 1986)

Chairman of the Board of Directors of Pavlodar EDC JSC

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

03.07.2018 – Vice-President of CAEPCO JSC for energy sales

18.03.2014 – Head of Prospective Development Department of Samruk-Green Energy LLP

18.08.2014 – Director of CAPEC Green Energy LLP

29.06.2012 – Project Manager, Chief Project Manager of Samruk-Green-Energy LLP

PERFORMANCE OF THE COMMITTEES OF THE BOARD OF DIRECTORS

PAVLODARENERGO JSC BOARD OF DIRECTORS HAS FOUR COMMITTEES:

1 STRATEGIC COMMITTEE 3 MEMBERS

Tasks:

- 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

Members:

Tabanov E.R., Chairman

Turganov D.N.

Perfilov O.V.

Performance

In 2019, the Committee had no meetings.

2 AUDIT COMMITTEE 3 MEMBERS 2 MEETINGS IN 2019

Tasks

- assisting the Board of Directors in effective performance of regulatory and oversight functions;
- advising the Board of Directors on matters requiring actions on its part.

Members:

Tabanov E.R., Chairman

Perfilov O.V.

Yazovskaya A.A.

Performance

The Committee addressed issues relating to activities of Internal Audit Department, including the review of relevant activity reports of departments, approval of budgets, work plans, introduction of amendments and additions to relevant corporate regulations and procedures, etc.

3 RISK AND CONTROL COMMITTEE 6 MEMBERS 2 MEETINGS IN 2019

Tasks

- assisting the Board of Directors in effective performance of regulating and supervisory functions, improvement and reinforcement of risk control;
- advising the Board of Directors on any matters requiring actions of risk managers.

Members:

Tabanov E.R., Chairman

Perfilov O.V.,

Nigai A.D.,

Rakhimberlinova Zh.Zh.

Stanbayeva A.O.,

Kan A.V.

Performance

The Committee considered the affairs of Risk Management Department including its reports, approved of its budgets, action plans, amended and supplemented relevant corporate regulations, etc.

4 PERSONNEL, REMUNERATION AND SOCIAL AFFAIRS COMMITTEE 4 MEMBERS 2 MEETINGS IN 2019

Tasks

- 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.

Members:

Andreyev G.I., Chairman

Perfilov O.V.,

Nigai A.D.,

Konstantinova N.V.

Performance

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.

*Данные приведены по состоянию на 31.12.2019

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

No.	Name, legal form	Sole Executive Body	Position	Date of election/expiry of powers
1.	PAVLODARENERGO JSC	Perfilov Olega Vladimirovich	General Director	10.09.2014 – 10.09.2021
2.	Pavlodar Regional Electric Distribution Company JSC	Bodrukhin Fedor Frolovich	General Director	07.10.2011 – 26.04.2021
3.	Pavlodar Heat Networks LLP	Imanayev Marat Shamilyevich	General Director	01.06.2015 – 01.06.2020
4.	Pavlodarenergosbyt LLP	Arginov Talgat Gabdullinovich	General Director	01.11.2013 – 01.11.2020
5.	Energetik Recreation Center LLP	Kandybayeva Tatyana Nokolayevna	General Director	03.05.2018 – 03.05.2020
6.	Energetic Health Care Center LLP	Zamotin Alexander Fedorovich	General Director	03.05.2018 – 03.05.2021
7.	Ekibastuzteploenergo LLP	Zakharyan Alexander Mikhailovich	General Director	01.10.2018 – 01.10.2021

MAJOR AND INTERESTED PARTY TRANSACTIONS

Please visit the site of the Depository of Financial Statements of Public Interest Organizations: *https://www.dfo.kz/* to get information regarding the Company's major and interested parties transactions.

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".

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.

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.

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

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

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

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

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

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

INTERNAL CONTROL AND AUDIT

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 2019, 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 Group of companies for the following business processes: “Investment Management”, “Technical Maintenance and Repair”. Also, the IAO monitored the implementation of external auditor’s and IAO’s 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 Inc., as well as in line with applicable 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 2019 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 Company’s corporate governance practices in 2019 were fully consistent with the provisions of the Corporate Governance Code.

KEY PRINCIPLES OF 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.

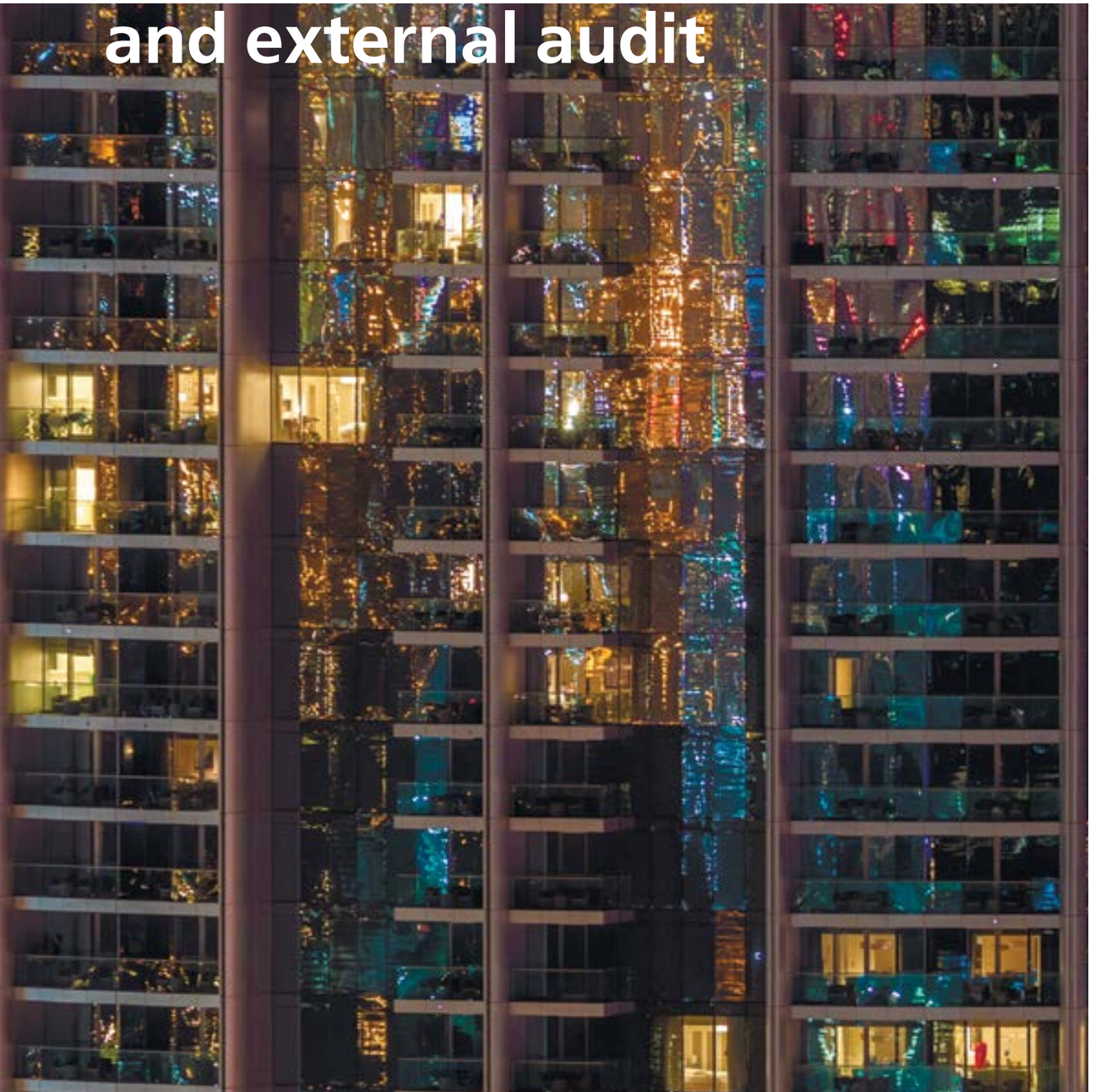
In 2019, all the fundamental principles of the Corporate Governance Code were respected.

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 activities, 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

RISK MANAGEMENT and external audit



The main goals of PAVLODARENERGO 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 threatening efficient operations.

The Company approved and implements Risk Management Policy determining the Company's approach to risks, establishing the general principles of its Risk Management System, goals and objectives thereof, key approaches to organization, implementation and control over risk management processes in the Company. The Company's internal regulations provide for distribution of responsibilities among Risk Management System participants as well as the nature of their cooperation.

Risk management is carried out at all levels in the Company and its subsidiaries by their management and executive bodies, managers and employees of its production facilities and business units. Risk management is a continuous and iterative process in the Company's management system making it an integral part of all organizational processes and an indispensable part of decision making.

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

RISK GROUPS

STRATEGIC RISKS

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

OPERATIONAL RISKS

- Commercial risks
- Technological risks
- Professional risks
- Reputation risks
- Procurement and supplies
- Regulatory risks
- Fuel risks
- Social risks
- Property risk
- Managerial risks
- Interaction with counterparties
- IT and information security risks
- Emergencies

LEGAL RISKS

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

FINANCIAL RISKS

- Managerial risks
- Interest risks
- Liquidity risk
- Credit risk
- Price risks
- Foreign exchange risks

RISKS ARE IDENTIFIED, EVALUATED AND MONITORED

01

RISK IDENTIFICATION

Detection of risks and their inclusion in the Company's Corporate Risk Register for further assessment and management.

02

RISK ANALYSIS AND ASSESSMENT

Determining the seriousness of risk impact on production, financial and economic performance of the Company

03

Risk Management

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

04

RISK MONITORING

Ensuring that risk management plans are implemented regularly, promptly and properly.

INTERNAL CONTROL STANDARDS

The Company has an Internal Control System (ICS) including policies, processes, procedures and standards of behaviour and actions combined into a single continuous process being a 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 its activities.

The Company has a three-level Internal Control System:

OPERATIONAL

Applies to core business objectives of the organization, including productivity, profitability and preservation of resources.

FINANCIAL

Refers to 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.

COMPLIANCE

Focuses on compliance with laws and regulations governing the operation of the organization.

ANALYSIS OF SIGNIFICANT RISKS AFFECTING PERFORMANCE

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

RISK	FACTORS	RISK LEVEL	CHANGE	DESCRIPTION OF THE RISK CHANGE	RISK MINIMIZATION MEASURES
Strategic Risks				Strategic Risks	
Damage to corporate reputation	Negative public reaction, absence of counter/positive media publications.	○	◁▷	In 2019, negative information was published in social and mass media related to an accident with a CHP/ETE LLP's employee in January 2019. This caused public outcry on the country level.	1. The Company's management, representatives of state bodies and mass media attended a press conference related to occupational health and safety, work environment and other issues of public concernment. 2. PAVLODARENERGO JSC published in mass media information regarding its operations, including implementation of investment programs providing for equipment modernization, organization of safe works in its Group of companies. 3. The Company performed certain awareness raising activities in mass and social media as well as at its corporate site regarding customer feedback. 4. The Company development and controlled the implementation of the measures planned to prevent the occurrence of similar events in the future.
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.	○	◁▷	Electrical capacity market was introduced since 1 January 2019. Balancing electricity market operates in simulation mode. The risk remains in critical 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 other authorities, participation in joint working groups to discuss and make amendments to legislation regulating electrical capacity and balancing electricity markets; • development of ASCAE system for wholesale consumers; • working with consumers for providing daily schedules; • monitoring actual electricity consumption via ASCAE system.
Operational Risks				Operational Risks	
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. 5. Failure to comply with OHS by contractors.	○	△	In 2019, compared to 2018, the rate of injuries increased across the Group. A contractor's employee was injuried.	The Company continuously takes measures to mitigate the occurrence rate of occupational injuries, including: • stringent control over technical condition of the equipment, buildings, structures and vehicles; • minimization of hazardous and dangerous production factors; • risk assessment; • constant monitoring of compliance with occupational safety during works; • provision of special-purpose clothes and personal protective equipment; • training and testing occupational safety; • investigation and in-depth analysis of accidents to prevent the occurrence thereof in the future; • behavioral safety audits. Introduction of lock out/tag out, LOTO procedure.
Loss of qualified/key personnel	1. Low average wages. 2. Internal and external migration. 3. Poor education of qualified power industry personnel.	○	△	In 2019, compared to 2018, personnel turnover increased in the Group.	In order to manage these risks the Corporation takes the following complex measures: • optimization of management and production processes and staffing level to use released payroll resources to increase salaries for critical and key blue collar personnel; • payroll increase in the Company's tariff estimates for future periods; • implementation of PROFENERGY Program in the following areas: a) generation of an external talent pool from students, graduates from higher educational institutions and secondary specialized colleges; b) employee advanced training; • mentorship development; • financial and other highly qualified employee motivation; • operation of a Training Center to ensure high quality (re-)training, education, professional advancement and development of personnel.
Lack of qualified blue collar personnel		○	△	The Corporation's performance largely depends on key experienced employees. Blue collar manpower shortage results in understaffing exposure. Limited number of experienced blue collar personnel and growth of demand for such workforce intensify competition on Kazakhstan and CIS labor markets. In 2019, based upon experts' opinion manpower shortage risk changed to critical.	

RISK	FACTORS	RISK LEVEL	CHANGE	DESCRIPTION OF THE RISK CHANGE	RISK MINIMIZATION MEASURES
Operational Risks					
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 2019, compared to 2018, 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 2019, 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 failure. 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 to discuss preparation to heating seasons, installation of heat meters, etc.
Financial Risks					
Growth of overdue receivables	The failure by the Group's consumers of electricity and heat to fully and timely pay for the power consumed in breach of the terms and conditions of respective agreements is caused by the following factors: • poor payment discipline; • decline in basic macroeconomic indicators.	○	△	In 2019, the share of receivables overdue for more than 3 months in the total debt. The Corporation considers this risk major and important.	1. As part of the Quality Management System opearing 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: • 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 employers; • 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.
Legal Risks					
Damage to the Company due to unethical practices of employees or third parties	Creation of external and internal threats to the Company's interests as a result of illegal actions of employees and/or third parties in relation to the Company's assets, infliction of damage as a result of inappropriate and inefficient use of resources.	○	◁▷	Risk probability remained unchanged.	The Company adopted Anti-corruption and anti-fraud policy to create and implement an efficient strategy to fight corruption and fraud and to promote an appropriate culture of behavior and a negative attitude to such actions among employees and management bodies of the Company. The Company uses Access Control Regulations establishing due control over employees work, access by contractors and third parties.
Strategic Risks					

▽ Risk impact increased

△▽ Risk impact remained unchanged

◁▷ No changes in risk probability

◁ Risk probability decreased

△ Risk impact decreased

▷ Risk probability increased

○ Average risk

○ High risk

Risk management activities in the Company are carried out by the Risk Management Department reporting to the Board of Directors. The Risk Management Department coordinates risk management, including actions of all participants of risk management system, development of methodology in the sphere of risk management processes and the system of risk management, timely consolidation of information regarding all identified risks and Risk Register upgrade and risk management monitoring.

The Department operates in accordance with the annual work plan approved by the Board of Directors to improve risk management system and Internal Audit Office.

WORKS PERFORMED IN 2020	WORK PLANNED FOR 2020
Updating the Company's Risk Register and Risk Map.	Updating of the Company's Risk Register and Risk Map.
Risk management training for key employees of business units and executives of the Company.	Risk management and internal control training for key employees of business units and executives of the Company.
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 IAO efficiency in business processes: • investment activities; • warehouse stock management; • control of maintenance and repairs.	Analysis and testing of IAO efficiency in business processes: • control of maintenance and repair; • distribution and metering of electric power, electricity monitoring; • distribution and monitoring of heat power, heat monitoring; • sale of power and accounts receivables management. • utility connection of consumer's heat consuming units to heating networks.

ANTI–CORRUPTION MANAGEMENT

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

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

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

The Policy sets out corruption and fraud fighting methods and procedure used by the Company, particularly, those related to identification and assessment of such events, internal investigations, calling to account anyone involved in such wrongdoing. The Company has well developed feedback channels (Hotline, telephone and mail services) enabling any legal entities and/or individuals to inform the Company of any imminent or completed corrupt or fraudulent activities.

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

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

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

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

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

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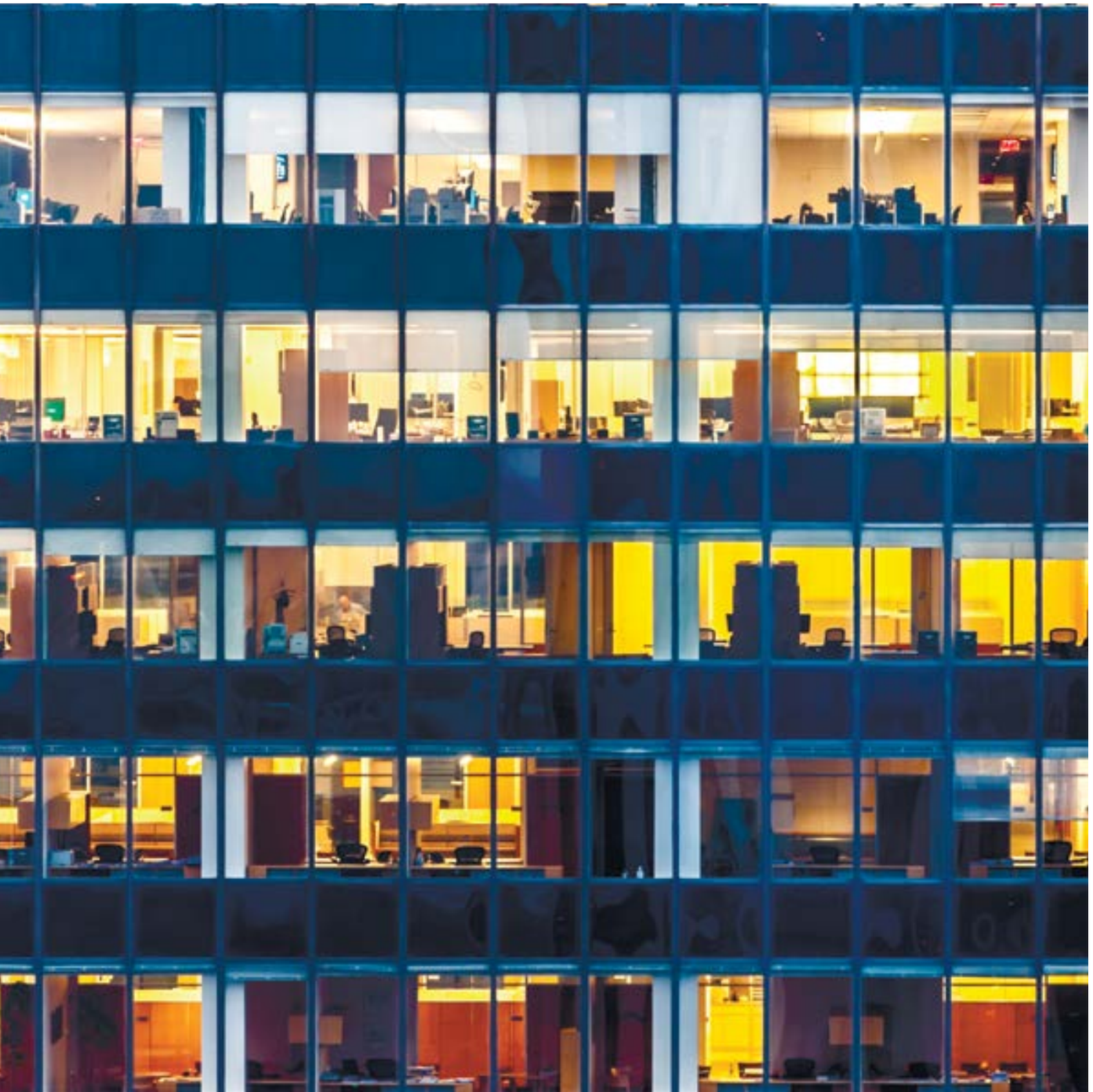
SUSTAINABLE DEVELOPMENT



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;
- anti-corruption activities.

STAKEHOLDER ENGAGEMENT

SOCIAL RESPONSIBILITY	ENVIRONMENTAL PROTECTION	OCCUPATIONAL HEALTH AND SAFETY	ECONOMIC SECURITY
Employees	Non-governmental organizations (NGO)	Employees	Shareholders
Government agencies and regulatory authorities	Government agencies and regulatory authorities	Suppliers, Contractors	Local communities
Local communities	Local communities		

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 2019, 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.

STAKEHOLDER ENGAGEMENT REPORT FOR 2019

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

COMPANY'S STAKEHOLDER	STAKEHOLDER'S INTEREST	ENGAGEMENT MECHANISM	ENGAGEMENT IN 2019
Shareholders	• strategic goals achievement; • economic benefits/high performance; • high corporate governance rating; • funds for development and dividends distribution; • net worth; • social programs implementation; • transparency of business processes.	• resolutions of the General Meeting of Shareholders; • resolutions of the Board of Directors; • corporate Internet site; • annual report; • discussions and business meetings.	Eleven meetings of the Board of Directors were held. The Company conducted a number of meetings and events to improve corporate governance.
Employees	• Human resources and social policy; • Terms and conditions of the collective bargaining agreement; • Compliance with employment legislation of the Republic of Kazakhstan; • Motivation to keep and employ highly qualified personnel.	• management decisions; • orders and instructions; • production, operating and other meetings; • operating reports; • oral negotiations; • OHS briefings; • Internal corporate communication channels; • Surveys and questionnaires; • Official social media accounts.	PAVLODARENERGO complied with the terms and conditions of the relevant collective bargaining agreement. The Company's employees received social assistance and support. The Company's subsidiaries conducted "Top Professional" contest. The Company continued the implementation of PROFENERGY project. The most distinguished employees of the Company were given corporate awards and assigned professional degrees.
Government agencies and regulatory authorities	• timely receipt of reliable information; • Kazakhstan power sector development support; • Ensuring reliable and continuous supply; • Increase of tax payments to local budgets; • Timely and high quality implementation of social projects; • Increase/preservation of jobs; • Compliance with Kazakhstan legislation in the sphere of industrial safety.	• submission of Company's performance reports; • responding to requests sent by state authorities regarding various matters of the Company's business; • suggesting amendments to Kazakhstan laws and regulations; • memoranda of cooperation with local executive authorities to support social development in Kazakhstan regions; • discussions, business meetings.	In 2019, blogs of Pavlodar region Akim and Akims of cities in the region were monitored on regular basis. All requests submitted by individuals regarding PAVLODARENERGO's activities were responded. The information on electricity and heat outage due to scheduled and/or emergency maintenance was published on corporate sites on regular basis with the timing of repair works and heat networks examination specified. The executive officers of the Group of companies (or assigned personnel) participated in the meetings dedicated to preparation of households to heating season together with state and regulatory authorities.
Local Communities (consumers)	• Market share/presence; • Ensuring reliable and failure-free electricity and heat supply; • Marketing communications; • Emissions to the environment.	• informing consumer and feedback system; • public hearings and meetings; • annual report; • signing memoranda and agreements on cooperation; • official social media accounts.	In 2019, the Group of companies accepted and processed 452,522 communications from its consumers. Such telephone and electronic communications included clarification requests, applications, suggestions, meter readings notification to the Call Center, etc.
Educational Institutions	• promotion of development of sector related science and education; • talent training and continuous knowledge sharing; • charity and sponsor support.	• cooperation with higher educational institutions in the regions of operations; • participation in the activities of examination boards, qualifications commissions and in accreditation of training courses; • conducting events, e.g., scientific papers contest.	In 2019, the Company held a contest of scientific papers and awarded corporate scholarships to the winners. In 2019, the Group of companies offered 293 students an opportunity to take a paid and unpaid on-the-job training. Eight excursions to the Group's production facilities were held for students of higher educational institutions and secondary specialized colleges.
Non-governmental organizations (NGOs)	• obtaining information regarding Corporation development potential; • Reduction of adverse impact on the environment; • charity and sponsor support; • public hearings.	• public hearings were held; • information regarding operations; • letters (requests) to the Company.	In 2019, the Company held 18 public hearings regarding environment protection, services, tariff estimate approval, and operational reports:
Mass Media	• transparency of business processes; • instant access to the Company's operational data regarding: – industrial safety; – production modernization; – financial indicators; – joint projects implementation; – development potential of the Company and sector.	• media tours and briefings, press conferences; • press releases; • responces to information requests; • mass media monitoring.	In 2019, 3,472 materials were published in mass and social media about PAVLODARENERGO. The Company's PR service issued 24 corporate publications.

COMPANY'S STAKEHOLDER	STAKEHOLDER'S INTEREST	ENGAGEMENT MECHANISM	ENGAGEMENT IN 2019
Suppliers, Contractors	• creation of transparent competitive environment; • use of market pricing mechanism; • stability and reliability of mutually beneficial cooperation; • performance guarantee under agreements/contracts.	• feedback system, meetings, negotiations; • signing agreements and memoranda, agreements regarding strategic cooperation; • tenders; • meetings with contractors and clients.	In 2019, the Group published its tender announcements and results thereof on its corporate site and in mass media.
Trade Unions	• compliance with the the employer's obligations related to its employees; • protection of employees' rights and interests; • creation of decent working conditions; • opportunities for personal and professional development; • social guarantees.	• negotiation and approval of the collective bargaining agreement; • meetings of trade union members with management.	The Company established the environment for trade union activities. It cooperated with the trade union based upon the principles of mutual interests, equality under Kazakhstan legislation and the collective bargaining agreement. Charity support was provided from the trade union's funds. The Group's trade unions conducted more than 25 events.

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 2019, PAVLODARENERGO Group of companies regularly provided information on its activities to stakeholders by updating web-sites of PAVLODARENERGO Group of companies and its subsidiaries, providing information to mass media, responding to requests, and arranging public hearings, press tours, round tables and other events.

In 2019, a total of 1,481 materials about activities of PAVLODARENERGO Group of companies were published in mass media, including 231 printed publications in local and republican media, 1,013 Internet publications (news agencies, websites, news aggregators, portals), and 237 stories on local and republican TV channels, 1,991 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.

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. The Company conducted its Open Day project to optimize interaction between Pavlodar Heat Networks LLP and condominium administrations.

In 2019, a total of 112 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 2020

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 POLICY

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 2019, the Company produced 3,559.837 mln kWh of electricity and 4,539.924 thous. Gcal of heat. To generate energy, the Company burned 3,564.443 thous. tonnes of Ekibastuz coal and 6.265 thous. tonnes 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 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 (CO2) 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 goals 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 project statements.

In addition, PAVLODARENERGO JSC informs its contractors about the applicable legislative and normative requirements by including such requirements in agreements, technical 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 under the Environmental and Social Action Plan are aimed at improving the environmental performance during production, as well as the health and safety policy at enterprises of PAVLODARENERGO JSC. The Company annually submits a public report under its ESAP.

ATMOSPHERIC AIR PROTECTION

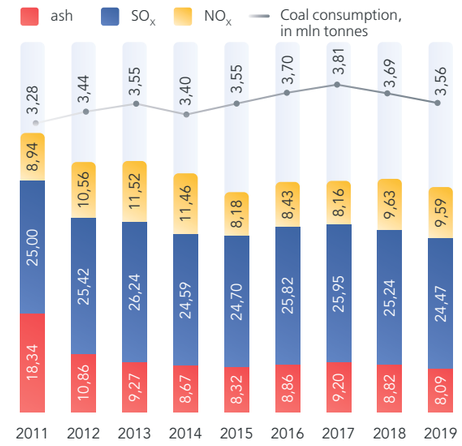
Atmospheric emissions are one of the main environmental impacts of thermal power plants.

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. tonnes to 8.1 thous. tonnes (72.9%).

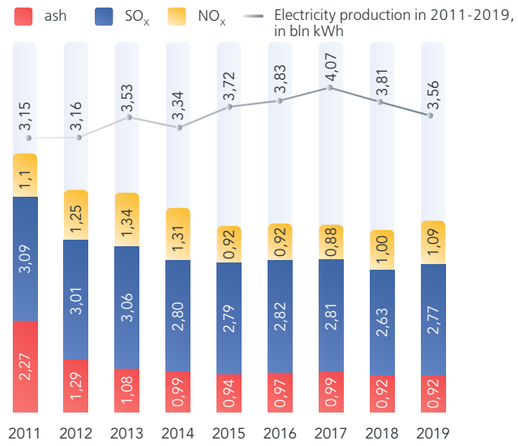
At the end of 2008, the year when the investment program was launched, PAVLODARENERGO JSC produced a total of 65.9 thous. tonnes of harmful emissions into the atmosphere (including other emissions), which in 2019 fell to 42.1 thous. tonnes (32.3%).

The amount of burned fuel (coal, heating oil), gross and per-unit emissions of solids (coal ash) and Sulphur oxide (SOx) reduced in 2019 compared to 2018 (coal ash by 8%, SOx by 3%, per-unit emissions of coal ash by 0.31%, SOx - by 5.39%).

Gross Emissions of Pollutants into Atmosphere in 2011–2019, in thous. tonnes



Specific harmful emissions into atmosphere in 2013-2019, in mg/MWм *h



MITIGATION OF ENVIRONMENTAL IMPACT, ENVIRONMENTAL PROTECTION MEASURES

In 2019, 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 emissions 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 refractory setting, 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);
- 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;
- repair of pipelines as well as stopping and control valves at service and potable water supply networks at CHP-2 and CHP-3;
- repair of sluice discharge pipelines and slurry pipeline at CHP-3 and CHP-2.

GREENHOUSE GAS (CO_2) EMISSIONS

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

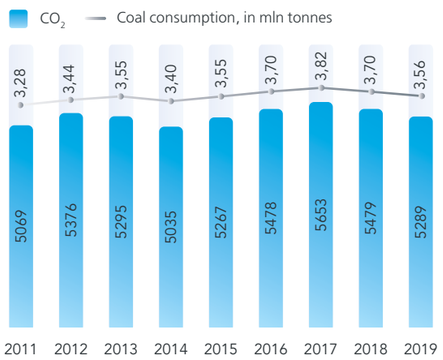
To monitor greenhouse gas emissions, the Company uses a calculation method in accordance with the guideline regulatory documents, which provides accounting of emissions from normal (regular) production operations, special practices (commissioning, process shutdown, repair and maintenance) and emergencies.

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 27.43 bln was allocated in 2016–2019 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 CO2 emissions by burning less coal thanks to reduced transmission losses of heat in pipelines). As a result, gross CO2 emissions reduced in 2019 by a total of 194.0 thous. tonnes compared to 2010, while per-unit emissions decreased by 3% compared to 2010.

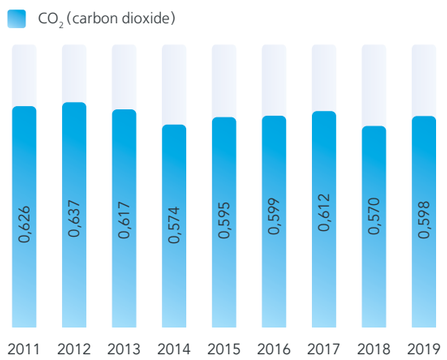
Another organizational tool used to reduce greenhouse gas emission is the Energy Saving and Fuel Efficiency Program, which implies new generating capacities making up an increasing share of generated energy, as well as the implementation of ISO 50001 energy management system (energy saving measures), 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 2019 greenhouse gas (CO2) emissions decreased by 35.203 thous. tonnes.

Due to decrease in production and fuel (coal, heating oil) consumption, gross greenhouse gas emissions decreased slightly in 2019 compared to the level of 2018 (3%) and amounted 5.289 mln tonnes of CO2. Per-unit greenhouse gas emissions were increased by 3%. However, in 2019, per-unit greenhouse gas emissions decreased by 3% as compared to 2010.

Coal consumption in 2011-2019, in mln tonnes



Specific CO2 emissions per unit of produced power in 2011-2019, in tonnes/MWh



ENVIRONMENTAL PROTECTION EXPENDITURES

To enhance efficiency of environmental protection, PAVLODARENERGO JSC provides financing for environmental initiatives. In 2019, total expenditures amounted to KZT 2,543,845 thous. 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.

In 2019, Pavlodar Regional Ecology Department RSI conducted two on-site audits in PAVLODARENERGO JSC to verify compliance with environmental requirements with seven improvement notices issued. The Company fully complied with five notices and plans to complete its works under remaining two notices in 2020.

Expenditures	Amount, in KZT mln			
	2016	2017	2018	2019
Investment expenditures	958,5	836,600	2 617,95	1 926,791
Expenses for overhaul of fixed assets intended for nature protection purposes	60,8	59,05	72,86	431,929
Current expenses	837,5	602,25	642,088	185,125

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.

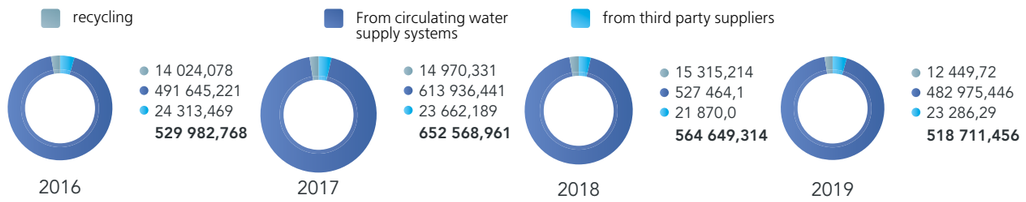
In accordance with the production monitoring program of PAVLODARENERGO JSC for 2015-2019 approved by the Environmental Regulation and Monitoring Committee of the Ministry of Energy of the Republic of Kazakhstan, the quality of water discharged to the ash dump as well as the level and quality of underground water is monitoried 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 2019, PAVLODARENERGO JSC consumed a total of 518,711,456 thous m3 of water, mostly via the closed-circuit water systems. In the reporting period, water discharge in PAVLODARENERGO JSC amounted to 320.501 thous. m3.

Total water consumption by source, in thous m³



Waste water discharged, thous m³

Indicator	2016	2017	2018	2019
Total waste water generated	**346,127**	**332,371**	**325,981**	**320,501**
Discharged to third parties	346,127	332,371	325,91	320,501

The most important environmental activities implemented in 2019 in the field of water use and water discharge include the following:

- monitoring of qualitative and quantitative parameters of ground water (water analysis was carried out in accordance with the approved schedule) at the industrial sites, ash dump sites and quarries;
- repair of pipelines, stop and control valves for service and potable water at CH-3 and CHP-2 of PAVLODARENERGO JSC;
- 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.

The use of a special geomembrane film will allow achieving 100% waterproofing.

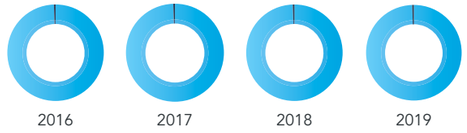
In 2019, facilities of PAVLODARENERGO JSC produced a total of 1,445.147 thous. tonnes of waste, including 1,440.676 thous. tonnes of coal combustion residuals and 4.471 thous. tonnes of industrial and household waste. Decrease in waste generation by 24.474 thous. tonnes compared to 2018 is due to reduction of coal consumption by 347 thous tonnes. The volume of industrial and household waste delivered in 2019 to third-party organizations for disposal or recycling increased by 1.91 thous. tonnes compared to 2018 due to increase in waste generation at facilities of PAVLODARENERGO JSC.

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.

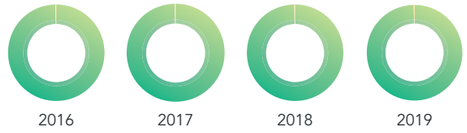
Significant waste management activities carried out in 2019:

- construction of stage III of the ash dump site at CHP-3 of PAVLODARENERGO JSC;
- construction of stage III of the ash dump site at CHP-3 of PAVLODARENERGO JSC;
- construction of section II of the ash dump site at Ekibastuz CHP of Ekibastuzteploenergo LLP;
- arrangement of sites for storage of wastes generated during renovation and construction of power facilities (preparation of sites, installation of containers).

Total weight of generated waste, in thous tonnes



Waste by hazard level, in thous. tonnes



Waste by method of handling, in thous. tonnes

Indicator	2016	2017	2018	2019
Waste generated	**1 471,743**	**1 518,243**	**1 471,746**	**1 445,147**
Including coal combustion residuals	1 465,965	1 513,489	1 465,15	1 440,676
Waste used at the enterprise	0,443	0,409	0,423	0,285
Waste decontaminated	-	-	0	0
Wastes transferred to third party organizations	5,278	4,340	6,096	4,186
Waste disposed at enterprise's own sites	1 465,965	1 513,489	1 465,15	1 440,676
including coal combustion residuals	1 465,965	1 513,489	1 465,15	1 440,676

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 first supervisory audits to verify compliance with the following international standards: ISO 9001 (Quality Management System), ISO 14001 (Environmental Management System), ISO 50001:2011 (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. The Company gradually transitions to new versions of ISO 45001:2018 (replacing OHSAS 18001:2007), ISO 50001:2018 (replacing ISO 50001:2011) international standards.

Pavlodar Heat Networks LLP has been certified for compliance with the following international standards: ISO 14001 (Environmental Management System), ISO 9001 (Quality Management System), and OHSAS 18001 (Occupational Health and Safety Management System). In 2019, Pavlodar Heat Networks LLP was successfully re-certified for compliance with the new versions of the following international standards: ISO 14001 (Environmental Management System) and ISO 9001 (Quality Management System).

Pavlodar EDC JSC has been certified for compliance with the following international standards: ISO 14001:2015 (Environmental Management System), ISO 9001:2015 (Quality Management System), OHSAS 18001:2007 (Occupational Health and Safety Management System), and ISO 50001:2011 (Energy Management System). In 2019, the company was successfully re-certified for compliance with a new version of ISO 50001:2011.

During the reporting period TÜV Rheinland Kazakhstan carried out the following audits:

- the first supervisory audit for compliance with ISO 50001:2011;
- the second supervisory audit for compliance with the following international standards: ISO 14001, ISO 9001, and OHSAS 18001:2007.

During the reporting period Ekibastuzteploenergo LLP has been certified for compliance with the following international standards: ISO 9001:2015 (Quality Management System), ISO 14001:2015 (Environmental Management System), ISO 45001:2018 (Occupational Health and Safety Management System), and ISO 50001:2011 (Energy Management System). In 2019, the company commenced its gradual transition to a new version of ISO 50001:2018.

PUBLIC APPRAISAL OF ENVIRONMENTAL PROTECTION ACTIVITIES

To meet environmental requirements of the Republic of Kazakhstan, in 2019 PAVLODARENERGO JSC held four 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:

- detailed design "Plan of Mining Operationsfor Clay Production at Beta Field in the Northern Industrial Area of Pavlodar City" (15.01.2019);
- detailed design "Remediation of Consequences of Production at Beta Field" (05.02.2019);
- feasibility studies of "Expansion of CHP-3 of PAVLODARENERGO JSC with installation of boilers No. 7 and No. 8 and turbine generator of No. 7 of PAVLODARENERGO JSC" (19.09.2019);
- detailed design "Building dams of 2nd stage of ash dump site at CHP-2 of PAVLODARENERGO JSC", reconstruction (27.11.2019).

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 SI.

PLANS FOR 2020

Conducting of public hearings on projects stipulated by investment programs of PAVLODARENERGO JSC for 2020.

HUMAN RESOURCES AND SOCIAL POLICY

HUMAN RESOURCES MANAGEMENT POLICY

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

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

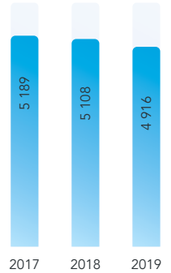
As of 31 December 2019, the Company's headcount was equal to 4,916 persons.

A decrease of 3.9% compared to 2018 was caused by the implementation of actions to optimize the headcount of enterprises as well as by an increased turnover rate.

In 2019, the Company hired 746 employees constituting 14.8% of its average stuffing number that slightly changed compared to 2018.

Kazakhstan Labor Code provides for a minimum one month notice to be issued to employees in case of labor relations termination therewith due to personnel reduction.

Changes in headcount, in persons



Payroll headcount distribution by companies with in PAVLODARENERGO Group in 2019

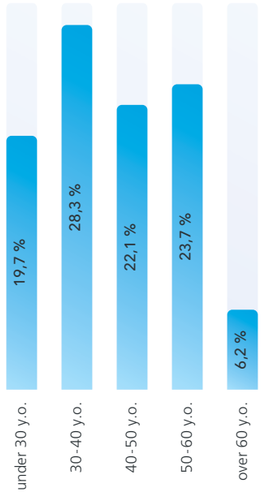
Company Name	Headcount
PAVLODARENERGO JSC	1 428
Pavlodar EDC JSC	1 888
Pavlodar Heat Networks LLP	429
Pavlodarenergosbyt LLP	455
Ekibastuzenergo LLP	716
Total:	**4 916**

EMPLOYEE STRUCTURE BY CATEGORY AND GENDER

Due to the nature of its activities, the Company's employee structure is dominated by men with a share of 61.5%. Production personnel are mostly blue-collar workers with a share of men amounting to 71.1%.

Employee category	Total		including:			
	persons	%	men		women	
			persons	%	persons	%
headcount	4 916	100	3 022	61,5	1 894	38,5
Managers	753	15,3	576	76,5	177	23,5
White-collar employees	1 289	26,2	404	31,3	885	68,7
Blue-collar workers	2 874	58,5	2 042	71,1	832	28,9

Employee Age Structure

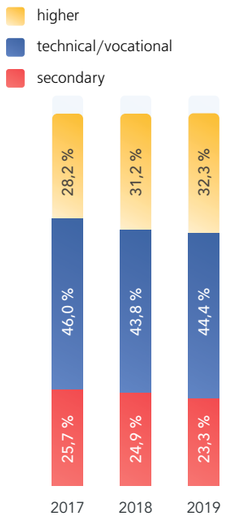


EMPLOYEE AGE STRUCTURE

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 48% of the total headcount. The share of employees over 60 years is 6.2%. Considering this situation the Company implements actions targeted at promotion of mentoring and succession to ensure transfer of professional knowledge and skills, and gradual reduction of the average employee age in order to achieve the best ratio between young proactive employees and highly qualified mature workers

The average age of the Company's employees is 41.3 years old.

Education Structure Dynamics



EMPLOYEE EDUCATION STRUCTURE

In 2019, the share of the Company's employees with higher education generally increased (compared to 2017-2018) as the result of personnel motivation under PROFENERGY corporate program. During 2017-2019 the proportion of employees having secondary education was declining and 2019 share of workers with technical/vocational education moderately rose compared to 2018.

In 2019, 48 employees obtained university degrees by correspondence training, including 37 employees majoring in job related disciplines; 19 employees graduated from technical/vocational colleges by correspondence training, including 16 persons majoring in job related fields. In 2019, 81 employees continued to study at higher education institutions by correspondence training, including 56 workers who majored in professionally relevant disciplines; 65 employees were obtaining technical/vocational education by correspondence training, 62 of them - in professionally relevant disciplines.

EMPLOYEE TRAINING AND DEVELOPMENT

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

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

The Company conducts its corporate training based on individual development plans to improve the effectiveness of activities and create safe working conditions.

In 2019, a total of 5,496 persons were trained, including 4,339 production workers (78.9% of the total trained pesonnel) who completed compulsory training. The number of employees trained in the Company's own training center in 2019 amounted 3,461 persons (63.0% of the total number of employees trained).

In 2019, advanced training programs were completed by 824 employees to develop their professional competences.

Name	2017	2018	2019
Number of employees who completed training, retraining and advanced training, including:	5 917	5 545	5 496
Occupational safety, fire safety guidelines and operating procedures (initial training, proficiency testing, certification/re-certification), courses for managers	4 548	4 351	4 339
Trainings in ISO9001, ISO14001, OHSAS1800 quality management systems (including environmental protection, internal audit and risk management issues)	12	59	22
Related occupations training	308	349	294
Civil defense and emergency training	0	5	17
Other (professional development, seminars, trainings, etc.)	1 049	781	824

PERSONNEL TURNOVER

In 2019, the turnover rate across the Company increased by 4% and 2.5% compared to 2017 and 2018, respectively, and reached 14.4%. Such an increase in the turnover rate was due to the following reasons:

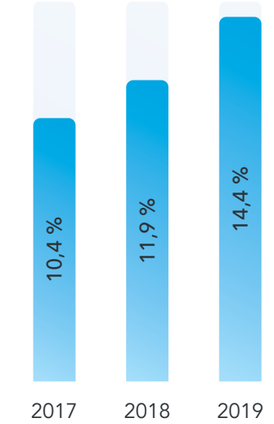
- dissatisfaction with remuneration;
- relocation within Kazakhstan (city/rural settlements).

To reduce the turnover rate, the following activities were further implemented in 2019:

- promoting mentoring;
- training, advanced training and corporate training funded by the Company;
- financial and non-financial incentives for employees.

The Company's personnel are informed of significant changes in the Company's operations pursuant to Kazakhstan legislation and the Company's internal regulations.

Turnover Rate



TALENT POOL

In 2019, in order to ensure availability of the required personnel reserve for various managerial positions, PAVLODARENERGO JSC's Group of companies created a talent pool of 564 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 2019, 104 persons from the talent pool were appointed to management positions. External talent pool is also created, including from among graduates. A total of 1,091 young specialists work at enterprises of PAVLODARENERGO JSC, of which 241 people were employed in 2019, including 164 persons for leading positions and professions. These include 60.6% (146 persons) with technical/ vocational training and 39.4% (95 persons) with a college degree.

ATTRACTING YOUNG SPECIALISTS

In 2016, as a part of its PROFENERGY project PAVLODARENERGO Group of companies established its Young Specialists Support Program designed to attract students and to raise the education level of its personnel. Fully implemented in 2017 the Program annually engages 260 students and employs 2% of them. Upon the Program introduction

- The Company concluded social partnership agreements with 6 educational institutions in Pavlodar and Ekibastuz. In 2019, it entered into an agreement with the college of the Pavlodar City State University named after Toraigyrov S.;
- Twenty eight students were employed during their summer vacations;
- As many as 21 students completed paid internship in the Company;
- As many as 797 students completed their internship and pre-graduate training without payment;
- Six winners of a scientific papers contest were granted personal scholarships;
- PAVLODARENERGO Group's employees annually take part in the work of examination and state attestation boards responsible for conducting graduation exams and assessment of graduate projects.

The Program also provides for young employee stimuli to get industry-specific education. From 2016 through 2019 83 employees took this opportunity annually, including

- 274 employees who were granted paid leaves;
- 18 were granted interest-free loans to pay their tuition fee;
- 39 employees who were paid bonuses for successful graduation.

Mentorship is being developed under PROFENERGY project aimed at professional knowledge and skills transfer to students and quick orientation of young specialists. It took four years to create mentors pool comprising highly qualified employees. In the average five mentors manage student's internship programs annually. Now up to 300 employees are appointed mentors annually. An average of 86 employees are additionally paid for induction of new and transferred staff.

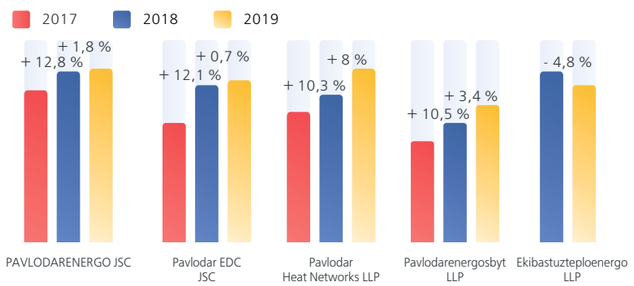
EMPLOYEE MOTIVATION AND REMUNERATION

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

The Company's system of employee motivation and remuneration is designed to attract, retain and motivate its employees to secure successful implementation of the Company's mission and the achievement of its business goals with minimum expenses.

In 2019, the Company took measures to optimize its processes and labor force (4.5% of the total manpower) allocating released payroll resources to increase the salaries of its key and critical personnel (covering 12.8% of the total Company's headcount) with the average wages increase in this category amounting 8.4% per employee. As the result of such measures taken, in 2019, the average employee remuneration in PAVLODARENERGO Group increased by 1.7% compared to 2018.

Average income growth in PAVLODARENERGO JSC'S group of companies



NON-FINANCIAL INCENTIVES

To increase motivation for efficient performance, every year the Company grants awards, certificates of merit and honorary titles to its employees for achieving high production results with announcement in corporate media.

In 2019, 90 employees and veterans of PAVLODARENERGO Group of companies were awarded for performance: 38 employees received corporate awards (including 10 awards from CAEPCO JSC); 11 employees received state awards including 1 employee who was awarded by the Ministry of Energy of the Republic of Kazakhstan; 33 employees received awards from the KEA Council of Veterans, 6 employees got awards from Kazakhstan Energy Association, including one employee who was awarded the Honored Power Engineer title, two employees were awarded the Distinguished Power Engineer title; 2 employees received awards from the CIS Electric Power Council, including one employee who was awarded the title of a CIS Honored Power Engineer.

INTERATION WITH TRADE UNIONS

PAVLODARENERGO Group of companies has entered into a Uniform Collective Bargaining Agreement for 2016-2019. During 2019, the Group completed the following tasks to enter into a new Uniform Collective Bargaining Agreement:

- it analyzed amendments to the Group's Uniform Collective Bargaining Agreement suggested by its employees;
- it brought the Uniform Collective Bargaining Agreement in compliance with recent changes in labor legislation;
- it drafted Uniform Collective Bargaining Agreement for 2020-2023.

In developing the terms of its collective bargaining agreement providing for benefits and guarantees for employees of PAVLODARENERGO Group and their families, the Company adhered to the principles of economic feasibility, sufficiency, joint responsibility and transparency.

PAVLODARENGO Group's interaction with trade unions covers the following aspects:

- monitoring of fulfillment of the terms and conditions of the Unified Collective Bargaining Agreement;
- control of working hours and rest time of employees in accordance with employment contracts, internal working guidelines and other employer's regulations;
- remuneration to employees in accordance with the Uniform Remuneration Regulation and other local remuneration regulations;
- work in the conciliation 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.

SOCIAL SUPPORT, GUARANTEES AND COMPENSATION

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

Any employment disputes in PAVLODARENERGO Group of companies are settled in compliance with applicable legislation as well as under the Collective Bargaining Agreement and conciliation commission where employer's and employees' representatives take part. The Company's internal regulations govern the procedure of employment disputes requests submission and responding thereto and all employees are informed thereof in the course of hiring procedure.

Name	2017	2018	2019
Number of trade union members employed, in persons	3 229	2 869	2 574
Percentage of total headcount, in %	62,2	56,2	52,4

Goals	Social Package
Personnel motivation for long-term employment	• additional professional pension contributions at the rate of 5 %; • bonus payment for professional competitions; • rewards to celebrate anniversaries and holidays.
Effective compensation and benefits policy	• subsidizing camp tours for children under 14 years old; • New Year gifts to children; • transportation of employees to/from work;
Support of employee working efficiency and health	• insurance against occupational accidents and diseases; • compulsory health insurance; • regular health screening; • reimbursement of sanatorium and preventive treatment expenses.
Social support of employees	• financial support in case of a child birth; • financial assistance for funeral services; • paid study leave; • retirement allowance; • additional paid leave for the first wedding of the employees and funeral 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.

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

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

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

SOCIAL SUPPORT IN CASE OF MATERNITY AND PATERNITY

Company Name	Number of employees who took maternity/child care leave during the year			Number of employees who were on maternity/child care leave as of the end of the year	Number of employees who returned from maternity/child care leave during the year
	women	men	total		
PAVLODARENERGO JSC	20	1	21	57	9
Pavlodar EDC JSC	27	0	27	68	9
Pavlodar Heat Networks LLP	6	0	6	16	4
Pavlodarenergosbyt LLP	13	0	13	38	6
Ekibastuzteploenergo LLP	17	0	17	37	10
Total:	**83**	**1**	**84**	**216**	**38**

SOCIAL SUPPORT IN CASE OF MATERNITY AND PATERNITY

Under its Collective Bargaining Agreement the Company continuously renders social assistance to veterans and retired employees allocating funds to the Council of Veterans of PAVLODARENERGO JSC. Every year the Company honors World War II veterans, Afghan War veterans, participants in the elimination of the consequences of the accident at the Chernobyl Atomic Electric Power Station and homefront workers and provides them with material support for the Victory Day. The Company renders financial aid and provides home care to non-working retirees as well as arranges holiday celebrations and tourist trips to Energetic Recreation Center.

In anticipation of the new academic year the kids of PAVLODARENERGO Group's employees received financial support from the trade union to cover the cost of preparation to studies. Families with three or more children of school age and challenged kids under 18 years of age get financial assistance from the Group. In 2019, the Company continued construction of a nine-story 96-apartment building for employees of PAVLODARENERGO Group of companies. The Company runs this project under the third stage provided for in its memorandum with the Pavlodar City Akimat concluded in 2016 to promote joint cooperation in the sphere of corporate social responsibility.

SPORTS AND RECREATIONAL EVENTS

To promote healthy lifestyle, the following activities are carried out at the Company's enterprises:

- fitness club memberships are provided to employees;
- active leisure is organized;
- collective traditions are being developed;
- annual sports events and professional competitions are held.

Approximately 2,730 employees go to swimming-pools, play football and volleyball and engage in other sports activities.

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, weight-lifting, arm-wrestling, chess, and fishing.

In 2019, 207 employees took part in competitions in eight sports disciplines. Forty eight people participated in city sports days held among enterprises of the region, where they ranked second in team scoring.

CORPORATE EVENTS

PAVLODARENERGO JSC'S team won military and sports relay held to celebrate the World Civil Defense Day where the Pavlodar City civil defense units competed to drill knowledge and skills and promote force coherent activities in an emergency situation.

Maslenitsa Festival (Pancake Week) was celebrated in Energetic Recreation Center by PAVLODARENERGO Group's employees and residents of the adjacent rural district.

PAVLODARENERGO Group of companies arranged a number of events dedicated to the World Occupational Safety Day, including kids' creative contests "Labor Safety through the Eyes of the Child", a traditional OHS Family Day and annual celebration in honor of the best OHS employees.

PAVLODARENERGO JSC held a fine arts contest to celebrate the World Environment Day. More than 60 projects were submitted by the Company's employees' 45 children and grandchildren of five to 14 years of age.

In August, a futsal tournament commemorating the Kazakhstan Constitution Day was held among social partners. PAVLODARENERGO JSC's took the first spot and Pavlodar EDC JSC's team finished up in the third place. The best players were also awarded with prizes.

PAVLODARENERGO Group of companies' team was recognized best in the Forty Eighth Sports and Athletic Competition held at the Pavlodar City Central Stadium among Pavlodar City producers under the President's Mile. An employee of Pavlodarenergosbyt LLP won the women's tournament.

The Company's Public Relations Department organized an event where employees of Pavlodar CHP-2 and CHP-3 as well as children of the Company's employees shoot video clips encouraging the compliance with occupational health and safety requirements. The clips were published both on the Group's corporate site and on its social media accounts.

Pavlodar EDC JSC's employee representing Pavlodar region took part in Russian Energy Week, an annual international forum held in Moscow to discuss fuel-and-energy sector development prospects and the potential of international cooperation in power sector to be unlocked.

A book about Ggeorgy Malenkov, Ekibastuz CHP's CEO from autumn 1958 until 1968, was presented at Ekibastuz City Central Library. Mr. Malenkov transferred the plant to Ekibastuz coal (pursuant to the initial station design), despite the fact that many experts believed it impossible. The book was written by Andrey Malenkov, a son of Georgy Malenkov and a soviet and Russian scientist.

PAVLODARENERGO Group of companies announced the winners of its annual Best Professional contest established to support young specialists and identify talent in its production units. The winners, a woman working in Pavlodar CHP-3 Chemical Shop (PAVLODARENERGO JSC

MAIN PLANS FOR 2020

In 2020, the Company will continue to implement its HR policies aimed at employee engagement and professional development. To this end the Company plans to take the following measures:

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. Further implementation of programs to improve the living conditions of key and critical staff;

4. Further development of automated HR processes for personnel development: induction, assessment, training, etc.;

5. Implementation of ENBEKENERGY project to engage labor from manpower-surplus Kazakhstan regions and employ it at PAVLODARENERGO Group of companies;

6. Perfection of the system of corporate (re-training) of personnel against the background of the labor market deficit, improvement of training quality, introduction of after-training performance monitoring.

OCCUPATINAL HEALTH AND SAFETY

In 2019, employees of OHS Departments of PAVLODARENERGO JSC, Pavlodar EDC JSC, Pavlodar Heat Networks LLP, Pavlodarenergosbyt LLP and Ekibastuzteploenergo LLP conducted 472 OHS inspections across PAVLODARENERGO Group of companies.

In 2019, the following activities were implemented across PAVLODARENERGO Group of companies

- sketches for OHS banners and posters were developed and placed on OHS information stands in the territory of enterprises;
- maintenance sites and safety fencing were brought in compliance with OHS requirements and ash disposal channels were closed as per overhaul and routine repair schedules;
- in anticipation of the World Safety Day a Safety and Labor Protection Day was held for employees' family members; a drawing contest "Labor Safety through the Eyes of the Child" was organized and the best occupational health and safety workers were encouraged; videos featuring the opinions PAVLODARENERGO Group of company's employees and their children regarding the importance of OHS requirements were made;
- Pavlodar CHP-2 and CHP-3 bought and installed OHS information boards at the entrance checkpoint;
- roads and walkways markings were made at Pavlodar CHP-3;
- first aid guidelines applicable to accidents and Computer Operation OHS regulations were developed and implemented;
- as per PAVLODARENERGO JSC's order the following CAEPCO JSC's OHS standards were implemented unchanged: «Occupational Health and Safety Standard: Behavioral Safety Audit», «Occupational Health and Safety Standard: Technical Specification of Personal Protective Means and the Procedure of Provision Thereof to CAEPCO JSC's Personnel»;
- PAVLODARENERGO JSC revised and approved standards of soap and special meals (milk) supply to its employees;
- The Company developed and implemented the Provisions Regarding Industrial Occupational Health and Safety Council;
- the Company's contractors' managers and employees working in the territory of PAVLODARENERGO underwent OHS training covering protective gear wear and use and compliance with zero tolerance of alcohol, drugs and tobacco requirements;
- electrical personnel commenced to use clothes made of NOMEX®, a material offering superior heat, flame and arc flash protection;
- The Company has completed its transition from utilization of waist belts to fall arrest harnesses. Now fall arrest harnesses are also used by contractors operating in the plants;
- Pavlodar EDC JSC bought two additional Alcotest-203 devices to duly and timely check its employees for alcohol intoxication;
- Pavlodar EDC JSC purchased 11 mobile video recorders to improve labor discipline and responsibility of the personnel involved in operational switches, work place preparation, installation/removal of workplace grounding, etc.;
- Ekibastuzteploenergo LLP's production facilities were certified for compliance with occupational safety regulations;
- Ekibastuzteploenergo LLP commenced modernization of shower facilities for 365 people, lavatories, halls and staircases in the junction tower;
- the roof overhaul was completed and a separate catering room was organized in the building of Pavlodar Heat Networks LLP repair department.

TECHNICAL INSPECTORS

PAVLODARENERGO 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 bargaining agreement, as well as to integrated programs and plans of priority measures to improve occupational safety practices;
- 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 related provisions of Kazakhstan Labor Code applies.

The Company's OHS employees participated in the following workshops together with PAVLODARENERGO's Employees Local Trade Union PA and Pavlodar Region Trade Union Center TTA: "Healthy Work Environment is the Basis of Successful Social Development", "Labor Disputes and Causes Thereof. The Procedure of Labor Disputes Resolution by the Conciliation Commission".

OCCUPATIONAL HEALTH AND SAFETY COUNCIL

PAVLODARENERGO 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 in 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 2019, PAVLODARENERGO Group of companies had three major injuries (Pavlodar EDC JSC, Pavlodar Heat Networks LLP, Ekibastuzteploenergo LLP) and one fatal case (Ekibastuzteploenergo LLP).

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

Occupational injuries rates

	2017	2018	2019
Headcount	5 189	5 108	4 916
Number of injury cases	5	2	4
Number of injured persons	5	2	4
Number of fatalities	0	0	1

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

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

SOCIAL PARTNERSHIP

PAVLODARENERGO JSC is implementing a social policy aimed at supporting the population in Pavlodar region.

In 2019, Pavlodar City Akimat and major regional companies (including PAVLODARENERGO JSC) signed Zhas Shanyrak Memorandum. The memorandum was executed based upon the Presidential Address "Kazakhstan citizens' wellbeing: increase in earnings and improvement of living standards" by major regional companies during Youth Year. Zhas Shanyrak Project was designed to help young families acquire their own accommodation. In 2019, pursuant to this memorandum, PAVLODARENERGO JSC continued to implement another large-scale social project in Pavlodar, i.e., building a nine-floor multi-apartment residential building for its employees in Usolsk district.

The Company's charity activities mainly include provision of aid to veterans of the Company. To perform social work with pensioners, collective agreements provide for the allocation of funds to PAVLODARENERGO's Council of Veterans. Every year, the Company honors World War II and Afghan War veterans, participants in the elimination of the consequences of the accident at the Chernobyl Atomic Electric Power Station and homefront workers and provides them with financial support for the Victory Day. The Company renders financial aid and provides home care to non-working retirees as well as the companies arranging dinners to celebrate the Victory Day, Day of Older Persons and Power Engineer's Day.

Non-working retirees residing in detached house districts are supplied with coal free of charge, given food packages and home care when they get sick. Four times a year the Company arranges veterans' trips to Energetik Recreation Center.

In 2019, PAVLODARENERGO JSC took part in the republican campaign "Road to School" under the motto "The Happy Childhood Territory". Every year, the Company provides targeted assistance to orphans.

PLANS FOR 2020

- *Completion of automation of OHS processes, i.e. creation of a number of automated processes that make it possible to plan, control and analyze OHS processes;*
- *Completion of implementation Behavioral Safety Audit standard;*
- *Development and implementation of OHS monitoring procedures;*
- *Installation of traffic signs in the territory of the plants;*
- *Bringing shower rooms both for men and wo men in compliance with sanitary and hygiene standards;*

The Company will continue the following work:

- *certification/bringing workplaces into safe condition;*
- *notification by sending letters to families of employees who have violated occupational health and safety requirements;*
- *implementation of Signal Sheets.*

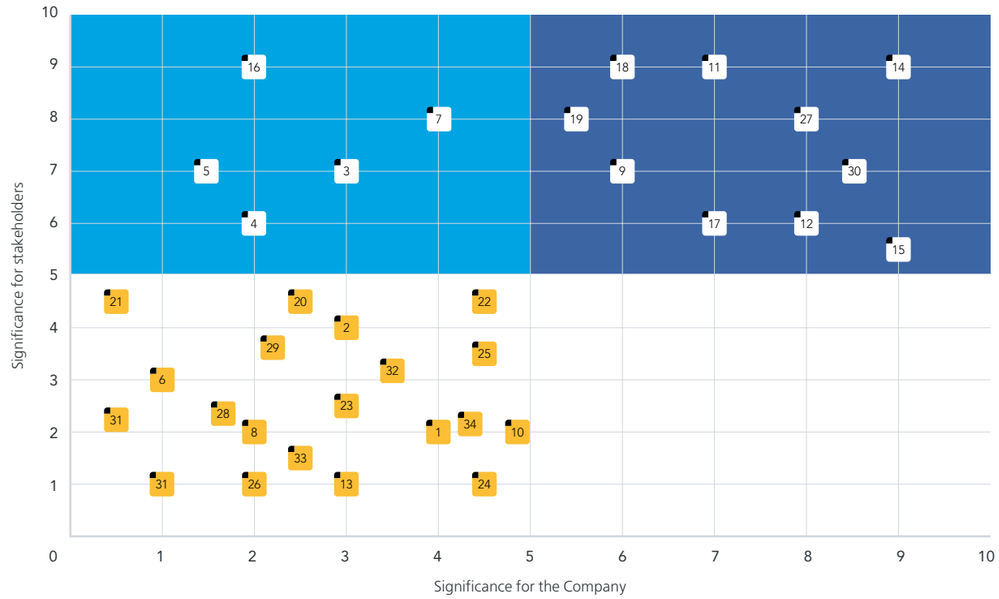
ABOUT THE REPORT

This Report was prepared by PAVLODARENERGO JSC based on the results achieved in 2019. 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 2018 Sustainable Development Report, was published in August 2019.

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



GRI ELEMENT INDEX

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

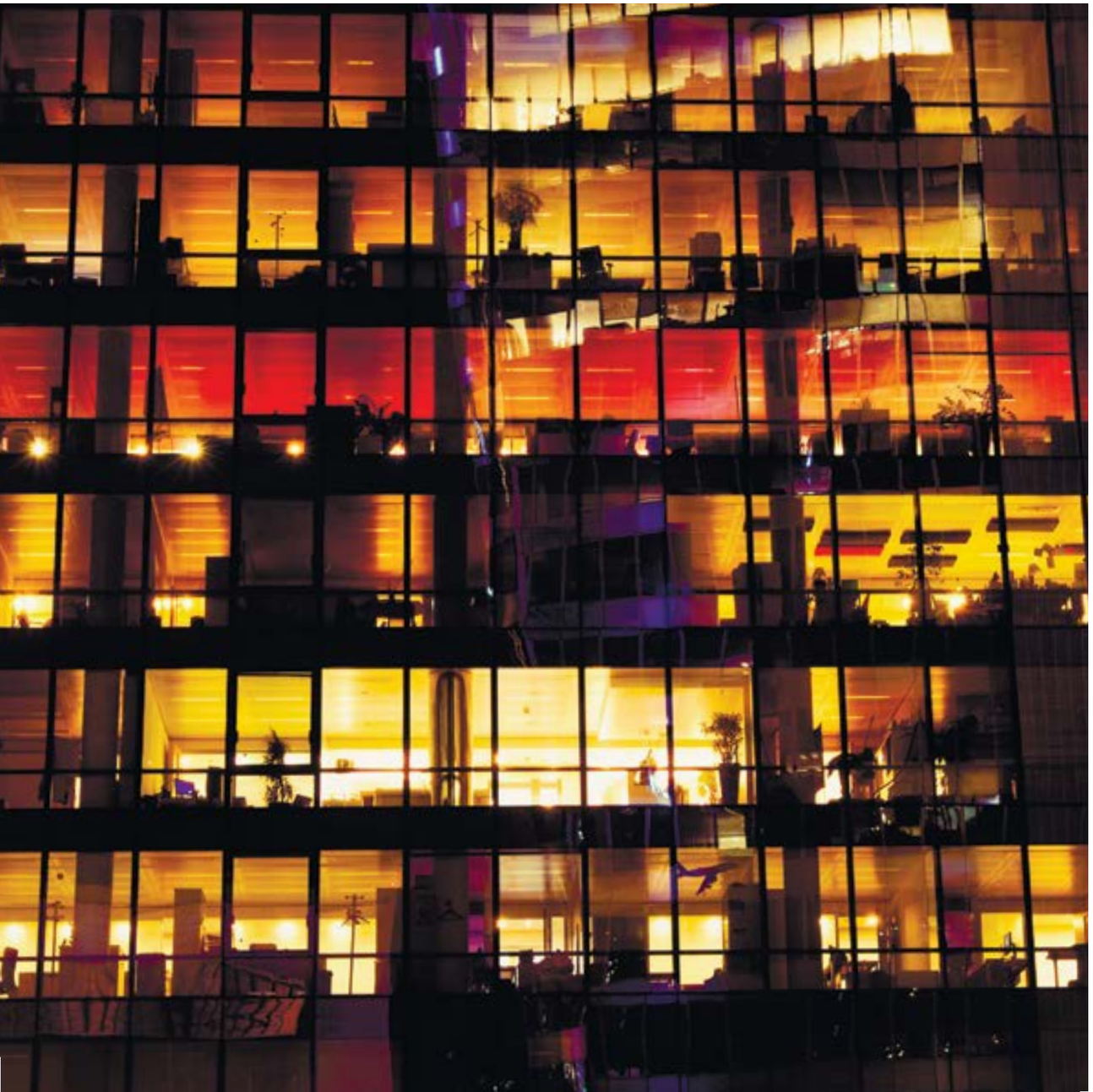
GRI ELEMENT INDEX

GRI STANDARD AND YEAR OF PUBLICATION	INDICATOR	PAGE NUMBER, SECTION AND/OR URL	EXCEPTIONS/ COMMENTS
GRI 101: Foundation (2016)			
GRI 102: General Disclosures (2016)	ORGANIZATION PROFILE		
	102-1 Name of the organization	Business Profile, page 9	
	102-2 Activities, brands, products, and services	Business Profile, page 9 and Business Model, page 16	
	102-3 Location of headquarters	Contacts, page 112	
	102-4 Location of operations	Geography of Operations, page 18	
	102-5 Ownership and legal form	Company Structure, page 10	
	102-6 Markets served	Geography of Operations, page 18_ Subsidiaries, page 18	
	102-7 Scale of the organization	Key Performance Indicators, page 11	
	102-8 Information on employees and other workers	Human Resources and Social Policy, page 62	
	102-9 Supply chain	Business Model, page 16	
	102-10 Significant changes to the organization and supply chain	Organizational Structure, page 48 Share Capital Structure, page 48	No changes.
	102-11 Precautionary principle or approach	Environmental Protection Expenditures, page 77	
	102-12 External initiatives	Environment Impact Management, page 77 Greenhouse Gas Emissions, page 78 Environmental Management System, page 81	
	102-13 Membership of associations	–	The Company is a member of Kazakhstan Electricity Association (KEA)
	STRATEGY		
	102-14 Management Statement	Letter of the Chairman of the Board of Directors, page 4 Letter of the General Director, page 6	
	ETHICS AND INTEGRITY		
	102-16 Values, principles, standards, and norms of behavior	Corporate Governance Code Compliance Report, page 59	
	Governance		
	102-18 Governance Structure	Organizational Structure, page 48 Performance Overview of the Committees of the Board of Directors, page 54	
GRI 102: General Disclosures (2016)	STAKEHOLDER ENGAGEMENT		
	102-40 List of stakeholder groups	Stakeholder Engagement, page 71	
	102-41 Collective bargaining agreements	Interaction with Trade Unions, page 87	
	102-42 Identifying and selecting stakeholders	Stakeholder Engagement, page 71	
	102-43 Approach to stakeholder engagement	Stakeholder Engagement, page 71	
	102-44 Key topics and concerns raised	Stakeholder Engagement, page 71	
	Reporting Practice		
	102-45 Entities included in the consolidated financial statements	About the Report, page 96	
	102-46 Defining report content and topic boundaries	List of Topics and Materiality Map, page 97	
	102-47 List of material topics	List of Topics and Materiality Map, page 97	
	102-48 Restatements of information	-	Indicators were not changed and are comparable with the data provided in previous annual reports of the Company.
	102-49 Changes in reporting	-	No changes.
	102-50 Reporting period	About the Report, page 96	
	102-51 Date of most recent report	About the Report, page 96	
	102-52 Reporting cycle	About the Report, page 96	
	102-53 Contact point for questions regarding the report	About the Report, page 112	
	102-54 Claims of reporting in accordance with the GRI Standards	About the Report, page 96	
	102-55 GRI content index	GRI Element Index, page 98	
	102-56 External assurance	About the Report, page 96	
SIGNIFICANT TOPICS			
ECONOMY			
Management Approach (2016)	103-1 Material topics and their boundaries	List of Topics and Materiality Map, page 97	
	103-2 Management approach	Section "Financial and economic indicators", page 43	Comprehensive environmental performance management policy covers all major topics in this area.
	103-3 Evaluation of the management approach	–	Not conducted.
GRI 203:Indirect Economic Impacts (2016)	203-1 Infrastructure Investments and Services Supported	Social Projects, page 95	
	203-2 Significant Indirect Economic Impacts	Attracting Young Specialists, page 86	
GRI 204: Procurement Practices (2016)	204-1 Proportion of Spending on Local Suppliers	Procurement, page 42	
GRI 205: Anti-Corruption (2016)	205-1: Operations Assessed for Risks Related to Corruption	Anti-Corruption Management, page 68	

GRI STANDARD AND YEAR OF PUBLICATION	INDICATOR	PAGE NUMBER, SECTION AND/OR URL	EXCEPTIONS/ COMMENTS
ENVIRONMENT			
Management Approach (2016)	103-1 Material topics and their boundaries	List of Topics and Materiality Map, page 97	
	103-2 Management approach	Environmental Impact Management, page 77	Comprehensive environmental performance management policy covers all major topics in this area.
	103-3 Evaluation of the management approach	-	Not conducted.
MATERIALS			
GRI 301: Materials (2016)	Materials used by weight or volume	Environmental Impact Management, page 77	
WATER			
GRI 303: Water and Effluents (2018)	303-3 Water withdrawal	Water Management, page 79	
	303-1 Interactions with water as a shared resource	Water Management, page 79	
	303-4 Water discharge	Water Management and Water Resources Conservation, page 79	
EMISSIONS			
GRI 305: Emissions (2016)	305-1 Direct GHG emissions	Greenhouse Gas Emissions, page 78	
	305-4 GHG emissions intensity	Greenhouse Gas Emissions, page 78	
	305-5 Reduction of GHG emissions (COR2R)	Greenhouse Gas Emissions, page 78	
	305-7 Nitrogen oxides (NOx), sulfur oxides (SOx) and other significant air emissions	Atmospheric Air Protection, page 77	
WASTE			
GRI 306: Waste (2016)	306-2 Waste by Type and Disposal Method	Efficient Handling and Disposal of Production Wastes, page 74	
COMPLIANCE			
GRI 307: Environmental Compliance (2016)	307-1 Non-compliance with environmental laws and regulations	Greenhouse Gas Emissions (CO2), page 72	
SOCIAL CATEGORY			
GRI 103: Management Approach (2016)	103-1 Explanation of the material topic and its boundary	List of topics and Materiality Map, page 97	
	103-2 The management approach and its components	Human Resources Management Policy, page 83	Comprehensive HR policy covers all major topics in this area
	103-3 Evaluation of the management approach	-	Not conducted
EMPLOYMENT			
GRI 401: Employment (2016)	401-1 New employee hires and employee turnover	Employee turnover, page 85	
LABOR/MANAGEMENT RELATIONS			
GRI 402: Labor/ Management Relations (2016)	402-1 Minimum Notice Periods Regarding Operational Changes	Human Resources and Social Policy, page 83	

GRI STANDARD AND YEAR OF PUBLICATION	INDICATOR	PAGE NUMBER, SECTION AND/OR URL	EXCEPTIONS/ COMMENTS
HEALTH AND SAFETY			
GRI 403: Occupational health and safety	403-1 Occupational health and safety management system	Strategic Goals and Implemented Measures in the Field of Occupational Health and Safety, page 93	
	403-2 Hazard identification, risk assessment and incident investigation	Types and Incidence of Occupational Injuries, page 94	
TRAINING			
GRI 404: Training and Education (2016)	404-2 Program for upgrading employees skills and transition assistance programs	Personnel Training and Development, page 85	
DIVERSITY AND EQUAL OPPORTUNITIES			
GRI 405: Diversity and Equal Opportunity (2016)	405-1 Diversity of governance bodies and employees	Personnel Structure by Category and Gender, page 83	
LOCAL COMMUNITIES			
GRI 103: Management Approach (2016)	103-1 Explanation of the material topic and its boundary	List of topics and Materiality Map, page 97	
	103-2 The management approach and its components	Stakeholder Engagement, page 71	
GRI 413: Local Communities	413-1 Operations with local community engagement, impact assessment and development programs	Stakeholder Engagement, page 71	
CUSTOMER HEALTH AND SAFETY			
GRI 103: Management Approach (2016)	103-1 Explanation of the material topic and its boundary	List of topics and Materiality Map, page 97	
	103-2 The management approach and its components	Customer Safety, page 41	
	103-3 Evaluation of the management approach	-	Not conducted
GRI 416: Customer health and safety (2016)	416-1 Assessment of the health and safety impacts of product and service categories	Customer Safety, page 41	
ADDITIONAL INFORMATION			
GRI G4 Electric Utilities Disclosure	G4-EU1 Installed Capacity Broken Down by Primary Energy Source and by Regulatory Regime	About Corporation, page 9	
	G4-EU2 Net Energy Output Broken Down by Primary Energy Source and by Regulatory Regime	Key Performance Indicators, page 11	
	G4-EU3 Number of Residential, Industrial, Institutional and Commercial Customer Accounts	Geography of Operations, page 18	
	G4-EU4 Length of Above and Underground Transmission and Distribution Lines by Regulatory Regime	Main Production Characteristics, page 18	
	G4-EU5 Allocation of CO2E Emissions Allowances or Equivalent, Broken Down by Carbon Trading Framework	Greenhouse Gas Emissions, page 78	

FINANCIAL STATEMENTS



PAVLODARENERGO JOINT STOCK COMPANY AND ITS SUBSIDIARIES

STATEMENT OF MANAGEMENT'S RESPONSIBILITIES
FOR THE PREPARATION AND APPROVAL OF THE CONSOLIDATED FINANCIAL STATEMENTS
For the year ended 31 December 2019

Management is responsible for the preparation of the consolidated financial statements that present fairly the consolidated financial position of Pavlodarenergo Joint Stock Company (the "Company") and its subsidiaries (the "Group") as at 31 December 2019, the consolidated results of its operations, changes in equity and cash flows for the year then ended, in compliance with International Financial Reporting Standards ("IFRS").

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

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

Management is also responsible for:

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

The consolidated financial statements of the Group for the year ended 31 December 2019 were approved by the management on 29 June 2020.

Signed on behalf of management:

Perfilov O.V.
General Director

29 June 2020
Pavlodar, Republic of Kazakhstan

ПАВЛОДАРЭНЕРГО

Belikova S.N.
Chief Accountant

29 June 2020
Pavlodar, Republic of Kazakhstan

PAVLODARENERGO JOINT STOCK COMPANY AND ITS SUBSIDIARIES

CONSOLIDATED STATEMENT OF FINANCIAL POSITION
AS AT 31 DECEMBER 2019
(in thousands of Tenge)

	Note	31 December 2019	31 December 2018
ASSETS			
NON-CURRENT ASSETS:			
Property, plant and equipment	6	128,376,058	126,890,292
Goodwill	7	1,405,202	1,687,141
Intangible assets	8	459,769	531,958
Advances paid	9	1,231,003	4,417,564
Other financial assets	10	40,601	84,189
Deferred tax assets	35	220,345	466,719
Other non-current assets	11	1,243,927	1,590,377
Total non-current assets		**133,976,905**	**135,668,230**
CURRENT ASSETS:			
Inventories	12	2,379,898	2,413,556
Trade receivables	13	5,035,358	5,066,418
Advances paid	9	224,354	492,690
Income tax prepaid		483,014	443,637
Other current assets	11	3,999,070	1,356,302
Other financial assets	10	12,081	18,560
Cash	14	426,209	395,812
Total current assets		**12,559,984**	**10,186,975**
TOTAL ASSETS		**146,536,889**	**145,855,205**
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		20,824,497	21,987,354
Retained earnings		28,475,051	31,992,978
Total equity		**67,151,720**	**71,832,504**
NON-CURRENT LIABILITIES:			
Non-current portion of bonds issued	20	1,537,163	1,475,528
Deferred income	19	3,937,793	4,135,679
Deferred tax liabilities	35	18,720,200	19,329,507
Provision for ash dumps restoration	21	878,279	1,298,758
Employee benefit obligations		62,219	65,659
Finance lease liabilities	22	1,068,972	1,232,169
Other long-term payables	25	27,520	28,206
Total non-current liabilities		**26,232,146**	**27,565,506**
CURRENT LIABILITIES:			
Current portion of bonds issued	20	39,560	42,651
Borrowings	17	40,200,964	35,094,545
Financial guarantees	18	833,037	47,498
Current portion of employee benefit obligations		9,546	5,845
Trade payables	23	7,825,871	6,557,036
Advances received - contract liabilities	24	992,859	1,120,477
Short-term provision for ash dumps restoration	21	927,879	-
Finance lease obligations	22	275,071	303,138
Other current liabilities and accrued expenses	25	2,048,234	3,277,005
Total current liabilities		**53,153,023**	**46,457,195**
Total liabilities		**79,385,169**	**74,022,701**
TOTAL EQUITY AND LIABILITIES		**146,536,889**	**145,855,205**

Signed on behalf of management of the Group:

Perfilov O.V.
General Director
29 June 2020
Pavlodar, Republic of Kazakhstan

Belikova S.N.
Chief Accountant
29 June 2020
Pavlodar, Republic of Kazakhstan

The notes on pages 12 to 72 are an integral part of these consolidated financial statements. Independent auditor's report is on pages 1 to 6.

PAVLODARENERGO JOINT STOCK COMPANY AND ITS SUBSIDIARIES

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

	Note	2019	2018
REVENUE	26	48,202,301	51,970,528
COST OF SALES	27	(40,865,616)	(37,408,158)
GROSS PROFIT		**7,336,685**	**14,562,370**
General and administrative expenses	28	(3,519,473)	(4,087,118)
Distribution costs	29	(768,443)	(759,059)
Finance costs	30	(4,140,731)	(2,395,047)
Finance income	31	498,809	94,599
Foreign exchange loss, net	32	(40,587)	(2,303,631)
Net impairment losses on financial instruments	33	(1,107,010)	(279,350)
Other expenses	34	(1,321,690)	(1,848,274)
Other income	34	1,298,118	811,525
(LOSS)/PROFIT BEFORE TAXATION		**(1,764,322)**	**3,796,015**
INCOME TAX EXPENSE	35	(558,769)	(1,447,931)
(LOSS)/PROFIT FOR THE YEAR		**(2,323,091)**	**2,348,084**
OTHER COMPREHENSIVE LOSS FOR THE YEAR:			
Change in estimates of asset retirement obligations		(34,061)	(67,049)
TOTAL COMPREHENSIVE (LOSS)/INCOME FOR THE YEAR		**(2,357,152)**	**2,281,035**
EARNINGS PER SHARE			
(Loss)/earnings per share, basic and diluted, in Tenge	37	**(13.94)**	**14.09**

Signed on behalf of management of the Group:

Perfilov O.V.
General Director
29 June 2020
Pavlodar, Republic of Kazakhstan

Belikova S.N.
Chief Accountant
29 June 2020
Pavlodar, Republic of Kazakhstan

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PAVLODARENERGO JOINT STOCK COMPANY AND ITS SUBSIDIARIES

CONSOLIDATED STATEMENT OF CHANGES IN EQUITY
FOR THE YEAR ENDED 31 DECEMBER 2019
(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 2018		**16,663,996**	**1,188,176**	**23,226,465**	**32,345,817**	**73,424,454**
Opening balance adjustment (IFRS 9)		-	-	-	(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 loss 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	11	-	-	-	(231,410)	(231,410)
At 31 December 2018		**16,663,996**	**1,188,176**	**21,987,354**	**31,992,978**	**71,832,504**
Loss for the year		-	-	-	(2,323,091)	(2,323,091)
Other comprehensive loss for the year		-	-	(34,061)	-	(34,061)
Total comprehensive loss for the year		**-**	**-**	**(34,061)**	**(2,323,091)**	**(2,357,152)**
Amortisation of revaluation reserve		-	-	(1,128,796)	1,128,796	-
Dividends declared	15				(1,174,042)	(1,174,042)
Financial guarantee liabilities	18	-	-	-	(715,805)	(715,805)
Fair value adjustment less deferred income tax	11	-	-	-	(433,785)	(433,785)
At 31 December 2019		**16,663,996**	**1,188,176**	**20,824,497**	**28,475,051**	**67,151,720**

Signed on behalf of management of the Group:

Perfiliev O.V.
General Director
29 June 2020
Pavlodar, Republic of Kazakhstan

Belikova S.N.
Chief Accountant
29 June 2020
Pavlodar, Republic of Kazakhstan

The notes on pages 12 to 72 are an integral part of these consolidated financial statements. Independent auditor's report is on pages 1 to 6.

PAVLODARENERGO JOINT STOCK COMPANY AND ITS SUBSIDIARIES

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

	Note	2019	2018
Cash flows from operating activities:			
(Loss)/profit before income tax		(1,764,322)	3,796,015
Adjustments for:			
Depreciation and impairment	6	5,966,237	5,115,729
Impairment loss on construction in progress	6	346,389	88,251
(Income)/loss on disposal of property, plant and equipment	34	(426,541)	599,263
Impairment losses on financial instruments	33	1,107,010	279,350
Provision for doubtful debts and advances paid	28	-	229,860
Ash dump restoration liabilities	21	38,272	419,888
Provision for impairment of inventories		130,688	63,824
Provision for unused vacation		56,591	4,379
Employee benefit costs		5,421	5,823
Finance costs	30	4,140,731	2,395,047
Finance income	31	(498,809)	(94,599)
Impairment loss on goodwill	34	281,939	-
(Income)/expenses from adjustment of value of deferred income	34	(106,707)	133,394
Foreign exchange loss, net	32	40,587	2,303,631
Operating cash flows before working capital changes		**9,317,486**	**15,339,855**
Changes in working capital			
Change in inventories		(97,030)	26,086
Change in trade receivables		(281,555)	653,766
Change in advances paid		258,362	431,415
Change in other assets		483,252	(560,940)
Change in trade payables		1,456,263	3,313,842
Change in deferred income		(13,934)	(109,970)
Change in advances received		(136,618)	211,333
Change in employee benefit obligations		(5,158)	(18,509)
Change in other liabilities and accrued expenses		(1,016,883)	336,902
Cash from operating activities		**9,964,185**	**19,623,780**
Income tax paid		(685,775)	(1,286,851)
Interest paid	17, 20	(3,818,385)	(2,737,212)
Net cash from operating activities		**5,460,025**	**15,599,717**
Cash flows from investing activities:			
Cash repaid		178,299	1,449,355
Loans to parent company		(4,425,000)	(800,000)
Repayment of loans to parent company		900,000	800,000
Purchases of property, plant and equipment		(5,169,420)	(13,385,331)
Purchases of intangible assets		(57,351)	(198,947)
Proceeds from interest accrued on deposits placed		40,147	89,398
Loans to third parties		-	(395,638)
Financial aid to shareholder		-	(94,720)
Net cash used in investing activities		**(8,533,325)**	**(12,535,883)**

PAVLODARENERGO JOINT STOCK COMPANY AND ITS SUBSIDIARIES

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

	Note	2019	2018
Cash flows from financing activities:			
Proceeds from borrowings	17	38,790,196	11,762,448
Repayment of borrowings	17	(33,742,208)	(11,359,534)
Placement of bonds	20	-	1,440,568
Dividends paid	15	(1,466,002)	(3,728,453)
Repayment of free-interest loan from parent company		(200,000)	(1,265,000)
Proceeds from free-interest loan from parent company		200,000	200,000
Repayment of principal on finance lease	22	(348,306)	(353,850)
Other		(38,234)	-
Net cash from/(used) in financing activities		**3,195,446**	**(3,303,821)**
NET INCREASE/(DECREASE) IN CASH		**122,146**	**(239,987)**
CASH at the beginning of the year	14	**395,812**	**697,759**
Effect of exchange rate changes on cash balances in foreign currencies		(14,890)	(7,985)
Change in provision for credit losses	14	(76,859)	(53,975)
CASH at the end of the year	14	**426,209**	**395,812**

Signed on behalf of management of the Group:

Perfilov K.V.
General Director
29 June 2020
Pavlodar, Republic of Kazakhstan

Belikova S.N.
Chief Accountant
29 June 2020
Pavlodar, Republic of Kazakhstan

The notes on pages 12 to 72 are an integral part of these consolidated financial statements. Independent auditor's report is on pages 1 to 6.

GLOSSARY, ABBREVIATIONS

Overhead power line	– shall mean an electric line for transmission of electric power through the wires located in the open air and attached by means of insulators and fittings to supports or brackets
Overhead transmission lines	– shall mean the structures intended for transmission of electric power over a distance by wires.
Gigacalorie" or "Gcal	– shall mean a unit of measurement of thermal energy used for assessment in the heat power industry, heating systems and the utilities sector.
Gigacalorie per hour" or "Gcal/h	– shall mean a derived unit of measurement used to specify the amount of heat produced or used by a certain equipment per a unit of time.
Cooling tower	– shall mean a structure shaped like an exhaust tower providing air stack effect.
Goodwill	– shall mean the difference between the price of a company and the fair value of all its assets
Ash	– shall mean an incombustible residue (in the form of dust) which consists of mineral impurities left after complete combustion of fuel.
Ash dump site	– shall mean a place for collection and disposal of waste ash and slag generated during combustion of solid fuel at combined heat and power plants.
Calorie" or "cal	– shall mean an off-system unit for measuring the amount of heat.
Boiler	– shall mean a device for generating pressurized steam or hot water through fuel combustion, use of electric power, heat of exhaust gas or technological process
Power transmission line" or "PTL	– shall mean a structure consisting of wires (cables) and auxiliary devices for transmission of electric power from power plants to consumers.
Megawatt	– shall mean a unit of power measurement in electricity generation.
PHNs	– shall mean Pavlodar Heat Networks.
Substation	– shall mean an electric installation used for conversion and distribution of electric power and consisting of transformers or other power converters, switchgear, control devices and auxiliary facilities.
Available capacity of a unit (plant)	– shall mean an installed capacity of a generating unit (plant) minus its capacity limitations.

Combined heat and power plant" or "CHPP" or "cogeneration heating plant	– shall mean a thermal power plant generating not only electric power, but also heat supplied to consumers in the form of steam and hot water.
Transformer	– shall mean a device for converting any significant properties of energy (e.g., electric transformer, torque converter) or objects (e.g., photo transformer).
Turbine generator	– shall mean a combination of a steam turbine, electricity generator and exciter united by one shaft train; it converts potential energy of steam into electric power.
Installed capacity	– shall mean an effective value of the turbine generators' rated capacity.
Installed heat capacity of the plant	– shall mean the sum of all rated heating capacities for all the equipment commissioned under the act and designed for supplying heat to external consumers and steam and hot water for internal needs.
Installed electrical capacity of the energy system	– shall mean total effective capacity of all turbo and hydropower generators of power plants in the energy system in accordance with their passports or specifications.
Wet scrubber	– shall mean a device for wet ash and dust removal operating in the phase inversion mode.
CTF	– shall mean Clean Technology Fund.
EBITDA	– shall mean an analytical indicator, which means earnings before interest, taxation, depreciation and amortization.
ESAP	– shall mean Environmental and Social Action Plan.
ISO	– shall mean International Organization for Standardization.
KEGOC	– shall mean Kazakhstan Electricity Grid Operating Company JSC.
OHSAS	– shall mean international occupational health and safety management system.
JSC	– shall mean a joint stock company.
ASCAHE	– shall mean automatic system for commercial accounting of heat energy.
ASCAE	– shall mean automatic system for commercial accounting of electricity.
GDP	– shall mean gross domestic product.
OHL	– shall mean overhead lines.
Pollutants	– гигакалория.
Gcal	– гигакалорий в час.
Gcal/h	– shall mean Gigacalory per hour.
HWS	– shall mean hot water supply.
GRES	– state district power plant.
GTPP	– shall mean gas turbine power plant.
HEPP	– shall mean hydroelectric power plant.
EBRD	– shall mean the European Bank for Reconstruction and Development.
FARD	– shall mean fly ash removal device.
kWh	– shall mean kilowatt per hour.
MW	– shall mean megawatt.
MNE RK	– shall the Ministry of National Economy of the Republic of Kazakhstan.
NGO	– shall mean non-governmental organizations.
EP	– shall mean environment protection.
Pavlodar EDC	– shall mean Pavlodar Regional Electric Distribution Company JSC.
PE	– shall mean PAVLODARENERGO JSC.
RK	– shall mean Republic of Kazakhstan.
PGA	– shall mean power grid area.
ICS	– shall internal control system.
BoD	– shall mean Board of Directors.
ABC	– shall mean aerial bundled conductor.
MM	– shall mean mass media.
RMS	– shall mean risk management system.
SMW	– shall mean solid municipal wastes.
INR	– shall mean inventories.
LLP	– shall mean limited liability partnership.
TPP	– shall mean thermal power plant.
CHP	– shall mean combined heat and power plant.
CAPEC	– shall mean Central-Asian Power-Energy Company JSC.
CAEPCO	– shall mean Central-Asian Electric Power Corporation JSC.
PP	– shall mean power plant.

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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

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