



## 2018: MODERNIZATION IS IN PROGRESS!



### SEVKAZENERGO JSC Petrovavlovsk CHP-2

- extension of the dam of map No.3 of ash dump No.2
- acquisition of 7AT Autotransformer
- reconstruction of the heat output scheme

### PAVLODARENERGO JSC Pavlodar CHP-3

- modernization of turbine unit No.6
- construction of chimney No.2
- construction of 3rd stage of the ash dump

### PAVLODARENERGO JSC Ekibastuz CHP

- construction of 2nd stage of the ash dump
- reconstruction of boiler unit No.7

### PAVLODARENERGO JSC Pavlodar CHP-2

- reconstruction of boiler unit No. 5

### Electric distribution companies

- construction of VL 35-110 kW – 68,984 km
- reconstruction of VL 35-110 kW (replacement of the ground wire and the porcelain insulation with a glass one) – 239,9 km
- reconstruction of substations 10-220 kW – 21 pcs

### Heating network companies

- reconstruction of the main heat supply networks by using pre-insulated pipes – 7,559 km
- insulation replacement on the main heat supply networks – 2,835 km

## CAEPCO JSC key indicators:

**1 203 MW**

installed electricity  
capacity

**2 953 Gcal/h**

installed heating  
capacity

**7 300,0 mln kW-h**

electric energy  
generation

**6 142,4 thous. Gcal**

heat energy  
generation

**6 069,8 mln kW-h**

transportation and  
distribution of  
electric energy

**4 441,2 thous. Gcal**

transportation and  
distribution of  
heat energy

*(for 12 months of 2017)*

## INCREASING THE QUALITY OF HEAT SUPPLIES TO CONSUMERS

In 2018, divisions of JSC CAEPCO in the regions will continue to carry out the investment program aimed at improving the quality of heat supplies to consumers. The planned investments for the reconstruction and modernization of heat supply networks in the current year are 8,6 bln. KZT. Activities will be carried out due to a loan from the European Bank for Reconstruction and Development, budget subsidies, and the Company's own funds.

### Pavlodar

As of January 01, 2018, the overall deterioration of heat supply networks in Pavlodar is 75%, and in Ekibastuz – 71%. To reduce the depreciation rates, Pavlodar Heat Supply Networks LLP plans to implement projects for reconstruction and modernization of heat supply networks in

both cities in 2018. As part of the overhaul, 9,312 km of the network in Pavlodar and 8,482 km in Ekibastuz are to be replaced. The current repairs will be carried out by heat supply engineers on the networks of 409 km (Pavlodar) and 335 km (Ekibastuz).

This year, under the investment program, 5 bln. KZT is planned for reconstruction

and modernization of heat supply networks, of which 1,223 bln. KZT will be intended for the regional centre, and 3,777 bln. KZT for the city of miners. The projects of the Investment Program-2018 include reconstruction of 19, 441 km of heat supply networks by using a pre-insulated pipeline (Pavlodar – 0,946 km, Ekibastuz – 18,495 km) where works in the city of miners includes the second stage of reconstruction of heat supply networks with a removal from private areas. In addition this year, thermal insulation of mineral wool will be still replaced with polyurethane foam insulation shells on heat supply networks: in Pavlodar – 4,382 km, and in Ekibastuz – 1,334 km.

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## INCREASING THE QUALITY OF HEAT SUPPLIES TO CONSUMERS

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### Petropavlovsk

As of January 1, 2018, the overall deterioration on the company's networks is 70,45%. To reduce the depreciation rates, in 2018 Petropavlovsk Heat Supply Networks LLP plans to implement large-scale projects for reconstruction and modernization of equipment and pipelines.

For example, due to overhaul and running repairs in 2018, 11,984 km of heat supply networks are to be replaced. As part of the investment program, the Petropavlovsk heat supply services intend to replace

additional 5,3 km of a pipeline by using a pre-insulated pipe.

In total, 3,6 bln. KZT will be allocated to the reconstruction and modernization of heat supply networks in Petropavlovsk in 2018.

**The project implementations will improve the quality of heat supplies to consumers that should meet the standards of physiological, sanitary & hygienic and household water needs, and will also ensure the uninterrupted provision of services to the population in the required quantity.**

## IN 2017, PAVLODARENERGO INCREASED ITS POWER GENERATION BY 6,4%

**In 2017, power generation by the enterprises of Pavlodarenergo JSC (Pavlodar Oblast, in the north of Kazakhstan) was 4 bln. 73,839 mln. kW/h, which is higher than in 2016 by 6,4%.**

Heat energy generation for the past year was 4 mln. 445,067 ths. Gcal, which is less than in 2016 by 2,7%, this is due to the fact that the average temperature of the outside air in winter did not fall down very low.

In 2017, 12,8 bln. KZT was allocated to implement investment programs of all subdivisions and units of Pavlodarenergo JSC (the current rate of exchange – 330,43/\$1) including 2,3 bln. KZT to implement some projects of JSC Pavlodar Regional Electric Distribution Company.

Among the investment projects of JSC "PREDC - construction of 110/10 kv Substation "Severnaya Gorodskaya" in Pavlodar by installing power transformers and constructing a double-circuit air line of 110 kv. The new substation will connect new customers and increase the power provided to the existing consumers.

## WE ARE IN THE TOP 5

The Annual Report of JSC CAEPCO has been at the top-5 best reports in Kazakhstan for the second year in a row. In addition, as part of the VII Annual Contest, the Company's Annual Report was nominated (the third place) under the notion of "The Best Report on Sustainable Development".

The contest is conducted by the Expert RA Kazakhstan with the assistance of the Kazakhstan Stock Exchange JSC. The event is aimed at promoting the effective disclosure of companies' information to interested parties. In 2017, 105 Kazakhstan companies took part in the contest including 41 financial organizations and 64 non-financial ones.

At present, the annual report is a mandatory element of the corporate governance of a successful organization and one of the key tools for interaction with the parties concerned as well as an important component of a company's positioning, a way to communicate key messages to the public.

It was noted at the ceremony that JSC CAEPCO had been holding its position in the top-5 rating for two years. The Company quite fully discloses information in almost all sections of the Annual Report.

## MODERNIZATION OF HEAT NETWORKS



Partners



### Pavlodar and Ekibastuz

### Petropavlovsk

#### FACT 2016-2017

Heat networks were replaced In Pavlodar	1,446 km	Heat networks were replaced	10,301 km
Heat networks were isolated In Pavlodar	8,384 km	Heat networks were isolated	0,710 km
Heat networks were replaced In Ekibastuz	10,255 km		
Heat networks were isolated In Ekibastuz	0,206 km		

#### PLAN 2018-2020

Replacement of heat networks in Pavlodar	2,670 km	Replacement of heat networks	8,236 km
Insulation of heat networks in Pavlodar	4,382 km	Insulation of heat networks	16,317 km
Replacement of heat networks in Ekibastuz	19,333 km		
Insulation of heat networks in Ekibastuz	2,531 km		

## RESULTS OF IMPLEMENTATION



Providing city residents with centralized heat supply



Increasing the efficiency, quality and reliability of heat supply



Liquidation over-standard heat loss and heat carrier by 2020

## FOR RELIABILITY OF ELECTRIC POWER SUPPLY TO CONSUMERS

One of the successfully implemented investment projects of AEDC JSC in 2017 is the modernization of the "Zholymbet" Substation with a capacity of 220/110/35/6 kV in the Shortandy District. The Substation was built in 1964 for the needs of the mining industry. At present, the Substation provides electric power supply to the village of the same name, two mines and the ore mining and processing mill of Kazakhaltyn JSC, and the most of the neighboring Ereimentau District as well.

Annually, the substation carries out modernization and reconstruction works replacing equipment. Last year, four oil breakers of MKP-110 kV were replaced with gas-insulated ones of VB-110 kV and a new telematics equipment was installed there: "Iset" Remote Station of the ARISSCADA Software System. It is designed to collect, process and transmit remote signals and remote measurements to the dispatcher panel of the Central Dispatching Service of AEDC JSC and the Operative Dispatching Service of Stepnogorsk Interdistrict Electric Power Networks. Prior to the replacement, the "Compass" Remote Station was used, which outlived its usefulness over the years of operation.

The introduction of the modern equipment at the "Zholymbet" Substation is aimed at ensuring the reliability of electric power supply to consumers.

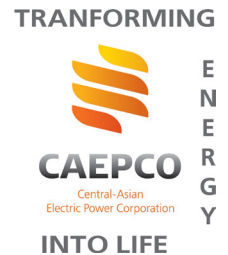
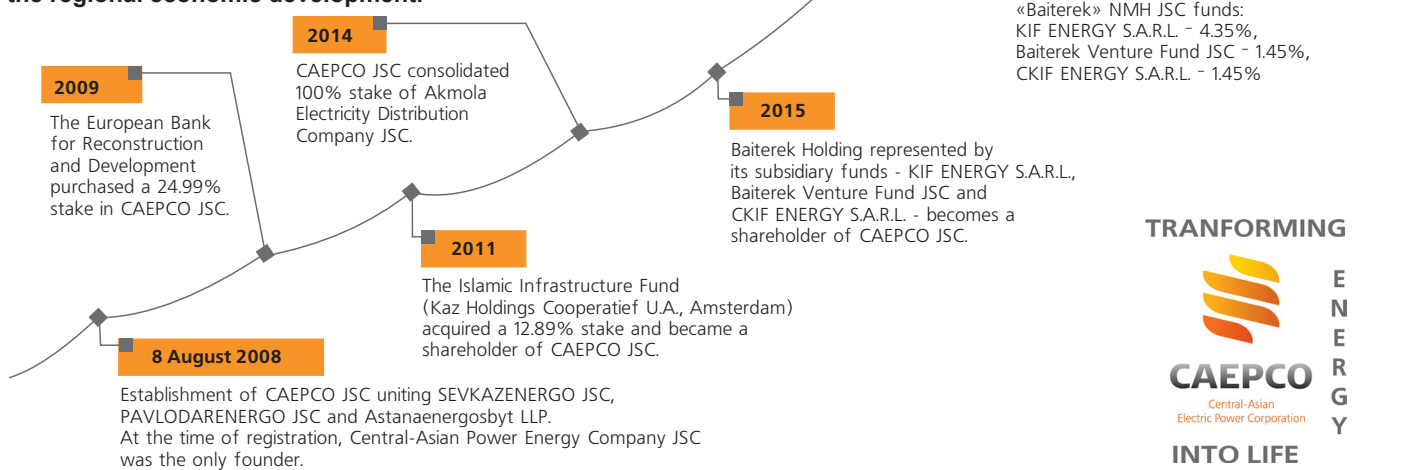




## CAEPCO – 10 YEARS OF SUCCESS!

On August 8, CAEPCO will celebrate its first “round” anniversary. CAEPCO is the leader among the Kazakhstan private energy companies, which confirms its achievements in the efficiency of business, ecology, and social policy with its numerous awards and recognitions.

The company is going on its confident path to success following its mission to improve the quality of life of its consumers and to create conditions for the regional economic development.



### A GIFT TO STUDENTS FROM POWER ENGINEERS

In December 2017, a formal opening of a new hostel for 200 energy students has been held in Pavlodar. Such gift to the Pavlodar Assembly College has been prepared by JSC Central-Asian Power Energy Company (CAPEC) with the assistance of its subsidiary company – PAVLODARENERGO JSC.

The project was implemented within the framework of the memorandum on joint implementation of social projects, concluded between the akimat of Pavlodar region and CAPEC JSC. As part of the Memorandum, PAVLODARENERGO JSC has planned another two large-scale social projects: construction of a high-rise residential building for the employees of the PAVLODARENERGO Group of Companies and participation in the construction of a pool in the Usolsk Microdistrict where PAVLODARENERGO JSC is carrying out the laying of external communications networks.

### WE ARE PREPARING FOR THE DAY OF LABOR PROTECTION

In April of this year, in Pavlodar a number of events dedicated to the World Day of Labor Protection will take place in Pavlodar: a game of the Club of the Cheerful and Sharp-Witted, a family safety day and a children's creativity contest. All the events are devoted to the 10th Anniversary of JSC CAEPCO.

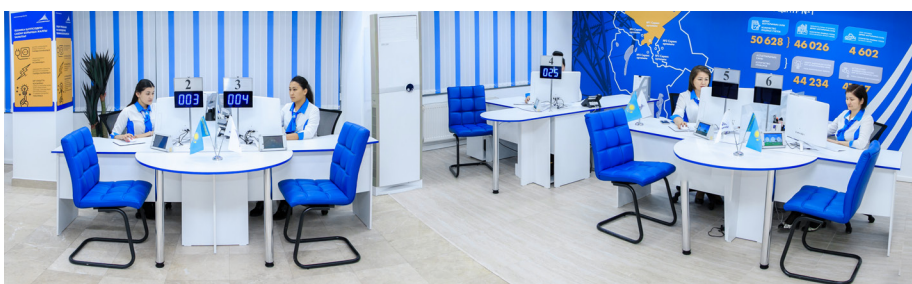
As experience shows, such activities aimed at promoting occupational safety and health have a beneficial effect on the growth of safety culture in the subsidiaries and at home. In particular, as part of the family holiday, some videos on the subject “Electrical safety in everyday life” will be demonstrated, and a quiz and an excursion around the company's territory will be arranged for the children of employees. One of the outstanding events will be the holding of a game of the Club of the Cheerful and Sharp-Witted referred to as “Security is our way of life.” For the first time such an event was held by PAVLODARENERGO JSC in 2017 and gained popularity among the employees.

### WE ARE IMPROVING SERVICES IN ASTANA

Astanaenergobytt LLP is seeking to improve the quality and the level of the customer service. In February of this year, the updated central office located at 1/4, B. Momysuly Ave. is to be opened.

The updating of the company's service centres commenced in December of 2017. The pilot project of Astanaenergobytt LLP

was to open Service Centres No. 1 (45, Abai Ave.) and No. 4 (1/24, Bogenbai Batyr Ave.) after the reconstruction thereof.



Comfortable conditions have been created for visitors of the updated service centres. The waiting area has been significantly expanded, and a system for assessing the quality of services by the consumer has been introduced. The number of employees working with customers has been doubled. To ensure a high-quality and fast service, and the position of a hall administrator was introduced. The updated service centres provide conditions for people with disabilities. In the updated Centre No. 1, legal entities have got the opportunity to receive invoices in a separate block, and there is a rack for charging gadgets. The above-mentioned changes are to be made in other service centres of the Company in the capital.