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**REPORT**

**ANALYSIS OF THE ELECTRICITY AND COAL MARKET IN KAZAKHSTAN**

**JANUARY 2020**

**MARKET DEVELOPMENT DEPARTMENT**

**March 2020**

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# **SECTION I**

# **Electricity generation in the UES of Kazakhstan**

According to the System Operator, Republic of Kazakhstan’s power plants generated 10268.6 million kWh of electricity in January 2020, which is 3.3% more than in the same period of 2019. The increase in generation was observed in all zones of the UES of Kazakhstan.

*million kWh*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Zone** | **Generation type** | **January** | | **Δ, %** |
| **2019** | **2020** |
| **Kazakhstan** | **Total** | **9 944.4** | **10 268.6** | **3.3%** |
| *TPP* | *8297.4* | *8495.1* | *2.4%* |
| *GTPP* | *865.2* | *903.2* | *4.4%* |
| *HPP* | *725.0* | *759.3* | *4.7%* |
| *WPP* | *47.1* | *78.5* | *66.7%* |
| *SES* | *9.4* | *32.4* | *244.7%* |
| *BSU* | *0.3* | *0.1* | *-66.7%* |
| **North** | **Total** | **7 522.8** | **7 795.0** | **3.6%** |
| *TPP* | *6717.0* | *6925.1* | *3.1%* |
| *GTPP* | *294.1* | *307.6* | *4.6%* |
| *HPP* | *494.9* | *512.8* | *3.6%* |
| *WPP* | *15.4* | *38.4* | *149.4%* |
| *SES* | *1.1* | *11.0* | *900.0%* |
| *BSU* | *0.3* | *0.1* | *-66.7%* |
| **South** | **Total** | **1147.7** | **1192.5** | **3.9%** |
| *TPP* | *870.9* | *888.3* | *2.0%* |
| *GTPP* | *20.1* | *18.6* | *-7.5%* |
| *HPP* | *230.1* | *246.5* | *7.1%* |
| *WPP* | *18.4* | *17.8* | *-3.3%* |
| *SES* | *8.2* | *21.3* | *159.8%* |
| **Western** | **Total** | **1273.9** | **1281.1** | **0.6%** |
| *TPP* | *709.5* | *681.7* | *-3.9%* |
| *GTPP* | *551.0* | *577.0* | *4.7%* |
| *WPP* | *13.3* | *22.3* | *67.7%* |
| *SES* | *0.1* | *0.1* | *0.0%* |

# *Electricity generation by regions of the Republic of Kazakhstan*

In January 2020, compared to the same period in 2019, electricity production increased significantly (20% growth and above) in Kostanay region. At the same time, a decrease in electricity production was observed in Zhambyl and West Kazakhstan regions.

*million kWh*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **№** | **Region** | **January** | | **Δ, %** |
| **2019** | **2020** |
| 1 | Akmola | 418.4 | 468.7 | 12.0% |
| 2 | Aktobe | 375.7 | 382.6 | 1.8% |
| 3 | Almaty | 704.2 | 728.4 | 3.4% |
| 4 | Atyrau | 546.3 | 559.2 | 2.4% |
| 5 | East Kazakhstan | 788.0 | 798.4 | 1.3% |
| 6 | Zhambyl | 261.4 | 258.5 | -1.1% |
| 7 | West Kazakhstan | 223.6 | 215.2 | -3.8% |
| 8 | Karaganda | 1 465.1 | 1 521.0 | 3.8% |
| 9 | Kostanay | 82.2 | 112.8 | 37.2% |
| 10 | Kyzylorda | 49.2 | 51.5 | 4.7% |
| 11 | Mangystau | 504.0 | 506.7 | 0.5% |
| 12 | Pavlodar | 4 052.6 | 4 172.2 | 3.0% |
| 13 | North Kazakhstan | 340.8 | 339.3 | -0.4% |
| 14 | Turkestan | 132.9 | 154.1 | 16.0% |
|  | **Total for RoK** | **9 944.4** | **10 268.6** | **3.3%** |

# *Electricity generation by associated generation*

In January 2020, electricity production from associated generation totaled 4 billion kWh, which is comparable to the same period in 2019 (4 billion kWh). Meanwhile, compared to January 2019, the share of associated generation increased slightly to 48.3% of the total electricity generation in Kazakhstan.

*million kWh*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **№** | **Name** | **2019** | | **2020** | |
| **January** | **share in the Republic of Kazakhstan, %** | **January** | **share in RoK, %** |
| 1 | ERG | **1 773.6** | **17.8%** | **1 744.0** | **17.0%** |
| 2 | Kazakhmys Energy LLP | **671.2** | **6.7%** | **671.5** | **6.5%** |
| 3 | Kazzinc LLP | **239.0** | **2.4%** | **250.3** | **2.4%** |
| 4 | Arcellor Mittal JSC | **187.7** | **1.9%** | **246.1** | **2.4%** |
| 5 | KKS LLP | **656.2** | **6.6%** | **646.3** | **6.3%** |
| 6 | CAEC | **694.3** | **7.0%** | **724.7** | **7.1%** |
| 7 | Zhambyl GRES JSC | **216.7** | **2.2%** | **208.8** | **2.0%** |
| 8 | Oil and gas enterprises | **478.6** | **4.8%** | **472.1** | **4.6%** |
|  | **TOTAL** | **4917.3** | **49.4%** | **4963.8** | **48.3%** |

The volume of electricity production by the energy producing organizations of Samruk-Energy JSC in January 2020 amounted **to 3097.7** mln/kWh, or an increase of 6.3% compared to the same period of 2019.

*million kWh*

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **№** | **Name** | **2019** | | **2020** | | **Δ2020/2019** | |
| **January** | **share in RoK, %** | **January** | **share in RoK %** | **mln kWh** | **%** |
|  | **Samruk-Energy JSC** | **2 914,3** | **29,3%** | **3 097,7** | **30,2%** | **183,5** | **6,3%** |
| *1* | *AlES JSC* | *594,1* | *6,0%* | *612,3* | *6,0%* | *18,2* | *3,1%* |
| *2* | *Ekibastuz GRES-1 LLP* | *1 539,3* | *15,5%* | *2 001,0* | *19,5%* | *461,8* | *30,0%* |
| *3* | *Ekibastuz GRES JSC-2 JSC* | *639,9* | *6,4%* | *336,6* | *3,3%* | *-303,3* | *-47,4%* |
| *4* | *Shardara HPP JSC* | *46,9* | *0,5%* | *53,1* | *0,5%* | *6,2* | *13,2%* |
| *5* | *Moinak HPP JSC* | *78.8* | *0.8%* | *76.4* | *0.7%* | *- 2.5* | *-3.1%* |
| *6* | *Samruk-Green Energy LLP* | *0,2* | *0,002%* | *0,2* | *0,001%* | *-0,01* | *-4,8%* |
| *7* | *First Wind Power Station LLP* | *15,1* | *0,2%* | *18,1* | *0,2%* | *3,1* | *20,3%* |

# **Electricity consumption in the UES of Kazakhstan**

# *Electricity consumption by zones and regions*

According to the System Operator, in January 2020, there was an increase in the dynamics of electricity consumption in the RoK compared to the indicators of January 2019. Thus, in the northern zone of the republic consumption increased by 1%, in the western zone by 0.4%, and in the southern zone by 3%.

*million kWh*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **#** | **Name** | **January 2019** | **January 2020** | **Δ,  million kWh** | **Δ, %** |
| **I** | **Kazakhstan** | **9 965.7** | **10 125.7** | **160** | **2%** |
| 1 | Northern zone | 6 511.5 | 6 601.7 | 90.2 | 1% |
| 2 | Western zone | 1 283.2 | 1 287.7 | 4.5 | 0.4% |
| 3 | Southern zone | 2 171 | 2 236.3 | 65.3 | 3% |
|  | ***including by region*** |  |  |  |  |
| 1 | East Kazakhstan | Region | 886,8 | 884,4-2,4 | -0,3% |
| 2 | Karaganda | 1 642.8 | 1 717.9 | 75.1 | 5% |
| 3 | Akmola | 947,8 | 947,2 | -0,6 | -0,1% |
| 4 | North Kazakhstan | 187.3 | 165-22 | , 3-12 | % |
| 5 | Kostanay | 468,4 | 449,9 | -18,5 | -4% |
| 6 | Pavlodar | 1 789.7 | 1 844.5 | 54.8 | 3% |
| 7 | Atyrau | 606 | 605-1 | ,0-0 | . 2% |
| 8 | Mangystau | 478.1 | 478.6 | 0.5 | 0.1% |
| 9 | Aktobe | 588.7 | 592.8 | 4.1 | 1% |
| 10 | West Kazakhstan | 199 | 204.2 | 5.2 | 3% |
| 11 | Almaty | 1 113.1 | 1 166.6 | 53.5 | 5% |
| 12 | Turkestan | 457.1 | 480.5 | 23.4 | 5% |
| 13 | Zhambyl | 426,4 | 410,7 | -15,7 | -4% |
| 14 | Kyzylorda | 174.4 | 178.5 | 4.1 | 2% |

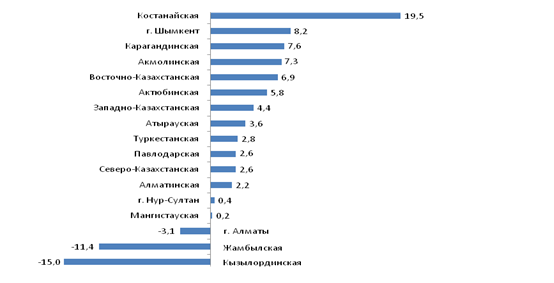
# **Industry results for January 2020**

*(express information of the Statistics Committee of the Ministry of National Economy of the Republic of Kazakhstan)*

In January 2020, compared to January 2019, the industrial production index was 104.1%. An increase in production volumes was recorded in 14 regions of the Republic, while a decrease was observed in the Kyzylorda and Zhambyl regions and in Almaty.

**Change in industrial output by region**

*as a percentage of the corresponding period of the previous year*



Production of iron ore concentrates and pellets, production of steel bars and rods made of steel, gold in the Dore alloy, cars and trucks increased (119.5%) in Kostanay region.

Production of sunflower and cottonseed oil, gasoline, diesel fuel, liquefied propane and butane increased in Shymkent (108.2%).

Production of copper ores, gold-bearing and zinc concentrates increased in Karaganda region, production of non-alloy steel, flat rolled products, rough and refined copper increased (107.6%).

Production of gold-bearing ores and concentrates, production of other agrochemical products and pesticides, ball and roller bearings (107.3%) increased in Akmola region.

In the East Kazakhstan region, an increase in the production of copper ores and gold-containing concentrates was noted, the production of refined gold, cars and trucks increased (106.9%).

Production of copper-zinc ores, production of ferrochrome and industrial services increased (105.8%) increased in Aktobe region.

In the West Kazakhstan region, due to an increase in gas condensate production, the industrial production index was 104.4%.

In Atyrau region, due to an increase in crude oil production, the industrial production index was 103.6%.

Production of processed cotton, petroleum bitumen, natural uranium and distribution power panels and boxes increased in the Turkestan region (102.8%).

In Pavlodar region, due to an increase in the production of copper ores and concentrates, the industrial production index amounted to 102.6%.

In the North Kazakhstan region, the production of processed milk, butter, flour and electricity increased (102.6%).

Production of confectionery and chocolate, soft drinks, cigarettes and electric batteries increased in Almaty region (102.2%).

Production of fruit and vegetable juices, flour and soft drinks increased in Nur-Sultan (100.4%).

In Mangystau region, due to an increase in the volume of industrial services, the index of industrial production amounted to 100.2%.

In Almaty, due to a decrease in the production of processed milk, confectionery and chocolate, processed tea and coffee, refined copper and television receivers, the industrial production index was 96.9%.

In Zhambyl region, due to the reduction in sugar and phosphorus production, the industrial production index was 88.6%.

In the Kyzylorda region, due to a decrease in crude oil production, the industrial production index was 85%.

*(Source:* [*www.stat.gov.kz*](http://www.stat.gov.kz)*)*

# *Electricity consumption by large consumers in Kazakhstan*

In January 2020, compared to the same period in 2019, electricity consumption for large consumers did not change. However, there is a decrease in power consumption (more than 20%) at the RSE "Kanal im. Satpayev", "Kazphosphate" LLP and "Temirzholenergo" LLP.

*million kWh*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **№** | **Consumer** | **January** | | |
| **2019** | **2020** | **Δ, %** |
| 1 | Arcelor Mittal Temirtau JSC | 301.7 | 344.0 | 14% |
| 2 | AZF (Aksu) TNK Kazchrome JSC | 497.5 | 508.4 | 2% |
| 3 | Kazakhmys Smelting LLP | 105.5 | 102.1 | -3% |
| 4 | Kazzinc LLP | 254.1 | 244.8 | -4% |
| 5 | Kazzinc JSCSokolovsko-Sarbay State Enterprise | 161.6 | 167.0 | 3% |
| 6 | Kazakhmys Corporation LLP | 106.4 | 117.2 | 10% |
| 7 | AZF (Aktobe) TNK Kazchrome JSC | 258.1 | 269.2 | 4% |
| 8 | RSE Kanal im. Satpayev | 10.1 | 7.7 | -24% |
| 9 | Kazphosphate LLP | 215.2 | 165.5 | -23% |
| 10 | NDFZ JSC (part of Kazphosphate LLP) | 190.9 | 139.9 | -27% |
| 11 | Taraz Metallurgical Plant LLP | 14.5 | 15.8 | 9% |
| 12 | Ust-Kamenogorsk Titanium and Magnesium Combine JSC | 70.7 | 79.4 | 12% |
| 13 | Ust-Kamenogorsk Titanium and Magnesium Combine JSCTengizchevroil | 168.2 | 166.4 | -1% |
| 14 | JSC " PAZ "(Pavlodar Aluminum Plant) | 79.7 | 84.5 | 6% |
| 15 | JSC " KEZ "(Kazakhstan Electrolysis Plant) | 325.2 | 323.7 | 0% |
| 16 | Temirzholenergo LLP | 156.8 | 125.0 | -20% |
| 17 | JSC "KEGOC" | 541.2 | 541.0 | 0% |
| **Total** | | **3 261,6** | **3 266,5** | **-0,15%** |

# **Coal**

# *Coal production by Samruk-Energy JSC*

In January 2020, Bogatyr Komir LLP produced 4.285 thousand tonnes, which is 2.5% less than in the corresponding period of 2018 (4.396 thousand tons).

# *Coal sales by Samruk-Energy JSC*

In January 2020, 4.109 thousand tonnes were sold, including:

- 3,321 thousand tons were delivered to the domestic market of the Republic of Kazakhstan, which is 6.2% less than in the corresponding period of 2018 (3,541 thousand tonnes);

- exported to Russia – 788 million tons, which is 1.1% more than in the corresponding period of 2018 (779 thousand tonnes).

*thousand tonnes*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **№** | **Region** | **Sales volume, thousand tonnes** | | **Δ, %** |
| **January 2019** | **January 2020** |
| Total exports to the domestic market of the Republic of Kazakhstan | | **3 541** | **3 321** | **93.8%** |
| Total exports to the Russian Federation | | **779** | **788** | **101.1%** |

According to the indicators for January 2020, compared to the same period in 2019, the Company's coal sales decreased by 4.9%.

# **Renewable energy sources**

The volume of electricity produced by renewable energy facilities (SES, wind farms, BGS, small hydroelectric power plants) in January 2020 amounted to 149.2 million kWh. Compared to January 2019 (91.8 million kWh), the increase was 62.5%.

million kWh

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **№** | **Name** | **2019** | | **2020** | | **Deviation 2020/2019** | |
| **January** | **share in the Republic of Kazakhstan, %** | **January** | **share in the Republic of Kazakhstan, %** | **mln kWh** | **%** |
|  | **Total output in the Republic of Kazakhstan** | **9 944,4** | **100%** | **10 268,6** | **100%** | **324,2** | **3,3%** |
| **I** | **Total RES in the Republic of Kazakhstan, including by zones** | **91,8** | **0,9%** | **149,2** | **1,5%** | **57,4** | **62,5%** |
| 1. | *Northern Zone* | *25,6* | *27,9%* | *58,6* | *39,3%* | *33* | *128,9%* |
| 2. | *Southern zone* | *55,4* | *60,3%* | *68,2* | *45,7%* | *12,8* | *23,1%* |
| 3. | *Western Zone* | *10.8* | *0%* | *22.4* | *15%* | *11.6* | *0%* |
| **II** | **Total RES in the Republic of Kazakhstan, including by type** | **94,4** | **0,9%** | **149,2** | **1,5%** | **57,4** | **62,5%** |
| 1. | *SES* | *9,4* | *10%* | *32,4* | *21,7%* | *23* | *244,7%* |
| 2. | *Wind farms* | *47,1* | *49,9%* | *78,5* | *52,6%* | *31,4* | *66,7%* |
| 3. | *Small hydroelectric* | *power plants 37,6* | *39,8%* | *38,2* | *25,6%* | *0,6* | *1,6%* |
| 4. | *Biogas plants* | *0.3* | *0.3%* | *0.1* | *0.1%* | *-0.2* | *0%* |

In January 2020, there is an increase of 62.5% in electricity production from solar power plants, wind farms and small hydroelectric power plants.

million kWh

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **#** | **Name** | **2019** | | **2020** | | **Deviation 2020/2019** | |
| **January** | **share in the Republic of Kazakhstan, %** | **January** | **share in the Republic of Kazakhstan, %** | **mln kWh%** | **%** |
|  | ***Electricity production in the Unified Energy System of the Republic of Kazakhstan*** | **9944,4** | **100,0%** | **10268,6** | **100%** | **324,2** | **3,3%** |
| 1. | Production of "clean" electricity (RES + Large hydroelectric power plants) | *781,8* | *7,9%* | *870,3* | *8,5%* | *88,5* | *11,3%* |
| 2. | Production of "clean" electricity (RES excluding Large hydroelectric power plants) | *94,4* | *0,9%* | *149,2* | *1,5%* | *54,8* | *58,1%* |

Electricity generation by Samruk-Energy JSC's renewable energy facilities (SES, wind farms, small hydroelectric power plants) in January 2020 amounted to 29.8 million kWh, or 20% of the total volume of electricity generated by renewable energy facilities, which is 3.8% higher compared to the same period in 2019% (in January 2019, the Company's renewable energy production amounted to 26 million kWh and the Company's share of renewable energy sources is 27.5%).

The main decrease in the share of renewable energy production is the commissioning of new renewable energy capacities in the Republic of Kazakhstan.

The Company's share in the production of "clean" electricity (SES, wind farms, small and large hydroelectric power plants) in January 2020 increased by 8.8% (247.2 million kWh) compared to the same period in 2019. (227.3 million kWh).

million kWh

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **№** | **Name** | **2019** | | **2020** | | **Deviation 2020/20/2019.** | |
| **January** | **share in the Republic of Kazakhstan, %** | **January** | **share in the Republic of Kazakhstan, %** | **million kWh** | **%1.** |
|  | Productionof "clean" electricity by JSC "Samruk-Energy" (SES, wind farms, small and large hydroelectric power plants) | 227,3 | 29,1% | 247,2 | 28,4% | 19,9 | 8,8% |
| 2. | Production of "clean" electricity by JSC "Samruk-Energy" (SES, wind farms and small hydroelectric power plants), incl.: | 26 | 27,5% | 29,8 | 20,0% | 3,8 | 14,6% |
| 3. | *Cascade of small hydroelectric power plants of "AlES" JSC* | *10,8* | *11,4%* | *11,6* | *7,8%* | *0,8* | *7,4%* |
| 4. | *Samruk-Green Energy LLP* | *0,1* | *0,1%* | *0,1* | *0,1%* | *0,0* | *0,0%* |
| 5. | *First Wind Power Station LLP* | *15,1* | *16,0%* | *18,1* | *12,1%* | *3,0* | *19,9%* |

# **Centralized electricity trading by KOREM JSC**

*(Information provided by KOREM JSC)*

In January 2020, trading was not conducted on the site of JSC "KOREM".

# **Export-import of electric energy**

In January 2020, the main direction of export and import of electricity in Kazakhstan was the Russian Federation (export to the Russian Federation – 105.9 million kWh, import from the Russian Federation-122.4 million kWh).KEGOC – 102.5 million kWh in order to balance electricity production and consumption. Electricity import from the Russian Federation in the reporting period totaled 101.4 million kWh in order to balance electricity production and consumption.

million kWh

| **Name** | **January** | | **Δ 2020/2019гг.** | |
| --- | --- | --- | --- | --- |
| **2019** | **2020** | **mln kWh** | **%** |
| **Kazakhstan's exports** | **97.7** | **268.0** | **170.2** | **174.1%** |
| **to Russia** | *97.3* | *105.9* | *8.6* | *8.8%* |
| **to Central Asian ECO** | *0.4* | *162.1* | *161.7* | *36474%* |
| **Kazakhstan's imports** | **119.0** | **125.0** | **6.0** | **5.1%** |
| **from Russia** | *119.0* | *122.4* | *3.4* | *2.8%* |
| **from Central Asian ECO** | *0.0* | *2.6* | *2.6* |  |
| **Balance-flow " + "deficit," - " excess** | **21,2** | **-142,9** | **-164,2** | **-772,7%** |

# **SECTION II**

# **Status of formation of the Common Electricity Market of the Eurasian Economic Union**

At the meetings of the Subcommittee on the formation of the EEER of the EEU Advisory Committee on Electric Power Industry under the EEC Board, the work is carried out by the EEU member states to develop and coordinate the rules for the functioning of the EEER of the EEU.

On 18.01.2019, 13-14.03.2019, 16-17.04.2019 meetings of authorized representatives of the EAEU member States were held to agree the draft Protocol on amendments to the EAEU Treaty and the draft Mutual Trade Rules. At the moment, there are a number of controversial issues regarding the wording of the norms.

On May 29, 2019, in Nur-Sultan the heads of the EAEU states signed an international agreement on the formation of the EEA.

# **Status of the CIS electricity market formation**

Since 1992, 53 meetings of the Electricity Council of the Commonwealth of Independent States (hereinafter referred to as the CIS EES) have been held.

By the decision of the CIS Unified Energy System (Protocol No. 50 of 21.10.2016), the Consolidated Schedule for the formation of the common electricity market of the CIS member States was approved.

|  |  |  |  |
| --- | --- | --- | --- |
| **№** | **. Activities** | **Due date** | **Current status** |
| 1 | Implementation of activities in accordance with section II. Action Plan for Cooperation between the EEC and the CIS EES, approved on June 10, 2016. | 2016-2020 | Permanent participation of the EEC representatives at the meetings of the CIS EEC, and representatives of the CIS EEC EC – at the meetings on the formation of the EAEU EER is ensured. |
| 2 | Preparation of a draft Procedure for settling deviations from the agreed values of interstate electric energy flows | in 2016-2017. | The decision to develop a procedure for regulating deviations from the agreed values of interstate electric energy flows was made at the 45th meeting of the CIS Unified Energy System. The draft Procedure was considered at the 29th meeting of the Working Group "Formation of the common electricity market of the CIS countries" on September 15, 2016 in Moscow (Russia). In accordance with the Decision of the 47th Session of the CIS EES, the CIS EES Action Plan for 2016 includes the development and approval of draft documents on determining the values of deviations from the agreed values of interstate electricity flows and regulating the values of deviations from the agreed values of interstate electricity flows. Work continues. |
| 3 | Preparation of a draft Procedure for distributing the capacity of interstate cross-sections / export-import cross-sections between participants in export-import activities. | 2018-2020 | By the decision of the 50th meeting of the CIS Unified Energy System, Methodological recommendations on metrological support of measuring systems for electric energy metering on interstate  power transmission lines were approved.  By the decision of the 50th session of the CIS Unified Energy System, the Schedule for monitoring the use of regulatory technical documents in the field of metrology of electrical measurements and electricity metering in the production activities of power systems of the CIS member States was approved. |
| 4 | Preparation of a draft Procedure for compensation of costs associated with the implementation of transit/transmission/movement of electricity through the energy systems of the CIS member States. | 2018-2020 | The unified data exchange layout format for recording interstate electricity flows, developed by the Working Group on Metrological Support for the Electricity Industry of the Commonwealth of Independent States, was approved by the decision of the 33rd meeting of the CIS EEC and recommended to the electric power management bodies of the CIS member States for use in organizing the recording of interstate electricity flows and the exchange of data on interstate flows. |
| 5 | Harmonization of national legislation in the field of electric power, development and adoption of national regulatory legal documents necessary for the formation and functioning of the CIS EER. | 2020-2025 | The decision of the 51st meeting of the CIS EES approved Conceptual approaches to technical regulation and standardization in the field of electric power. The Regulation on the Working Group "Updating and harmonization of the regulatory and technical framework for Regulating the Electric Power Industry"was also approved. The Work Plan of this Working Group was approved by the decision of the 51st meeting of the CIS EES. |

# **CASA-1000 project implementation status**

*Project Description*

The CASA-1000 project is the first step towards creating a regional electricity market for Central and South Asia (CASAREM), using the significant energy resources of Central Asia to help reduce the energy deficit in South Asia on a mutually beneficial basis.

It is planned to start delivering electricity under the CASA-1000 project in 2021. It is assumed that the transmission line capacity will be about 6 billion cubic meters. kWh per year.

The project financing process is managed by the World Bank.

The project is divided into two main packages:

* construction of power transmission lines in Kyrgyzstan, Tajikistan, Afghanistan and Pakistan;
* Construction of two-terminal high-voltage DC converter substations in Pakistan and Tajikistan.

The construction period after signing the contract is 42 months (2021).

# **Review of media in the CIS countries**

*(according to the website of the CIS EES Executive Committee)*

**Kyrgyz Republic**

**The annual revenue of Electric Stations from the CASA-1000 project will average $65-90 million** *(07.01.2020).*

Operation of the CASA-1000 project is planned for 2022 and the annual income of JSC Electric Stations will average from $65 to 90 million with a volume of 1.25-1.75 billion kWh (at a tariff of 5.15 US cents per kWh). This is stated in the decision of the Jogorku Kenesh Committee on Fuel and Energy Complex and Subsoil Use to the draft letter of agreement on amendments and additions to the Financing Agreement between Kyrgyzstan and the European Investment Bank (Central Asia-South Asia Electricity Transmission Project "CASA-1000"), published on the website of the Residential Complex. These funds are planned to be used to cover the overall deficit in the energy sector, according to the committee's materials.

The cost tariff of JSC "NES of Kyrgyzstan" is about 4.26 US cents per kW this will allow for about 15 years to recoup all costs for the construction of power lines, while the EIB loan is issued by the Ministry of Finance of the Kyrgyz Republic for JSC "NES of Kyrgyzstan" for no more than 29 years, the Housing Committee writes.

**A new overhead line from the 110/35/10 kV Bosteri substation was put into operation** *(11.01.2020).*

A new overhead line from the 110/35/10 kV Bosteri substation has been put into operation, according to the website of the State Committee for Industry, Energy and Subsoil Use.

The new 10 kV high-voltage overhead power transmission line is intended for backup supply of electric energy to the boiler room of the Bosterinsky Heat Supply Enterprise branch of the Kyrgyzteploenergo state enterprise, the report says.

Since 2012, this backup line has been missing, which put at risk about 600 consumers of thermal energy in the village of Bosteri, the report says.

The construction works have been completed, 86 pieces of reinforced concrete supports have been installed, and a high-voltage air cable of more than 3 km has been laid from the Bosteri substation to the boiler room of the Bosteri Heat Supply Company branch.

**For 4 years, the volume of electricity production in the republic increased by 7.9%** *(11.01.2020).*

In 2018, 15.7 billion kW were produced.h of electricity, of which more than 77% is consumed in the domestic market. This is reported by the National Statistical Committee. Compared to 2017, the volume of electricity increased by 1.9% more, and compared to 2014-by 7.9%.

Electricity losses in 2018 accounted for 17.9% of the resource volume (in 2014-23.3%). In 2018, the volume of heat production amounted to 3.2 million gigacalories, which is 4.2% less compared to 2014. The entire volume of heat energy is supplied to the domestic market of the republic. At the same time, its losses in 2018 decreased by 74% and amounted to 243.3 thousand gigacalories. Over the five-year period, the share of heat losses in total resources decreased from 28.2% in 2014 to 7.7% in 2018.

**There are no plans to increase electricity tariffs in 2020, - Head of the National Energy Holding A. Nazarov** *(14.01.2020)***.**

Tariff policy is handled by the State Agency for Regulation of the Fuel and Energy Complex. Speaking about electricity exports, he said that in 2018, exports amounted to 750 million kWh, while in 2019 there were no electricity exports.

During the press conference, A. Nazarov also spoke about plans in the energy sector for 2020. "We have outlined several plans for 2020 - we will develop the regions according to the program of events: provide electricity, install poles, power lines and transformers." The head of the National Energy Holding also spoke about plans for digitalization.

"First of all, this is the installation of smart meters. Until 2024, we plan to provide all subscribers. Now there are 1 million 450 thousand subscribers, 215 thousand meters are installed. We have made a plan to install 300 thousand meters this year, " he said.

In turn, Iskender Kadyrkulov, General Director of Severelectro OJSC, added that $1 million was saved by reducing electricity losses, and $95 million was saved by installing smart meters and implementing billing.

**The MP suggested that the government should start importing electricity today** *(30.01.2020).*

Deputy of the Jogorku Kenesh Ermamat Tagayev proposed to the Prime Minister and the head of the National Energy Holding to start importing electricity today.

As he said at a meeting of the parliament, there was little precipitation in the fall of 2019, and not enough water entered the Toktogul reservoir, and it may not be fully filled. If during the heating period of 2020-2021 there is not enough water to generate electricity, then the country may introduce limits on electricity consumption due to a shortage. And if the limit is exceeded, there may be planned shutdowns, E. Tagaev suggested.

"To prevent this from happening, the government should start importing electricity today," he said.

If they agree to buy cheap 1 billion kW.In addition to electricity, 1.5 billion cubic meters can be saved in the Toktogul reservoir, he said.

"There is still time, but if we don't decide before March 1, 2020, it will be too late. If this issue is not resolved, in 2021 we will have to ask neighboring countries, and they will sell 1 kW as in December 2014.if the price is 5.6 soms, then it will be very sad. To buy 1 billion kW.h will have to spend 5 billion 600 million soms. And today, if we buy 1 kWh for 1 som 30 tyyns, then 1 billion 300 million soms will only be needed. Our country would save 4 billion 300 million soms, " the MP said.

**Republic of Moldova**

**A large solar power plant will be built in Comrat** *(24.01.2020)***.**

The largest photovoltaic park is planned to be built in Comrat. Solar panels will be installed in a local industrial park.

The project was proposed by Fly Ren Energy Company SRL, owned by Italian entrepreneur Carlo Arturo Garuzzo, and he intends to invest five million euros in it. The photovoltaic park will be built on a plot of more than 20 hectares. About 30 thousand solar panels with a total capacity of 10 megawatts will be installed here. This will allow residents of the industrial park to save energy costs

The 20-hectare plot was provided by the Comrat City Hall, which has already signed a contract with the investor. Work will start at the end of August. Comrat Mayor Sergei Anastasov says that as a result of this project, the local budget will receive only about one million lei per year from the land lease fee.

"We should have implemented such projects long ago," the mayor said.

"The main beneficiaries will be companies from Belgium, Japan and Comrat. This is the fifth Italian company that intends to work in the Comrat Industrial Park, " said Comrat Mayor Sergey Anastasov. He also said that the investor is considering the possibility of installing solar panels in residential areas of Comrat.

"In a practical sense, people will feel a reduction in the price of electricity. The air pollution index will also be reduced. The panels absorb sunlight and are completely safe for the environment, " said Italian investor Garuzzo Carlo Arturo.

The same Italian investor has already implemented similar projects in Serbia, Italy and Turkey. In the capital's suburb of Bachoy, he built and in 2018 commissioned a photovoltaic park for four thousand solar panels.

It should be noted that the same Italian entrepreneur invested in 2018 in a photovoltaic park with an area of 2.5 hectares, installed on the site of the Institute of Genetics, Physiology and Plant Protection of the Academy of Sciences of Moldova. The businessman did not specify how much one kilowatt-hour produced by the plants will cost, and what tariff can provide a return on investment within 5-7 years.

It should be noted that currently the tariffs for electricity produced by photovoltaic installations set by the National Agency for Energy Regulation for some economic agents are 1.75-1.90 lei per kWh. The Italian investor is advised by former Prime Minister Chiril Gaburici, who was previously part of the Fly Ren Energy team and helped attract these investments.

Currently, there are more than 50 parks with 3 MW photovoltaic installations in the Republic of Moldova. However, they generate only 2-3 million kWh of energy, or less than 0.1% of the country's consumption.

**Ukraine in 2019 reduced the supply of electricity to Moldova in physical terms by 32.6% - to 644 million kWh** *(22.01.2020)***.**

Such data was provided by the Ministry of Energy and Environmental Protection of Ukraine, noting that in general, in 2019, compared to 2018, Ukraine increased electricity exports by 4.95% - up to 6 billion 469.3 million kWh. At the same time, Ukrainian electricity supplies from the Burshtyn TPP power island to Hungary, Slovakia and Romania increased by 17.1% to 4 billion 448.4 kWh, while electricity supplies to Poland decreased by 2.4% to 1 billion 376.8 million kWh.

Ukrainian electricity exports to Moldova in 2019 amounted to 644.03 million kWh, which is 32.6% (311.7 million kWh) less than in 2018. As previously reported, Ukraine in 2018 supplied Moldova with 955 million 779 thousand kWh of electricity against 1 billion 133 million 901 thousand kWh a year earlier. That is, in physical terms, deliveries decreased in 2018, compared to 2017, by 15.7%. At the same time, in monetary terms, Moldova imported $53 million 144 thousand worth of electricity from Ukraine in 2018, which is 1.9% less than in the previous year. Moldova ranked 3rd in terms of Ukrainian electricity imports in 2018

**Turkey invests in renewable energy sources in the south of Moldova** *(30.01.2020).***.**

The largest Turkish holding company, Yıldırım Holding, is interested in investing in renewable energy sources in the south of Moldova, in the territory of the Gagauzia autonomous Region.

This was stated by its President Yuksel Yildirim at a meeting with the Bashkan of Gagauzia Irina Vlah, held during her working visit to Turkey. According to Irina Vlah, during the conversation the parties discussed issues of mutual interest.

The head of Gagauzia described the economic and investment potential of the autonomous region, emphasizing that the region is open to large international companies. The President of the holding expressed interest in investing in renewable energy sources in Gagauzia.

**The Ministry of Economy of Moldova named priorities for 2020** *(15.01.2020)***.**

Among the main priorities of the Ministry of Economy and Information Infrastructure of Moldova for 2020 are: creating conditions for business, attracting foreign investment, and developing the ICT industry.

This was discussed at a working meeting of the Minister of Economy and Infrastructure Anatoly Usatyi with state secretaries and heads of departments of the department, where they discussed the achievements of the branch department in 2019, as well as proposals for its activity plan for 2020. interlic.md

The meeting participants discussed the implementation of the goals set for 2019, as set out in the Sectoral Spending Strategies for 2019-2021, as well as the proposals of the Ministry of Finance on the priorities of sectoral policies in the budget cycle 2021-2023.

Anatoly Usatyi stressed that in 2020, the efforts of the Ministry of Economy and Infrastructure are still focused on providing an attractive business environment, developing business infrastructure tools, stimulating the growth of foreign investment, developing road and transport infrastructure, promoting sustainable energy policies, and developing industry.

**Moldova has increased its commitments to reduce greenhouse gas** *emissions (29.01.2020).***.**

Moldova can reduce greenhouse gas emissions not only by the planned 70% (compared to 1990), but even by 88% if it receives the necessary financial, technical and technological support.

This is provided for in the updated document (INDC) on Moldova's contribution to reducing emissions. infotag.md

According to the representative office of the United Nations Development Programme in Moldova, the updated document presented on Tuesday during a joint working session with public authorities and other interested institutions is more optimistic than the last one, 2015, which, when Moldova signed the Paris Agreement, provided that the republic is unconditionally able to reduce emissions by 64-67%, and with international support - by 78%.

State Secretary of the Ministry of Agriculture, Regional Development and Environment Dorin Andros told the meeting that although Moldova's share is only 0.026% of global greenhouse gas emissions, it suffers from global warming just like the rest of the world."

"Agriculture, water resources, forestry, health, energy and transport are the most vulnerable to climate change, so we will work with the international community on both mitigation and adaptation to climate change," he said.

From 1990 to 2016, Moldova's greenhouse gas emissions decreased from 44.9 million tons to 14.6 million tons of CO2 equivalent, or by 68%. However, after 2000, volumes began to grow at an average rate of 3.4% per year, and in the last decade, the growth rate of emissions decreased to 0.12% per year.

The INDC document was updated and prepared with the support of the EU4Climate project, funded by the European Union and implemented by the United Nations Development Programme.

**Republic of Tajikistan**

**12 state investment projects in the energy sector are being implemented in Tajikistan** *(02.01.2020).*

Twelve state investment projects in the energy sector are being implemented in Tajikistan. According to the country's energy sector, the total amount of these projects is $ 16.1 billion. somoni ($1.6 billion). In particular, last year the reconstruction of the Nurek and Kairakkum hydroelectric power stations worth $ 5.5 billion was started. somoni. The Sarband hydroelectric power station is also being upgraded to the tune of 1.3 billion rubles. somoni. Reconstruction of the Sarband hydroelectric power station will be completed in early 2021, as a result of which its capacity will increase by almost 45 megawatts. According to the country's energy sector, work is currently proceeding at an accelerated pace to start construction of the Sebzor hydroelectric power station in the Roshtkalinsky district of the Gorno-Badakhshan Autonomous Region.

It is planned to allocate more than 470 million somoni of public investment for the project, and the facility will be commissioned in 2022. The implementation of projects in the energy sector has allowed for an increase in production over the past 7 years, i.e. 2013-2019.

**The hydropower potential of the Vakhsh River is estimated at 37 billion kWh per year** *(06.01.2020).*

The hydropower potential of the Vakhsh River in Tajikistan is estimated at 37 billion kWh per year. According to the Ministry of Energy and Water Resources of the country, technically and economically feasible hydropower resources of the specified river for the construction of hydroelectric power plants amount to 37 billion kWh per year.

According to available estimates, there are 9 sites that are favorable for the construction of hydroelectric power plants with reservoirs. Currently, hydroelectric power stations with a total installed capacity of about 5 thousand MW have been built on 7 out of 9 possible sites.

Rogun HPP, the first unit of which was launched on November 16, 2018, is the eighth HPP of this cascade. After the Rogun HPP construction is fully completed, the installed capacity of all hydroelectric power stations in the Vakhsh cascade will be

8,375 MW.

Shurabskaya HPP with an estimated capacity of 850 MW or with an annual output of 2.1 billion kWh of electricity remains the ninth project not implemented in the Vakhsh River alignment.

Power engineers claim that the construction of the Shurab HPP can be started after the construction of the Rogun HPP, in order to avoid silting up the HPP reservoir during the construction of the Rogun HPP dam.

Location The Shurab HPP is located 35 km below the Rogun HPP.

**The hydropower potential of the Zarafshon River in Tajikistan is estimated at 3.4 billion kWh** *(10.12.2020).*

The hydropower potential of the Zarafshon River in Tajikistan is estimated at about 3.4 billion kWh of electricity per year. However, experts say that technically and economically feasible hydropower resources for the construction of hydroelectric power stations amount to more than 10.5 billion kWh per year.

It is estimated that there are 13 sites that are favorable for the construction of hydroelectric power plants with reservoirs on the Zarafshon River.

According to the country's energy sector, there is a scheme for the integrated construction of hydroelectric power stations on the Zarafshon River, developed back in the 70s of the last century. According to the specified scheme, it was planned to build about

11 hydroelectric power stations. This scheme is currently being reviewed.

Earlier it was reported that Tajik and Uzbek experts are considering the technical aspects of implementing a joint project to build two hydroelectric power plants on the Zarafshon River in Tajikistan.

We are talking about the construction of two hydroelectric power plants with a total capacity of 320 MW, 160 MW each.

The decision to jointly build a hydroelectric power station on the Zarafshon River was made by the presidents of the two countries in August 2018 during Emomali Rahmon's state visit to Tashkent.

**The Government reduced Barki Tojik's debt to Sangtuda-1 by $10 million** *(13.01.2020).*

The Government of Tajikistan has decided to reduce the debt of the state energy holding "Barki Tojik" to JSC "Sangtuda HPP-1".

At the end of December, the Government of the Republic of Tatarstan adopted a resolution on state financial support for the open joint-stock holding company Barki Tojik

According to the resolution, the debt of Barki Tojik to JSC Sangtuda HPP-1 is reduced by 98 million 472.2 thousand somoni (about $10 million).

This amount will be credited to the authorized capital of the open joint-stock holding company “Barki Tojik " as a contribution of the founder.

"To establish that the amount credited to the authorized capital of the open joint-stock holding company "Barki Tojik" in accordance with paragraph 1 of this resolution is considered as payment of part of the existing debt of the open joint-stock holding company "Barki Tojik" to the open joint-stock company "Sangtuda hydroelectric power Station-1", the resolution says.

"In order to reduce the remaining debt of open joint stock company "Sangtuda Hydroelectric Power Station-1", formed as of November 29, 2019 to the state budget for taxes, make a netting in the amount of

98,472,208 (ninety-eight million four hundred and seventy-two thousand two hundred and eight) somoni (excluding income tax and social tax), " the government resolution further emphasizes.

Barki Tojik LLC and the Tax Committee, in accordance with the procedure established by the legislation of the Republic of Tajikistan, are instructed to take measures to introduce amendments and additions to the unified State Register of legal entities and individual entrepreneurs.

The State Committee for Investment and State Property Management of the Republic of Tatarstan, Barki Tojik and Sangtuda Hydroelectric Power Station-1 are instructed to make appropriate changes to the accounting data in accordance with the established procedure.

**The hydroelectric potential of the Surkhob and Obikhingou rivers is estimated at 36.3 billion kWh** *(16.01.2020).*

The Surkhob and Obikhingou Rivers are tributaries of the Vakhsh River. Their hydropower potential is estimated at 36.3 billion kW / h, while technically possible and economically feasible hydropower resources for the construction of hydroelectric power stations amount to 16.4 billion kW/h. It is estimated that there are 4 sites on the Surkhob River and 5 sites on the Obikhingou River that are favorable for the construction of hydroelectric power plants with reservoirs. According to the country's energy sector, four hydroelectric power plants of varying capacities from 400 MW to 600 MW can be built on the Surkhob River. Five hydroelectric power stations with capacities ranging from 160 MW to 850 MW can be built on the Obihingou River alignment. The largest projects in this area are the Urfatinskaya HPP (850 MW) and the Sangvorskaya HPP (800 MW).

Earlier, investors from China, Iran and Kazakhstan showed interest in the Obihingou River projects, but the matter did not go beyond conversations.

**Rogun HPP will receive more than half of the budget funds allocated for energy development** *(17.01.2020).*

More than half of the funds provided by the state budget of Tajikistan for 2020 for the development of the energy sector will be allocated for the construction of the Rogun hydroelectric power station.

According to the Ministry of Finance of the republic, the draft state budget for the current year provides for the allocation of 3 billion rubles for the development of this industry. 927.6 million somoni ($405.3 million).

About 2.1 billion rubles. Somoni ($216.7 million) of this amount will be allocated for the construction of Rogun hydroelectric power station facilities. Budget funding for the completion of Rogun this year is commensurate with the funds allocated for this purpose last year.

In general, at the expense of all sources in 2019, it was planned to allocate 4 billion rubles for the construction of this hydroelectric power station. somoni. Construction works and the purchase of necessary equipment, in particular, are carried out at the expense of the balance of funds raised through the placement of Eurobonds on international financial markets, as well as at the expense of funds received from the sale of shares of JSC Rogun HPP. In 2018, 4.7 billion rubles were allocated for the construction of the Rogun HPP, taking into account the additional amount. somoni. This figure is 889 million somoni more than in 2017. Recall that on January 15, the Majlisi Namoyandagon (lower house of Parliament) of Tajikistan approved amendments to the Law of the Republic of Tajikistan "On privatization of state property". The amendments provide for permission to attract investments, including foreign ones, to develop the activities of JSC Rogun HPP.

**Tajikistan earned more than $91.3 million from electricity exports in 2019** *(January 24, 2020).*

The amount of electricity exported increased by 18.6% compared to the same period in 2018. Meanwhile, the energy sector did not disclose data on the volume of electricity supplies to neighboring countries and only noted that electricity was supplied to Uzbekistan, Afghanistan and Kyrgyzstan.

According to the Ministry of Energy and Water Resources, more than 2.4 billion kWh of electricity was delivered outside the country in 2018. Due to the export of electricity, the republic earned about $77 million. The cost of each kilowatt of energy for Afghanistan in 2018 was 4.11 cents, and for Uzbekistan-2 cents.

In 2019, the country produced more than 20.6 billion kWh of electricity, which is 4.7% more than in 2018. In particular, hydroelectric power stations generated more than 19.1 million kWh. This figure in combined heat and power plants amounted to over 1.5 billion kWh of electricity.

**Changes in the CASA-1000 project will allow Tajikistan to increase the volume of electricity exports** *(28.01.2020).*

Changes made earlier to the CASA-1000 regional project will allow Tajikistan to increase the volume of electricity exports to Pakistan and Afghanistan.

As the Minister of Energy and Water Resources of Tajikistan Usmonali Usmonzoda said at a press conference yesterday, according to these changes in the construction of a 500 kV DC power line from Sangtuda (Tajikistan) A converter substation will not be built until Peshawar (Pakistan) in Kabul (Afghanistan). "In other words, Pakistan will receive Tajik electricity directly. Thus, instead of the previously announced 1,000 MW, Pakistan will receive 1,300 MW of electricity from Tajikistan, " the minister said.

From the Goran substation (Tajikistan), through a 220 kV transmission line, Tajik electricity in the amount of 300 MW will be supplied to Puli Khumri (Afghanistan), which is stipulated by the agreement.

According to the Deputy Minister of Energy and Water Resources of Tajikistan Jamshed Shoimzoda, according to the CASA-1000 project and previously signed agreements, electricity imports are designed for a period of 15 years. During this period, it is planned to return the investment and make a profit. The cost of electricity that will be delivered during this period is also determined.

Shoimzoda also noted that the project is being implemented in all participating countries. Tajikistan is implementing a project for the construction of a power transmission line and a converter substation. An order for equipment for the construction of power lines was placed, some of which was delivered to the country.

Earlier it was reported that the Tajik section of the 500 kV AC power transmission line and a Converter substation in Sangtud will be built as part of the project. These works will be carried out by the Swedish company ABB and the Indian company Kalpataru Power Transmission Ltd. The Indian company earlier started preliminary work on the construction of the Tajik section of the 500 kV AC power line. The converter substation in Sangtude will be built by the Swedish company ABB. It is noted that the total cost of the project is over $1 billion. Project costs are distributed as follows: Tajikistan – $314 million, Kyrgyzstan - $209 million, Afghanistan - $354 million and Pakistan - $209 million.

International financial institutions such as the World Bank (WB), the European Bank for Reconstruction and Development (EBRD), the Islamic Development Bank (IDB), the UK government and others act as investors in Tajikistan. In particular, the World Bank will allocate $45 million, the IDB- $70 million, and the EBRD – $110 million for the implementation of the Tajik section of the project.

**The head of the Ministry of Energy spoke about the advantages of the billing system for electricity metering**

*(28.01.2020).*

An automated electricity monitoring and metering system (billing system) is planned to be implemented in a number of cities and districts of Tajikistan, including Dushanbe.

As the Minister of Energy and Water Resources of the Republic Usmonali Usmonzoda told reporters at a press conference yesterday, in 2016-2017, with the financial assistance of the Kuwait Fund, a feasibility study was developed for the project of a system for accounting and electricity losses in the cities of Kulob, Bokhtar, districts of republican subordination, as well as some cities and districts of Sughd region.

"According to the results of the feasibility study, relevant investment projects were drawn up and submitted to international financial organizations for financing. In particular, projects in the cities of Kulob and Bokhtar will be financed by the European Bank for Reconstruction and Development and the European Union. These structures plan to allocate credit and grant funds to Tajikistan. In these cities, it is planned to replace

50 thousand electricity meters, including 32 thousand. in Kulyab and 18 thousand in Bokhtar. In addition, a new 110 kV substation will be built in Kulyab as part of this project," the minister said.

Usmonzoda also noted that negotiations are underway with the Asian Infrastructure Investment Bank (AIIB), the Asian Development Bank, the World Bank and other international financial institutions to implement these projects in other cities and districts of the country.

"Now there are more than 1.6 million electricity meters in the country. With the completion of projects in the cities of Dushanbe, Kulob, Bokhtar and some districts of Sogd, more than 50% of these meters will be replaced with new ones, " he said.

The head of the Ministry of Energy also said that a consortium of domestic companies is implementing an automated system of electricity control and metering in Dushanbe. According to the investment agreement signed with the government, this Consortium should implement the project in the capital. Work will start from the Sino waste area.

"The billing system has already proved itself in the city of Khujand. There, the fundraising rate has increased to 100%, and losses have been reduced to 9-10% from 18-19%. As a result of the transition to a billing system, electricity losses in the republic will be significantly reduced, and the collection of funds will increase, " he concluded.

The energy sector also reported that switching to a billing system does not mean prepayment for electricity. This system allows you to make prepayment, as well as payment for electricity after monthly consumption. However, if the payment is delayed for 10-15 days after the expiration of the monthly consumption, the consumer will be targeted disconnected.

**"Since the beginning of the heating season, the Dushanbe-2 CHPP has produced over 600 million kWh** *(28.01.2020).*

More than 770 million kWh of electricity and more than 490 thousand gigacalories have been generated in Dushanbe since the beginning of the heating season. Dushanbe's CHPPs 1 and 2 resumed operations in early November 2019. The heating season officially began on November 1, and the capital's CHP plants began to generate electricity and supply heat to the objects of the city of Dushanbe. Currently, thermal energy is generated by two capacities – Dushanbe CHPP-1 and Dushanbe CHPP-2.

Since the beginning of the current heating season, CHPP-2 has generated over 660 million kWh of electricity. The volume of heat supply was over 205 thousand gigacalories. Thus, more than 80% of the electricity generated by Dushanbe thermal power plants is accounted for by CHPP-2. In fifteen days of January 2020, CHPP-2 generated over 128 million kWh of electricity. The volume of heat supply was over 54 thousand gigacalories.

Currently, more than 2.2 thousand objects of the capital, including social ones, receive heat. This figure is 400 objects more than in the last heating season.

Recall that a number of new residential districts in Dushanbe were connected to the capital's heating system before the start of the heating season last year. New facilities have been connected to the heating system, including social and residential buildings in a number of microdistricts. Many of these properties are located in the metropolitan areas of Sino, Ismoili Somoni and Firdavsi. Most of the facilities in the capital's districts are provided with heat by the Dushanbe-2 CHPP.

Recall that the last heating season began in the third decade of October

2018 and ended on March 16, 2019.

According to Tajik power engineers, a significant role in the heat supply was played by the Dushanbe-2 CHPP. TPP " Dushanbe-2 "(autumn-winter period) produced 12-15% of the total electricity generated daily in Tajikistan.

The daily electricity generation of the metropolitan CHPP-2 ranged from 7.5 million kWh to 9 million kWh, depending on applications or needs.

Recall that the construction project of Dushanbe CHPP-2 was implemented by the Chinese company TVEA. The total capacity of the Dushanbe-2 CHPP is 400 MW of electricity and 360 Gcal of heat.

**Tajikistan and Uzbekistan discuss the construction of a hydroelectric power station on the Zarafshon River** *(29.01.020).*

A Tajik delegation headed by Deputy Minister of Energy and Water Resources Jamshed Shoimzoda met with representatives of Uzbekhydroenergo yesterday.

The Uzbek side was headed by the head of Uzbekhydroenergo JSC Abdugani Sanginov. The parties discussed scientific and technical, project and financial cooperation.

The main topic was the practical implementation of the project for the construction of the Yavan hydroelectric power station on the Zarafshon River in Tajikistan. The preliminary cost of the project is $282 million, and the annual design capacity of the HPP is 140 MW.

In this context, the parties discussed the volume of construction of the facility, the feasibility study of the project and other important aspects of the construction of a hydroelectric power station.

**Republic of Belarus**

**On structural changes in the Belarusian energy** *system (10.01.2010).*

In accordance with the developed action plan for 2019-2020 to improve the management structure of organizations that are part of the Ministry of Energy system, the following changes have taken place.

From April 1, 2019

yes, the state institution "State Energy and Gas Supervision" has started functioning. The transformation made it possible to separate economic functions (GPO "Belenergo") from supervisory ones (Gosenergogaznadzor).

On December 17, 2019, the Ministry of Economy issued a certificate of registration of Belenergostroy Holding, which transferred the shares of Belelektromontazhnaladka, Belenergosvyaz, Belselelektrosetstroy, Belenergozashchita, and Zapadelektrosetstroy to its economic management.

On January 1, 2020, the Belarusian NPP became part of the State Enterprise "Belenergo". This solution will allow us to build and maintain a unified technical policy in the field of electric power generation in the power system.

By December 31, 2019, the work on joining RUE "ODU" to the state Enterprise "Belenergo"was completed. Since January 3, 2020 RUE " ODU "is excluded from the Unified State Register of Legal Entities and individual Entrepreneurs with the transfer of all rights and obligations to the State Enterprise" Belenergo".

The implementation of structural changes will increase the efficiency of management of organizations that are part of the State Enterprise "Belenergo".

**Modernization of substations and construction of power lines-Minister of Energy on plans for the future** *(31.01.2020).*.

Energy Minister Viktor Karankevich outlined the main priorities of the Belarusian energy system for the future at a meeting with the staff of the Lida Electric Networks branch of the republican unitary enterprise Grodnoenergo, BelTA learned from Belenergo.

According to the Minister, the Belarusian energy system is developing dynamically: new technologies are emerging, power stations are being upgraded, and electricity and heat networks are being reconstructed. The Lida Electric Networks branch is no exception. The company successfully solves its main task-to provide reliable, uninterrupted supply of electric energy to consumers in the required amount.

"The long - term goals are to increase the efficiency of the industry, create conditions for increasing electricity consumption both in the country as a whole and in the regions, taking into account the commissioning of a nuclear power plant. The main focus will be on the modernization of substations, the construction of new power transmission lines, " the minister said.

**Siemens to supply Belarus with equipment for peak backup power sources to Belenergo State Enterprise**

The Swedish company Siemens Industrial Turbomachinery will supply equipment for the construction of peak-reserve power sources in Belarus. The relevant contracts were signed at the end of 2019.

On December 24, a contract was signed between Siemens and RUE Minskenergo. The document was signed by Oleg SHCHEMEL, General Director of Minskenergo, and Darko TIFNICEVIC, Executive Sales Director of Siemens Industrial Turbomachinery. Ambassador of the Kingdom of Sweden to the Republic of Belarus Kristina JOHANNESSON also took part in the event. The peak backup power source will be built in the CHPP-5 branch of Minskenergo, with an installed capacity of 300 MW. The signed contract provides for the supply of equipment for a set of peak-backup power sources, as well as the provision of related services – installation supervision, commissioning supervision, instruction and training of maintenance and repair personnel. Earlier, on November 27, in the Swedish city of Finspong, a similar contract for the supply of equipment for the construction of peak-reserve energy sources based on Lukomlskaya GRES (150 MW) and Novopolotsk CHPP (100 MW) was signed between Siemens and RUE"Vitsebskenergo". Siemens is one of the largest suppliers of equipment for the needs of the energy sector and industrial enterprises of the republic, and has extensive experience in cooperation with Belarus in terms of service and participation in the modernization of power system equipment. The construction of peak-reserve power sources will be carried out in accordance with a set of measures to integrate the Belarusian NPP into the country's unified energy system. The sources will be implemented on the basis of gas turbine technology.

**Mogilev CHPP-1 capacity increased**

Summing up the results of 2019, we can say with confidence that all the obligations of BURN for capital construction within the framework of regional investment programs have been fulfilled. One of the most significant and large-scale projects was the reconstruction of turbines at stations No. 3 and 4 of Mogilev CHPP-1 using modern combined-cycle gas technologies.

In October, two steam turbines of the German company Howden and two generators of the company Partzch were put into operation at Mogilev CHPP-1, the oldest station in the Mogilev region. The installation of this equipment was carried out according to the PPR developed by specialists of JSC Belenergoremnaladka. BURNE served as the general contractor for the construction of this facility. Development of the construction project and adjustment of the architectural design were performed by RUE "Belnipienergoprom". From May to September 2018, Mogilevskaya CHPP-1 underwent dismantling and filling of the reconstructed foundations of turbine units. Reconstruction of the foundations and all general construction works were carried out by the SU branch of Mogilev CHPP-2 of JSC Belenergostroy. Already in October 2018, new turbines with a capacity of up to 6 MW each were installed on the foundations to replace the fully exhausted AR-6 units with a capacity of 4.6 MW produced by the Czech Škoda plant (built in 1953 and 1954). The fundamental difference between KK&K TWIN steam turbine units and classic multi-stage turbines is that two low-stage turbines are used as a drive, the rotors of which are located in parallel and rotate one common gearbox shaft, which transmits torque to the generator rotor. Such turbines are more mobile, compact and easy to operate.

The Deputy head of the PRM of JSC Belenergoremnaladka spoke about the specifics of work at the facility. Development of the facility began in October last year with the installation of turbines and generators on foundations through special openings in the roof of the turbine shop of the CHPP using a truck crane with a lifting capacity of 300 tons. The work was carried out in the cramped conditions of the current production, which does not allow it to be stopped for a long period, and under the supervision of the chief engineer of the manufacturer. Then there was the assembly of turbines and generators, installation of auxiliary equipment, pipelines, electrical equipment and instrumentation. Simultaneously with the installation and adjustment, our specialists and staff of Mogilev CHPP-1 studied new equipment and the operation of technological schemes. The object is not simple, the work is responsible, and the weather also made its own adjustments. In addition, it was necessary to ensure productive and comfortable interaction of a large number of specialists.

Simultaneously with the replacement of steam turbines at Mogilevskaya CHPP-1, a reverse cooling system for turbine oil coolers and air coolers for turbine generator sets (stations No. 1,3,4,5) was installed with the installation of "dry" fan cooling towers, boiler steam lines at stations No. 5-7 were replaced, and network water pipelines were reconstructed. In September 2019, comprehensive testing of turbine units together with auxiliary equipment was successfully completed. The implementation of the second stage of the project has increased the efficiency and reliability of the plant, and the installed capacity of Mogilev CHPP-1 has been increased to 50.5 MW.

**Republic of Armenia**

**Numerous problems have been encountered in the implementation of the program of liberalizing the Armenian electricity market** *(24.01.2020).*

Numerous problems have been encountered in the implementation of the program of liberalizing the Armenian electricity market. This was stated by Deputy Minister of Energy Infrastructures and Natural Resources Hakob Vardanyan on January 24 from the rostrum of the National Assembly of the Republic of Armenia.

According to him, the program was supposed to work 1.5 years ago, but the presence of a number of problems did not give the desired results. First of all, as the Deputy minister noted, we are talking about the lack of software that allows us to regulate issues related to market liberalization. Currently, the Ministry of Energy Infrastructures and Natural Resources, with financial and technical assistance from donor partners, is developing this program. No less important problem, Hakob Vardanyan believes, is to clarify the obligations and responsibilities of companies involved in the production, transmission and distribution of electricity. These obligations and responsibilities will be incorporated into the software. In addition, the lack of parallel work with the Georgian energy system does not yet allow for foreign trade.

Earlier, the project to build a new relay substation in Meghri was suspended, but at the end of last year, the country's government decided to return to the project in its original version. Documents are being prepared for conducting tender procedures to identify the contractor of the Armenia-Georgia power transmission line construction project. Recall that according to the amendments to the law" On Energy", adopted on February 7, 2018, it was envisaged to liberalize the electricity market in Armenia. It is planned, in particular, to move from the only regulatory model of the buyer-seller operating in the market to a new liberal model, introduce modern trade rules, improve the tariff regulation system, and introduce new tools for the development of interstate trade.

It is planned to separate the distribution and equipment functions, as a result of which other suppliers will be able to operate in the market, each as a licensed organization, which, in turn, will increase the state fees charged. Today, neither electricity producers nor large consumers are responsible for the volume of sales and consumption (ordered capacity), which can lead to unlimited fluctuations in tariff regulation. In the context of the best international experience, the responsibility of producers and large consumers for the ordered and actually used volumes of electricity should be considered. On the way to liberalizing the market, it is planned to create both an electronic platform and the formation of new structures in the electric power industry market. In particular, it provides for the creation of a market operator, which will act as the main responsible person for electricity trading. It is also planned to improve the tariff policy and introduce effective mechanisms. We are talking, in particular, about night and day tariffs, their size, and the time of application. In this regard, it will also be possible to consider seasonal, peak or night busy times in order to establish new tariffs. It is expected that the use of competitive elements will help reduce tariffs.

As for the Armenia-Georgia transmission line, its capacity will be higher than the previous ones -

400 kilovolts, while now there is only one 220 kV line and two 110 kV lines. The German Development Bank KfW will provide a loan for the construction of the power transmission line. The final cost of the project has not yet been determined, but is estimated at 300 million euros. In addition to the transmission line, it will be necessary to build a so-called DC insert. It will ensure uninterrupted connection of the energy systems of Armenia and Georgia. Now they operate on different frequencies (the Armenian one is synchronized with the Iranian one, the Georgian one is synchronized with the Russian one), so whenever the two countries exchange electricity, they must create an "island" of direct current. To do this, the border section of the Armenian energy system is temporarily disconnected from its network and connected to the Georgian one (or vice versa). Inserting direct current will allow you to exchange directly. In the center of Armenia, near the city of Hrazdan, the Armenia - Georgia power line will connect with the Iran-Armenia power line. Then a continuous corridor of 400 kV will be created. In turn, Georgia will strengthen the transmission line going to Armenia from 220 to 500 kilovolts, and then continue it to Russia, in the direction of Ksani-Stepantsminda (border with Russia) - Mozdok (North Ossetia). All this will create a single corridor Russia-Georgia-Armenia-Iran, which will allow the four countries to freely trade in electricity.

**Republic of Kazakhstan**

**Ekibastuz GRES-1 increases electricity exports to Uzbekistan** *(11.01.2020).*

In 2020, the volume of electricity exports of Ekibastuz GRES-1 LLP to Uzbekistan is planned to reach 1.5 billion kWh. Thus, deliveries started last summer continue. This became known during the board meeting in the Akimat of Pavlodar region.

"In 2020, the volume of electricity exports to Uzbekistan is planned to reach 1.5 billion kWh," said Murat Abulkalykov, head of the Department of Energy and Housing and Communal Services of Pavlodar region.

According to him, from July to December 2019, 923 million kWh were sold to the southern neighbor. Last September, Bakytzhan Kazhiyev, Chairman of the Management Board of KEGOC JSC, noted at a press conference in Almaty that an agreement on electricity supplies to Uzbekistan was first reached in the history of the national grid operator and Kazakhstan as a whole. "At the same time, our company is interested in increasing the volume of electricity transmission."

For Ekibastuz GRES-1, this is not the first experience of working for export. In 2015-2016, the plant supplied about 130 million kWh of energy to Kyrgyzstan. In 2017-2018, deliveries were made to the Russian Federation. Thus, according to the Energy Department, in 2018, exports to Russia amounted to 3.75 billion kWh.

Ekibastuz GRES-1 LLP, which is owned by Samruk-Energo JSC, is a thermal power plant that produces and distributes electricity with an installed capacity of 4 thousand MW. Of the eight power units, six are currently in operation.

The plant is the largest power plant in Kazakhstan with a market share of about 20% in terms of total installed electric capacity.

Ekibastuz GRES-1 LLP completed 2019 by generating 18.3 billion kWh of electricity. In 2018, this figure was 19.1 billion kWh....

**Kaskelen-220 substation was launched in Almaty region** *(18.01.2020).*

4.7 billion tenge was allocated from the national budget for the project implementation

Kaskelen 220/110/10 kV substation with a 53 km long transmission line, aimed at uninterrupted power supply of Karasai, Zhambyl, Ili districts and the western part of Almaty, has been launched in the village of Batan, Karasai district, Kapital business information center reports.kz was informed by the press service of the Akim of Almaty region.

"According to the results of the past year, the gross volume of industrial production in Almaty region reached almost a trillion tenge. A significant contribution to achieving this indicator was made by the districts bordering the city of Almaty, where large enterprises and industrial facilities are located. For the successful operation of each of them, uninterrupted power supply is necessary. Therefore, the construction and launch of such a powerful substation here in Karasai district is a great and joyful event for all of us," said the head of the region Amandyk Batalov.

Due to the launch of the substation, uninterrupted power supply will be provided to Karasai, Zhambyl and Ili districts, where 70% of all production facilities in the region are located. In the future, by agreement with JSC "AZhK", high-voltage lines from this substation will be extended to Kokozek, where another substation will also be built.

"Thanks to this, the necessary electricity will be provided to the industrial zone" Burunday", which will attract investment there, open production facilities and create new jobs, " said Amandyk Batalov.

The 220/110/10 kW Kaskelen-220 substation with a 220 kW transmission line was transferred to the trust management of Alatau Zharyk Companyasy JSC. Construction work was performed by the contractor organization "Kerneu Limited" LLP. In total, 4.7 billion tenge was allocated from the national budget for the implementation of the project.

"This substation is necessary for three large districts of the region and the western part of Almaty. To provide sustainable electricity to more than 400 legal entities and 6,200 individuals, "said Akhmetzhan Yessimov, Chairman of the Management Board of JSC NWF Samruk-Kazyna.

Amandyk Batalov added that hydroelectric power stations are being built in the region, and a solar power plant located on 400 hectares with a capacity of 100 MW has been launched in Kapshagai. Two 50 MW solar power plants have also been built in Yenbekshikazakh and Ili districts. There are also plans to build a combined heat and power plant in Taldykorgan, which is currently being designed.

**In 2019, 21 large renewable energy facilities were launched in Kazakhstan** *(09.01.2020).*

In general, there are 90 operating renewable energy facilities in the country

The press service of the Ministry of Energy of the Republic of Kazakhstan informed about the development of renewable energy sources. The Ministry said that despite the fact that Kazakhstan is an energy-sufficient country, there is a need to develop clean technologies, clean energy to reduce greenhouse gas emissions and other pollutants. However, the development of renewable energy sources is not economically profitable and requires a large amount of state support, the Ministry of Energy emphasizes in a press release.

"Commitment to the principles of sustainable development, understanding of the importance of renewable energy for sustainable energy, understanding of climate risks allowed Kazakhstan to take an important step towards the development of renewable energy in the country. The concept of transition to a "green" economy, the law on supporting renewable energy sources have been adopted, conditions for attracting investment for the implementation of renewable energy projects have been created, i.e. the country has done some work on developing a policy in the field of renewable energy to improve the legal framework for attracting investors, " the report says.

The Ministry of Energy plans to increase the capacity of renewable energy sources and reach the target starting position of 3% of total electricity generation in 2020. This will enable the implementation of larger renewable energy projects to achieve the target indicator of 10% by 2030, as set out in the Concept for the transition of Kazakhstan to a "green" economy.

According to the Ministry, currently there are 90 operating renewable energy (RES) facilities with a total capacity of 1050.1 MW (19 wind farms–283.8 MW; 31 SES–541.7 MW; 37 hydroelectric power plants – 222.2 MW; 3 bio – power plants-2.42 MW) in Kazakhstan, the press service of the Ministry of Energy of Kazakhstan reports. Since the beginning of 2019, 21 renewable energy facilities with a capacity of 504.55 MW have been put into operation. This year, it is planned to increase the number of renewable energy sources from 90 to 108 projects with a total capacity of 1,655 MW.

Since 2018, selection for the implementation of renewable energy projects has been carried out through an auction mechanism. This mechanism allowed, on the one hand, to make the process of selecting projects and investors transparent and understandable, and, on the other hand, to rely on more efficient technologies and projects that minimize the impact on end-user tariffs from the introduction of renewable energy capacities. International auctions for 2018-2019 were held in electronic format for renewable energy projects with a total capacity of 1205 MW.

138 companies from 12 countries took part in the auction: Kazakhstan, China, Russia, Turkey, Germany, France, Bulgaria, Italy, the United Arab Emirates, the Netherlands, Malaysia, Spain. Bidders for the 1,205 MW offered applications for the implementation of projects with an installed capacity of 3893.52 MW, which exceeded the demand by 3.2 times.

As a result of the auction, 30 companies signed contracts with the unified renewable energy buyer (RFC) for 15 years for a total capacity of 804.3 MW and 12 companies are at the stage of signing contracts with the RFC for a total capacity of 162.89 MW.

In addition, it should be noted that there was a decrease in electricity tariffs for wind power plants (WPP) on average at the auction participants ' requests by 10.6%, small hydroelectric power plants (HPP) by 14.5%, and solar power plants (SPP) by 36%. At the same time, the maximum reduction in tariffs for individual projects was 51% for SES, 23% for wind farms and hydroelectric power plants.

On November 27, 2019, the first project auction for a 50 MW solar power plant was held in the Otyrar district of the Turkestan region, in the vicinity of the village of Shaulder, with a land area of 100 hectares.

For this auction, a package of documents describing the main parameters of the project was prepared by the order of the Ministry of Energy of the Republic of Kazakhstan within the framework of the UNDP-GEF project "Reducing the risks of investing in the renewable energy sector".

The Governor's Office of Turkestan region has reserved a land plot for the project, which will be transferred to the auction winner. The winner of the auction has the right to conclude a 15-year contract with the single buyer of renewable energy – LLP "Settlement and Financial Center for Renewable Energy" and sell all generated electricity at the auction rate. The tariff is subject to annual indexation taking into account changes in the exchange rate of the national currency tenge and taking into account inflation.

The auction was attended by 7 companies from 6 countries: Kazakhstan, Germany, Italy, China, the Netherlands and Russia. During the trading session, the maximum auction price of 29 tenge /kWhdecreased 2.3 times. The winner of the auction was the company "Arm Wind" LLP with a price of 12.49 tenge/kWh, which is approximately 3.2 cents of the US dollar.

This tariff is a record low tariff in the solar energy market in Kazakhstan. The main founder of Arm Wind LLP is the ENI oil company (Italy).

Also, over the past two years, work has been carried out to attract investment in the renewable energy sector by signing a number of agreements and memoranda with international financial institutions and organizations in the amount of about 240 billion tenge (or $ 613 million). On November 28, 2019, a Memorandum of Understanding was signed between the Ministry of Energy of the Republic of Kazakhstan and the Asian Infrastructure Investment Bank (AIIB).

As part of the above-mentioned Memorandum, an agreement was also signed between the Ministry of Energy of the Republic of Kazakhstan, the AIIB and Zhanatasskaya Wind Farm LLP on cooperation and support for the 100 MW Zhanatasskaya Wind Farm Wind farm project.

**The fourth solar power plant was commissioned in Karaganda region** *(09.01.2020).*

A new "green" project appeared in the village of Kengir near Zhezkazgan. The fourth solar power plant in the region with a capacity of 10 MW was put into operation in December last year. 29,436 solar panels are installed on an area of 20 hectares. They are capable of producing 14 million kWh per year, Kazinform reports.

Zhenis Kassymbek visited the SES during his working trip to Zhezkazgan and said that 2019 was a breakthrough year for the region in the introduction of alternative energy sources. "By developing solar energy, we not only overcome the shortage of capacity, but also solve environmental issues, and our region becomes a leader in the development of renewable energy sources," Zhenis Kassymbek said. The first three such power plants were built in Sarani, Gulshat and Agadir villages. The largest of them is Saransk with a capacity of 100 MW. In total, more than 60 billion tenge of private investment was invested in the construction of all solar stations in the Karaganda region. The new solar station in Kengir is fully automated. In total, 10 people work here. The property was built at the expense of private investment. The generated electricity will be distributed in the network of JSC "Zhezkazgan Electric Distribution Company".

**JSC "Kazakhstan Electric Energy and Capacity Market Operator"** (30.12.2019).**.**

Kazakhstan's electricity needs increase: consumption increased by 2% over the year

In January–November 2019, electricity production in Kazakhstan amounted to 96.7 billion kWh, a decrease of 0.4% over the year. For the same period last year, production amounted to 97 billion kWh, with an increase of 4.4% over the year.

In monetary terms, the production, transmission and distribution of electricity in January–November of this year amounted to 1.4 trillion tenge, the index of industrial production compared to the corresponding period last year — 101.9%. In general, in 2018, electricity production in the country reached 107.3 billion kWh — 4% more than in the previous year.

According to the Ministry of Energy of the Republic of Kazakhstan, 138 electric power stations (including renewable energy facilities) of various forms of ownership, most of them private, produce electricity in the country. The total installed capacity of Kazakhstan's power plants is 21,673 MW.

According to the types of energy resources used, power stations are divided as follows:

\* on coal — 69.7%;

\* on gas — 20.0%;

\* hydroelectric power plants (excluding small hydroelectric power plants) — 9.0%;

\* on renewable sources (including small hydroelectric power plants) - 1.3 %.

Over the past five years, the available capacity of power plants has increased by 2,470 MW, or 15% from the level of 2013, mainly due to an increase in the capacity of thermal power plants and renewable energy facilities. The average age of power plant equipment in Kazakhstan at the end of 2018 was 32 years. The capacity of the oldest equipment introduced more than 70 years ago is 118 MW (0.54% of the total installed capacity of power plants).

The largest volume of electricity production falls on the industrial Pavlodar region: 39.3 billion kWh, which is 40.6% of the total volume in the country.

The top three also included Karaganda (14 billion kWh) and East Kazakhstan (8.9 billion kWh) regions. Atyrau (5.5 billion kWh) and Mangystau (4.7 billion kWh) regions complete the TOP 5 regions in terms of electricity production.

These five regions consolidate 74.8% of the country's electricity production.

Electricity consumption in January–November 2019, according to KOREM, amounted to 94.8 billion kWh, an increase of 1.9% compared to the corresponding period last year (93 billion kWh).

The maximum volume of electricity consumption is observed in Pavlodar (17.5 billion kWh), Karaganda (16.3 billion kWh) and Almaty (10.1 billion kWh) regions.

According to experts ' forecasts, consumption in Kazakhstan will continue to show stable growth. Electricity consumption against the background of the development of Kazakhstan's economy will increase to 136 billion kWh by 2030, and to 172 billion kWh by 2050.

The growing demand for electricity and decommissioning due to the deterioration of old power plants in Kazakhstan will require significant construction of new capacities: 11-12 GW by 2030 (which corresponds to approximately 60% of the installed capacity in 2012) and 32-36 GW by 2050, excluding the installed capacity of renewable energy facilities.

**The deputy proposed to equalize electricity tariffs** *(15.01.2020).*

It would be more correct to move away from the old tariff formation scheme and equalize tariffs between all consumer groups.

At the plenary session of the Mazhilis of the Parliament, MP Snezhana Imasheva appealed to Deputy Prime Minister Roman Sklyar to ask the government to consider the issue of abolishing differentiated electricity tariffs, the correspondent reports zakon.kz.

In all regions of the country, electricity tariffs of large energy supply organizations are regulated by the state. The regulatory body, based on the actual costs of the company for the purchase and transportation of electricity, forms a single average selling tariff, and then approves separate tariffs for individuals – the population, and legal entities - entrepreneurs, budget organizations. At the same time, it is lower for the former, higher for the latter, " she said, voicing the deputy's request.

As a result, according to her, low electricity tariffs for the population are actually subsidized at the expense of an inflated tariff for entrepreneurs.

Subsidizing the tariff for the population at the expense of entrepreneurs and legal entities is a long-standing established practice and justified itself at a time when there was no competition in the electricity market, there was a monopoly. But at this time, unregulated organizations that sell electricity have also appeared on the electricity market. More than 300 licenses have been issued for this type of activity, and about 40 of them remain regulated. At the same time, unregulated organizations do not compete, but speculate on inflated prices for legal entities. Constant, artificial restraint of tariffs for the population at the expense of entrepreneurs only leads to a constant increase in tariffs for them, " Imasheva pointed out.

The deputy explained that during each trip to the regions, businessmen complain about high tariffs and ask to return differentiated tariffs by day zones, thanks to which they somehow reduced electricity bills.

However, it would be more fair and correct not to return diftarifes, but to move away from the old tariff formation scheme dictated by the Ministry of National Economy of the Republic of Kazakhstan and gradually equalize tariffs between all consumer groups. And then the price of electricity for businesses will decrease in general. According to NPP economists, fair energy tariffs would boost the local economy, and experts who have studied the problem agree that large and medium-sized businesses are freed up with the abolition of cross-subsidies. According to statistics, the growth of, for example, industrial production, as a result, can reach more than 3%, - said the parliamentarian.

She recalled that in 2017, the Ministry of National Economy itself set such a task - to equalize tariffs for all.

Currently, the tariffs for all groups are the same only in Almaty and Almaty region, amounting to 19.71 tenge per kilowatt for all and the city of Aktau. The MP asks to consider the possibility of abandoning the government's policy of subsidizing tariffs for the population at the expense of other categories of consumers, and to establish fair prices for all groups of consumers. And also to work out mechanisms for targeted tariff reduction for needy and socially vulnerable groups of the population.