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**REPORT**

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

**JANUARY-MARCH 2021**

**DEPARTMENT "MARKET DEVELOPMENT"**

**April, 2021**

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# **SECTION I**

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

According to the System Operator, power plants of the Republic of Kazakhstan in January-March 2021 generated 30,769.7 million kWh of electricity, which is 4.5% more than the same period in 2020. A slight decrease in generation was observed only in the Western zone of the UES of Kazakhstan.

*million kWh*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Zone** | **Generation type** | **January-March** | | **Δ, %**  **2020** |
| **2020** | **2021** |
| **Kazakhstan** | **Total** | **29450.4** | **30769.7** | **29450.4** |
| *TPP* | *24349.4* | *25422.1* | *24349.4* |
| *GTES* | *2573.0* | *2746.8* | *2573.0* |
| *hydroelectric power station* | *2088.2* | *1900.4* | *2088.2* |
| *WES* | *245.1* | *432.3* | *245.1* |
| *SES* | *194.1* | *267.0* | *194.1* |
| *BSU* | *0.6* | *1.1* | *0.6* |
| **Northern** | **Total** | **22449.2** | **23686.2** | **22449.2** |
| *TPP* | *20002.8* | *21151.1* | *20002.8* |
| *GTES* | *868.0* | *843.4* | *868.0* |
| *hydroelectric power station* | *1402.4* | *1363.8* | *1402.4* |
| *WES* | *112.5* | *226.6* | *112.5* |
| *SES* | *62.9* | *100.2* | *62.9* |
| *BSU* | *0.6* | *1.1* | *0.6* |
| **South** | **Total** | **3308.8** | **3408.5** | **3308.8** |
| *TPP* | *2378.7* | *2503.0* | *2378.7* |
| *GTES* | *55.2* | *81.3* | *55.2* |
| *hydroelectric power station* | *685.8* | *536.6* | *685.8* |
| *WES* | *58.5* | *121.4* | *58.5* |
| *SES* | *130.6* | *166.2* | *130.6* |
| **Western** | **Total** | **3692.4** | **3675.0** | **3692.4** |
| *TPP* | *1967.9* | *1768.0* | *1967.9* |
| *GTES* | *1649.8* | *1822.1* | *1649.8* |
| *WES* | *74.1* | *84.3* | *74.1* |
| *SES* | *0.6* | *0.6* | *0.6* |

# 

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

In January-March 2021, compared to the same period in 2020, electricity generation increased significantly (an increase of 15% or more) in the Zhambyl and Kyzylorda regions. At the same time, a decrease in electricity generation was observed in Aktobe, Almaty, Karaganda, Mangistau, North Kazakhstan and East Kazakhstan regions.

*million kWh*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **No. p / p** | **Region** | **January-March** | | **Δ, %** |
| **2020** | **2021** |
| 1 | Akmola | 1354.6 | 1471.1 | 8.6% |
| 2 | Aktobe | 1,096.1 | 1,066.9 | -2.7% |
| 3 | Almaty | 2000.9 | 1901.5 | -5.0% |
| 4 | Atyrau | 1647.8 | 1764.1 | 7.1% |
| 5 | East Kazakhstan | 2266.2 | 2186.7 | -3.5% |
| 6 | Zhambyl | 677.0 | 823.0 | 21.6% |
| 7 | West Kazakhstan | 637.1 | 643.3 | 1.0% |
| 8 | Karaganda | 4385.5 | 4284.3 | -2.3% |
| 9 | Kostanay | 312.0 | 331.4 | 6.2% |
| 10 | Kyzylorda | 160.1 | 186.1 | 16.2% |
| eleven | Mangistau | 1407.5 | 1267.6 | -9.9% |
| 12 | Pavlodar | 12,051.7 | 13,430.5 | 11.4% |
| 13 | North Kazakhstan | 983.1 | 915.3 | -6.9% |
| 14 | Turkestan | 470.8 | 497.9 | 5.8% |
|  | **Total for Kazakhstan** | **29450.4** | **30,769.7** | **4.5%** |

The volume of electricity production by energy producing organizations of Samruk-Energy JSC for January-March 2021 amounted to 10,029.6million kWh or an increase of 14.5% compared to the same period in 2020.

*million kWh*

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **No.** | **Name** | **2020** | | **2021** | | **Δ 2021/2020** | |
| **January March** | **share in Kazakhstan, %** | **January March** | **share in Kazakhstan, %** | **million kWh** | **%** |
|  | **JSC " Samruk-Energy "** | **8,757.8** | **29.7%** | **10,029.6** | **32.6%** | **1271.8** | **14.5%** |
| *1* | *JSC AlES \_* | *1664.7* | *5.7%* | *1614.7* | *5.2%* | *-50.0* | *-3.0%* |
| *2* | *LLP " Ekibastuz GRES-1"* | *5,711.4* | *19.4%* | *6160.4* | *20.0%* | *449.0* | *7.9%* |
| *3* | *JSC " Ekibastuz GRES-2"* | *981.3* | *3.3%* | *1913.0* | *6.2%* | *931.7* | *94.9%* |
| *4* | *JSC " Shardara HPP"* | *166.9* | *0.6%* | *167.7* | *0.5%* | *0.8* | *0.5%* |
| *5* | *JSC Moynakskaya HPP* | *181.8* | *0.6%* | *123.3* | *0.4%* | *-58.5* | *-32.2%* |
| *6* | *Samruk-Green LLP Energy »* | *0.8* | *0.003%* | *4.8* | *0.016%* | *4.00* | *500.0%* |
| *7* | *LLP "First wind power plant"* | *50.9* | *0.2%* | *45.7* | *0.1%* | *-5.2* | *-10.2%* |

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

# *Consumption of electrical energy by zones and regions*

According to the System Operator, in January-March 2021, there was an increase in the dynamics of electricity consumption in the republic compared to January-March 2020 by 4%. Thus, the increase in the northern zone was 4% and in the southern zone by 5%, while in the western zone of the republic, consumption decreased by 1%.

*million kWh*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **No.** | **Name** | **January- March 2020** | **January - March 2021** | **Δ,  million kWh** | **Δ, %** |
| **I** | **Kazakhstan** | **29,039.7** | **30 100.3** | **1060.6** | **4%** |
| 1 | Northern zone | 19,098.6 | 19900.9 | 802.3 | 4% |
| 2 | Western zone | 3,709.3 | 3,678.5 | -30.8 | -1% |
| 3 | Southern zone | 6231.8 | 6 521 | 289.2 | 5% |
|  | ***incl . \_ by regions*** |  |  |  |  |
| 1 | East Kazakhstan | 2578.9 | 2560.3 | -18.6 | -1% |
| 2 | Karaganda | 4989.4 | 5,158.9 | 169.5 | 3% |
| 3 | Akmola | 2692.1 | 2943 | 250.9 | 9% |
| 4 | North Kazakhstan | 470.4 | 509 | 38.6 | 8% |
| 5 | Kostanay | 1294.9 | 1 304 | 9.1 | 1% |
| 6 | Pavlodar | 5378.2 | 5655.3 | 277.1 | 5% |
| 7 | Atyrau | 1735 | 1664.8 | -70.2 | -4% |
| 8 | Mangistau | 1373.7 | 1348.9 | -24.8 | -2% |
| 9 | Aktobe | 1694.6 | 1,770.5 | 75.9 | 4% |
| 10 | West Kazakhstan | 600.6 | 664.8 | 64.2 | 11% |
| 11 | Almaty | 3,182.7 | 3,348.1 | 165.4 | 5% |
| 12 | Turkestan | 1346.6 | 1405.8 | 59.2 | 4% |
| 13 | Zhambyl | 1201.6 | 1223.3 | 21.7 | 2% |
| 14 | Kyzylorda | 500.9 | 543.8 | 42.9 | 9% |

# **The results of the industry in January-March 2021**

*(express information of the Bureau of National Statistics ASPR RK)*

January-March 2021 compared to January-March 2020, the industrial production index (hereinafter referred to as IPP) amounted to 100.1%. An increase in production volumes was recorded in 11 regions of the republic, a decrease was observed in Atyrau , West Kazakhstan , Karaganda, Kyzylorda , Mangystau and Turkestan regions.

**Changes in industrial output by region**

*in % to the corresponding period of the previous year*

In the city of Nur -Sultan, the IPP amounted to 125.3%, mainly due to the growth in the production of ready-mixed concrete, refined gold, the production of railway cars and locomotives.

In Almaty, due to increased growth in the production of building prefabricated metal structures, buses and ready-mixed concrete, the IPP amounted to 118.3%.

In the Almaty region, the IPP amounted to 114.8% due to an increase in the production of tobacco products, the production of electric batteries and switchboards.

In the city of Shymkent, due to the increase in the production of refined products and transformers, the IPP amounted to 112.7%.

In the North Kazakhstan region, due to an increase in the growth in the production of milk, flour, linseed and butter, the IPP amounted to 110.2%.

In the Akmola region, due to an increase in the production of pesticides, the production of combines and tractors, the IPP amounted to 109.1%.

In the Kostanay region, the IPP amounted to 108.6% due to an increase in the extraction of iron and gold ores, copper concentrates, the production of gold in doré, flour and cars.

In the East Kazakhstan region, the IPP amounted to 108.1% due to an increase in the extraction of gold-bearing ores and concentrates, the production of refined gold.

In the Aktobe region, the IPP was 107.3% due to the growth in the provision of services in the mining industry.

In the Zhambyl region, due to the growth in the production of phosphate raw materials, the production of sugar, phosphate fertilizers and ferrosilicomanganese , the IPP amounted to 107.3%.

In Pavlodar region, the IPP amounted to 103.7% due to the growth in the production of gasoline, diesel fuel, heating oil and processing of secondary metal raw materials.

In the Karaganda region, the decrease in the IPP was due to a decrease in the production of coal, copper and zinc concentrates (99.1%).

In the Turkestan region, due to a decrease in the extraction of uranium and thorium ores, a decrease in cotton production, the IPP amounted to 97.7%.

In West Kazakhstan IPP amounted to 95.3% due to a decrease in gas condensate production, production of pipes, steel profiles.

In Atyrau (85.3%), Kyzylorda (99.4%), Mangistau (92.6%) regions, the IPP decreased mainly due to a reduction in crude oil production.

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

# *Electricity consumption by large consumers in Kazakhstan*

In January-March 2021, compared to the same period in 2020, electricity consumption by large consumers decreased by 0.9%.

*million kWh*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **No. p / p** | **Consumer** | **January-March** | | |
| **2020** | **2021** | **Δ, %** |
| 1 | JSC Arcelor Mittal Temirtau" | 991.5 | 959.8 | -3% |
| 2 | JSC AZF ( Aksuysky ) "TNK Kazchrome " | 1477.1 | 1387.9 | -6% |
| 3 | Kazakhmys LLP Smelting » | 299.3 | 308.4 | 3% |
| 4 | Kazzinc LLP \_ | 723.4 | 733.0 | 1% |
| 5 | JSC " Sokolovsko-Sarbayskoye GPO" | 485.2 | 426.9 | -12% |
| 6 | Kazakhmys Corporation LLP | 337.6 | 331.9 | -2% |
| 7 | AZF JSC (Aktobe) "TNK Kazchrome " | 764.6 | 770.2 | 1% |
| 8 | RSE “Channel them. Satpaev » | 25.6 | 38.0 | 48% |
| 9 | Kazphosphate LLP \_ | 505.2 | 410.5 | -19% |
| 10 | NDFZ JSC (part of Kazphosphate LLP ) | 430.8 | 330.6 | -23% |
| 11 | LLP " Taraz Metallurgical Plant" | 49.3 | 95.1 | 93% |
| 12 | JSC " Ust-Kamenogorsk titanium -magnesium plant" | 239.2 | 121.5 | -49% |
| 13 | Tengizchevroil LLP \_ | 485.8 | 477.6 | -2% |
| 14 | PAZ JSC (Pavlodar Aluminum Smelter) | 242.8 | 232.9 | -4% |
| 15 | JSC "KEZ" (Kazakhstan electrolysis plant) | 948.3 | 950.1 | 0% |
| 16 | TemirzholEnergo LLP \_ | 362.6 | 420.7 | 16% |
| 17 | JSC "KEGOC" | 1256.7 | 1444.6 | 15% |
| **Total** | | **9,194.1** | **9 109.3** | **-0.9%** |

*million kWh*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Name** | **January-March** | | **Deviation, million kWh** | **Δ, %** |
| **2020** | **2021** |
| **I** | **JSC " Samruk-Energy "** | **1399.98** | **1468.3** | **68.4** | **4.9%** |
| *1.* | *Bogatyr- Komir LLP* | 33.36 | 55.8 | *22.4* | 67.3% |
| *2.* | *JSC Alatau Zharyk Companies »* | 198.51 | 199.4 | *0.9* | 0.5% |
| *3.* | *AlmatyEnergoSbyt LLP* | 1168.11 | 1213.1 | *45.0* | 3.9% |

# **Coal**

# *Thermal coal mining in Kazakhstan*

According to the Bureau of National Statistics, Kazakhstan produced 27,896.5 thousand tons of hard coal in January-March 2021, which is 1% less than in the same period in 2020 (28,130 thousand tons).

*thousand tons*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **No. p / p** | **Region** | **January-March** | | **Δ, %** |
| **2020** | **2021** |
| 1 | Pavlodar | 18,493.2 | 17,566.5 | 95% |
| 2 | Karaganda | 7977.3 | 8,123.1 | 102% |
| 3 | East Kazakhstan | 1675.7 | 2,120.7 | 127% |
|  | **Total for the Republic of Kazakhstan** | **28 130** | **27,896.5** | **99%** |

# *Coal mining by Samruk-Energy JSC*

In January-March 2021, Bogatyr Komir LLP produced 11,758 thousand tons, which is 4.9% less than in the corresponding period of 2020 (12,369 thousand tons).

# *Sale of coal by Samruk-Energy JSC*

In January-March 2021, 11,751 thousand tons were sold, including :

- to the domestic market of the Republic of Kazakhstan 10,607 thousand tons, which is 6.8% more than in the corresponding period of 2020 (9,928 thousand tons);

- for export (RF) - 1,144 thousand tons, which is 53.2% less than in the corresponding period of 2020 (2,443 thousand tons).

*thousand tons*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **No. p / p** | **Region** | **Sales volume, thousand tons** | | **Δ, %**  **2021/2020** |
| **January-March 2020** | **January-March 2021** |
| **Total to the domestic market of the Republic of Kazakhstan** | | **9 928** | **10 607** | **106.8%** |
| **Total for export to Russia** | | **2443** | **1 144** | **46.8%** | **1 144** | **46.8%** |

According to the indicators for January-March 2021, compared to the same period in 2020, the Company observed a decrease in coal sales by 5%.

# **Renewable energy sources**

According to the system operator, the volume of electricity production by renewable energy facilities (SPP, WPP, BGS, small HPPs) of the Republic of Kazakhstan in January-March 2021 amounted to 870.5 million kWh . Compared to the period January-March 2020 (596.2 million kWh ), the increase was 173.7%.

million kWh

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **No.** | **Name** | **2021** | | **2020** | | **Deviation 2021/2020,** | |
| **January March** | **share in Kazakhstan, %** | **January March** | **share in Kazakhstan, %** | **million kWh** | **%** |
|  | **Total output in Kazakhstan** | **30769.7** | **100%** | **29450.3** | **100.0%** | **1319.4** | **1.0%** |
| **I** | **Total RES in the Republic of Kazakhstan, incl . by zones** | **870.5** | **2.8%** | **596.2** | **2.0%** | **274.3** | **1.5%** |
| 1. | *Northern zone* | *359.9* | *41.3%* | *195.6* | *32.8%* | *164.3* | *1.8%* |
| 2. | *Southern zone* | *425.7* | *48.9%* | *272.2* | *45.7%* | *153.5* | *1.6%* |
| 3. | *Western zone* | *84.9* | *0.0%* | *128.4* | *21.5%* | *-43.5* | *0.7%* |
| **II** | **Total RES in the Republic of Kazakhstan, incl . by type** | **870.5** | **2.8%** | **596.2** | **2.0%** | **274.3** | **1.5%** |
| 1. | *SES* | *267.0* | *30.7%* | *247.7* | *41.5%* | *19.3* | *1.1%* |
| 2. | *WES* | *432.3* | *49.7%* | *242.6* | *40.7%* | *189.7* | *1.8%* |
| 3. | *Small HPPs* | *170.1* | *19.5%* | *105.3* | *17.7%* | *64.8* | *1.6%* |
| 4. | *BiogasInstallations* | *1.1* | *0.1%* | *0.6* | *0.1%* | *0.5* | *1.8%* |

January-March 2021 there is an increase in electricity production by small hydropower plants compared to the same period in 2020.

million kWh

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **No.** | **Name** | **2021** | | **2020** | | **Deviation 2021/2020,** | |
| **January March** | **share in Kazakhstan, %** | **January March** | **share in Kazakhstan, %** | **million kWh** | **%** |
|  | ***Electricity production in UES RK*** | **30769.7** | **100.0%** | **29450.3** | **100%** | **1319.4** | **1.0%** |
| 1. | Production of "clean" electricity (RES + Large HPPs) | *3869.1* | *12.6%* | *1922.2* | *6.5%* | *1946.9* | *2.0%* |
| 2. | Production of "clean" electricity (RES excluding Large HPPs) | *870.5* | *2.8%* | *596.2* | *2.0%* | *274.3* | *1.5%* |

Samruk-Energo JSC (SPP, WPP, small HPPs) for January-March 2021 amounted to 126.4 million kWh or 9.8% of the total volume of electricity generated by RES facilities, which is 40.8 % higher compared to the same period in 2020 (in January-March 2020, the Company's RES generation amounted to 85.6 million kWh , RES of the Company 14.4%).

million kWh

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **No.** | **Name** | **2021** | | **2020** | | **Deviation 2021/2020,** | |
| **January March** | **share in Kazakhstan, %** | **January March** | **share in Kazakhstan, %** | **million kWh** | **%** |
| **1** | **Production of JSC " Samruk-Energo " "clean" electricity (RES excluding Large HPPs), including :** | **126.4** | **9.8%** | **85.6** | **14.4%** | **40.8** | **1.5%** |
|  | *AlES JSC Cascade of small HPPs* | *47.3* | *3.6%* | *33.9* | *5.7%* | *13.4* | *1.4%* |
|  | *Samruk - Green Energy LLP SPP 2 MW* | *2.3* | *0.2%* | *0.8* | *0.1%* | *1.5* | *2.9%* |
|  | *Samruk - Green Energy LLP WPP Shelek 5 MW* | *1.2* | *0.0%* | *0.0* | *0.0%* | *1.2* |  |
|  | *First Wind Power Plant LLP WPP 45 MW* | *76.8* | *5.9%* | *50.9* | *8.5%* | *25.9* | *1.5%* |

# **Centralized electricity trading JSC "KOREM"**

*(information of KOREM JSC)*

*General trading results*

Based on the results of the centralized electricity trading in March 2021, 112 transactions were concluded in the amount of 241,440 thousand kWh for a total amount of 1,978,795.4 thousand tenge (excluding VAT) (including spot trading in the "day ahead" mode and trading for the medium and long term), including:

* spot-trades in the "one day ahead" mode - 109 deals were made in the amount of 117,072 thousand kWh for a total amount of 960,518.6 thousand tenge. The minimum price at spot auctions in the “one day ahead” mode was 8.2 tenge / kWh (excluding VAT), the maximum price was 8.21 tenge / kWh (excluding VAT);
* spot trading “during the trading day” - no deals were made;
* trades in electricity for the medium and long term - 3 transactions were made in the amount of 124,368 thousand kWh for a total amount of 1,018,276.8 thousand tenge (without VAT). The minimum price for this type of centralized trading was 7.95 tenge / kWh (excluding VAT), the maximum - 11.6 tenge / kWh (excluding VAT).

For the same period in 2020, the total volume of centralized trading amounted to 77,255 thousand kWh . The table below shows the price dynamics of transactions concluded at centralized trading in March 2020-2021.

Dynamics of prices established as a result of centralized trading

in March 2020-2021

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **March** | **spot trading in the "day ahead" mode** | | **trades for medium- and long-term periods** | | **during business days** | |
| MIN price | MAX price | MIN price | MAX price | MIN price | MAX price |
| **tg / kWh ( without VAT)** | | | | | |
| **2020** | **6** | **6.3** | **5.76** | **7.65** | **-** | **-** |
| **2021** | **8.2** | **8.21** | **7.95** | **11.6** | **-** | **-** |

# 

# ***Results of spot trading in the "day ahead" mode***

Based on the results of the spot trading in March 2021, 109 transactions were concluded in the amount of 117,072 thousand kWh , the minimum clearing price for spot trading in the “one day ahead” mode was 8.2 tenge / kWh (excluding VAT), and maximum - 8.21 tenge / kWh (excluding VAT).

The table below shows the final day-ahead spot trading results for March 2021.



# The table shows that the total demand amounted to 158,880 thousand kWh , while the total supply amounted to 117,072 thousand kWh , Unsatisfied demand in March 2021 amounted to 41,808 thousand kWh , and unsatisfied supply amounted to 0 thousand kWh . In the course of spot trading, 294 orders were accepted into the trading system, of which 225 were from buyers and 69 were from sellers.

# ***Results of spot trading "during the trading day"***

# Based on the results of the auctions held in March 2021, no deals were concluded. Based on the results of the auctions held in March 2020, no deals were also concluded.

# ***Trading results for the medium and long term***

# In March 2021, based on the results of trading for the medium and long term, 3 transactions were concluded in the amount of 124,368 thousand kWh for a total amount of 1,018,276.8 thousand tenge (excluding VAT). The minimum price for this type of centralized trading was 7.95 tenge / kWh (without VAT), and the maximum price was 11.6 tenge / kWh (without VAT).

# For the same period in 2020, for trading in electricity for the medium and long term, 3 transactions were concluded with a volume of 70,560 thousand kWh for a total amount of 538,513.92 thousand tenge (excluding VAT). The minimum price for this type of centralized trading was 5.76 tenge / kWh (without VAT), and the maximum price was 7.65 tenge / kWh (without VAT).

# **Export-import of electrical energy**

In order to balance the production and consumption of electricity in January-March 2021, exports to the Russian Federation amounted to 309.4 million kWh , imports from the Russian Federation - 342.2 million kWh .

Export of JSC " KEGOC " - 297.843 million kWh , import of electricity from the Russian Federation for the reporting period in the amount of 273.319 million kWh .

million kWh

| **Name** | **2020 January  - March** | **202 1 January  -March** | **Δ 2021/2020** | |
| --- | --- | --- | --- | --- |
| **2260.8** | **-52.8%** |
| **Export of Kazakhstan** | **-690.5** | **-1,011.6** | **-321.1** | **46.5%** |
| **in Russia** | -234.8 | -309.4 | -74.5 | 31.7% |
| **in the IPS of Central Asia** | -455.7 | -702.2 | -246.5 | 54.1% |
| **Import of Kazakhstan** | **201.82** | **249.92** | **48.11** | **24%** |
| **From Russia** | 279.8 | 342.2 | 62.4 | 22.3% |
| **from IPS Central Asia** | 277.2 | 342.2 | 65.0 | 23.5% |
| **Balance- flow "+" deficit, "-" excess** | **-410.7** | **-669.4** | **-258.7** | **63.0%** |

# **SECTION II**

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

The common electricity market of the Eurasian Economic Union is planned to be formed by integrating the national electricity markets of **Armenia, Belarus, Kazakhstan, Kyrgyzstan and Russia.** The EAEU Member States are gradually forming a common electric power market of the Union on the basis of parallel operating electric power systems, taking into account the priority provision of electric energy to domestic consumers of the Member States.

At the same time, the balance of economic interests of producers and consumers of electric energy, as well as other subjects of the EAEU OER, will be observed.

May 29, 2019 as part of the celebration of the fifth anniversary of the signing of the Treaty on the Eurasian Economic Union The Supreme Council signed an international agreement on the formation of a common electric power market of the Union in the form of a Protocol on amendments to the Treaty on the Eurasian Economic Union dated May 29, 2014 (in terms of the formation of a common electric power market of the Eurasian Economic Union).

On December 20, 2019, the Supreme Council adopted Decision No. 31 “On the plan of measures aimed at the formation of a common electricity market of the Eurasian Economic Union”, which establishes, among other things, the deadlines for the approval and entry into force of the rules for the functioning of the Union’s common electricity market, as well as other acts provided for by the specified protocol.

At present, the EAEU Member States are working on the development and harmonization of the rules for the functioning of the EAEU CER.

In 2021, one meeting of the Advisory Committee on the Electricity Industry under the EEC Board (hereinafter referred to as the Advisory Committee) was held   
(14th meeting, January 21, 2021) and one meeting of the Subcommittee on the formation of the EAEU ERA of the Advisory Committee on the Electricity Industry under the EEC Board (hereinafter referred to as the Subcommittee) (56th meeting 14 January , 57th meeting 5 February, 58th meeting 25-26 February, 59th meeting 11-12 March, 60th meeting 26 March).

Work on the formation of a common electricity market of the Eurasian Economic Union continues.

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

Since 1992, 55 meetings of the Electric Power Council of the Commonwealth of Independent States (hereinafter - CIS EEC) have been held.

By decision of the EEC of the CIS (Minutes No. 50 dated October 21, 2016), the Consolidated Schedule for the Formation of a Common Electricity Market of the CIS Member States was approved.

|  |  |  |  |
| --- | --- | --- | --- |
| **No.** | **Events** | **Period of execution** | **Current status** |
| 1 | Implementation of activities in accordance with Section II . Action Plan for Cooperation between the EEC and the EEC of the CIS, approved on June 10, 2016. | 2016-2020 | Permanent participation of the EEC representatives at the meetings of the EEC of the CIS, representatives of the EC of the EEC of the CIS - at the meetings on the formation of the EER of the EAEU is ensured. |
| 2 | Preparation of a draft procedure for the settlement of deviations from the agreed values of interstate power flows . | 2016-2017 | The decision to develop a procedure for settling deviations from the agreed values of interstate power flows was taken at the 45th meeting of the EEC of the CIS. The draft Procedure was considered at the 29th meeting of the Working Group "Formation of a common electric power market of the CIS countries" on September 15, 2016 in Moscow (RF). In accordance with the Decision of the 47th meeting of the EEC of the CIS, the Action Plan of the EEC of the CIS for 2016 includes the development and approval of draft documents on determining the magnitude of deviations from the agreed values of interstate electricity flows and the settlement of deviations from the agreed values of interstate electricity flows . Work continues. |
| 3 | Preparation of a draft procedure for the distribution of throughput capacity of interstate sections / export-import sections between participants in export-import activities. | 2018-2020 | By the decision of the 50th meeting of the EEC of the CIS, Methodological recommendations for the metrological support of measuring complexes for metering electric energy at interstate  power lines.  By the decision of the 50th meeting of the EEC of the CIS, the Schedule for monitoring the application of regulatory technical documents in the field of metrology of electrical measurements and electricity metering in the production activities of the energy systems of the CIS member states was approved. |
| 4 | Preparation of a draft procedure for compensation of costs associated with the implementation of the transit / transmission / movement of electricity through the energy systems of the CIS member states. | 2018-2020 | The unified format of the data exchange layout for accounting of interstate electricity flows , developed by the Working Group on metrological support of the electric power 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 industry management bodies of the CIS member states for use in organizing the accounting of interstate electricity flows and data exchange on interstate flows . |
| 5 | Harmonization of national legislation in the field of electric power industry, 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 EEC of the CIS approved the Conceptual approaches to technical regulation and standardization in the field of electric power industry. The Regulations on the Working Group “Updating and Harmonizing the Regulatory and Technical Base for Regulating the Electricity Industry” were also approved. By the decision of the 51st meeting of the CIS EEC, the Work Plan of this Working Group was approved. |

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

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

**Republic of Armenia**

**Minister: Armenia's energy development program provides for the extension of the life of the ANPP after 2026**

The strategic program for the development of the Armenian energy sector until 2040 provides for the repeated extension of the life of the Armenian NPP after 2026, and in the future, the construction of a new NPP.

As the minister noted, nuclear power plants are a stable supplier of clean energy, and thanks to this, Armenia will be able to fulfill its obligations under the Paris Agreement to combat climate change.

It should be noted that earlier the management of the Armenian NPP has repeatedly stated that there is a resource for extending the life of the ANPP until 2040 (in 2026 for five years, and in 2030 for 10 years - until 2040).

To complete the ANPP program, the Armenian government provided a budget loan in the amount of 63.2 billion drams (about $130 million). For the implementation of the program, Armenia previously attracted a $270 million loan from the Russian Federation and a $30 million grant at 3% per annum, and as of today, the residual resource of these funds was $ 107 million.

# FRV with IFC, EBRD and Ameribank has successfully completed a deal to finance the construction of the largest industrial solar power plant in Armenia, Masrik-1.

Fotowatio Company Renewable Ventures (FRV), which is a member of Abdul Latif Jameel and the world's leading developer of projects in the field of renewable energy, together with IFC, EBRD and Ameribank , successfully completed a deal to finance the construction of the largest Masrik-1 industrial solar power plant in Armenia. Financing of the project will be up to $ 38.4 million in the form of several tranches.

The 55 MW Masrik-1 solar power plant will generate more than 128 gigawatt-hours of electricity per year at a competitive rate of $41.9 per MWh to power more than 20,000 homes and avoid over 40,000 tons of carbon emissions in year.

**Armenian authorities propose to increase the capacity of autonomous solar stations**

The maximum capacity of autonomous solar stations for business in [Armenia](https://ru.armeniasputnik.am/tags/keyword_news_armenia/) can be increased from 500 kilowatts to 2 megawatts. The draft of relevant amendments to the law "On Energy", drawn up by the Ministry of Territorial Administration and Infrastructures, was submitted to the parliament of the republic.

Now the limit for home solar stations is 150 kilowatts, for business this threshold was increased from 150 to 500 kilowatts in 2017, for a period of five years (that is, until the end of 2022).

The owners of such stations not only use electricity from the network, but also supply it themselves. If it turns out that at the end of the year the owner sent more to the network than he received, then he receives compensation for this surplus. Thanks to this rule, several hundred such stations have already appeared in Armenia.

At the same time, according to the national energy development strategy, by 2024 it is planned to increase the total capacity of autonomous solar stations to 100 megawatts, while today it already exceeds 80 megawatts. The power grid may not be able to cope with a further increase in these capacities, so even the current threshold of 500 kilowatts is set temporarily, until the end of 2022 (the stations installed before that will be able to continue operating).

In addition, if the owners of such power plants deliver more to the network during the year than they receive from there, then “Electric Networks of [Armenia](https://ru.armeniasputnik.am/tags/keyword_news_armenia/) ” buys this surplus from them at a price of 22-24 drams per kilowatt-hour. This is almost the same price as commercial solar stations sell electricity to the grid - which, nevertheless, have to obtain a license. True, the current law provides that in the case of autonomous stations, their power should not exceed the approximate power of electrical appliances in a house or enterprise (to exclude the regular sale of energy from such stations).

**Republic of Belarus**

**The representative of Belarus headed the Energy Department of the EEC**

Representative of Belarus Vadim Zakrevskiy has been appointed Director of the Energy Department of the Eurasian Economic Commission.

Prior to his appointment to the EEC, Vadim Zakrevskiy served as Deputy Minister of Energy of Belarus. He is a candidate of technical sciences.

# Minsk CHPP-5 started construction of the second stage of peak-reserve capacities

at the CHPP-5 branch of RUE Minskenergo in connection with the commissioning of the Belarusian NPP.

At CHPP-5, work is also underway to modernize the open switchgear for 330 kV and 110 kV at the first stage of the construction of the REI. The transformer is being installed. Completion is scheduled for July.

When considering the issue of updating the information on testing the operation of the power systems of the Baltic countries in an isolated mode, the operators of the Baltic transmission systems informed the Belarusian and Russian parties about the postponement of testing with the branch of the energy systems of the Baltic States to isolated operation at the end of 2024 - the beginning of 2025 within two weeks . Testing was originally planned for 2019. Transmission system operators of the Baltic States noted their readiness to notify the parties in a timely manner of more precise testing dates.

**The Republic of Kazakhstan**

**another SPP was built in the Almaty region**

Kaskelen 50 MW is produced by the photovoltaic method of converting solar energy into electrical energy using polycrystalline silicon solar panels with a total power of 50 MW on the DC side. There are about 140,000 such panels on the SES site, with an area of 140 hectares.

The total cost of the project amounted to 13.37 billion tenge, 80% of which was provided by the state development institution Development Bank of Kazakhstan JSC (DBK, a subsidiary of Baiterek Holding ) in the form of a loan, the remaining 20% - own funds of the project implementer Mistral LLP Energy ".

At the moment, in addition to the Kaskelen 50 MW solar power plant, the Development Bank's projects include 2 solar power plants: the Nurgisa solar power plant with a capacity of 100 MW near the city of Kapshagay , as well as the Zhylga photovoltaic power plant with a capacity of 20 MW in the Turkestan region.

**Kazakhstan will hold the first auctions for the construction of flexible generation at the end of 2021**

The Ministry of Energy plans to hold auctions at the end of 2021 to select projects for the construction of flexible capacities, Energy Minister N. Nogaev said at an expanded board of the department.

As reported, this year the Ministry of Energy [plans to hold](https://kursiv.kz/news/otraslevye-temy/2021-02/v-kazakhstane-postroyat-manevrennye-moschnosti-na-1500-mvt-k-2025-godu) auctions for the construction of four combined cycle plants (CCGT) with commissioning in 2025 in the south of Kazakhstan. These are CCGTs in the Kyzylorda region for 220 MW, Turkestan region for 250 MW, Almaty region for 400 MW and Almaty for 450 MW.

According to the head of the Kazakhstan Electricity Association A. Kuanyshbaev , Kazakhstan needs the construction of flexible capacities of at least 1-1.5 thousand MW.

**Increase in electricity tariffs explained in the Ministry of Energy**

On Tuesday, March 9, information appeared that Kazakhstan [could increase marginal electricity tariffs](https://www.zakon.kz/5061243-v-kazahstane-planiruyut-povysit-tarify.html) . The Ministry of Energy commented on this news.

The ministry explained that in September 2020, it received an application from 37 energy-producing organizations (out of 45 for which marginal tariffs are set) to adjust the marginal tariffs for electricity.

Director of the Electricity Development Department of the Ministry of Energy of the Republic of Kazakhstan A. Daribaev noted that in 2020 and from the beginning of 2021, the following costs independent of energy-producing organizations increased:

- an increase in the cost of fuel (the price of Karazhyr coal by 8.6%, the price of coal by Bogatyr Komir LLP increased by 9.9% in 2020, the cost of its transportation increased by 7%);

- an increase in the volume of mandatory purchase of electricity produced by RES (in 2021, the volume increased by 68% compared to 2020, costs for RES increased by 49%);

- an increase in the cost of mandatory payments to the budget due to an increase in the MCI (from 2,778 tenge in 2020 to 2,917 tenge in 2021);

- increase in the cost of gas transportation;

- Increased repair costs.

## **Why the Kazakh authorities are selling the Ust-Kamenogorsk and Shulbinskaya HPPs**

**In February of this year, the government of Kazakhstan published a decree, which refers to the sale of state shares in the Ust-Kamenogorsk and Shulbinskaya hydroelectric power plants (HPPs).**

Prime Minister Askar Mamin instructed to hold a two-stage tender for the sale of 100% state stakes in the authorized capital of Ust -Kamenogorsk HPP NPP and Shulbinskaya HPP NPP limited liability partnerships. On February 9, he signed the corresponding resolution.

The Decree shall enter into force from the date of its signing. These facilities are included in the comprehensive privatization plan for 2021-2025. Work on the assessment of objects began on March 11, 2021. It is planned to determine the starting cost by March 25. The auction will be held on May 4, and on May 17 a sale and purchase agreement will be concluded, according to the website privatization.gosreestr.kz.

**Kyrgyz Republic**

**Under the CASA-1000 project, Kyrgyzstan will export 40% of the volume of electricity, - NEGK**

Tyumenbaev, executive director for project implementation at the National Electric Grid of Kyrgyzstan OJSC .

According to him, the price of electricity for Pakistan will be 5.15 cents per 1 kWh (the cost price for receiving OJSC "Electric Stations"), for Afghanistan the price is the same.

And the total price with all costs will be 9.41 cents for Pakistan, he said.

**An agreement has already been reached with Kazakhstan on the supply of 900 million kWh of electricity, we must return this volume by 2023, - Minister R. Kazakbaev**

For 2021, electricity imports in the amount of 1.5 billion kWh are required , in connection with which negotiations are underway with the Uzbek and Kazakh sides. Minister of Foreign Affairs R. Kazakbaev spoke about this .

“An agreement has already been reached with Kazakhstan on the supply of electricity in the amount of up to 900 million kWh in 2021. The same amount of electricity will be returned to Kazakhstan by 2023. At the moment, negotiations are also underway with the Uzbek side. We hope that the authorized bodies of the two countries will find mutually acceptable solutions for the import of electricity, including taking into account the interdependence of our states in the water and energy sector,” he said.

There is a risk to reach April 2022 with a volume of water in the Toktogul reservoir of 5.5 billion cubic meters, - National Energy Holding

The minister stressed that due to the onset of low water in the Naryn river basin, today there are real risks of insufficient water accumulation in the Toktogul reservoir.

**Russian Federation**

# RDIF and Fortum invest in the construction of the largest solar power plant

The first supplies of electricity to the wholesale market may begin as early as the fourth quarter of 2021

The Russian Direct Investment Fund (RDIF) and Fortum , a leading energy company in Northern Europe and a leader in renewable energy in Russia, are investing in a 116 MW solar power plant (SPP) project in the Republic of Kalmykia.

# **New renewable energy facilities will be fined for low generation**

The government published the rules of the new renewable energy support program for 2025-2035, and they turned out to be unexpectedly strict. According to the new requirements, the generator may lose 30-80% of the total payment if the generation plan is not met in the first year of operation. For insufficient sales of equipment abroad, investors face a fine within a third of the payment, for low localization - 75-85%. The rules have been approved, although the monetary volume of the program is unknown, investors are outraged. With its decline, analysts believe, some players will leave the market.

The government has published a decree introducing the rules for a new renewable energy support program for 2025-2035. From now on, the selection of projects for solar and wind power plants (SPP and WPP), as well as mini-hydro plants up to 50 MW, will be held at the minimum single-part price per kilowatt-hour (includes capital and operating costs). SPP projects for 2023 and 2024 from the first renewable energy support program (480 MW) will be selected according to the same criterion. The first contests under the new rules must be held before September 4th.

The Decree also introduces penalties for non-fulfillment of the export target (the share of proceeds from the sale of renewable energy equipment abroad in the cost of the station). For SES and WES, the penalty in 2025-2029 will be 10% of the guaranteed payment, in 2030-2032 it will increase to 21%, and in 2033-2035 it will reach 33%. The Decree also increases fines for insufficient localization of equipment for renewable energy facilities: a fine for solar power plants - 85%, for wind farms and mini-hydroelectric power plants - 75%.

**The government has amended the conditions for the selection of TPP modernization projects**

The Russian government has published [a Decree on Amendments to the Rules of the Wholesale Electricity and Capacity Market](http://publication.pravo.gov.ru/Document/View/0001202103190002?index=0&rangeSize=1) regarding projects for the modernization of thermal power plants (TPPs).

According to the Decree, the deadline for the selection of TPP modernization projects for 2027 and additional selection of modernization projects using innovative power equipment for 2027-2029 has been postponed from April 1 to May 1, 2021.

The maximum size of the total capacity of modernization projects using innovative power equipment is set at 1610 MW for two price zones of the wholesale market. Thus, in order to create additional measures for the development of domestic engineering, including gas turbines of higher power, the Government of Russia provides for the selection of projects for the modernization of thermal power plants using up to two gas turbines with a capacity in the range from 65 MW to 80 MW, up to three gas turbines with a capacity of in the range from 100 MW to 130 MW and up to four gas turbines with a capacity in the range from 150 MW to 190 MW within the specified timeframes for their implementation. The adopted decision will reduce the cost burden on consumers and at the same time provide support for the domestic power engineering industry.

The Decree also provides for the possibility of decommissioning generating facilities (one or more) at one power plant and commissioning new facilities at another power plant of the owner located in the same price zone of the wholesale market.

The capital cost limit for TPP modernization projects using innovative gas turbines with a capacity of at least 100 MW is set at 73,437 rubles per 1 kW (indexation of the value of 70,000 rubles per 1 kW, set for withdrawal in 2020), with a capacity of less than 100 MW - 100,000 rubles per 1 kW.