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**REPORT**

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

**JANUARY-MARCH 2020**

**MARKET DEVELOPMENT DEPARTMENT**

**April 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 29 450,4 million kWh of electricity in January-March 2020, which is 5.1% 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-March** | | **Δ, %** |
| **2019** | **2020** |
| **Kazakhstan** | **Total** | **28015,6** | **29450,4** | **5,1%** |
| *TPP* | *23340,7* | *24349,4* | *4,3%* |
| *GTPP* | *2429,4* | *2573,0* | *5,9%* |
| *HPP* | *2038,9* | *2088,2* | *2,4%* |
| *WPP* | *153,7* | *245,1* | *59,5%* |
| *SES* | *52,1* | *194,1* | *272,6%* |
| *BSU* | *0,8* | *0,6* | *-25,0%* |
| **North** | **Total** | **21296,5** | **22449,2** | **5,4%** |
| *TPP* | *19002,6* | *20002,8* | *5,3%* |
| *GTPP* | *816,4* | *868,0* | *6,3%* |
| *HPP* | *1406,7* | *1402,4* | *-0,3%* |
| *WPP* | *50,0* | *112,5* | *125,0%* |
| *SES* | *20,0* | *62,9* | *214,5%* |
| *BSU* | *0,8* | *0,6* | *-25,0%* |
| **South** | **Total** | **3172,6** | **3308,8** | **4,3%** |
| *TPP* | *2392,3* | *2378,7* | *-0,6%* |
| *GTPP* | *58,0* | *55,2* | *-4,8%* |
| *HPP* | *632,2* | *685,8* | *8,5%* |
| *WPP* | *58,5* | *58,5* | *0,0%* |
| *SES* | *31,6* | *130,6* | *313,3%* |
| **Western** | **Total** | **3546,5** | **3692,4** | **4,1%** |
| *TPP* | *1945,8* | *1967,9* | *1,1%* |
| *GTPP* | *1555,0* | *1649,8* | *6,1%* |
| *WPP* | *45,2* | *74,1* | *63,9%* |
| *SES* | *0,5* | *0,6* | *20,0%* |

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

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

*million kWh*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **№** | **Region** | **January-March** | | **Δ, %** |
| **2019** | **2020** |
| 1 | Akmola | 1 293,2 | 1 354,6 | 4,7% |
| 2 | Aktobe | 1 066,1 | 1 096,1 | 2,8% |
| 3 | Almaty | 1 922,8 | 2 000,9 | 4,1% |
| 4 | Atyrau | 1 531,2 | 1 647,8 | 7,6% |
| 5 | East Kazakhstan | 2 272,1 | 2 266,2 | -0,3% |
| 6 | Zhambyl | 738,6 | 677,0 | -8,3% |
| 7 | West Kazakhstan | 623,0 | 637,1 | 2,3% |
| 8 | Karaganda | 4 269,0 | 4 385,5 | 2,7% |
| 9 | Kostanay | 261,7 | 312,0 | 19,2% |
| 10 | Kyzylorda | 138,8 | 160,1 | 15,3% |
| 11 | Mangystau | 1 392,3 | 1 407,5 | 1,1% |
| 12 | Pavlodar | 11 150,7 | 12 051,7 | 8,1% |
| 13 | North Kazakhstan | 983,7 | 983,1 | -0,1% |
| 14 | Turkestan | 372,4 | 470,8 | 26,4% |
|  | **Total for RoK** | **28 015,6** | **29 450,4** | **5,1%** |

# *Electricity generation by associated generation*

In January-March 2020, electricity production from associated generation totaled 14.2 billion kWh, which is comparable to the same period in 2019 (14.2 billion kWh). Meanwhile, compared to January-March 2019, the share of associated generation increased slightly to 50.9% of the total electricity generation in Kazakhstan.

*million kWh*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **№** | **Name** | **2019** | | **2020** | |
| **January-March** | **share in the Republic of Kazakhstan, %** | **January-March** | **share in RoK, %** |
| 1 | ERG | 5 220,4 | 18,6% | 5 100,3 | 17,3% |
| 2 | Kazakhmys Energy LLP | 1 919,5 | 6,9% | 1 989,1 | 6,8% |
| 3 | Kazzinc LLP | 673,2 | 2,4% | 669,9 | 2,3% |
| 4 | Arcellor Mittal JSC | 602,9 | 2,2% | 697,2 | 2,4% |
| 5 | KKS LLP | 1 901,1 | 6,8% | 1 832,7 | 6,2% |
| 6 | CAEC | 1 962,7 | 7,0% | 2 079,7 | 7,1% |
| 7 | Zhambyl GRES JSC | 601,3 | 2,1% | 521,9 | 1,8% |
| 8 | Oil and gas enterprises | 1 383,4 | 4,9% | 1 311,2 | 4,5% |
|  | **TOTAL** | **14 264,5** | **50,9%** | **14 202,0** | **48,2%** |

The volume of electricity production by the energy producing organizations of Samruk-Energy JSC in January-March 2020 amounted to **8 757,9** mln/kWh, or an increase of 13.6% compared to the same period of 2019.

*million kWh*

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **№** | **Name** | **2019** | | **2020** | | **Δ2020/2019** | |
| **January-March** | **share in RoK, %** | **January-March** | **share in RoK %** | **mln kWh** | **%** |
|  | **Samruk-Energy JSC** | **7 709,0** | **27,5%** | **8 757,9** | **29,7%** | **1 048,8** | **13,6%** |
| *1* | *AlES JSC* | *1 618,6* | *5,8%* | *1 664,7* | *5,7%* | *46,1* | *2,9%* |
| *2* | *Ekibastuz GRES-1 LLP* | *4 002,0* | *14,3%* | *5 711,4* | *19,4%* | *1 709,3* | *42,7%* |
| *3* | *Ekibastuz GRES JSC-2 JSC* | *1 699,3* | *6,1%* | *981,3* | *3,3%* | *-718,0* | *-42,3%* |
| *4* | *Shardara HPP JSC* | *130,1* | *0,5%* | *166,9* | *0,6%* | *36,8* | *28,3%* |
| *5* | *Moinak HPP JSC* | *209,4* | *0,7%* | *181,8* | *0,6%* | *-27,6* | *-13,2%* |
| *6* | *Samruk-Green Energy LLP* | *0,7* | *0,002%* | *0,8* | *0,003%* | *0,13* | *19,4%* |
| *7* | *First Wind Power Station LLP* | *48,9* | *0,2%* | *50,9* | *0,2%* | *2,1* | *4,2%* |

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

# *Electricity consumption by zones and regions*

According to the data of the System Operator, in January-March 2020, there was an increase by 4% in the electricity consumption in the Republic compared to the indicators of January-March 2019. Thus, in the northern and western zones of the republic consumption increased by 4%, and in the southern zone by 3%.

*million kWh*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **#** | **Name** | **January- March 2019** | **January-March 2020** | **Δ,  million kWh** | **Δ, %** |
| **I** | **Kazakhstan** | **28 040,3** | **29 039,7** | **999,4** | **4%** |
| 1 | Northern zone | 18 435,7 | 19 098,6 | 662,9 | 4% |
| 2 | Western zone | 3 567,2 | 3 709,3 | 142,1 | 4% |
| 3 | Southern zone | 6 037,4 | 6 231,8 | 194,4 | 3% |
|  | ***including by region*** |  |  |  |  |
| 1 | East Kazakhstan | 2 503,8 | 2 578,9 | 75,1 | 3% |
| 2 | Karaganda | 4 711 | 4 989,4 | 278,4 | 6% |
| 3 | Akmola | 2 674 | 2 692,1 | 18,1 | 1% |
| 4 | North Kazakhstan | 509,5 | 470,4 | -39,1 | -8% |
| 5 | Kostanay | 1 287,7 | 1 294,9 | 7,2 | 1% |
| 6 | Pavlodar | 5 067,3 | 5 378,2 | 310,9 | 6% |
| 7 | Atyrau | 1 660,3 | 1 735 | 74,7 | 4% |
| 8 | Mangystau | 1 347,1 | 1 373,7 | 26,6 | 2% |
| 9 | Aktobe | 1 682,4 | 1 694,6 | 12,2 | 1% |
| 10 | West Kazakhstan | 559,8 | 600,6 | 40,8 | 7% |
| 11 | Almaty | 3 049 | 3 182,7 | 133,7 | 4% |
| 12 | Turkestan | 1 292,6 | 1 346,6 | 54,0 | 4% |
| 13 | Zhambyl | 1 218,1 | 1 201,6 | -16,5 | -1% |
| 14 | Kyzylorda | 477,7 | 500,9 | 23,2 | 5% |

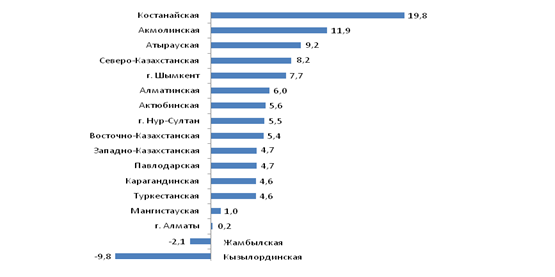
# **Industry results for January-March 2020**

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

In January-March 2020, compared to January-March 2019, the industrial production index was 105.8%. An increase in production volumes was recorded in 15 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*



In Kostanay region, the extraction of agglomerated iron ores, iron ore pellets and concentrates increased, production of steel bars and rods, gold in gold doré alloy, cars and trucks increased (119.8%).

In Akmola region, production of gold-containing ores and concentrates increased, production of gold in gold doré alloy, ball and roller bearings increased (111.9%).

In Atyrau region due to the increase in crude oil production, the index of industrial production amounted to 109.2%.

In North-Kazakhstan region uranium ore extraction increased, production of unrefined sunflower and rapeseed oil, processed milk, butter, commodity concrete and centrifugal pumps increased (108.2%).

In Shymkent city the production of refined sunflower oil, gasoline, diesel fuel, liquefied propane and butane, medicines increased (107.7%).

In Almaty region, production of confectionery and chocolate, soft drinks, cigarettes and medicines increased (106%).

In Aktobe oblast, production of copper-zinc ores and industrial services increased (105.6%).

In Nur-Sultan city the production of flour, soft drinks, commodity concrete and refined gold increased (105.5%).

In East-Kazakhstan region there was an increase in extraction of copper ores and gold-containing concentrates, production of cars and trucks increased (105.4%).

In West-Kazakhstan region due to the increase in gas condensate production, the index of industrial production amounted to 104.7%.

In Pavlodar region the extraction of copper concentrates increased, production of steel pipes, parts of railroad locomotives, streetcar motor cars and rolling stock, electricity increased (104.7%).

In Karaganda oblast, production of iron ore sinter, gold and zinc concentrates increased, production of pig iron, flat rolled steel, blister and refined copper increased (104.6%).

In Turkestan oblast, production of processed cotton, oil bitumen, and distribution power boards and boxes increased (104.6%).

In Mangistau region due to the increase in the volume of industrial services, the index of industrial production amounted to 101%.

In Almaty city the production of beer, soft drinks, medicines, prefabricated building structures of concrete, non-alloy steel and other aluminum metal products increased (100.2%).

In Zhambyl region due to the reduction of sugar and phosphorus production, the index of industrial production amounted to 97.9%.

In Kyzylorda region due to the reduction of crude oil production, the index of industrial production amounted to 90.2%.

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

# *Electricity consumption by large consumers in Kazakhstan*

In January-March 2020, electricity consumption by large consumers decreased by 1.3% compared to the same period in 2019.

*million kWh*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **№** | **Consumer** | **January-March** | | |
| **2019** | **2020** | **Δ, %** |
| 1 | Arcelor Mittal Temirtau JSC | 991,5 | 926,9 | 7% |
| 2 | AZF (Aksu) TNK Kazchrome JSC | 1 477,1 | 1 434,2 | 3% |
| 3 | Kazakhmys Smelting LLP | 299,3 | 295,2 | 1% |
| 4 | Kazzinc LLP | 723,4 | 736,5 | -2% |
| 5 | Kazzinc JSCSokolovsko-Sarbay State Enterprise | 485,2 | 440,6 | 10% |
| 6 | Kazakhmys Corporation LLP | 337,6 | 311,8 | 8% |
| 7 | AZF (Aktobe) TNK Kazchrome JSC | 764,6 | 771,4 | -1% |
| 8 | RSE Kanal im. Satpayev | 25,6 | 32,9 | -22% |
| 9 | Kazphosphate LLP | 505,2 | 624,6 | -19% |
| 10 | NDFZ JSC (part of Kazphosphate LLP) | 430,8 | 557,9 | -23% |
| 11 | Taraz Metallurgical Plant LLP | 49,3 | 42,1 | 17% |
| 12 | Ust-Kamenogorsk Titanium and Magnesium Combine JSC | 239,2 | 204,5 | 17% |
| 13 | Ust-Kamenogorsk Titanium and Magnesium Combine JSCTengizchevroil | 485,8 | 486,9 | 0% |
| 14 | JSC " PAZ "(Pavlodar Aluminum Plant) | 242,8 | 236,6 | 3% |
| 15 | JSC " KEZ "(Kazakhstan Electrolysis Plant) | 948,3 | 940,9 | 1% |
| 16 | Temirzholenergo LLP | 362,6 | 444,2 | -18% |
| 17 | JSC "KEGOC" | 1 256,7 | 1 387,4 | -9% |
| **Total** | | **3 261,6** | **9 194,1** | **9 316,5** |

# **Coal**

# *Steam coal production in Kazakhstan*

Kazakhstan produced 28.1 million tons of hard coal in January-March 2020, which is 2% less than in the same period of 2019 (28.7 million tons), according to the Committee on Statistics of the Ministry of Energy of the Republic of Kazakhstan.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **№** | **Oblast** | **January-March** | | **Δ, %** |
| **2019** | **2020** |
| 1 | Pavlodarskaya | 18 848,4 | 18 439,2 | 98% |
| 2 | Karagandinskaya | 7 885,2 | 7 977,3 | 101% |
| 3 | East Kazakhstan | 1 908,3 | 1 675,7 | 88% |
|  | **Total in RoK** | **28 739,4** | **28 130** | **98%** |

# *Coal production by Samruk-Energy JSC*

In January-March 2020, Bogatyr Komir LLP produced 12369 thousand tons, which is 0.4% less than in the corresponding period of 2019 (12414 thousand tons).

# *Coal sales by Samruk-Energy JSC*

In January-March 2020, 12731 thousand tons were sold, including:

- 9928 thousand tons were delivered to the domestic market of the Republic of Kazakhstan, which is 1.1% less than in the corresponding period of 2019 (9824 thousand tons);

- exported to Russia – 2443 million tons, which is 0.9% more than in the corresponding period of 2019 (2422 thousand tons).

*thousand tonnes*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **№** | **Region** | **Sales volume, thousand tonnes** | | **Δ, %** |
| **January-March 2019** | **January-March 2020** |
| Total exports to the domestic market of the Republic of Kazakhstan | | **9 824** | **9 928** | **101,1%** |
| Total exports to the Russian Federation | | **2 422** | **2 443** | **100,9%** |

According to the indicators for January 2020, compared to the same period in 2019, the Company's coal sales decreased by 1%.

# **Renewable energy sources**

The volume of electricity produced by renewable energy facilities (SES, wind farms, BGS, small hydroelectric power plants) in January-March 2020 amounted to 596.2 million kWh. Compared to January-March 2019 (317.1 million kWh), the increase was 88%.

million kWh

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **№** | **Name** | **2019** | | **2020** | | **Deviation 2020/2019** | |
| **January-March** | **share in the Republic of Kazakhstan, %** | **January-March** | **share in the Republic of Kazakhstan, %** | **mln kWh** | **%** |
|  | **Total output in the Republic of Kazakhstan** | **28015,6** | **100%** | **29450,3** | **100,0%** | **1434,7** | **5,1%** |
| **I** | **Total RES in the Republic of Kazakhstan, including by zones** | **317,1** | **1,1%** | **596,2** | **2,0%** | **279,1** | **88,0%** |
| 1. | *Northern Zone* | *94,7* | *29,9%* | *195,6* | *32,8%* | *100,9* | *106,5%* |
| 2. | *Southern zone* | *176,7* | *55,7%* | *272,2* | *45,7%* | *95,5* | *54,0%* |
| 3. | *Western Zone* | *45,7* | *0,0%* | *128,4* | *21,5%* | *82,7* | *0,0%* |
| **II** | **Total RES in the Republic of Kazakhstan, including by type** | **317,1** | **1,1%** | **596,2** | **2,0%** | **279,1** | **88,0%** |
| 1. | *SES* | *52,1* | *16,4%* | *247,7* | *41,5%* | *195,6* | *375,4%* |
| 2. | *Wind farms* | *153,7* | *48,5%* | *242,6* | *40,7%* | *88,9* | *57,8%* |
| 3. | *Small hydroelectric* | *110,5* | *34,8%* | *105,3* | *17,7%* | *-5,2* | *-4,7%* |
| 4. | *Biogas plants* | *0,8* | *0,3%* | *0,6* | *0,1%* | *-0,2* | *0,0%* |

In January-March 2020, there is a decrease in electricity production by large and small hydropower plants compared to the same period in 2019, while electricity production by WES, SES and BSU facilities increased.

million kWh

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **#** | **Name** | **2019** | | **2020** | | **Deviation 2020/2019** | |
| **January-March** | **share in the Republic of Kazakhstan, %** | **January-March** | **share in the Republic of Kazakhstan, %** | **mln kWh%** | **%** |
|  | ***Electricity production in the Unified Energy System of the Republic of Kazakhstan*** | **28015,6** | **100,0%** | **29450,3** | **100%** | **1434,7** | **5,1%** |
| 1. | Production of "clean" electricity (RES + Large hydroelectric power plants) | *2245,5* | *8,0%* | *2607,8* | *8,9%* | *362,3* | *16,1%* |
| 2. | Production of "clean" electricity (RES excluding Large hydroelectric power plants) | *317,100* | *1,1%* | *596,2* | *2,0%* | *279,1* | *88,0%* |

Electricity generation by RES facilities of Samruk-Energy JSC (SES, WES, small HPPs) in January-March 2020 amounted to 85.6 mln kWh or 14.4% of the total volume of electricity generated by RES facilities, which is 4.3% higher compared to the same period of 2019 (in January-March 2019, RES generation of the Company amounted to 82.1 mln kWh, and the share of RES of the Company was 25.9%).

The main decrease in the share of the Company's RES power generation is the commissioning of new RES capacities in the RoK.

The Company's share in the production of "clean" electricity (SES, RES, small and large HPPs) for January-March 2020 increased by 9.2% (685.7.5 million kWh) compared to the same period of 2019. (627.7 million kWh).

million kWh

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **№** | **Name** | **2019** | | **2020** | | **Deviation 2020/20/2019.** | |
| **January-March** | **share in the Republic of Kazakhstan, %** | **January-March** | **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) | 627,7 | 28,0% | 685,7 | 26,3% | 58,0 | 9,2% |
| 2. | Production of "clean" electricity by JSC "Samruk-Energy" (SES, wind farms and small hydroelectric power plants), incl.: | 82,1 | 25,9% | 85,6 | 14,4% | 3,5 | 4,3% |
| 3. | *Cascade of small hydroelectric power plants of "AlES" JSC* | *32,5* | *10,2%* | *33,9* | *5,7%* | *1,4* | *4,3%* |
| 4. | *Samruk-Green Energy LLP* | *0,7* | *0,2%* | *0,8* | *0,1%* | *0,1* | *14,3%* |
| 5. | *First Wind Power Station LLP* | *48,9* | *15,4%* | *50,9* | *8,5%* | *2,0* | *4,1%* |

# **Centralized electricity trading by KOREM JSC**

*(Information provided by KOREM JSC)*

*General results of the trades*

According to the results of centralized trades in electricity in February 2020, 104 deals were concluded in the volume of 50,071 thousand kWh for a total amount of 330,105.36 thousand tenge (including, in the "day-ahead" mode and trades for medium- and long-term periods), including:

- spot trades in "day-ahead" mode - 103 deals were concluded in the volume of 49,735 thousand kWh for a total amount of 328,170 thousand tenge. The minimum price at spot trades in "day-ahead" mode amounted to 4,501 tg/kWh (excluding VAT), the maximum price - 6,2 tg/kWh (excluding VAT);

- spot trades "during the operational day" - no deals were concluded.

- trades in electricity for medium- and long-term periods - 1 deal was concluded in the volume of 336 thousand kWh for a total amount of 1935.36 thousand tenge. The minimum and maximum price for this type of centralized trading was 5.76 tenge/kWh (excluding VAT).

For the same period of 2019, the total volume of centralized bidding amounted to 1,079,058 thousand kWh.

Dynamics of prices formed on the basis of

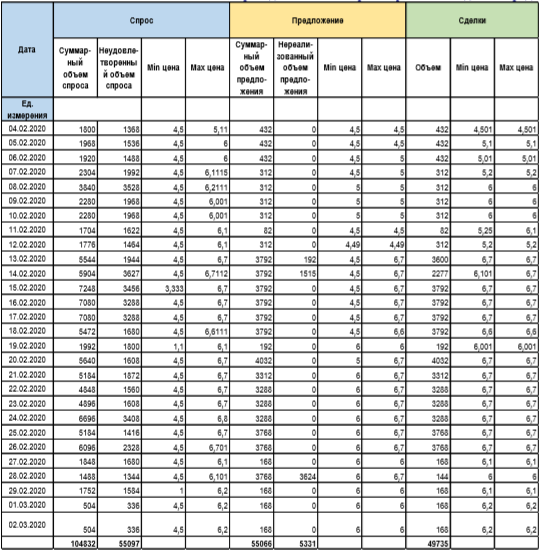
the results of centralized trading in February 2019-2020.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **February** | **spot trading in the "day-ahead" mode** | | **trading for medium- and long-term periods** | | **within the operational day** | |
| MIN price | MAX price | MIN price | MAX price | MIN price | MAX price |
| **tg/kWh (excluding VAT)** | | | | | |
| **2019** | **5,7** | **7,31** | **5,76** | **7,2** | **-** | **-** |
| **2020** | **4,501** | **6,7** | **5,76** | **5,76** | **-** | **-** |

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

According to the results of spot trades in February 2020, 103 transactions were concluded in the volume of 49,735 thousand kWh, the minimum clearing price at spot trades in the "day-ahead" mode amounted to 4,501 tg/kWh (excluding VAT), and the maximum - 6.2 tg/kWh (excluding VAT).

The table below shows volumes and bid-ask prices and final results of spot trades in the "day-ahead" mode in February 2020.



The table shows that the total demand amounted to 104832 thousand kWh, while the total supply amounted to 55066 thousand kWh. The unsatisfied demand volume in February 2020 amounted to 55097 thousand kWh, while the unsatisfied supply volume amounted to 5331 thousand kWh. In the process of spot trades, a total of -534 bids were accepted into the trading system, including 411 bids from buyers and 123 bids from sellers.

**Results of spot trades "during operational days"**

According to the results of spot trades held "during the operational day" in February 2020, no deals were concluded. According to the results of trades held in February 2019 similar to the current period no deals were concluded.

**Results of trades for medium- and long-term period**

In February 2020, according to the results of the trades for medium- and long-term period, 1 deal was concluded in the volume of 336 thousand kWh for the total amount of 1935,36 thousand tenge. The minimum and maximum price for this type of centralized bidding was 5.76 tenge/kWh (excluding VAT).

# **Export-import of electric energy**

In January-March 2020, the main direction of electricity export-import of the RK was the Russian Federation (export to the Russian Federation – 234.8 mln kWh, import from the Russian Federation – 277.2 mln kWh). KEGOC – 224.2 mln kWh in order to balance electricity production-consumption. Electricity import from the Russian Federation in the reporting period in the amount of 215.8 mln kWh was carried out in order to balance production-consumption of electricity.

million kWh

| **Name** | **January-March** | | **Δ 2020/2019гг.** | |
| --- | --- | --- | --- | --- |
| **2019** | **2020** | **mln kWh** | **%** |
| **Kazakhstan's exports** | **1 380,2** | **397,4** | **-982,8** | **-71,2%** |
| **to Russia** | *1 379,3* | *234,8* | *-1 144,5* | *-83,0%* |
| **to Central Asian ECO** | *0,8* | *162,6* | *161,7* | *19398%* |
| **Kazakhstan's imports** | **315,3** | **279,8** | **-35,4** | **-11,2%** |
| **from Russia** | *315,0* | *277,2* | *-37,9* | *-12,0%* |
| **from Central Asian ECO** | *0,2* | *2,6* | *2,4* | *1082,4%* |
| **Balance-flow " + "deficit," - " excess** | **-1 064,9** | **-117,6** | **947,3** | **-89,0%** |

# **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 | 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**

**Kyrgyzstan has produced electricity for 9.6 billion soms since the beginning of the year (23.04.2020).**

In January-March 2020 produced industrial products worth about 75 billion soms, including the volume of industrial production excluding the processing of agricultural products amounted to 68.4 billion soms, according to the National Statistical Committee.

Of these, the volume of electricity production, its transmission and distribution amounted to 9.6 billion soms, gas production and distribution through gas supply systems - 1.6 billion soms.export transmission is planned in the amount of 269 million 355.6 thousand kWh. Frequency regulation for 2019 is 94.2 MW.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Actually produced in current prices, thousand soms | | | | Physical volume index, % | |
| for the reporting month | | from the beginning of the year | | reporting period to the corresponding month of the last year | reporting period to the corresponding period of the last year |
| 2020 | 2019 | 2020 | 2019 |
| Provision with electricity,gas, steam and conditioned air | 3553684,1 | 3398931,7 | 13089448,8 | 12445821,8 | 68,5 | 91,3 |
| Electricity generation, transmission and distribution | 2695590,2 | 2663079,1 | 9672726,5 | 9279808,0 | 63,1 | 88,7 |

**The Government of the Kyrgyz Republic approved the tariff policy for electricity for 2020-2022 (08.04.2020).**

The Government approved the medium-term tariff policy of the Kyrgyz Republic for electricity for 2020-2022 by a resolution dated March 27, 2020.

The State Agency for Regulation of Fuel and Energy Complex was instructed to approve tariffs for electricity and heat for end consumers in the prescribed manner.

"The tariff for households, set at 77 tyyn/kWh, is socially-oriented and is only 47% of the actual cost of electricity on the energy system (generation, transmission, distribution costs).

In case a household subscriber (population) uses electricity in the volume exceeding the guaranteed volume of preferential consumption, payment for the over consumed volume will be made at a tariff of 2.16 soms/kWh," the document says.

For pumping stations and wells that provide the population with drinking water, as well as water for irrigation of agricultural land, the electricity tariff remains at the level of socially oriented tariff of 77.9 tyyn/kWh (excluding taxes).

In addition, since 2016, a tariff of 1.58 soms per 1 kWh (excluding taxes) has been set for urban electric transportation. The new tariffs provide for the application of this tariff also for public charging stations for electric vehicles. Children's residential institutions, social stationary and semi-stationary institutions for the disabled or elderly citizens are singled out as a separate category of consumers with the establishment of the tariff for electric energy at the level of tariffs determined for electric transportation in the amount of 1.58 soms per 1 kWh (excluding taxes).

For industrial, agricultural, budgetary (all state and municipal institutions financed from the national/local budget) and other non-domestic consumers, payment for consumed electricity will be made at a tariff of 2.24 soms per 1 kWh (excluding taxes).

Cryptocurrency mining entities are singled out in a separate group, for which the electricity tariff will be adjusted by an increasing coefficient of 1.3.

In accordance with the Law of the Kyrgyz Republic "On Renewable Energy Sources", preferences are provided for producers of electricity and heat generated by renewable energy sources, including mandatory purchase of all RES electricity by large distribution enterprises. Compensation of additional costs of distribution enterprises for the purchase of electricity generated using RES is taken into account when calculating and setting the national electricity tariff for end consumers. In this regard, the provisions of the Law of the Kyrgyz Republic "On Renewable Energy Sources" will be taken into account when calculating and setting electricity tariffs for end consumers.

**Republic of Uzbekistan**

**The Legislative Chamber of Oliy Majlis of the Republic of Uzbekistan adopted a new version of the law "On rational use of energy" (30.04.2020).**

Among the now already legislated requirements is the establishment of the norm of mandatory certification for compliance with energy efficiency indicators of goods (works, services). The draft law was prepared by a group of deputies of the Committee on Industry, Construction and Trade of the Legislative Chamber with the participation of experts of "Uzneftegazinspektsiya" and "Uzenergoinspektsiya" under the Ministry of Energy of the Republic of Uzbekistan. The law stipulates that the Ministry of Energy of the Republic of Uzbekistan is a specially authorized state body in the field of rational use of energy, which implements a unified state policy in sectors of the economy and objects of the social sphere in the field of rational use of energy.

The Ministry of Energy develops and monitors mechanisms to stimulate the introduction of energy efficient and energy saving technologies, including in production processes.

The Ministry of Energy is also responsible for organizing research and development activities to improve energy efficiency and energy saving in economic sectors and social facilities, and developing proposals for investment projects. The Ministry will determine the requirements for establishing categories of energy efficiency and energy saving of goods (works, services), buildings and structures, devices, including apartment buildings. The Ministry of Energy is also responsible for developing proposals to limit the production in the country or import to Uzbekistan of products with low energy efficiency.

Thus, the new version of the law "On rational use of energy" establishes a procedure for state control over compliance with energy efficiency requirements, is aimed at limiting the production and import of non-energy efficient products, saving energy resources of state bodies and organizations.

During the preparation of the draft law, the experience of the United Kingdom, the United States, Japan, France, Germany, Ukraine, Russia, Kazakhstan in the field of energy saving and energy efficiency, regulation of energy consumption, development and implementation of relevant requirements in the economic and social spheres was studied.

**Uzbekistan launches first tender for construction of a wind power plant (16.04.2020г.).**

The project will be implemented with the support of the European Bank for Reconstruction and Development under a cooperation agreement with the ultimate goal of building wind farms with a total capacity of 1 GW.

The tender will be conducted in 2 stages, including qualification selection and review of technical and commercial proposals.

The capacity of the new plant will be 100 MW. A site for its construction and related infrastructure has already been selected in the Karauziak district of Karakalpakstan. Environmental studies and bird migration studies are currently underway at the site.

There are also plans to build a wind power plant with a total capacity of 200 MW near the site for the first power plant. A similar tender process will be carried out for this project.

The project is part of a large-scale renewable energy strategy being implemented by the Uzbek government.

In general, this strategy envisages the deployment of cost-effective and environmentally friendly wind farms with a total capacity of up to 3 GW in the next 10 years to meet the growing demand for electricity in the country.

**Uzbekistan will establish a wholesale electricity and gas market (09.04.2020).**

Uzbekistan will create a wholesale electricity and gas market. By fall, a general plan until 2030 and proposals will be developed. The President of Uzbekistan instructed to develop a master plan of the program of gas transport system development until 2030 by September 1 with the involvement of experts from the World Bank and Asian Development Bank.

The ministries of Energy, Economic Development and Poverty Reduction, Finance, Investment and Foreign Trade, Antimonopoly Committee and State Assets Management Agency are charged with implementing the assignment, Gazeta.uz reported.

Within the same timeframe, the agencies are to develop proposals for creating a wholesale electricity and natural gas market based on exchange trading, providing equal access for all participants and a transparent pricing mechanism. The creation of a wholesale electricity market for Central Asian operators was announced in the middle of last year by Uzbekistan's Deputy Energy Minister Sherzod Khodjaev. On such an exchange, Central Asian power producers will be able to offer surplus generation, and Uzbekistan plans to use it to fill in the missing volumes for future electricity supplies to Afghanistan.

**Republic of Belarus**

**The draft Law of the Republic of Belarus on the formation of a common electric power market of the Eurasian Economic Union has been approved (03.04.2020).**

On April 2, the House of Representatives of the National Assembly of the Republic of Belarus considered the draft Law of the Republic of Belarus "On Ratification of the Protocol on Amendments to the Treaty on the Eurasian Economic Union of May 29, 2014 (regarding the formation of a common electricity market of the Eurasian Economic Union)". Deputy Minister of Energy V.A. Zakrevsky made a report before the deputies.

The Protocol on Amendments to the Treaty on the Eurasian Economic Union of May 29, 2014 (in terms of the formation of a common electricity market of the Eurasian Economic Union) was prepared to implement Article 81 of the Treaty on the Union and signed by the Heads of the EAEU Member States on May 29, 2019.

This international treaty establishes the conceptual apparatus in the electricity sector, defines the methods of trade, the management bodies of the common electricity market of the Union, participants and infrastructure organizations, their functions and powers, gives the Eurasian Economic Commission the authority to approve the rules governing the common electricity market of the Union.

The main provisions of the international treaty will enter into force together with the entry into force of the rules governing the Union's EDM, tentatively in early 2025. Until then, the Member States together with the EEC will have to adopt detailed rules and regulations, prepare the technological basis of the market and the information system.

**Republic of Azerbaijan**

**Azerbaijan increases electricity production (27.04.2020).**

In January-March 2020, power plants in Azerbaijan generated 6.7 billion kWh of electricity, which is 5.9% more than in the same period of 2019, according to a report by the State Statistics Committee.

Of the total volume of electricity produced in the period, 6.5 billion kWh was marketable, which is 0.06% more than in the same period of 2019.

Thermal power plants (TPPs) accounted for 6.2 billion kWh of the total marketable electricity generated during the period under review, an increase of 6% over the same period in 2019.

Hydroelectric power plants (HPPs) in Azerbaijan generated 0.216 billion kWh of electricity during the period (a 26.8% decline).

During the reporting period, wind power generation facilities in Azerbaijan produced 24.2 million kWh of electricity (a 1.3-fold decline), while solar power plants produced 8.7 million kWh of electricity (a 0.06% decline).

**Republic of Kazakhstan**

**In Turkestan region of the Republic of Kazakhstan solar power plant "SES "Zhetysay" was put into operation (28.04.2020).**

The owner of the power plant is "Company KaDi" LLP, which realized the project at its own expense. During construction of the power plant bifunctional double-sided panels with a unit capacity of 375 W were used with the use of single-axis tracker system morning and evening with a fixed angle. The use of the tracker system will increase the output of the power plant by up to 30%.

The project is in line with the green economy policy and contributes to the industrial and innovative development of Kazakhstan. Reduction of CO2 emissions into the atmosphere will be about 6048 tons/year. Additional jobs were created during the project implementation. Also, it should be noted the inexhaustibility and availability of the source of electricity. The payback period of this project is 7 years.

The planned annual output to the grid is 7219000 kW. Electricity is generated by 12798 solar panels distributed on 158 movable "tables" with 81 solar modules each. To convert DC to AC, the power plant has 4 inverters with a unit capacity of 1250 KW each, combined in a block-modular installation.

**Support for Kazakhstani manufacturers in procurement in the energy sector (23.04.2020).**

Kazakhstani enterprises, whose products are oriented to use in the energy sector, are increasingly confident in mastering complex production projects. The key to the technological development of domestic companies and their production of products with higher added value has become the mechanism of so-called off-take contracts. For the period of 2019 - 2020, 8 off-take agreements were concluded for the group of companies of Samruk-Energy JSC for the total amount of over 536 million tenge.

The largest electric power holding for supplying its power plants, coal mines and power transmission companies formalized partnership relations for the purchase of a wide range of goods - from radios and insulators to electrodes and transformers.

An off-take contract is a good tool to support entrepreneurs involved in import substitution projects with orders. It is a long-term contract under conditional terms of delivery and payment subject to project implementation.

The development of import substitution is a very important aspect of supporting domestic production. In Samruk-Energy JSC, a Local Project Office for import substitution and local content development was established, the activity of which, in fact, resulted in the above-mentioned 8 off-take agreements with Kazakhstani manufacturers. At the same time, special attention is paid to withdrawal of goods subject to import substitution from purchased works and services. Thus, Alatau Zharyk Company JSC, an energy transmission company within Samruk-Energy, removed from the purchased works the position "Transformer", which is not produced in Kazakhstan, and provided the order for the amount of 485 million tenge to a domestic supplier, who created production for this position.

According to Darhan Sagindykov, Managing Director for Supply of Samruk-Energy JSC, the mechanism of off-take contracts is now being actively introduced into the procurement system of the Fund "Samruk-Kazyna", which will bring cooperation with domestic business to a fundamentally new level, additionally create new jobs, as well as to develop production, which was previously available in Kazakhstan.

As you know, the Fund announced 2020 as the Year of Support for Domestic Manufacturers. The Fund's companies often act as the main customers, providing work for a significant part of the trade, service and industrial sectors of the economy. Only since the beginning of 2020, electric power enterprises of Samruk-Energy JSC Group have provided orders to domestic manufacturers for the amount of more than 2.5 billion tenge.