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**REPORT**

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

**JANUARY-APRIL 2020**

**MARKET DEVELOPMENT DEPARTMENT**

**May 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 37 613,9 million kWh of electricity in January-April 2020, which is 3.9% 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-April** | | **Δ, %** |
| **2019** | **2020** |
| **Kazakhstan** | **Total** | **36191,6** | **37613,9** | **3,9%** |
| *TPP* | *29666,0* | *30606,1* | *3,2%* |
| *GTPP* | *3086,5* | *3350,0* | *8,5%* |
| *HPP* | *3151,8* | *3018,1* | *-4,2%* |
| *WPP* | *205,1* | *328,3* | *60,1%* |
| *SES* | *81,1* | *310,4* | *282,7%* |
| *BSU* | *1,1* | *1,0* | *-9,1%* |
| **North** | **Total** | **27727,9** | **28641,3** | **3,3%** |
| *TPP* | *24306,4* | *25174,7* | *3,6%* |
| *GTPP* | *1036,4* | *1108,9* | *7,0%* |
| *HPP* | *2285,6* | *2096,2* | *-8,3%* |
| *WPP* | *61,6* | *152,0* | *146,8%* |
| *SES* | *36,8* | *108,5* | *194,8%* |
| *BSU* | *1,1* | *1,0* | *-9,1%* |
| **South** | **Total** | **3918,8** | **4170,0** | **6,4%** |
| *TPP* | *2857,8* | *2896,1* | *1,3%* |
| *GTPP* | *73,7* | *73,8* | *0,1%* |
| *HPP* | *866,2* | *921,9* | *6,4%* |
| *WPP* | *77,6* | *77,2* | *-0,5%* |
| *SES* | *43,5* | *201,0* | *362,1%* |
| **Western** | **Total** | **4544,9** | **4802,6** | **5,7%** |
| *TPP* | *2501,8* | *2535,3* | *1,3%* |
| *GTPP* | *1976,4* | *2167,3* | *9,7%* |
| *WPP* | *65,9* | *99,1* | *50,4%* |
| *SES* | *0,8* | *0,9* | *12,5%* |

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

In January-April 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-April** | | **Δ, %** |
| **2019** | **2020** |
| 1 | Akmola | 1 662,0 | 1 724,3 | 3,7% |
| 2 | Aktobe | 1 362,4 | 1 412,6 | 3,7% |
| 3 | Almaty | 2 393,0 | 2 549,8 | 6,6% |
| 4 | Atyrau | 1 960,2 | 2 152,6 | 9,8% |
| 5 | East Kazakhstan | 3 402,4 | 3 214,7 | -5,5% |
| 6 | Zhambyl | 881,4 | 831,2 | -5,7% |
| 7 | West Kazakhstan | 799,9 | 837,2 | 4,7% |
| 8 | Karaganda | 5 603,5 | 5 815,3 | 3,8% |
| 9 | Kostanay | 349,8 | 403,6 | 15,4% |
| 10 | Kyzylorda | 169,5 | 205,5 | 21,2% |
| 11 | Mangystau | 1 784,8 | 1 812,8 | 1,6% |
| 12 | Pavlodar | 14 099,2 | 14 824,2 | 5,1% |
| 13 | North Kazakhstan | 1 248,6 | 1 246,6 | -0,2% |
| 14 | Turkestan | 474,9 | 583,5 | 22,9% |
|  | **Total for RoK** | **36 191,6** | **37 613,9** | **3,9%** |

# *Electricity generation by associated generation*

In January-April 2020, electricity production from associated generation totaled 18.6 billion kWh, which is comparable to the same period in 2019 (18 billion kWh). Meanwhile, compared to January-April 2019, the share of associated generation increased slightly to 48.1% of the total electricity generation in Kazakhstan.

*million kWh*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **№** | **Name** | **2019** | | **2020** | |
| **January-April** | **share in the Republic of Kazakhstan, %** | **January-April** | **share in RoK, %** |
| 1 | ERG | 6 804,3 | 18,8% | 6 580,1 | 17,5% |
| 2 | Kazakhmys Energy LLP | 2 523,3 | 7% | 2 669 | 7,1% |
| 3 | Kazzinc LLP | 1 010,8 | 2,8% | 880,2 | 2,3% |
| 4 | Arcellor Mittal JSC | 831,4 | 2,3% | 930,5 | 2,5% |
| 5 | KKS LLP | 2 445,7 | 6,8% | 2 363,1 | 6,3% |
| 6 | CAEC | 2 504,7 | 6,9% | 2 642,6 | 7,0% |
| 7 | Zhambyl GRES JSC | 709,6 | 2,0% | 632,5 | 1,7% |
| 8 | Oil and gas enterprises | 1 772,3 | 4,9% | 1 376,2 | 3,7% |
|  | **TOTAL** | **18 602,1** | **51,4%** | **18 074,2** | **48,1%** |

The volume of electricity production by the energy producing organizations of Samruk-Energy JSC in January-April 2020 amounted to **10 493,2** mln/kWh, or an increase of 10.6% compared to the same period of 2019.

*million kWh*

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **№** | **Name** | **2019** | | **2020** | | **Δ2020/2019** | |
| **January-April** | **share in RoK, %** | **January-April** | **share in RoK %** | **mln kWh** | **%** |
|  | **Samruk-Energy JSC** | **9 485,6** | **26,2%** | **10 493,2** | **27,9%** | **1 007,6** | **10,6%** |
| *1* | *AlES JSC* | *1 969* | *5,4%* | *2 065,7* | *5,5%* | *96,5* | *4,9%* |
| *2* | *Ekibastuz GRES-1 LLP* | *4 863,1* | *13,4%* | *6 494,8* | *17,3%* | *1 631,7* | *33,6%* |
| *3* | *Ekibastuz GRES JSC-2 JSC* | *2 136,2* | *5,9%* | *1 401,3* | *3,7%* | *-734,9* | *-34,4%* |
| *4* | *Shardara HPP JSC* | *178,3* | *0,5%* | *212,7* | *0,6%* | *34,5* | *19,3%* |
| *5* | *Moinak HPP JSC* | *277,6* | *0,8%* | *252,1* | *0,7%* | *-25,4* | *-9,2%* |
| *6* | *Samruk-Green Energy LLP* | *1,0* | *0,003%* | *1,2* | *0,003%* | *0,22* | *22,6%* |
| *7* | *First Wind Power Station LLP* | *60,3* | *0,2%* | *65,3* | *0,2%* | *5,0* | *8,4%* |

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

# *Electricity consumption by zones and regions*

According to the data of the System Operator, in January-April 2020, there was an increase by 3% in the electricity consumption in the Republic compared to the indicators of January-April 2019. Thus, in the northern zone consumption increased by 3%, western zone by 6%, and in the southern zone by 2%.

*million kWh*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **#** | **Name** | **January- April 2019** | **January-April 2020** | **Δ,  million kWh** | **Δ, %** |
| **I** | **Kazakhstan** | **36 208,1** | **37 216,9** | **1 008,8** | **3%** |
| 1 | Northern zone | 23 901,9 | 24 535,6 | 633,7 | 3% |
| 2 | Western zone | 4 571,3 | 4 825,3 | 254 | 6% |
| 3 | Southern zone | 7 734,8 | 7 856 | 121,2 | 2% |
|  | ***including by region*** |  |  |  |  |
| 1 | East Kazakhstan | 3 265,3 | 3 326,7 | 61,4 | 2% |
| 2 | Karaganda | 6 128,2 | 6 435,1 | 306,9 | 5% |
| 3 | Akmola | 3 401,3 | 3 331,4 | -69,9 | -2% |
| 4 | North Kazakhstan | 648,9 | 595,3 | -53,6 | -8% |
| 5 | Kostanay | 1 664,4 | 1 639,1 | -25,3 | -2% |
| 6 | Pavlodar | 6 580,3 | 6 992,5 | 412,2 | 6% |
| 7 | Atyrau | 2 108,2 | 2 251,7 | 143,5 | 7% |
| 8 | Mangystau | 1 746,3 | 1 779,5 | 33,2 | 2% |
| 9 | Aktobe | 2 213,5 | 2 215,5 | 2 | 0,1% |
| 10 | West Kazakhstan | 716,7 | 794 | 77,3 | 11% |
| 11 | Almaty | 3 886,4 | 3 960 | 73,6 | 2% |
| 12 | Turkestan | 1 686,1 | 1 713,2 | 27,1 | 2% |
| 13 | Zhambyl | 1 558,1 | 1 558,3 | 0,2 | 0,01% |
| 14 | Kyzylorda | 604,1 | 624,4 | 20,3 | 3% |

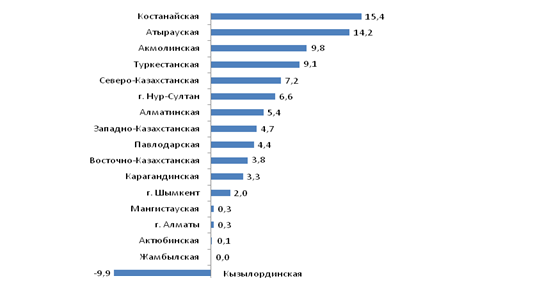
# **Industry results for January-April 2020**

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

In January-April 2020, compared to January-April 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 production of agglomerated iron ores, iron ore pellets and concentrates increased, production of flour, bars and rods of steel, gold in gold doré alloy, cars and trucks increased (115.4%).

In Atyrau region due to the increase in crude oil production, the index of industrial production amounted to 114.2%.

In Akmola region, the extraction of gold-containing concentrates increased, production of flour, gold in gold doré alloy, tractors and trucks increased (109.8%).

In Turkestan region, extraction of uranium ores increased, production of processed cotton, oil bitumen, and distribution power boards and boxes increased (109.1%).

In North-Kazakhstan oblast uranium ore extraction increased, production of unrefined sunflower and rapeseed oil, processed milk, butter, commercial concrete and centrifugal pumps increased (107.2%).

In Nur-Sultan city, production of flour, soft drinks, commodity concrete, refined gold and diesel locomotives increased (106.6%).

In Almaty region, production of confectionery and chocolate, soft drinks, cigarettes and medicines increased (105.4%).

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

In Pavlodar region, extraction of copper concentrates increased, production of steel pipes, parts of railroad locomotives, streetcar motor cars and rolling stock, electricity increased (104.4%).

In East Kazakhstan region there was an increase in the production of copper ores and gold-containing concentrates, the production of cars and trucks increased (103.8%).

In Karaganda region the extraction of iron ore sinter, gold-containing ores and zinc concentrates increased, production of pig iron, flat rolled steel, rough and refined copper increased (103.3%).

In Shymkent city the production of refined sunflower oil, gasoline, diesel fuel, liquefied propane and butane increased (102%).

In Mangistau region due to the increase in the volume of industrial services, the index of industrial production amounted to 100.3%.

In Almaty city increased production of beer, medicines, prefabricated building structures of concrete and other aluminum metal products (100.3%).

In Aktobe oblast the volume of copper-zinc ore mining increased, industrial services increased (100.1%).

In Zhambyl oblast, extraction of gold-containing ores and phosphate raw materials increased, production of diesel fuel, phosphate fertilizers, portland cement and gold in gold doré alloy increased (100%).

In Kyzylorda region due to the decrease in crude oil production, the index of industrial production amounted to 90.1%.

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

# *Electricity consumption by large consumers in Kazakhstan*

In January-April 2020, electricity consumption by large consumers decreased by 2% compared to the same period in 2019.

*million kWh*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **№** | **Consumer** | **January-April** | | |
| **2019** | **2020** | **Δ, %** |
| 1 | Arcelor Mittal Temirtau JSC | 1 286,3 | 1 247,5 | 3% |
| 2 | AZF (Aksu) TNK Kazchrome JSC | 1 962,5 | 1 880,6 | 4% |
| 3 | Kazakhmys Smelting LLP | 395,5 | 383,0 | 3% |
| 4 | Kazzinc LLP | 957,0 | 975,4 | -2% |
| 5 | Kazzinc JSCSokolovsko-Sarbay State Enterprise | 617,8 | 586,9 | 5% |
| 6 | Kazakhmys Corporation LLP | 441,3 | 410,8 | 7% |
| 7 | AZF (Aktobe) TNK Kazchrome JSC | 1 020,8 | 1 048,7 | -3% |
| 8 | RSE Kanal im. Satpayev | 48,9 | 59,4 | -18% |
| 9 | Kazphosphate LLP | 668,9 | 798,9 | -16% |
| 10 | NDFZ JSC (part of Kazphosphate LLP) | 571,5 | 709,1 | -19% |
| 11 | Taraz Metallurgical Plant LLP | 68,7 | 55,6 | 24% |
| 12 | Ust-Kamenogorsk Titanium and Magnesium Combine JSC | 319,3 | 273,3 | 17% |
| 13 | Ust-Kamenogorsk Titanium and Magnesium Combine JSCTengizchevroil | 643,1 | 641,7 | 0% |
| 14 | JSC " PAZ "(Pavlodar Aluminum Plant) | 318,9 | 313,9 | 2% |
| 15 | JSC " KEZ "(Kazakhstan Electrolysis Plant) | 1 254,4 | 1 248,7 | 0% |
| 16 | Temirzholenergo LLP | 479,5 | 572,3 | -16% |
| 17 | JSC "KEGOC" | 1 547,8 | 1 792,7 | -14% |
| **Total** | | **12030,4** | **12289,5** | **-2%** |

# **Coal**

# *Steam coal production in Kazakhstan*

According to information from the Statistics Committee of the Ministry of Energy of Kazakhstan, Kazakhstan produced 37,003.6 million tons of hard coal in the period January-April 2020, which is almost equal to the same period in 2019 (36,906.8 million tons).

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **№** | **Oblast** | **January-April** | | **Δ, %** |
| **2019** | **2020** |
| 1 | Pavlodarskaya | 24 242,4 | 24 198,6 | 100% |
| 2 | Karagandinskaya | 10 368,2 | 10 568,7 | 101% |
| 3 | East Kazakhstan | 2 153,1 | 2 181,0 | 101% |
|  | **Total in RoK** | **36 906,8** | **37 003,6** | **100%** |

# *Coal production by Samruk-Energy JSC*

In January-April 2020, Bogatyr Komir LLP produced 16 226 thousand tons, which is 2,1% more than in the corresponding period of 2019 (15 898 thousand tons).

# *Coal sales by Samruk-Energy JSC*

In January-April 2020, 16 273 thousand tons were sold, including:

- 12 941 thousand tons were delivered to the domestic market of the Republic of Kazakhstan, which is 6.1% less than in the corresponding period of 2019 (12 201 thousand tons);

- exported to Russia – 3 331 million tons, which is 3.2% more than in the corresponding period of 2019 (3 442 thousand tons).

*thousand tonnes*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **№** | **Region** | **Sales volume, thousand tonnes** | | **Δ, %** |
| **January-April 2019** | **January-April 2020** |
| Total exports to the domestic market of the Republic of Kazakhstan | | **12 201** | **12 941** | **106,1%** |
| Total exports to the Russian Federation | | **3 442** | **3 331** | **96,8%** |

As per the figures for January-April 2020, as compared to the same period in 2019, the Company has seen an increase in coal sales.

# **Renewable energy sources**

The volume of electricity produced by renewable energy facilities (SES, wind farms, BGS, small hydroelectric power plants) in January-April 2020 amounted to 854.7 million kWh. Compared to January-April 2019 (471.2 million kWh), the increase was 81.4%.

million kWh

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **№** | **Name** | **2019** | | **2020** | | **Deviation 2020/2019** | |
| **January-April** | **share in the Republic of Kazakhstan, %** | **January-April** | **share in the Republic of Kazakhstan, %** | **mln kWh** | **%** |
|  | **Total output in the Republic of Kazakhstan** | **36191,7** | **100%** | **37613,8** | **100,0%** | **1422,1** | **3,9%** |
| **I** | **Total RES in the Republic of Kazakhstan, including by zones** | **471,2** | **1,3%** | **854,7** | **2,3%** | **383,5** | **81,4%** |
| 1. | *Northern Zone* | *142,4* | *30,2%* | *287,8* | *33,7%* | *145,4* | *102,1%* |
| 2. | *Southern zone* | *262,1* | *55,6%* | *413,2* | *48,3%* | *151,1* | *57,6%* |
| 3. | *Western Zone* | *66,7* | *0,0%* | *153,7* | *18,0%* | *87,0* | *0,0%* |
| **II** | **Total RES in the Republic of Kazakhstan, including by type** | **471,2** | **1,3%** | **854,7** | **2,3%** | **383,5** | **81,4%** |
| 1. | *SES* | *52,1* | *11,1%* | *247,7* | *29,0%* | *195,6* | *375,4%* |
| 2. | *Wind farms* | *153,7* | *32,6%* | *242,6* | *28,4%* | *88,9* | *57,8%* |
| 3. | *Small hydroelectric* | *110,5* | *23,5%* | *105,3* | *12,3%* | *-5,2* | *-4,7%* |
| 4. | *Biogas plants* | *0,8* | *0,2%* | *0,6* | *0,1%* | *-0,2* | *0,0%* |

In January-April 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-April** | **share in the Republic of Kazakhstan, %** | **January-April** | **share in the Republic of Kazakhstan, %** | **mln kWh%** | **%** |
|  | ***Electricity production in the Unified Energy System of the Republic of Kazakhstan*** | **36191,7** | **100,0%** | **37613,8** | **100%** | **1422,1** | **3,9%** |
| 1. | Production of "clean" electricity (RES + Large hydroelectric power plants) | *3439,2* | *9,5%* | *3737,6* | *9,9%* | *298,4* | *8,7%* |
| 2. | Production of "clean" electricity (RES excluding Large hydroelectric power plants) | *471,200* | *1,3%* | *854,7* | *2,3%* | *383,5* | *81,4%* |

Electricity generation by RES facilities of Samruk-Energy JSC (SES, WES, small HPPs) for January-April 2020 amounted to 116 mln kWh or 13.6% of the total volume of electricity generated by RES facilities, which is 6.9% higher compared to the same period of 2019 (for January-April 2019, RES generation of the Company amounted to 108.5 mln kWh, and the share of RES of the Company was 23%).

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, WES, small and large HPPs) for January-April 2020 decreased by 0.5% (830 mln kWh) compared to the same period of 2019. (834.1 mln. kWh).

million kWh

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **№** | **Name** | **2019** | | **2020** | | **Deviation 2020/20/2019.** | |
| **January-April** | **share in the Republic of Kazakhstan, %** | **January-April** | **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) | 834,1 | 24,3% | 830,0 | 22,2% | -4,1 | -0,5% |
| 2. | Production of "clean" electricity by JSC "Samruk-Energy" (SES, wind farms and small hydroelectric power plants), incl.: | 108,5 | 23,0% | 116,0 | 13,6% | 7,5 | 6,9% |
| 3. | *Cascade of small hydroelectric power plants of "AlES" JSC* | *47,3* | *10,0%* | *49,6* | *5,8%* | *2,3* | *4,9%* |
| 4. | *Samruk-Green Energy LLP* | *0,9* | *0,2%* | *1,1* | *0,1%* | *0,2* | *22,2%* |
| 5. | *First Wind Power Station LLP* | *60,3* | *12,8%* | *65,3* | *7,6%* | *5,0* | *8,3%* |

# **Centralized electricity trading by KOREM JSC**

*(Information provided by KOREM JSC)*

*General results of the trades*

According to the results of centralized trading in electricity in March 2020, 82 transactions were concluded in the volume of 77,255 thousand kWh for a total amount of 579,809.76 thousand tenge (excluding VAT), (including, in the "day-ahead" mode and trading for medium and long-term periods), including:

- spot trades in "day-ahead" mode - 79 deals were concluded in the volume of 6,695 thousand kWh for the total amount of 41,295.84 thousand tenge. The minimum price at spot trades in "day-ahead" mode amounted to 6 tenge/kWh (excluding VAT), the maximum price - 6.3 tenge/kWh (excluding VAT);

- spot trades "within operational day" - no deals were concluded.

- trades in electricity for medium- and long-term periods - 3 deals were concluded in the 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 bidding was 5.76 tenge/kWh (excluding VAT), and the maximum price was 7.65 tenge/kWh (excluding VAT).

For the same period of 2019, the total volume of centralized bidding amounted to 3,620,592 thousand kWh.

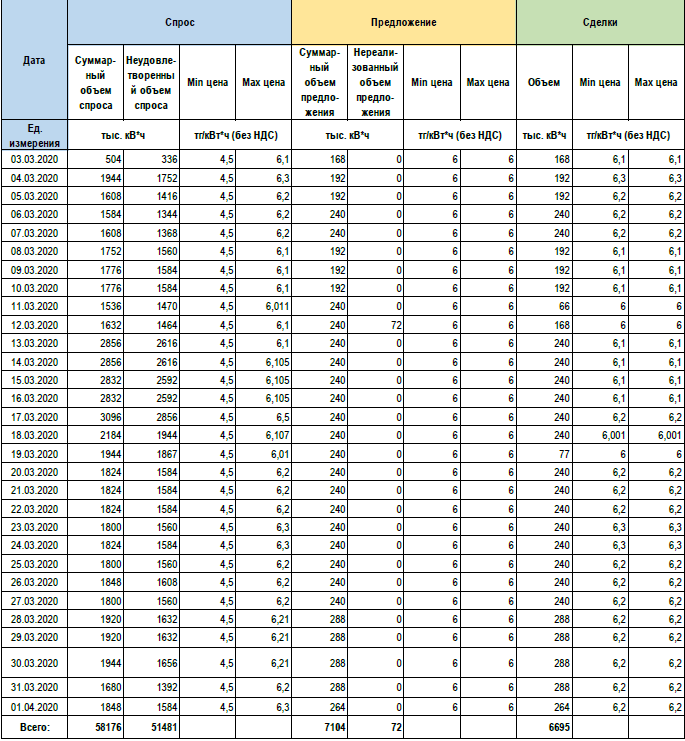
**Dynamics of prices formed as a result of centralized trades**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **March** | **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** | **6** | **7,41** | **5,76** | **8,33** | **-** | **-** |
| **2020** | **6** | **6,3** | **5,76** | **7,65** | **-** | **-** |

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

According to the results of spot trades held in March 2020, 79 transactions in the volume of 6,695 thousand kWh were concluded, the minimum clearing price at spot trades in the "day-ahead" mode was 6 tenge/kWh (excluding VAT), and the maximum was 6.3 tenge/kWh (excluding VAT).

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



The table shows that the total demand amounted to 58,176 thousand kWh, while the total supply amounted to 7,104 thousand kWh. The unsatisfied demand volume in March 2020 amounted to 51,481 thousand kWh, and the unsatisfied supply volume amounted to 72 thousand kWh. In the process of spot trading, a total of -391 bids were accepted into the trading system, including 322 bids from buyers and 69 bids from sellers.

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

Following the results of spot trades held "during the operational day" in March 2020 no deals were made. Following the results of trades held in March 2019 similar to the current period no deals were made.

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

According to the results of trading for medium- and long-term periods in March 2020, 3 deals were concluded in the volume of 70,560 thousand kWh for a total amount of 538,513.92 thousand tenge. The minimum for this type of centralized bidding was 5.76 tenge/kWh (excluding VAT), and the maximum price was 7.65 tenge/kWh (excluding VAT).

Compared to the same period of 2019, in March 2020, there was a significant decrease in the volume of trades for the medium- and long-term period by 51 times.

# **Export-import of electric energy**

In January-April 2020, the main direction of electricity export-import of the RK was the Russian Federation (export to the Russian Federation – 306.9 mln kWh, import from the Russian Federation – 363.3 mln kWh). KEGOC – 292.7 mln kWh in order to balance electricity production-consumption. Electricity import from the Russian Federation in the reporting period in the amount of 282.1 mln kWh was carried out in order to balance production-consumption of electricity.

million kWh

| **Name** | **January-April** | | **Δ 2020/2019гг.** | |
| --- | --- | --- | --- | --- |
| **2019** | **2020** | **mln kWh** | **%** |
| **Kazakhstan's exports** | **2 088,3** | **763,0** | **-1 325,2** | **2 088,3** |
| **to Russia** | *2 085,4* | *306,9* | *-1 778,5* | *2 085,4* |
| **to Central Asian ECO** | *2,9* | *456,1* | *453,2* | *15786%* |
| **Kazakhstan's imports** | **433,9** | **366,0** | **-68,0** | **-15,7%** |
| **from Russia** | *433,7* | *363,3* | *-70,4* | *-16,2%* |
| **from Central Asian ECO** | *0,2* | *2,6* | *2,4* | *1082,4%* |
| **Balance-flow " + "deficit," - " excess** | **-1 654,3** | **-397,0** | **1 257,3** | **-76,0%** |

# **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)*

**Results of the Supreme Eurasian Economic Council (20.05.2020).**

On May 19, 2020, a meeting of the Supreme Eurasian Economic Council was held in videoconference mode.

The Strategy for the development of Eurasian economic integration until 2025 was generally approved. At the same time, the governments of the Union's countries were instructed to finalize the document for the next meeting of the Supreme Eurasian Economic Council, which is scheduled to be held in person.

The EEU approved the main guidelines of macroeconomic policy of the states of the Eurasian Economic Union for 2020 - 2021. The document includes a set of national and integration measures to improve the economic situation in the member states and minimize the economic consequences of external shocks associated with the coronavirus pandemic and a sharp decline in commodity prices.

And also the Supreme Eurasian Economic Council approved the annual report for 2019 on the state of competition in cross-border markets and measures taken in the Eurasian Economic Union to curb violations of common rules of competition in them. The report noted that the Union is consistently working to remove barriers to the movement of goods, more and more markets are becoming common and open to entrepreneurs.

**Kyrgyz Republic**

**Until April 2021, Kyrgyzstan will import a total of 1 billion kWh of electricity (27.05.2020).**

By April 2021, Kyrgyzstan will import a total of 1 billion kWh of electricity, Aitmamat Nazarov, head of the National Energy Holding, told a press conference in Bishkek on May 27.

Negotiations are underway with Kazakhstan, Turkmenistan and Tajikistan to import electricity, he said.

"But the price is much more expensive than the price from the tariff of the population. At the same time, the tariff will not be increased. We are finding other sources. At the expense of other consumers we will cover the costs," he said.

**Republic of Uzbekistan**

**Uzbekistan has adopted a strategy of electricity supply for 10 years (06.05.2020).**

The Government approved the "Concept of Electricity Supply of the Republic of Uzbekistan for 2020-2030". This strategy was developed with the participation of international experts and is based on the high priority given by the President of the Republic of Uzbekistan to the development of the power sector, fundamental reform of the sector to meet the growing demand for energy from the population and the rapidly developing economy of the country.

The development of the energy sector of Uzbekistan will continue in accordance with the best international practices, and the adopted strategy has ambitious but practical and achievable goals based on the existing results of the power sector and the projects being implemented.

The strategy defines medium and long-term goals for the period from 2020 to 2030 and will be adjusted as necessary based on continuous analysis. The strategic goal of the document is to provide the population and economy of Uzbekistan with electricity at competitive prices, and to develop a balanced energy sector that embraces the best global practices and current trends in the global electricity sector.

The Concept provides for priority measures aimed at: modernization and reconstruction of existing power plants, as well as construction of new ones using energy-efficient power generation technologies; improvement of electricity metering systems; development of renewable energy sources, especially solar energy; legal reforms to improve tariff policy and ensure transition to the wholesale market.

It is planned that by 2030 it is necessary to:

- Increase capacity from 12.9 GW to 29.3 GW and electricity production from 63.6 billion kWh to 120.8 kWh;

- reduce natural gas consumption from 16.5 billion cubic meters to 12.1 billion cubic meters;

- reduce electricity transmission losses to 2.35% and distribution losses to 6.5% (1.85 times less than the 2019 level).

In developing renewable energy sources, special attention will be paid to affordable energy supply in regions with current electricity shortages. Renewable energy will improve environmental conditions, increase efficiency and stimulate the development of local industries, infrastructure and job creation. In order to accelerate the development of renewable energy sources in this area, a wide application of public-private partnerships is planned.

**Applications for participation in the first tender for RES in Uzbekistan were submitted by 70 investors (21.05.2020).**

70 companies and consortiums from 30 countries have applied for participation in Uzbekistan's first tender for construction of a 100 MW wind power plant (WPP). Independent private power producers were invited to participate in the project by the Ministry of Energy of the Republic of Uzbekistan, the Ministry of Investment and Foreign Trade and the Agency for Development of Public-Private Partnership under the Ministry of Finance.

The winners of the tender will participate in the development, financing, construction, ownership and operation of facilities under the project.

The first tender for the wind power project will be realized with the support of the European Bank for Reconstruction and Development under a cooperation agreement, the ultimate goal of which is the construction of wind farms with a total capacity of 1 GW.

The site for the construction of this wind power plant and related infrastructure has been selected in the Karauziak district of the Republic of Karakalpakstan.

We would like to add that this project is a part of a large-scale strategy of utilization of renewable energy sources, implemented by the Government of the Republic of Uzbekistan. In general, the deployment of economically efficient and environmentally friendly wind power plants with a total capacity of up to 3 GW is envisaged in the next 10 years to meet the growing demand for electricity in the country.

**Republic of Belarus**

**The Republic of Belarus has set the volume of quotas for the creation of installations for the use of renewable energy sources for 2021 - 2023 (18.05.2020).**

According to the results of the meeting of the Republican Interdepartmental Commission for the establishment, distribution, release and withdrawal of quotas for the creation of installations for the use of renewable energy sources held on April 29, 2020, the following quotas for 2021-2023 have been set:

|  |  |  |  |
| --- | --- | --- | --- |
| Type of renewable energy source | 2021 | 2022 | 2023 |
| using wind energy | 0 | 19800 | 10000 |
| using biogas energy | 0 | 5000 | 10000 |
| using solar energy | 0 | 0 | 10000 |
| using energy of natural movement of water streams | 0 | 0 | 29160 |
| using energy of wood fuel, other types of biomass | 0 | 2600 | 3000 |
| using heat of the earth and other energy sources that are not non-renewable | 0 | 0 | 40000 |
| TOTAL: | 0 | 27400 | 102160 |

The quotas are established in accordance with paragraph 6 of the Regulations on the Procedure for the Establishment, Distribution, Release and Withdrawal of Quotas for the Establishment of Installations for the Use of Renewable Energy Sources, approved by Resolution of the Council of Ministers of the Republic of Belarus No. 662 of August 6, 2015.

**Russian Federation**

**Revenues from electricity exports from Russia halved in January-March (21.05.2020n).**

Revenues from electricity exports from Russia in January - March 2020 decreased by 56% compared to the figure of the same period of 2019 and reached $112.7 million, follows from the materials of the Federal Customs Service (FCS).

The physical volume of electricity exports amounted to 2.749 billion kWh and decreased by 46%. In March, electricity exports fell by 60% to 352 million kWh compared to February this year. Revenues from electricity exports in March were down 49% compared to February, totaling $40.2 million.

**On May 20, 2020, an online meeting of the Working Group on Human Resources and Training in the CIS Electricity Industry was held (22.05.2020).**

On May 20, 2020, an online meeting of the Working Group on Personnel Management and Training in the CIS Electric Power Industry was held. It was attended by representatives of national electric power companies and organizations of the Republic of Armenia, Republic of Belarus, Republic of Kazakhstan, Kyrgyz Republic, Republic of Moldova, Russian Federation, Republic of Tajikistan, Republic of Uzbekistan and specialists of the Executive Committee of the CIS Electric Power Council.

The Working Group considered the following issues on the Agenda:

1. On the draft Work Plan of the Working Group on Personnel Management and Training in the CIS Electric Power Industry for 2020-2021.

2. On consideration of the draft Methodological Recommendations on liquidation of consequences of realization of anthropogenic risks and training of personnel on rendering first aid to victims.

3. On the draft Methodological Recommendations on ensuring ergonomic conditions for managing anthropogenic risks in the electric power industry of the CIS member states.

4. On the draft Methodological Recommendations on the formation and operation of personnel training centers of energy companies of the CIS member states.

5. Miscellaneous.

Taking into account the discussion, adopted amendments, comments and proposals, the participants of the meeting decided to:

- To approve the drafts of the Work Plan of the Working Group on Personnel Management and Training in the CIS electric power industry for 2020-2021 (to instruct the Executive Committee to send to the relevant ministries and national electric power companies for each of the draft documents under development explanatory notes with justifications for their development with subsequent adjustment, if necessary, of the Plan by items and deadlines), Methodological Recommendations to ensure ergonomic conditions for anthropogenic risk management in the electric power industry

- To approve the conducted work on the draft Methodical Recommendations on liquidation of consequences of anthropogenic risks realization and personnel training on rendering first aid to victims. To accept it as a basis. To entrust the Executive Committee together with the Working Group to finalize the draft Methodical Recommendations taking into account comments and proposals of the relevant ministries and national electric power companies of the CIS member states and submit it for consideration at the next meeting of the Working Group.

- To hold the next meeting of the Working Group in Moscow in September 2020.

**Ministry of Energy of Turkmenistan and Russia are preparing a draft memorandum on cooperation in the energy sector (28.05.2020).**

Representatives of the Ministry of Energy of Turkmenistan and the Ministry of Energy of Russia discussed a draft memorandum of understanding on cooperation in the format of a videoconference. Preparation of the draft Memorandum of Understanding between the Ministry of Energy of Turkmenistan and the Ministry of Energy of the Russian Federation on cooperation in the energy sector was the main topic of the online meeting held.

During the talks, the Turkmen side emphasized that the full strengthening and diversification of economic ties with Russia, which is one of Turkmenistan's strategic partners, is among the key directions of the foreign policy pursued under the leadership of President Gurbanguly Berdimuhamedov.

It was also noted that Turkmenistan and Russia have good prospects for cooperation in the implementation of projects on transit and export of electricity.

In particular, it concerns the projects on construction of the Turkmenistan-Afghanistan-Pakistan high-voltage power transmission line, interconnection of the Central Asian power system, formation of a common power market of the Eurasian Economic Union by 2025 and so on. Turkmenistan exports electricity to Afghanistan and is considering exporting electricity to Tajikistan, Pakistan and Armenia.

**Republic of Tajikistan**

**Tajikistan resumed electricity supplies to Uzbekistan (07.05.2020).**

So far, Tajik electricity supplies to the neighboring country are carried out in small volumes and only through two 220 kV lines. In the near future, electricity supplies to Uzbekistan will increase many times and 500 kV lines will be used.

So far, the countries have not reached a final agreement on the price of Tajik electricity supplied to Uzbekistan.

Recall that the export of Tajik electricity to the neighboring state was stopped in early December last year due to the onset of cold weather and in order to meet the domestic needs of the republic.

According to earlier agreements, Dushanbe exports electricity to Tashkent only from April to October, when Tajikistan's domestic needs are fully met.

**The COVID-19 pandemic has not become a hindrance for the construction of Rogun HPP (21.05.2020).**

The construction of the giant of Tajik hydropower is in full swing. Just as before the first case of coronavirus infection was registered in Tajikistan at the end of April, so today about 20,000 workers and engineers are working in three shifts on the construction of the Rogun HPP.

According to builders' plans, Rogun's third unit will be commissioned in the second half of 2025.

With the onset of summer, the builders intend to increase the volume of construction work at the site. The first hydropower unit of Rogun HPP was put into operation in November 2018, the second - in September 2019. The technical design of the Rogun HPP was developed by the Central Asian branch of the Institute Gidroproekt back in 1978.

When designing the hydropower plant, the complex natural conditions of the construction area were fully taken into account: high seismicity, complex geological and tectonic conditions, a narrow mountain gorge, mudflow hazard, and a bed of rock salt at the base of the dam.

Preparatory work on the construction site of Rogun HPP was started in 1976, and by the early 1990s a significant amount of work had been completed - 21 kilometers of tunnels were tunneled, the Vakhsh riverbed was bridged with a construction cofferdam. After the collapse of the USSR, construction of the station was stopped, the cofferdam was washed away by floods, and the underground workings were partially flooded.

In the early 2000s, the leadership of Tajikistan decided to continue construction of the station. The functions of the design organization were entrusted to the Moscow "Institute Gidroproekt", which in 2009 developed the "Concept of completion of Rogun HPP", and in 2012 issued the "Finalization of the HPP construction project".

The Government of Tajikistan conducted an international expert review of the project with the participation of the World Bank and received a positive opinion.

After completion of Rogun HPP, its capacity will amount to 3,600 MW, and the plant will become the largest HPP in Central Asia.

The underground engine room of the plant will house 6 units with installed capacity of 600 MW each. The average annual electricity generation will amount to 13.8 billion kWh, which will fully cover the winter electricity deficit in Tajikistan and give an impetus to the country's economic development.

**Republic of Azerbaijan**

**Azerbaijan has increased electricity production (15.05.2020).**

In April this year, Azerbaijan produced 1,923.6 million kWh, exported 17.5 million kWh and imported 17.7 million kWh of electricity.

The Ministry of Energy reported that in April compared to the same period of 2019, the volume of electricity produced in the country decreased by 112.2 million kWh, exports decreased by 86.4 million kWh and imports increased by 6.5 million kWh.

It is reported that the volume of electricity produced in the republic in January-April this year, compared to the same period last year, increased by 68.2 million kWh and amounted to 8896.7 million kWh.

Compared to the first 4 months of the last year, electricity production at TPPs increased by 189.2 million kWh and amounted to 8435.2 million kWh, at HPPs decreased by 120.2 million kWh and amounted to 341.8 million kWh, at other sources (WPP, SES and ZUTBO) decreased by 0.8 million kWh and amounted to 119.7 million kWh.

VPP generated 34.5 million kWh, SES generated 13.4 million kWh, and the Solid Waste Disposal Plant generated 71.8 million kWh of electricity.

"In the first 4 months of 2020, electricity production by Azerenerji OJSC amounted to 7985.8 mln kWh (TPP 7689.9 mln kWh, HPP 295.9 mln kWh), by the State Energy Service of Nakhchivan AR 114.1 m mln kWh (TPP 62.7 mln kWh, HPP 39.9 mln kWh, SES 11.5 mln kWh), and by independent power plants 796.8 mln kWh." During this time, electricity exports amounted to 500.6 million kWh, decreased by 116.4 million kWh compared to the same period of 2019. Electricity imports amounted to 44.7 million kWh, compared to the same period last year decreased by 7.5 million kWh," the report said.

**Republic of Kazakhstan**

**Kazakhstan will spend 72 billion tenge on wind energy (07.05.2020).**

The total capacity of green facilities will amount to more than 180 MW. In Akmola region by 2022 they want to launch four green projects for more than 72 billion tenge. This was reported in the regional akimat.

In Arshalyn district is expected to launch a wind farm for 39 billion tenge. The Akimat noted that it is planned to open the second stage, the capacity of which will reach up to 100 MW.

In Erementau district they plan to put into operation two more wind farms with a total capacity of 80 MW. Thus, the realization of one of the green projects is estimated at 26 billion tenge. Its capacity will be 50 MW. Construction of the second wind power plant will cost 5.6 billion tenge. Its capacity will be 30 MW.

In Kokshetau they want to realize a green project for 2 billion tenge. According to information, it is planned to install seven WPPs for 7 MW. In general, through the launch of green facilities in the region want to create about 50 jobs.

Earlier it was reported that this year the country wants to launch 13 green stations for $856 million. The total capacity will be about 700 MW. According to information, these projects are currently either in the construction and installation phase or in the design phase. Meanwhile, the outbreak of the coronavirus pandemic has made adjustments and affected the overall progress of the projects.