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**REPORT**

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

**JANUARY-AUGUST 2021**

**DEPARTMENT "MARKET DEVELOPMENT"**

**September, 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-August 2021 generated 75,073.3 million kWh of electricity, which is 8% more than the same period in 2020. The growth in generation was observed in all zones of the UPS of Kazakhstan.

*million kWh*

|  |  |  |  |
| --- | --- | --- | --- |
| **Zone** | **Generation type** | **January-August** | **Δ, %****2020** |
| **2020** | **2021** |
| **Kazakhstan** | **Total** | **69508.2** | **75073.3** | **8.0%** |
| *TPP* | *54961.8* | *59396.2* | *8.1%* |
| *GTES* | *6362.7* | *6970.4* | *9.6%* |
| *hydroelectric power station* | *6637.2* | *6448.0* | *-2.9%* |
| *WES* | *646.1* | *1047.8* | *62.2%* |
| *SES* | *897.4* | *1208.5* | *34.7%* |
| *BSU* | *3.0* | *2.4* | *-20.0%* |
| **Northern** | **Total** | **52885.5** | **57436.8** | **8.6%** |
| *TPP* | *45648.5* | *50192.1* | *10.0%* |
| *GTES* | *2187.3* | *1972.4* | *-9.8%* |
| *hydroelectric power station* | *4418.1* | *4402.1* | *-0.4%* |
| *WES* | *296.7* | *468.7* | *58.0%* |
| *SES* | *331.9* | *399.1* | *20.2%* |
| *BSU* | *3.0* | *2.4* | *-20.0%* |
| **South** | **Total** | **7641.0** | **8123.9** | **6.3%** |
| *TPP* | *4584.8* | *4714.6* | *2.8%* |
| *GTES* | *116.5* | *179.7* | *54.2%* |
| *hydroelectric power station* | *2219.1* | *2045.9* | *-7.8%* |
| *WES* | *157.3* | *376.6* | *139.4%* |
| *SES* | *563.3* | *807.1* | *43.3%* |
| **Western** | **Total** | **8981.7** | **9512.6** | **5.9%** |
| *TPP* | *4728.5* | *4489.5* | *-5.1%* |
| *GTES* | *4058.9* | *4818.3* | *18.7%* |
| *WES* | *192.1* | *202.5* | *5.4%* |
| *SES* | *2.2* | *2.3* | *4.5%* |

#

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

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

*million kWh*

|  |  |  |  |
| --- | --- | --- | --- |
| **No. p / p** | **Region** | **January-August** | **Δ, %** |
| **2020** | **2021** |
| 1 | Akmola | 2965.1 | 3413.3 | 15.1% |
| 2 | Aktobe | 2661.2 | 2476.1 | -7.0% |
| 3 | Almaty | 4,792.6 | 4,693.3 | -2.1% |
| 4 | Atyrau | 4 104.0 | 4627.9 | 12.8% |
| 5 | East Kazakhstan | 6252.8 | 6,131.4 | -1.9% |
| 6 | Zhambyl | 1498.4 | 1,790.1 | 19.5% |
| 7 | West Kazakhstan | 1504.8 | 1568.6 | 4.2% |
| 8 | Karaganda | 10,949.0 | 10,347.2 | -5.5% |
| 9 | Kostanay | 700.3 | 665.4 | -5.0% |
| 10 | Kyzylorda | 337.6 | 424.5 | 25.7% |
| 11 | Mangistau | 3,372.9 | 3316.1 | -1.7% |
| 12 | Pavlodar | 27,225.8 | 32,518.7 | 19.4% |
| 13 | North Kazakhstan | 2,131.3 | 1,884.7 | -11.6% |
| 14 | Turkestan | 1012.4 | 1216.0 | 20.1% |
|   | **Total for Kazakhstan** | **69,508.2** | **75,073.3** | **8.0%** |

The volume of electricity production by energy producing organizations of Samruk-Energy JSC for January-August 2021 amounted to 23.5million kWh or an increase of 26% compared to the same period in 2020.

*million kWh*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **No.** | **Name** | **2020** | **2021** | **Δ 2021/2020** |
| **January-August** | **share in Kazakhstan, %** | **January-August** | **share in Kazakhstan, %** | **million kWh** | **%** |
|  | **JSC Samruk-Energy**  | **18,625.7** | **26.8%** | **23,477.2** | **31.3%** | **4,851.5** | **26.0%** |
| *1* | *JSC AlES* | 3488.6 | *5.0%* | 3348.9 | *4.5%* | *-139.7* | *-4.0%* |
| *2* | *LLP "Ekibastuz GRES-1"* | *11,263.0* | *16.2%* | 14459.5 | *19.3%* | *3,196.5* | *28.4%* |
| *3* | *JSC "Ekibastuz GRES-2"* | *2,717.7* | *3.9%* | 4629.4 | *6.2%* | *1911.7* | *70.3%* |
| *4* | *JSC "Shardara HPP"* | *410.6* | *0.6%* | 368.2 | *0.5%* | *-42.4* | *-10.3%* |
| *5* | *JSC "Moinak HPP"* | *641.2* | *0.9%* | 572.4 | *0.8%* | *-68.8* | *-10.7%* |
| *6* | *Samruk-Green Energy LLP* | *2.8* | *0.004%* | 13.5 | *0.018%* | *10.70* | *382.1%* |
| *7* | *LLP "First wind power plant"* | *101.8* | *0.1%* | 85.3 | *0.1%* | *-16.5* | *-16.2%* |

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

# *Consumption of electrical energy by zones and regions*

According to the System Operator, in January-August 2021, there was an increase in the dynamics of electricity consumption in the republic compared to January-August 2020 by 7%. Thus, in the northern zone of the republic, consumption increased by 6%, in the southern zone by 12% and in the western zone by 6%.

*million kWh*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **No.** | **Name** | **Jan-Aug 2020** | **Jan-Aug 2021** | **Δ, million kWh** | **Δ, %** |
| **I** | **Kazakhstan** | **69,437.3** | **74417.2** | **4979.9** | **7%** |
| 1 | Northern zone | 45,626.3 | 48282.9 | 2656.6 | 6% |
| 2 | Western zone | 9,023.3 | 9554.5 | 531.2 | 6% |
| 3 | Southern zone | 14,787.7 | 16579.8 | 1792.1 | 12% |
|  | ***incl . \_ by regions*** |  |  |  |  |
| 1 | East Kazakhstan | 6,062.9 | 6150.6 | 87.7 | 1% |
| 2 | Karaganda | 12,005.1 | 12443.7 | 438.6 | 4% |
| 3 | Akmola  | 5,743.6 | 6549.1 | 805.5 | 14% |
| 4 | North Kazakhstan | 1,055.3 | 1125.6 | 70.3 | 7% |
| 5 | Kostanay  | 2942.7 | 3134.7 | 192.0 | 7% |
| 6 | Pavlodar | 13,465.8 | 14361.0 | 895.2 | 7% |
| 7 | Atyrau  | 4,185.8 | 4380.1 | 194.3 | 5% |
| 8 | Mangistau  | 3364.3 | 3507.1 | 142.8 | 4% |
| 9 | Aktobe | 4350.9 | 4518.2 | 167.3 | 4% |
| 10 | West Kazakhstan  | 1473.2 | 1667.3 | 194.1 | 13% |
| 11 | Almaty  | 7,174.1 | 8033.7 | 859.6 | 12% |
| 12 | Turkestan | 3334.2 | 3759.1 | 424.9 | 13% |
| 13 | Zhambyl  | 3 174 | 3491.1 | 317.1 | 10% |
| 14 | Kyzylorda  | 1105.4 | 1296.0 | 190.6 | 17% |

# **Results of the industry in January-August 2021**

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

January-August 2021 compared to January-August 2020, the industrial production index (hereinafter referred to as IPP) amounted to 102.4%. An increase in production volumes was recorded in 14 regions of the republic, a decrease was observed in Atyrau , West Kazakhstan and Mangystau regions.

**Changes in industrial output by region**

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

In the city of Almaty, due to an increase in the growth in the production of sunflower oil, ice cream, boxes, boxes made of paper or cardboard, ready-mixed concrete, mortar , steel pipes, building prefabricated metal structures, cars and trucks, buses, the IPP amounted to 122.1%.

In the city of Nur -Sultan, the IPP was 113.9% due to the growth in the production of soft drinks, preforms , ready-mixed concrete, refined gold, switchboards, prefabricated structures made of cement and concrete, and the production of railway and diesel locomotives.

In the Almaty region, the IPP was 113.8% due to an increase in the production of soft drinks, fruit and vegetable juices, sugar, plastic pipes, drywall , ready-mixed concrete, Portland cement, mortars.

In the Kostanay region, the IPP amounted to 109.2% due to an increase in the extraction of iron, gold and aluminum ores, copper and iron ore concentrates, iron ore pellets, the production of flour, butter, bran, asbestos, gold in doré, hot-rolled steel bars and rods, tractors, combines and cars.

In the Akmola region, due to an increase in the extraction of gold ores, the production of pesticides, ready-made animal feed, pipes and hoses made of rubber, natural uranium, the production of combines, tractors and trucks, the IPP amounted to 108.4%.

In the North Kazakhstan region, due to the growth in the production of milk, flour, confectionery, linseed oil, bran, plastic pipes, an increase in the production of freight cars, the IPP amounted to 107.5%.

In the city of Shymkent, due to an increase in the production of soft drinks, sunflower and soybean oils, confectionery, medicines, Portland cement, heating oil, motor oil, transformers, electrical wires and cables, the IPP amounted to 106.4%.

In the Zhambyl region, due to the growth in the extraction of gold ores, finely ground phosphate raw materials, the production of sugar, sausages, phosphate fertilizers, ferrosilicomanganese , sodium triphosphate , Portland cement, diesel fuel, heating oil, the IPP amounted to 106.2%.

In the Aktobe region, the IPP amounted to 105.9% due to an increase in the production of oil, copper and zinc concentrates, non-agglomerated iron ores, an increase in the production of finished animal feed, chromium salts, chromium oxide, liquefied propane and butane, hot-rolled steel profiles, building prefabricated metal structures .

In the East Kazakhstan region, the IPP amounted to 104.8% due to an increase in the extraction of copper, gold-bearing and lead-zinc ores, gold-bearing concentrates, the production of refined gold, gold in doré, enriched uranium, trucks and tractors.

In the Pavlodar region, the IPP amounted to 104.7% due to the growth in the extraction of copper ores, the production of pesticides, ferrosilicon chromium , gasoline, diesel fuel, propane and liquefied butane, fuel oil.

In the Turkestan region, due to the growth in the extraction of uranium and thorium ores, gold concentrates, the production of soft drinks, flour, sausages, electrical transformers, circuit breakers, building prefabricated metal structures, the IPP amounted to 102.3%.

In the Kyzylorda region, the IPP amounted to 100.8% due to an increase in the extraction of uranium and thorium ores, the production of rice, sulfuric acid, Portland cement, building prefabricated concrete structures.

In the Karaganda region, the growth of IPP amounted to 100.3% due to an increase in the extraction of copper ores, gold-bearing ores and concentrates, lead-zinc ores, the production of medicines, coke and semi-coke from hard coal, pig iron, flat and galvanized rolled products, unalloyed steel , sandwich coated steel panels.

In Mangistau (96.5%) and Atyrau (94.2%) regions, the IPP decreased mainly due to a reduction in crude oil production.

In the West Kazakhstan IPP amounted to 93.2% due to a decrease in gas condensate production.

# *Electricity consumption by large consumers in Kazakhstan*

In January-August 2021, compared to the same period in 2020, electricity consumption by large consumers increased by 1.53%.

*million kWh*

|  |  |  |
| --- | --- | --- |
| **No** | **Consumer** | **January-August** |
| **2020** | **2020** | **Δ, %** |
| 1 | JSC Arcelor Mittal Temirtau" | 2450.0 | 2450.0 | 2% |
| 2 | JSC AZF ( Aksuysky ) "TNK Kazchrome " | 3,878.2 | 3,878.2 | -10% |
| 3 | Kazakhmys LLP Smelting » | 800.9 | 800.9 | -9% |
| 4 | Kazzinc LLP \_ | 1,892.7 | 1,892.7 | -3% |
| 5 | JSC " Sokolovsko-Sarbayskoye GPO" | 1,107.8 | 1,107.8 | -4% |
| 6 | Kazakhmys Corporation LLP | 854.0 | 854.0 | 0% |
| 7 | AZF JSC (Aktobe) "TNK Kazchrome " | 2,138.1 | 2,138.1 | -1% |
| 8 | RSE “Channel them. Satpaev » | 157.4 | 157.4 | 46% |
| 9 | Kazphosphate LLP \_ | 1457.5 | 1457.5 | -9% |
| 10 | NDFZ JSC (part of Kazphosphate LLP ) | 1280.5 | 1280.5 | -13% |
| 11 | LLP " Taraz Metallurgical Plant" | 152.3 | 152.3 | 31% |
| 12 | JSC " Ust-Kamenogorsk titanium -magnesium plant" | 528.2 | 528.2 | -17% |
| 13 | Tengizchevroil LLP \_ | 1227.1 | 1227.1 | -1% |
| 14 | PAZ JSC (Pavlodar Aluminum Smelter) | 637.0 | 637.0 | 0% |
| 15 | JSC "KEZ" (Kazakhstan electrolysis plant) | 2506.9 | 2506.9 | 0% |
| 16 | TemirzholEnergo LLP \_ | 927.2 | 927.2 | 24% |
| 17 | JSC "KEGOC" | 2868.3 | 2868.3 | 27% |
| **Total** | **23,583.5** | **23,944.9** | **1.53%** |

*million kWh*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|   | **Name** | **January-August** | **Deviation, million kWh** | **Δ , %****2020** |
| **2020** | **2021** |
| **I** | **JSC " Samruk-Energy "** | **4681.18** | **5244.0** | **562.8** | **12.0%** |
| *1.* | *LLP "Bogatyr-Komir"* | 195.00 | 194.9 | -0.1 | -0.1% |
| *2.* | *JSC Alatau Zharyk Companies »* | 579.13 | 622.5 | 43.4 | 7.5% |
| *3.* | *AlmatyEnergoSbyt LLP* | 3907.05 | 4426.6 | 519.6 | 13.3% |

# **Coal**

According to the Bureau of National Statistics, Kazakhstan produced 69,189.6 thousand tons of hard coal in January-August 2021, which is 0.2% more than in the same period in 2020 (69,036.7 thousand tons).

*thousand tons*

|  |  |  |  |
| --- | --- | --- | --- |
| **No.**  | **Region** | **January-August** | **Δ, %** |
| **2020** | **2021** |
| 1 | Pavlodar | 42,788.1 | 42,204.9 | 98% |
| 2 | Karaganda | 21,725.7 | 21,590.9 | 99% |
| 3 | East Kazakhstan | 4445.0 | 5,031.4 | 113% |
|  | **Total for the Republic of Kazakhstan** | **69,036.7** | **69,189.6** | **100.2%** |

# *Coal mining by Samruk-Energy JSC*

In January-August 2021, Bogatyr Komir LLP produced 29,159 thousand tons, which is 4.4% more than in the corresponding period of 2020 (27,942 thousand tons).

# *Sale of coal by Samruk-Energy JSC*

In January-August 2021, 29,394 thousand tons were sold, including :

- to the domestic market of the Republic of Kazakhstan 23,202 thousand tons, which is 10.5% more than in the corresponding period of 2020 (20,999 thousand tons);

- for export (RF) - 6,192 thousand tons, which is 6.6% less than for the corresponding period of 2020 (6,626 thousand tons).

*thousand tons*

|  |  |  |  |
| --- | --- | --- | --- |
| **No. p / p** | **Region** | **Sales volume, thousand tons** | **Δ, %** **2021/2020** |
| **January-August 2020** | **January-August 2021** |
| **Total to the domestic market of the Republic of Kazakhstan** | **20 999** | **23 202** | **110.5%** |
| **Total for export to Russia** | **6 626** | **6 192** | **93.4%** | **1 144** | **46.8%** |

According to the indicators for January-August 2021, compared to the same period in 2020, the Company observed an increase in coal sales by 6.4%.

# **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-August 2021 amounted to 3,395.9 million kWh . Compared to the period of January-August 2020 (2,107.9 million kWh ), the increase was 61.1%.

million kWh

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **No.** | **Name** | **2020** | **20 2 1g** | **Deviation 20 2 0/2021,** |
| **January-August** | **share in Kazakhstan, %** | **January-August** | **share in Kazakhstan, %** | **million kWh** | **%** |
|   | **Total output in Kazakhstan** | **69508.2** | **100.0%** | **75073.3** | **100%** | **5565.1** | **8.0%** |
| **I** | **Total RES in the Republic of Kazakhstan, incl . by zones** | **2107.9** | **3.0%** | **3395.9** | **4.5%** | **1288.0** | **61.1%** |
| 1. | *Northern zone* | *721.1* | *34.2%* | *1572.6* | *46.3%* | *851.5* | **118.1%** |
| 2. | *Southern zone* | *1138.8* | *54.0%* | *1618.5* | *47.7%* | *479.7* | **42.1%** |
| 3. | *Western zone* | *248.0* | *11.8%* | *204.8* | *0.0%* | *-43.2* | **-17.4%** |
| **II** | **Total RES in the Republic of Kazakhstan, incl . by type** | **2107.9** | **3.0%** | **3395.9** | **4.5%** | **1288.0** | **61.1%** |
| 1. | *SES* | *951.0* | *45.1%* | *1802.0* | *53.1%* | *851.0* | **89.5%** |
| 2. | *WES* | *643.6* | *30.5%* | *1047.8* | *30.9%* | *404.2* | **62.8%** |
| 3. | *Small HPPs* | *510.3* | *24.2%* | *543.8* | *16.0%* | *33.5* | **6.6%** |
| 4. | *BiogasInstallations* | *3.0* | *0.1%* | *2.3* | *0.1%* | *-0.7* | **-23.3%** |

January-August 2021 there is an increase in the production of electricity by solar power plants, wind farms and small hydropower plants compared to the same period in 2020.

million kWh

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **No.** | **Name** | **2020** | **2021** | **Deviation 2020/2021,** |
| **January-August** | **share in Kazakhstan, %** | **January-August** | **share in Kazakhstan, %** | **million kWh** | **%** |
|  | ***Electricity production in UES RK*** | **69508.2** | **100%** | **75073.3** | **100.0%** | **5565.1** | **8.0%** |
| 1. | Production of "clean" electricity (RES + Large HPPs) | *6066.2* | *8.7%* | *8306.3* | *11.1%* | *2240.1* | **36.9%** |
| 2. | Production of "clean" electricity (RES excluding Large HPPs) | *2107.9* | *3.0%* | *3395.9* | *4.5%* | *1288.0* | **61.1%** |

Samruk-Energo JSC (SPP, WPP, small HPPs) in January-August 2021 amounted to 212.5 million kWh or 6.3% of the volume of electricity generated by renewable energy facilities in the Republic of Kazakhstan , which is compared with the same the period of 2020 is lower by 4 % (in January-August 2020, the Company 's RES generation amounted to 221.4 million kWh , and the share of the Company's RES was 10.5%).

The Company's share in the production of "clean" electricity (SPP, WPP, small and large HPPs) for January-August 2021. increased by 0.8% (1,784.1 million kWh ) compared to the same period in 2020. (1,770.7 million kWh ).

million kWh

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **No.** | **Name** | **2020** | **2021** | **Deviation 2020/2021,** |
| **January-August** | **share in Kazakhstan, %** | **January-August** | **share in Kazakhstan, %** | **million kWh** | **%** |
| 1 | Production of JSC " Samruk-Energo " "clean" electricity (RES excluding Large HPPs), including : | 221.4 | 10.5% | 212.5 | 6.3% | -8.9 | -4.0% |
|  | *JSC AlES Cascade of small HPPs* | *116.8* | *5.5%* | *116.9* | *3.4%* | 0.1 | 0.1% |
|   | *Samruk-Green Energy LLP SPP 2 MW* | *2.8* | *0.1%* | *0.6* | *0.0%* | -2.2 | -78.6% |
|   | *Samruk-Green Energy LLP WPP Shelek 5 MW* |  | *0.0%* | *9.7* | *0.0%* | 9.7 |   |
|   | *First Wind Power Plant LLP WPP 45 MW* | *101.8* | *4.8%* | *85.3* | *2.5%* | -16.5 | -16.2% |

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

*(information of KOREM JSC)*

*General trading results*

Based on the results of the centralized trading in electricity in August 2021, 119 transactions were concluded in the amount of 130,488 thousand kWh for a total amount of 9,887,616 thousand tenge (excluding VAT) (including spot trading in the "day ahead" mode and trading in the medium-term and long-term periods), including:

* spot-trades in the "one day ahead" mode - 111 deals were made in the amount of 87,744 thousand kWh for a total amount of 758,985.6 thousand tenge. The minimum and maximum price at spot trading in the “one day ahead” mode amounted to 8.65 tenge / kWh (without VAT);
* spot trading “during the trading day” - no deals were made;
* trades in electricity for the medium and long term - 8 transactions were made in the amount of 42,744 thousand kWh for a total amount of 229,776 thousand tenge (excluding VAT). The minimum price for this type of centralized trading was 1.46 tenge / kWh (excluding VAT), the maximum - 11 tenge / kWh (excluding VAT).

For the same period in 2020, 2 transactions were concluded in the amount of 3,456 thousand kWh . The table below shows the price dynamics of transactions concluded at centralized trading in August 2020-2021.

Dynamics of prices established as a result of centralized trading

in August 2020-2021

|  |  |  |  |
| --- | --- | --- | --- |
| **August** | **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** | **8.5** | **8.5** | **1.1** | **1.1** | **-** | **-** |
| **2021** | **8.65** | **8.65** | **1.46** | **1.1** | **-** | **-** |

#

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

Based on the results of the spot trading in August 2021, 111 transactions were concluded in the amount of 87,744 thousand kWh , the minimum and maximum clearing price for spot trading in the “one day ahead” mode was 8.65 tenge / kWh (excluding VAT) .

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



# The table shows that the total demand amounted to 131,808 thousand kWh , while the total supply amounted to 87,744 thousand kWh , with deals made in the amount of 87,744 thousand kWh .

# Unsatisfied demand in August 2021 amounted to 44,064 thousand kWh , and unsatisfied supply - 0 thousand kWh . In the process of spot trading, 195 orders were accepted into the trading system, of which 166 were from buyers and 29 were from sellers.

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

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

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

# In August 2021, following the results of trading for the medium and long term, 8 transactions were concluded with a volume of 42,744 thousand kWh for a total amount of 229,776 thousand tenge (excluding VAT). The minimum price for this type of centralized trading was 1.46 tenge / kWh (excluding VAT), and the maximum price was 11 tenge / kWh (excluding VAT).

# For the same period in 2020, for trading in electricity for the medium and long term, 1 transaction was concluded with a volume of 1,176 thousand kWh .

# **Export-import of electrical energy**

In order to balance the production and consumption of electricity in January-August 2021, exports to the Russian Federation amounted to 908.4 million kWh , imports from the Russian Federation - 1,010.5 million kWh .

Including export of JSC " KEGOC " - 865.8 million kWh , import of electricity from the Russian Federation for the reporting period in the amount of 820.9 million kWh .

million kWh

| **Name** | **2020** | **2021** | **Δ 2021/2020** |
| --- | --- | --- | --- |
| **January-August** | **million kWh** | **%** |
| **Export of Kazakhstan** | **-1,144.0** | **-1,971.8** | **-827.8** | **72.4%** |
| **in Russia** | **-682.3** | **-908.4** | **-226.1** | **33.1%** |
| **in the IPS of Central Asia** | **-461.7** | **-1,063.4** | *-601.7* | 130.3% |
| **Import of Kazakhstan** | **1,073.1** | **1315.7** | **242.6** | **22.6%** |
| **From Russia** | **1,073.1** | **1315.7** | **242.6** | **22.6%** |
| **from IPS Central Asia** | **314.8** | **305.2** | **-9.6** | **-3.1%** |
| **Balance- flow "+" deficit, "-" excess** | **-70.9** | **-656.1** | **-585.2** | **825.3%** |

# **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, two meetings of the Advisory Committee on the Electricity Industry under the EEC Board (hereinafter referred to as the Consultative Committee) were held
(14th meeting on January 21, 15th meeting on April 21), two meetings of authorized representatives of the Member States (March 18 and July 30), 12 meetings of the Subcommittee on the Formation of the ERA of the EAEU of the Advisory Committee on the Electricity Industry under the EEC Board (hereinafter referred to as the Subcommittee) (56th meeting on January 14, 57th meeting on February 5, 58th meeting on February 25-26, 59th meeting on 11-12 March, 60th meeting March 26, 61st meeting April 9, 62nd meeting April 16, 63rd meeting May 13, 64th meeting June 7, 65th meeting June 24-25, 66th meeting 7 July, 67th meeting 22-23 July, 68th meeting 12-18 August, 69th meeting 26-27 August) and one workshop on 1 July).

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 interstatepower 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 and KOREM JSC)*

REPUBLIC OF ARMENIA.

Works on restorative annealing of the VVER-440 reactor vessel of power unit No. 2 have been completed at the Armenian NPP. Work at the station is being carried out in order to extend the life of the nuclear power plant until 2026. The annealing process took place in the reactor hall of the station, and the reactor remained in its regular place. The annealing plant was delivered disassembled to the nuclear power plant, then this installation, the height of a two-story house, was assembled and installed in the reactor vessel. The metal was slowly heated to a temperature of 475 degrees Celsius, held for 150 hours and then gradually cooled. The reactor vessel is the main non-replaceable element of a nuclear power plant. Annealing will return the operational characteristics of the metal shell of the reactor to its original state by 80-85%.

Electricity generation in Armenia in January-July increased by 0.1% year-on-year. The volume of electricity production, according to operational statistics, in January-July 2021 increased by 0.1% compared to the same period last year, the National Statistical Committee of the Republic reports. As noted in the report, the volume of electricity production for the seven months of 2021 amounted to 4,457.1 million kWh . At the same time, this indicator in July 2021 compared to July 2020 decreased by 2.2%, and compared to June 2021 it increased immediately by 23.5%.

Electric Networks of Armenia CJSC intends to pledge 100% of the shares of Tashir Capital CJSC to ensure the fulfillment of loan agreements to be concluded by the company with the European Bank for Reconstruction and Development and the Asian Development Bank, as well as with the International Finance Corporation.

On August 27, the Government of the Republic of Armenia approved the corresponding draft decision. As noted in the rationale, based on an agreement dated August 26, 2002 on the sale of state shares to Midland resources Holding Limited , government approval is required before the deal can be entered into. Based on the foregoing, the shareholders of the Company - Liormand Holdings Limited and Tashir Capital CJSC have applied to the Ministry of Territorial Administration and Infrastructure of the Republic of Armenia with a request to support the process of attracting new credit resources for the implementation of the investment program. The pledge will also become a means of ensuring the fulfillment of the company's obligations arising from loan agreements.

CJSC Electric Networks of Armenia was established in May 2002 as a result of the merger of four state-owned regional companies for the distribution and sale of electricity: Yerevan Electric Networks, Northern Electric Networks, Southern Electric Networks and Central Electric Networks. The main activity of the company is the regulated distribution and sale of electricity. The total length of the networks is 36,000 km. The company serves about 985,000 consumers. CJSC Electric Networks of Armenia has an exclusive license for the transmission and distribution of electricity in the territory of the Republic of Armenia at guaranteed tariffs, calculated based on the company's costs and the regulated rate of return on invested capital.

REPUBLIC OF BELARUS

of the Lukomlskaya GRES was successfully completed as part of the project “Construction of an automatic frequency and power flow control system (AFRC) in the Belarusian energy system. 12th turn. The implementation of this project is extremely relevant from the point of view of improving the reliability and stability of the energy system of the Republic of Belarus in connection with the construction and commissioning of the Belarusian NPP. The results achieved are unique at the moment in RUE " Vitebskenergo ", as for the first time the automation of the traditional steam power unit No. 4 (315 MW) of Lukomlskaya GRES was fully ready to participate in the primary and secondary regulation of frequency and power in the power system in accordance with the most modern regulatory requirements of the State Production Association " Belenergo ". The outdated control system of power unit No. 4 was modernized with the transfer of automatic regulators to a modern software and hardware complex by expanding the existing steam turbine control system. With the direct participation of the power plant personnel, unique solutions for automating the deep unloading mode of the power unit from 120 to 100 MW (deep unloading in automatic mode) were successfully implemented.

The automation solutions developed and implemented by the commissioning organization ensured the change in the electrical load of the power unit in the control range in a fully automatic mode with the required accuracy (in the corridor ± 1% of the nominal load of the unit) and with the required dynamics for participation in the primary frequency control.

At the final stage, from July 26 to July 30, 2021, complex (certification) tests of the power unit of station No. 4 of the Lukoml SDPP were successfully carried out together with the central dispatching system of Belenergo State Production Association .

At the Gomel CHPP-2, the overhaul of the power unit st. No. 2 with a capacity of 180 MW. On July 20, the power unit was included in the network of the Belarusian energy system. During the repair, to ensure reliable and economical operation of the power unit, two blocks of coil packs of the high-pressure convective superheater of the TGME-206 steam boiler were replaced; control of the metal of steam pipelines, collectors, heating surfaces, desuperheaters and the drum of the TGME-206 boiler; repair of shut-off and control valves, drum, gas-air path of the boiler of pumping units; modernization of the ignition and signal device for the burners of the steam boiler TGME-206; repair of steam heating turbine T-180/210-130-1 (including repair of oil coolers, steam distribution system, shut-off and control valves, revision of bearing supports No. 1-9); repair of the turbogenerator TGV-200-2MUZ with the replacement of the rotor shroud rings.

In the branch "Mogilev CHPP-2" RUE " Mogilevenergo " one of the turbines is being reconstructed with the replacement of the generator due to its physical deterioration. The new R-18/24-2.1/0.25 heating turbine was manufactured at the Kaluga Turbine Plant, the turbogenerator was manufactured at the Lysvensky Privod Heavy Electrical Machine Building Plant (Russia). To control the steam turbine, an automated monitoring and control system is provided, supplied by the Kaluga plant complete with the turbine. For auxiliary equipment, the project provides for automated control systems that will be able to be included in the overall process control system of the CHPP. In addition to generating electricity, the new turbine is designed to supply steam to a network heater that provides heating with network water for city utility networks, as well as the largest industrial enterprises of Mogilev. The general contractor for the replacement of the turbine is the SU CHPP-2 branch of SE Belenergostroy . Commissioning of the equipment is scheduled for 2022.

As part of the implementation of the Measures for the regime integration of the Belarusian NPP into the balance of the energy system, four power plants are building a PEI based on a gas turbine unit (with a total capacity of 800 MW).

BEREZOVSKAYA GRES has already completed foundation work for GTUs No. 1-5, for chimneys and step-up transformers, as well as for water coolers, cooling pumps and an expansion tank container. Concreting of the foundation slab of the auxiliary transformer module 10/6 kV and the slab for the GTU control module was completed. The construction of the foundation for the supply tank of liquid fuel and storage tanks No. 1 and 2 was completed, the foundation for the autotransformer and the transfer paths were also completed. The first of five gas turbines was delivered to the construction site. At present, Berezovskaya GRES is carrying out reinforcement of fire barriers; on the installation of monolithic grillages of portals and foundations for 330 kV outdoor switchgear equipment , grounding, lightning protection , vertical planning and fencing from reinforced concrete panels, as well as on concrete preparation for 110 kV outdoor switchgear portals and construction of a road along the PRI site to 110 kV outdoor switchgear.

AT LUKOMLSKAYA GRES, all three GTUs have already been installed on the foundation. The foundations for the control module and the electrical equipment module were also made, the sand base and the concrete preparation of the foundation for the fan cooling tower module were completed, and the reinforcement cage elements are in the process of being manufactured . The installation of foundations for the overpass between the PREI site and the diesel facilities was completed, reinforced concrete columns of the overpass were mounted. At the moment, the station is working on the installation of foundations for storage tanks for diesel fuel, the building structures of the frame of the treatment facilities are being manufactured, and measures are being taken to lower the water. Also, the installation of metal structures of the overpass of technological pipelines from the main building to the PREI site is being carried out, an oil collector is being installed for auxiliary transformers 10/6 kV and cable channels are being installed on the territory of the outdoor switchgear and GTU.

AT NOVOPOLOTSKAYA CHPP, two GTU modules were installed on the foundation, as well as the installation of foundations for the control module and the electrical equipment module. Foundations for 110 kV power transformers were also installed . Currently, the plant is carrying out work on the installation of foundations for auxiliary transformers 10/6 kV , as well as a number of other works.

At CHPP-5, GTUs No. 1, 2, 3, 4 were installed on the foundation. The foundations for the installation of GTUs No. 5 and 6 are ready. Also, the plant has already carried out work on the installation of the foundations of the liquid fuel separator unit, the liquid fuel transfer unit, the compressed air unit, a heating module and a block-module for closed circuit cooling pumps, an AT-2 transformer was installed, and at the moment, the installation of cable rack metal structures and electrical equipment is underway. In the process of performing work on the installation of foundations for closed-type cooling towers and installation of foundations for power transformers 110 and 330 kV.

THE REPUBLIC OF KAZAKHSTAN

The Eurasian Economic Union has not yet launched a single electricity market, but the export potential of its member countries is growing. Belarus is nearing completion of a nuclear power plant that was originally supposed to enable exports, and a recent EDB report forecasts Central Asia's electricity surplus to rise from 37.2 TWh in 2020 to 45.6 TWh in 2030. What trade opportunities will give the EAEU a single energy market , analyzed the professor of the Russian-Armenian University, president of the NPO "Energy Security Institute" Vahe Davtyan .

Common energy market and export prospects

Apparently, the EAEU common electricity market will be launched without a common natural gas market. This, of course, contradicts the position expressed more than once by Minsk and Yerevan, but the decisions taken by the Eurasian Economic Commission form the conditions under which the transition to the electricity market without deep integration in the gas transport sector will not only not be painful, but can bring serious dividends to members of the Union.

In particular, we are talking about the possibility of commercial supplies of electricity to the European market through the establishment of a transparent transit tariff. However, before examining the prospects for exports in the European direction, let us turn to the specifics of the functioning of the national electricity markets of the EAEU member countries. This is necessary, first of all, in order to determine the export potential of the Union, as well as to identify problems in intra-Union electric power communications.

The main characteristic of the electricity markets of the EAEU in terms of the formation of a common market continues to be energy surplus and, consequently, the focus of most member countries on export.

Having excess generating capacity, they are aimed at finding foreign markets, which is why they often use protectionist methods to promote their energy interests. The latter is in direct conflict with the basic principle of the formation of a common electricity market - the liberalization of national markets (for more details, see the previous article).

Liberalization concerns not only the organization of the internal structure of the market, the rules of its functioning, but also export-import operations. And in this sense, not all members of the Union are ready to “open the gates” for external suppliers, including partners in the EAEU. There is a conflict of interest, and this, perhaps, is the "Achilles' heel" of the Eurasian power industry integration.

Generation opportunities of the EAEU countries

Let's look at some numbers. The total electricity generation in the EAEU in 2019 exceeded 1.2 trillion kWh . (the results of 2020 have not yet been summed up). As for the volume of mutual trade, until 2018 it reached about 10 billion kWh , however, this figure decreased significantly due to the cessation of Belarus' electricity imports from Russia in 2018 (imports amounted to about 3 billion kWh annually).

Let us consider the main electric power characteristics of the EAEU members separately.

Russia. The installed capacity of power plants of the UES of Russia as of the beginning of 2020 amounted to 246,342.5 MW. Consumption and generation of electricity has been growing over the past 10 years. In 2019, generation increased by 0.9% compared to 2018, to 1,080.6 billion kWh , consumption increased by 0.4% and amounted to 1,059.4 billion kWh . Electricity surplus in Russia, according to various estimates, ranges from 20 to 30 GW.

Belarus. The installed capacity of generating facilities in Belarus is 10,073.99 MW. Electricity consumption in the republic is 38 billion kWh per year. It is expected that after the launch of the second unit of the BelNPP, electricity generation in Belarus will increase by 18 billion kWh , which opens up great opportunities for export.

Kazakhstan. As of 2021, the total installed capacity of power plants in Kazakhstan is 23,621.6 MW, and the available capacity is 20,078.6 MW. The volume of electricity production reaches 106 billion kWh . At the same time, Kazakhstan is a net exporter of electricity: the excess generation reaches 5 billion kWh .

Armenia. Armenia has an excess of generating capacity: out of an installed capacity of 2885 MW, about 2000 MW are used today. The annual production of electricity in Armenia is about 7 billion kWh , of which up to 1.5 billion kWh is exported to Iran. At present, the construction of the 3rd Iran-Armenia high-voltage transmission line is underway, which will increase the mutual flows between the countries from the current 350 MW to 1200 MW. In turn, this transmission line is part of the North-South (Iran-Armenia-Georgia-Russia) international electricity corridor project, the implementation of which may in the future provide the republic with positioning in international, including Eurasian, electricity markets.

Kyrgyzstan. The installed capacity of power plants in Kyrgyzstan is 3892 MW, of which 862 MW are thermal power plants, 3030 MW are hydroelectric power plants. Annual generation in Kyrgyzstan is about 15 billion kWh . Currently, the republic is struggling to provide electricity to the domestic market, although according to the CASA-1000 program (electricity transmission project in Central Asia and South Asia, funded by USAID), it is planned that starting from 2023, Kyrgyzstan, together with Tajikistan, will begin supplying electricity to Pakistan and Afghanistan. In particular, deliveries are planned to be carried out in the summer, when a surplus of electricity is formed in the country.

As can be seen from the above indicators, almost all EAEU member countries are aimed at developing export strategies. At the same time, taking into account the availability of the necessary generating capacities, as well as a convenient geographical location, Russia, Belarus and Kazakhstan have the greatest potential to intensify exports.

As for Armenia, it is in a post-war shock, and the regional geo-economic architecture does not allow us to talk about the full diversification of export destinations. Moreover, due to problems with exports (due primarily to the slow pace of implementation of the above-mentioned Iran-Armenia power line project), the operation of one of the key energy facilities, the 5th power unit of the Hrazdan TPP (480 MW), was stopped in the republic .

Regarding Kyrgyzstan, two key problems should be noted. Firstly, the energy system of the republic has accumulated a colossal debt, which over the past 15 years has reached $15 billion. This affects the tariff policy, which causes significant damage to the investment climate of the system. Secondly, currently in the energy system of Kyrgyzstan there is a high depreciation of fixed assets, which reaches 60%. At the same time, in international practice, wear of 30% is already considered critical.

Europe or Asia?

Let us return, however, to the prospects for exports in the European direction. Today, among the members of the EAEU, only Russia delivers to the Baltic countries and Finland. In 2019, supplies to Lithuania amounted to 6.3 billion kWh (by RUB 20.5 billion), to Finland – 7 billion kWh (by RUB 21.9 billion). It is obvious that the member countries of the EAEU can also join this section with the payment of the cost of transit. It is here that favorable conditions are formed for the other participants in the Eurasian integration, aimed at using their excess capacities.

Given the geographical location, good prospects are highlighted for Belarus. Although the Baltic countries refuse to import Belarusian electricity, deliveries can be made to Finland, for example. This will become possible after the launch of the second power unit of the BelNPP , supplies from which, according to some estimates, can reach up to 10 billion kWh , in monetary terms - from €300 million to €400 million ($356.5-475.3 million). Among other things, this may also be interesting from the point of view of covering the Russian loan allocated for the construction of the nuclear power plant.

Theoretically, Kazakhstan can also join this section, dynamically developing generating capacities, especially in the field of renewable energy (according to the energy development strategy of the republic, the share of renewable energy by 2030 will be 10%, by 2050 - 50%). But given its geographical location, the supply of electricity to Europe through Russian networks seems inappropriate.

Here it is possible to use a swap supply model, however, considering the issue in the context of the interests of the EAEU, the most optimal scenario is the promotion of Belarusian and Russian electricity on the European markets. As for Kazakhstan, the most promising development scenario is the activation of exports to the dynamically growing Asian market, which has consolidated its position as a driver of global energy demand.

Electricity and coal market in Kazakhstan for 6 months of 2021

All power plants of the Republic of Kazakhstan in the first half of 2021 generated 57,325.4 million kWh of electricity, which is 7.1% more than the same period in 2020. The growth in generation was observed in all zones of the Unified Energy System (UES) of Kazakhstan. This is reported with reference to the data of the System Operator in the Analytical Review of the Electricity and Coal Market in Kazakhstan for January-June 2021, prepared by the Market Development Department.

The volume of electricity production by energy producing organizations of Samruk-Energy JSC for this period amounted to 17,891.1 million kWh , which is 25.8 % more than last year's figures for the same period.

At the same time, according to the analysis, in the dynamics of electricity consumption of the republic in January-June 2021, there was an increase of 6% compared to January-June 2020. So, in the northern zone of the republic, consumption increased by 6%, in the southern zone by 10% and in the western zone by 2%.

The company's experts note that according to the forecast balance of electric energy and capacity for 2021-2027 of the Ministry of Energy of the Republic of Kazakhstan, an increase in electricity consumption by an average of 2.4% is expected. In addition, by 2027, a shortage of electric capacity is predicted, taking into account the necessary reserve in the amount of about 898 MW. At the same time, already now in the UES of Kazakhstan there is a shortage of regulation capacity of about 1000 MW.

To solve these problems, today, with the support of the Samruk-Kazyna Fund , a number of major projects are being implemented in the country's energy sector related to the construction of new stations and the expansion and modernization of existing ones.

In terms of thermal coal production, according to the data provided in the Electricity and Coal Market Analysis , in January-June 2021, Kazakhstan produced 52,147.2 thousand tons of hard coal, which is 1% less than in the same period of 2020. Including 22,244 thousand tons were mined at the Bogatyr Komir open pits. During this period, the company sold 22,517 thousand tons, including : 18,230 thousand tons for the domestic market of the Republic of Kazakhstan, - for export (RF) - 4,287 thousand tons.

The volume of electricity production by objects using renewable energy sources (RES: solar and wind power plants, small hydroelectric power plants, biogas stations in Kazakhstan in January-June 2021 amounted to 2005.5 million kWh. Compared to the period January-June 2020 ( 1470 million . kWh ) growth was 1.4%.

Electricity generation by own renewable energy facilities amounted to 156.9 million kWh or 7.8% of the total electricity generated by renewable energy facilities.

Growth in electricity production noted in Kazakhstan

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As part of the implementation of the Chinese Belt and Road Initiative, the Turgusun HPP was put into operation in the East Kazakhstan region of the Republic of Kazakhstan. This was reported by Xinhua on August 10 , noting that the hydroelectric power plant has a capacity of almost 25 MW, and is located about 40 km from the city of Altai.

The Turgusun HPP is the first joint Chinese-Kazakhstani project in the field of hydropower since the launch of the "Belt and Road" initiative in 2013 by the party-state leader of the PRC Xi Jinping . For the construction of the hydroelectric power plant, the China International Corporation for Water Resources and Energy, which is a subsidiary of the giant China Three Gorges Corp .; the contract was signed in 2014.

The project, due to its great environmental significance, was included in the State Program of Industrial and Innovative Development of Kazakhstan and received increased attention from the government of the republic.

Nurlan Nogayev took part in the first meeting of energy ministers of the SCO countries. This meeting, which took place online, was initiated by the Tajik side, which is the chairman of this organization this year. The event was also attended by the heads of the energy departments of India, China, Kyrgyzstan, Russia, Pakistan and Uzbekistan.

During his speech, Nurlan Nogayev emphasized the importance of cooperation between the SCO member states, taking into account the difficult global economic situation. The Minister of Energy of Kazakhstan noted that the joint work of the countries of the Shanghai Cooperation Organization in the field of energy is of a strategic nature and is long-term. The head of the department spoke about the main achievements of the republic in the field of subsoil use, oil, gas and renewable energy. So, from September 1, 2020, in Kazakhstan, for the first time since independence, electronic auctions were organized to obtain the right to subsoil use of hydrocarbon raw materials. At the same time, both foreign and domestic investors have the right to take part. In addition, the meeting participants were informed about the plans to improve the efficiency of the oil and gas industry management. “The Government of the Republic is implementing an information system for accounting for crude oil and gas condensate. This year it is planned to connect organizations that provide 60% of the total oil production in Kazakhstan,” Nurlan Nogayev added . In addition, in order to achieve the goals of transitioning the economy to low-carbon development, last year Kazakhstan was able to increase the share of renewable energy sources in the country's total energy balance to 3%, and over the past 5 years, the installed capacity of renewable energy facilities has grown almost 7 times - from 240 MW in 2015 to 1,634.7 in 2020.

At the end of his speech, in order to further deepen cooperation between the members of the organization in the energy sector, Nurlan Nogayev proposed to continue the work of the SCO Energy Club, which was established in 2012. The last meeting of the SCO Energy Club was held in 2016. “Joint work at the site of the Shanghai Cooperation Organization will certainly contribute to the economic development of our countries, as well as the creation of joint projects in the energy sector. The time has come to unite efforts to restore the pace of development of the world economy,” the minister concluded.

Turgusun HPP in the East Kazakhstan region has been successfully put into operation. With the financial support of the Development Bank of Kazakhstan JSC (a subsidiary of Baiterek Holding , Bank, DBK), the construction of a small hydroelectric power plant (HPP) on the river. Turgusun in the Altai region of the East Kazakhstan region, Kazinform reports .

The HPP construction project is implemented by Turgusun-1 LLP, the capacity of the HPP is 24.9 MW, the launch of which will reduce the electricity deficit in the region by 79.8 million kilowatt hours per year, as well as reduce carbon dioxide emissions by 680 tons per year. In July 2021, the commercial commissioning of the Turgusun hydroelectric power plant was carried out. Electricity generation in favor of the buyer (Settlement and Financial Center for Support of Renewable Energy Sources LLP) for the month of July amounted to 2.3 million kWh . The launch of the Turgusunskaya HPP provided its own sustainable energy supply to almost the entire East Kazakhstan region, as well as other regions of the country in accordance with the agreement concluded with the RFC for the purchase of electricity.

How much and when will electricity tariffs increase in Kazakhstan

Acting \_ Chairman of the Committee for the Regulation of Natural Monopolies of the Ministry of National Economy of the Republic of Kazakhstan Askhat Zhapsarbay told how much electricity tariffs will increase in the near future, Kazinform correspondent reports .

“Increased tariffs by the Ministry of Energy for energy-producing organizations by an average of 15%, depending on the region, will affect end consumers within a radius of 7.2% - we are currently raising this issue. That is, it will vary by region. We will try to carry out the work in such a way that it does not affect the population group. That is, we will apply this differentiation, and we hope to do it in such a way that it is fairly painlessly perceived by the so-called population group,” Askhat said. Japsarbay at a briefing in the CCS. He added that the increase in tariffs is planned approximately from September 1. “We have a divided increase - that is, a 15% increase in tariffs for energy-producing organizations took place on April 1. On July 1, we already raised part of the tariffs. September 1 - these are the regions where we have not yet had time to increase. On average in the republic it will be 3.5%,” the speaker concluded.

The first wind power plant is being built in Kostanay region

Electric wind station " Ybyray " with a capacity of 50 MW began to build in August 2020. The project is being implemented through private investment, its cost is 26.3 billion tenge. The station provides for the construction of 16 wind masts with a capacity of 3.2 MW each. To date, seven wind turbines have been installed , but the foundation has already been equipped for everything.

A step-up substation 35/110 kV , a 110 kV line , 35 kV lines to the installed wind turbines and an administrative and residential area have been built,” the head of the region said. Wind generators are supplied from China. In the near future, the installation of the remaining windmills and power lines will begin. “As part of the tests, on August 17, the initial start-up of 5 wind turbines was carried out . Start-up and adjustment works continue,” summed up A. Mukhambetov .

Since August 17, five out of seven wind turbines have been undergoing commissioning. As Almat Isenbayev , the manager of the Ybyray wind farm , explained to NK , now the operation of the windmills is being monitored, the system is being set up, and troubleshooting is underway. At the same time, the masts are already supplying electricity to the KEGOK network. Not at full capacity, but still - 0.5 MW out of 3.2 MW required.

Kcell has built the first base station based on alternative electricity in the Charyn Canyon.

The energy for powering the base station is produced using a hybrid wind -solar installation with a capacity of 6 kilowatts. An alternative power supply provides reliable communication in such a remote and inaccessible area. At the same time, the installation does not have a negative impact on the environment due to renewable and environmentally friendly solar and wind energy.

The structure of the hybrid wind -solar installation includes:

- Kazakhstan-made wind generator that converts wind energy into electrical energy;

- solar panels that change the energy of the sun into electrical energy;

- Electricity storage system that provides accumulation of energy generated by wind and sun;

- inverter device that starts the conversion;

- DC voltage, generated from solar and wind energy into AC voltage, feeds the operability of the entire cellular base station.

In Almaty, from September 1, the tariff for electricity supply for legal entities, or consumers using electricity for non-domestic needs, is increased.

However, the increase does not apply to individuals.

The company named the reasons for increasing the marginal price for electricity for consumers in Almaty and the Almaty region:

1. increase from April 1, 2021, the marginal tariffs of energy-producing organizations of the Republic of Kazakhstan for electrical energy in accordance with the order of the Minister of Energy of the Republic of Kazakhstan dated March 30, 2021 No. 108;

2. increase from June 1, 2021, the tariff of the regional energy transmission organization JSC "Alatau Zharyk" Companies "for regulated services for the transmission of electric energy in accordance with the joint order of the Departments of the Committee for the Regulation of Natural Monopolies of the Ministry of National Economy of the Republic of Kazakhstan for the city of Almaty and the Almaty region dated May 17, 2021;

3. changing the structure of the formation of the selling price for electric energy of energy-producing organizations in accordance with the law "On amendments and additions to certain legislative acts of the Republic of Kazakhstan on supporting the use of renewable energy sources and the electric power industry" in terms of introducing from July 1, 2021 a surcharge to support the use of renewable energy sources.

REPUBLIC OF KYRGYZSTAN

kWh of electricity to Kyrgyzstan . Agreement signed. Background: President S. Japarov discussed with the head of Turkmenistan G. Berdimuhamedov the import of natural gas and electricity from Turkmenistan to Kyrgyzstan

An agreement was signed on the import of electricity from Turkmenistan. This was reported by the press service of the Ministry of Energy and Industry.

From August to December 2021, Turkmenistan will supply 501.9 million kWh of electricity to Kyrgyzstan.

As part of the agreement reached, Turkmenistan exported 19.2 million kWh of electricity until August 9.

Negotiations are underway on the export of natural gas from Turkmenistan to Kyrgyzstan.

The contract was signed by Minister of Energy and Industry Doskul Bekmurzaev and Minister of Energy of Turkmenistan (now Vice Prime Minister) Charymyrat Purchekov .

Earlier, during the official visit of President Sadyr Japarov to Turkmenistan on June 27-28, 2021, the leaders of the two countries agreed on the supply of electricity to Kyrgyzstan.

Import of electricity in the 1st half of the year increased by 2 times, export by 4.8 times, - National Statistical Committee

- On August 12, the National Statistical Committee released foreign trade data for the 1st half of 2021.

Electricity imports in the 1st half of 2021 amounted to 675.9 million kWh and doubled compared to the same period last year.

Import and export of electricity in the 1st half of 2020-2021 (in million kWh ):

In the 1st half of 2021, 419.85 million kWh were imported from Kazakhstan , or 1.3 times more than in the 1st half of 2020.

In the 1st half of 2021, 256.09 million kWh were imported from Uzbekistan . In the 1st half of 2020, electricity from Uzbekistan was not imported.

The export of electricity in the 1st half of 2021 amounted to 164.4 million kWh and increased by 4.8 times compared to the same period last year.

Earlier, Electric Stations OJSC was informed that within the framework of agreements on the exchange of electricity, from June 1, 2021, the return of electric energy to Kazakhstan and Uzbekistan has begun.

According to the National Statistical Committee , 70.7 million kWh were exported to Kazakhstan , or 2 times more than in the 1st half of 2020.

kWh were exported to Uzbekistan . In the 1st half of 2020, electricity was not supplied to Uzbekistan.

The Russian company will design new hydropower facilities for Kyrgyzstan. As part of the agreements with the authorities of the Kyrgyz Republic, the company opened a branch in Bishkek and received the status of a consultant on the implementation of the small hydropower development program of the Kyrgyz Republic (“Green Billion”).

The organization noted that the priority plans for cooperation also include the creation of a master plan for the development of hydropower resources, the study of the current state of existing hydraulic structures, the study of promising river alignments, as well as advising the government on the development of the country's energy sector.

Kambarata HPP-1, Kazarmansky and Suusamyr-Kokomeren HPP cascades, - Deputy Minister of Investments presented projects worth $8.2 billion

The Kambarata HPP project is located on the Naryn River, the cost is $2 billion 869 million, the payback period is 10 years, the construction period is 8 years.

of the Kazarmansky HPP cascade was also presented . It is located on the Naryn River, between the tributaries of the Ala-Buka and Kokomeren rivers in the Jalal-Abad region. The cost of the project is $2 billion, the implementation period is 7 years.

the Suusamyr-Kokomeren HPP cascade was also announced . The total cost of the project is $3.3 billion. The project is located on the Suusamyr and Kokomeren rivers , which is a tributary of the Naryn River.”

Next year, Kyrgyzstan is phasing out cross-subsidizing in the energy sector. Thermal power plant will be transferred to Bishkek, - head of the Ministry of Economic Finance

“Next year, Kyrgyzstan refuses cross-subsidization, the thermal power plant will be transferred to Bishkek,” Deputy Chairman of the Cabinet of Ministers - Minister of Economy and Finance Akylbek said today, August 19 Zhaparov at the Kyrgyz-Russian business forum.

The business forum is being held in the village of Sary-Oi, Issyk-Kul region.

The minister added that the hydropower industry of Kyrgyzstan is "waiting" for investors with projects and relevant permits.

As reported in January 2021 at Electric Stations OJSC, the company, on behalf of the government, is working on the issue of transferring the capital's heating plant to gas.

According to the company, preliminary calculations show that this will lead to an increase in the cost of manufactured products (thermal energy, hot water supply, electric energy, steam) by at least two times.

“For the uninterrupted operation of the Bishkek CHPP on gas, a necessary condition is a stable supply of gas to our country with a stable pressure in gas pipelines . The company is also ready to transfer the Bishkek CHP to the balance of the capital's mayor's office, as proposed by the relevant resolution of the Jogorku Kenesh of the Kyrgyz Republic with a further decision to subsidize the tariff for the population and work out a decision on a preferential gas tariff for the Bishkek CHP,” the company said.

Derivative HPP "Kulanak" with a capacity of 100 MW at the confluence of the At-Bashy and Naryn rivers. Director of "PP "Naryn" presented the project

- Director of LLC "Production Enterprise "Naryn" Kutubay On August 19, Murzabaev , at the Kyrgyz-Russian business forum, presented the project of the (derivative) Kulanak HPP with a capacity of 100 MW.

In a comment, the head of the company said that it is planned to build a diversion hydroelectric power station at the confluence of the At-Bashi and Naryn rivers.

“It will be located at the confluence of the At-Bashy and Naryn rivers, 3.5 km below. The dam will be 27 meters, (further) the station itself will be installed along the diversion channel 6.5 km,” he said.

According to the presented video presentation , the HPP will include a dam, a derivation water intake, a 6.5 km long diversion canal, a pressure basin, a HPP building with 4 units of 25 MW each and a diversion canal.

Reference:

With the diversion scheme, the pressure at the hydroelectric power station is formed by creating a concentrated drop due to the diversion of water from the river through an artificial conduit, which is used as open channels (non-pressure derivation); pressure tunnels or pipelines (pressure derivation). In most cases, a dam is built in the river to take water to hydroelectric power plants in the diversion scheme, forming a small reservoir, often performing daily regulation.

New substation " Razzakov " launched in Batken region

Sadyr Japarov today launched a new substation " Razzakov " in the Leilek district of Batken region and took part in the event on the occasion of the completion of the construction of a new overhead power line " Razzakov -Arka" and the reconstruction of the substation "Arka".

It is noted that the operation of these facilities will allow the region to become completely energy independent from neighboring countries.

The construction of a new overhead power line 110 kilovolt " Razzakov - Arka" with a length of 51 kilometers, a new substation 110/35/10 kilovolt " Razzakov " and the reconstruction of the existing substation 110/35/6 kilovolt "Arka" was completed as part of the project "Improving the power supply of the Arka massif of the Batken areas".

The head of state noted the great importance of the energy sector for Kyrgyzstan. Therefore, one of the strategic goals is to ensure energy independence and security, as well as an uninterrupted supply of electricity to the population of the country and the economy. According to him, energy is an industry of strategic importance for the economic development of any country.

THE REPUBLIC OF MOLDOVA

Modernization in the CHPP: Three new pumps and a degasser are being installed at Source No. 1. Termoelectrica reports that it is carrying out extensive modernization and maintenance work on thermal power equipment involved in the production of heat and electricity in cogeneration mode from Source No. 1. According to the supplier, a number of works are currently underway related to the replacement of many installations, which will allow increase their efficiency and productivity, as well as the reliability of electricity generation in cogeneration mode , IPN reports.

“Among our priorities, as in previous years, we note the restoration of the production infrastructure, an absolutely necessary modernization, since it materializes in direct benefits for consumers - by ensuring uninterrupted heat supply services and improving their quality,” says Vyacheslav Yeni, CEO of Termoelectrica , quoted by in a press release.

Among the main types of work, the replacement of the degasser of the Power Unit No. 3 is noted. Works related to the dismantling of equipment that have been in operation for 41 years have been started. A new degasser has been purchased and is ready for installation. The advantage is the improvement of technical parameters, an increase in the life of the degasser by 20 years. In addition, we are talking about saving about 4.2 million lei per year due to the nominal parameters of the degasser.

In the second quarter of this year, the purchase price for electricity in Ukraine and at the Moldovan CHP ( Kuchurgan ) increased by 10.7% compared to the first quarter, according to the National Energy Regulatory Agency (ANRE).

So, if in the first quarter the average purchase price for electricity in Ukraine and at the Moldovan CHP ( Kuchurgan ) was 85.4 bani per kWh , in the second quarter it reached 94.5 bani per kWh .

At the same time, the average purchase price in the second quarter of 2021 was 7.7% higher than in the same period last year.

The increase in energy prices was much more significant for Premier Energy SRL and FEE Nord SA, but less significant for alternative suppliers, which import mainly from Ukraine.

This is mainly due to an increase by 10% from April 1, 2021 of the average purchase price of the Kuchurgan HPP (Transnistrian region), which provides about 70% of the electricity needs of the Republic of Moldova.

During the bilateral meeting of Presidents Maia Sandu and Volodymyr Zelensky in Chisinau, the topic of returning Ukrainian energy companies to the electricity supply market of the Republic of Moldova was discussed.

Statistics show that in recent years the volume of electricity imports by the Republic of Moldova from Ukraine has been steadily declining.

According to a statement from the Presidential Administration in Kyiv, Zelensky said during the meeting that the Republic of Moldova is an important partner for Ukraine and that Kyiv is open to deepening relations.

At the moment, Ukraine is ousted from the Moldovan energy market by the Moldavskaya GRES located in Transnistria, which belongs to the Russian corporation Inter RAO. GRES supplies electricity to Moldova from unpaid natural gas, the debt for which is paid by Moldovan consumers.

The heads of state discussed the return of Ukrainian energy companies to the electricity supply market of the Republic of Moldova.

In fact, Ukrainian companies, especially those that are part of the DTEK group of Ukrainian oligarch Rinat Akhmetov, are still present on the electricity market, only the volumes of energy supplied are very small.

It should be noted that in May-July of this year, about 80% of the energy demand was provided by the Kuchurgan CHPP of Moldova, almost 10% by suppliers in Ukraine and only 10% by domestic producers.

In the first half of 2021, the end consumers of Moldova (excluding Transnistria) received 2 billion 060.8 million kWh. electricity in the amount of 3 billion 224 million lei.

As InfoMarket was informed by the National Energy Regulatory Agency, this is 8.1% more than the same period of the previous year in physical terms, but 7.8% lower than in value terms.

According to ANRE, at the same time, household consumers used 933.1 million kWh in January-June 2021. electricity (+6.3% compared to the same period in 2020) by 1 billion 590 million lei (-9%), and non-domestic - 1 billion 127.7 million kWh. (+9.7%) in the amount of 1 billion 634 million lei (-6.6%). According to ANRE, in general, GNF Furnizare Energie supplied 1 billion 356.6 million kWh to consumers in the first half of 2021. electricity (+6.3% compared to the same period in 2020) by 2 billion 014.9 million lei (-12.1%), FEE Nord - 515.4 million kWh. (+9.2%) by 966.7 million lei (-1.3%), and other suppliers - by 188.7 million kWh. (+19.3%) by 242.5 million lei (+7.8%). At the same time, GNF Furnizare Energie in January-June this year . supplied household consumers with 660.9 million kWh (+7.6%) for 1 billion 027.8 million lei (-11.4%), and FEE Nord - 272.2 million kWh (+3.3% ) by 562.2 million lei (-4.3%).

Supply of electricity to non-residential consumers at GNF Furnizare Energie amounted to 695.8 million kWh (+5.2%) for the amount of 987.1 million lei (-12.8%), FEE Nord -243.2 million kWh (+16.7%) for 404.4 million lei (+3.2%), other suppliers - 188.7 million kWh. (+19.3%) by 242.5 million lei (+7.8%).

According to ANRE, the total level of payment for electricity consumed in the first half of 2021 amounted to 99.9% (for the same period a year earlier - 99%), including this indicator for consumers of GNF Furnizare Energie in January-June 2021 amounted to 99.7% (for the same period in 2020 - 98.9%), for FEE Nord consumers - 100.4% (for the same period in 2020 - 99, 1%).

RUSSIAN FEDERATION

Rosseti and the System Operator introduced a unique digital technology for remote control of relay protection equipment

Rosseti and the System Operator have launched a digital technology for remote control of relay protection devices, the press service of the ODU Center (a branch of the System Operator) reports.

The system was implemented as part of the R&D of Rosseti Moscow Region and is included in the departmental program "Unified Technical Policy - Reliability of Power Supply" of the Ministry of Energy of Russia.

At the moment, two 220 kV substations are participating in the pilot project - Kozhevnicheskaya and Belarusian companies Rosseti Moscow Region (part of Rosseti ). At the first of them, the system was put into commercial operation on August 2, at the second, adjustment is ongoing, commissioning is scheduled in the near future.

Putin instructed to work out the construction of new hydropower facilities in the Amur basin. Russian President Vladimir Putin instructed to study the possibility of building new hydroelectric facilities in the Amur River basin. The corresponding instruction was given following the results of the meeting on the situation with floods and fires in the constituent entities of the Russian Federation and the course of liquidation of their consequences, which took place on August 6.

"The government of the Russian Federation, together with the government of the Amur Region and the government of the Khabarovsk Territory, should consider the construction of hydroelectric facilities in the Amur River basin, including on the Niman and Selemdzha rivers , taking into account the need to develop the energy system of the Far Eastern Federal District and take additional measures to reduce the risk of floods ", - the text of the instruction published on the Kremlin's website says.

North Ossetia plans to reconstruct three hydroelectric power stations by 2026

By the end of the year, the region also intends to put into operation a reserve autotransformer phase at the Alania substation and the cable section of the Northern Portal - Nizhny Ruk power line.

Gizeldonskaya , Dzaudzhikauskaya and Ezminskaya HPPs in North Ossetia are planned to be reconstructed by 2026. This was reported in the press service of the head and government of the republic.

"In accordance with the developed by JSC "NTC UES" and approved by the Scheme and program for the prospective development of the electric power industry in the republic until 2026, it is planned to reconstruct the Gizeldonskaya , Dzaudzhikauskaya and Ezminskaya HPPs with an increase in their installed capacities," the report says.

It also provides for the possibility of commissioning three small HPPs with a total capacity of more than 20 MW. As a result, this will make it possible to increase the capacity of the energy system of the republic from 448 to 487 MW, and the generation of electric energy - from 765 million kWh to 1,136 million kWh.

Until the end of 2021, North Ossetia plans to commission a backup autotransformer phase at the Alania substation, the cable section of the Severny Portal - Nizhny Ruk power line, as well as the construction of a new 110 kV Mamison substation, which will develop tourism potential region.

Construction of a solar power plant with a capacity of 10 MW began in Chechnya

More than 800 million rubles will be invested in its creation. A solar power plant with a capacity of 10 MW began to be built in the Achkhoi-Martan district of Chechnya. The ceremony of laying a commemorative capsule at the site of the future facility was timed to coincide with the 70th anniversary of the birth of the first president of the republic, Akhmat Kadyrov.

The project will be implemented by the Hevel group of companies . The volume of electricity generation is projected at the level of 13 million kWh per year, which will ensure the annual reduction of carbon dioxide emissions by 7 thousand tons. It is planned that the project will create about 100 temporary jobs during the construction period and up to 15 permanent jobs.

The first solar power plant in the region was put into operation in June this year in the Naursky district of the republic, its capacity is 5 MW. The investment project was also implemented by the Hevel group of companies ,

Russia has increased electricity exports to Europe against the backdrop of rising prices in the EU. This was reported to "RG" by Deputy Minister of Energy Pavel Snikkars .

In Europe, electricity generation by hydroelectric power plants and generation volumes based on renewable energy sources (RES) are declining. Gas and coal quotations also rose to a record high, which led to an increase in the price of electricity to an average of 85 euros per 1 MW per hour. Our export price is much lower - in July it was 54.6 euros per 1 MW per hour and, accordingly, now our electricity is in high demand on the European market, Snikkars said .

The press service of the Ministry of Energy "RG" clarified that since the beginning of 2021, electricity supplies to Europe have increased by 2.64 times (more than 7 billion kWh ) compared to the same period in 2020. They already exceed the volume of exports to Europe for the whole of 2020. The largest growth was in May-July - deliveries were almost 3.5 times higher than in the same period in 2020.

Earlier it was reported that Russia's income from electricity exports in 2021 could exceed $1 billion. For comparison: in 2020, our country earned $480 million from this. Despite these records, the prospects for maintaining or increasing electricity exports to Europe are still vague.

Now the average European price has slightly decreased - to 79 euros per 1 MW per hour. If gas prices fall sharply due to the imminent commissioning of Nord Stream 2, they will drag the price of electricity with them. Just a rumor about the possible launch of the gas pipeline reduced prices by 10%, but as for the price level in the coming winter, much depends on a combination of weather, physical demand, volumes of imported gas supply in Europe and other factors, said Alexei Grivach, deputy head of the National Energy Security Fund .

THE REPUBLIC OF TAJIKISTAN

The authorized capital of the Rogun HPP increased by almost 15%. It currently stands at about $3.2 billion. The authorized capital of OJSC Rogun HPP, at the suggestion of the Supervisory Board of the Company, increased by 4.5 billion somoni (about 398 million). At the moment, the authorized capital of the company is estimated at 36 billion 60 million (about $ 3.2 billion), the directorate of JSC Rogun HPP reports. 45 million additional ordinary shares with par value of each share in the amount of 100 somoni are placed in the authorized capital of the Company .

It should be noted that the authorized capital of Rogun is reviewed annually during the annual general meeting of shareholders of the Company, taking into account additional financing for the completion of the station.

According to the data of the Directorate of the Rogun HPP, from the beginning of the completion of Rogun , that is, from 2008 to the beginning of 2021, 34.3 billion somoni was allocated .

In 2020, 3.2 billion somoni was allocated for the construction of Rogun .

Budget financing for the completion of the station this year is set at 2.1 billion somoni .

According to the government-approved schedule, the total amount of financial resources needed for the further construction of Rogun for the period 2020-2022 will be about $1.1 billion.

After the commissioning of the first two units (in November 2018 and September 2019), the station generated about 3 billion kilowatt-hours of electricity.

At the moment, two Rogun hydroelectric units are operating at low power (100-120 MW).

, it is planned to install six units in the turbine hall of the Rogun HPP, the design capacity of each of which will be 600 MW. The construction of the station is expected to be fully completed by 2033.

EDB analysts studied investment activity in the water and energy complex of Central Asia

The Eurasian Development Bank (EDB, the Bank) has published a report “Investments in the water and energy complex of Central Asia”. The authors of the report analyzed the current situation in the Central Asian EEC based on the results of 30 years of independence of 5 republics (Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan), assessed the level of cooperation between countries in the EEC.

Analysts also identified the main challenges facing the CA countries in addressing EEC issues, conducted a rigorous study of ongoing and promising investment projects in the Central Asian EEC by analyzing the investment strategies of the main players and government programs. On this basis, the report presents a preliminary assessment of the needs for investment in the infrastructure of the energy and water segments of the WEC until 2030.

The authors of the report assess that the insufficient level of cooperation between the countries of Central Asia in the water and energy complex and, accordingly, the implemented technical and economic solutions lead to significant economic losses.

According to the report, estimates of annual economic losses and unrealized economic benefits reach $4.5 billion. This corresponds to 1.5% of regional GDP. Losses in agriculture are estimated at 0.6% of CA GDP, in the energy complex - 0.9% of CA GDP.

Tajikistan has increased the volume of electricity supplies to Uzbekistan and Afghanistan. Over the seven months of this year, Tajikistan gained more than $55 million from the supply of electricity to neighboring countries. According to the relevant departments of the energy sector of the Republic of Tajikistan, the amount of electricity exports increased by 25% compared to the same period in 2020. In July alone, electricity worth about $18 million was exported.

Meanwhile, the energy sector did not disclose data on the volume of electricity supplies to neighboring countries during this period and only noted that electricity was supplied to Afghanistan and Uzbekistan.

During this period, the country produced more than 12.1 billion kWh of electricity, which is 0.8% more than the same period in 2020.

The first meeting of energy ministers of the member states of the Shanghai Cooperation Organization in the format of a videoconference was held on August 12 in Dushanbe. It was attended by representatives of the ministries and departments of the SCO member states responsible for cooperation in the energy sector, and the SCO Secretariat. It was noted that, despite the coronavirus pandemic , the SCO states continue to develop cooperation in the energy sector.

The agenda discussed the state of and prospects for the development of cooperation in the energy sector of the SCO member states, the draft Concept of Energy Cooperation of the SCO Member States, the creation of the Working Group of the SCO Member States on Energy Cooperation.