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**MARKET ANALYSIS OF THE POWER INDUSTRY OF KAZAKHSTAN**

**MARCH 2022**

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

According to the System Operator, power plants of the Republic of Kazakhstan in January-March 2022 generated 30,773.4 million kWh of electricity, which is 3.7 million kWh or 0.01% more than the same period in 2021. The increase in generation was observed in the Southern and Western zones of the UES of Kazakhstan.

*million kWh*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Zone** | **Generation type** | **January March** | **Δ, million kWh** | **Δ, %** |
| **2021** | **2022** |
| **Kazakhstan** | **Total** | **30769.7** | **30773.4** | **3.7** | **0** |
| *TPP* | *25422.1* | *25119.0* | *-303.1* | *-1.2%* |
| *GTES* | *2746.8* | *3016.5* | *269.7* | *9.8%* |
| *HPS* | *1900.4* | *1815.8* | *-84.6* | *-4.5%* |
| *WES* | *432.3* | *543.8* | *111.5* | *25.8%* |
| *SES* | *267* | *278.3* | *11.3* | *4.2%* |
| *BSU* | *1.1* | *0.0* | *-1.1* | *-100%* |
| **Northern** | **Total** | **23686.2** | **23119.7** | **-566.5** | **-2.4%** |
| *TPP* | *21151.1* | *20521.2* | *-629.9* | *-3.0%* |
| *GTES* | *843.4* | *810.1* | *-33.3* | *-3.9%* |
| *HPS* | *1363.8* | *1368.5* | *4.7* | *0.3%* |
| *WES* | *226.6* | *314.0* | *87.4* | *38.6%* |
| *SES* | *100.2* | *105.9* | *5.7* | *5.7%* |
| *BSU* | *1.1* | *0.0* | *-1.1* | *-100%* |
| **South** | **Total** | **3408.5** | **3698.7** | **290.2** | **8.5%** |
| *TPP* | *2503* | *2842.5* | *339.5* | *13.6%* |
| *GTES* | *536.6* | *447.3* | *-89.3* | *-16.6%* |
| *HPS* | *81.3* | *83.7* | *2.4* | *3.0%* |
| *WES* | *121.4* | *153.4* | *32.0* | *26.4%* |
| *SES* | *166.2* | *171.8* | *5.6* | *3.4%* |
| **Western** | **Total** | **3675** | **3955** | **280** | **7.6%** |
| *TPP* | *1768* | *1755.3* | *-12.7* | *-0.7%* |
| *GTES* | *1822.1* | *2122.7* | *300.6* | *16.5%* |
| *WES* | *84.3* | *76.4* | *-7.9* | *-9.4%* |
| *SES* | *0.6* | *0.6* | *0.0* | *0* |

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

In January-March 2022, compared to the same period in 2021, electricity generation increased significantly in Akmola , Atyrau , East Kazakhstan, Zhambyl , West Kazakhstan, Kostanay , Mangistau and Pavlodar regions. A sharp increase in electricity production in the Zhambyl region by 414.2 million kWh. or 50.3% due to the inclusion of an additional two units at the Zhambyl GRES in order to cover the shortage of electricity in the Southern zone.

At the same time, a decrease in electricity generation was observed in Aktobe, Almaty, Karaganda, Kyzylorda , North Kazakhstan and Turkestan regions.

*million kWh*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **No.**  | **Region** | **January March** | **Δ, million kWh** | **Δ, %** |
| **2021** | **2022** |
| 1 | Akmola | 1471.1 | 1585.9 | 114.8 | 7.8% |
| 2 | Aktobe | 1,066.9 | 1011.9 | -55 | -5.2% |
| 3 | Almaty | 1901.5 | 1,812.3 | -89.2 | -4.7% |
| 4 | Atyrau | 1764.1 | 1970.7 | 206.6 | 11.7% |
| 5 | East Kazakhstan | 2186.7 | 2206.3 | 19.6 | 0.9% |
| 6 | Zhambyl | 823 | 1237.2 | 414.2 | 50.3% |
| 7 | West Kazakhstan | 643.3 | 681.6 | 38.3 | 6.0% |
| 8 | Karaganda | 4284.3 | 3912.2 | -372.1 | -8.7% |
| 9 | Kostanay | 331.4 | 365 | 33.6 | 10.1% |
| 10 | Kyzylorda | 186.1 | 182.3 | -3.8 | -2.0% |
| 11 | Mangistau | 1267.6 | 1302.7 | 35.1 | 2.8% |
| 12 | Pavlodar | 13,430.5 | 13,463.3 | 32.8 | 0.2% |
| 13 | North Kazakhstan | 915.3 | 575.1 | -340.2 | -37.2% |
| 14 | Turkestan | 497.9 | 466.9 | -31.0 | -6.2% |
|  | **Total for Kazakhstan** | **30,769.7** | **30,773.4** | **3.7** | **0** |

# *1.2* *Electricity generation by energy producing organizations* *of Samruk-Energy JSC*

The volume of electricity production by energy producing organizations of Samruk-Energy JSC for January-March 2022 amounted to 9,670.2million kWh . The decrease in electricity generation compared to the same period in 2021 amounted to 359.4 million kWh or 3.6%. The decrease is observed at all power plants, with the exception of Samruk-Green Energy LLP .

*million kWh*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **No.** | **Name** | **2021** | **2022** | **Δ 2022/2021** |
| **January March** | **share in Kazakhstan, %** | **January March** | **share in Kazakhstan, %** | **million kWh** | **%** |
|  | **"Samruk-Energy" JSC** | **10029.6** | **32.6%** | **9670.2** | **31.4%** | **-359.4** | **-3.6%** |
| *1* | *AlES JSC* | *1614.7* | 5.2% | 1528.7 | 5.0% | *-86.0* | *-5.3%* |
| *2* | *"Ekibastuz GRES-1" LLP* | *6,160.4* | 20.0% | 5988.9 | 19.5% | *-171.5* | *-2.8%* |
| *3* | *"Ekibastuz GRES-2" JSC* | *1913.0* | 6.2% | 1879.8 | 6.1% | *-33.2* | *-1.7%* |
| *4* | *"Shardara HPP" JSC* | *167.7* | 0.5% | *101.2* | 0.3% | *-66.5* | *-39.7%* |
| *5* | *"Moinak HPP" JSC* | *123.3* | 0.4% | *121.1* | 0.4% | *-2.2* | *-1.8%* |
| *6* | *Samruk-Green Energy» LLP* | *4.8* | 0.0% | 4.9 | 0.0% | *0.10* | *2.1%* |
| *7* | *"First wind power plant" LLP* | *45.7* | 0.1% | *45.6* | 0.1% | *-0.1* | *-0.2%* |

# *1.3 Shares of energy holdings and large energy producing organizations*

*in power generation in Kazakhstan*

As can be seen from the chart below, the share of
Samruk-Energy JSC in the electricity market of Kazakhstan remains the leader and amounts to 3 1.4 %.

**Kazakhstan**

**30 773,4**

**mln. kWh**

**Others**

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

In January-March 2022 compared to January-March 2021, the industrial production index (hereinafter referred to as IPI) amounted to 105.8%. An increase in production volumes was recorded in 16 regions of the republic, a decrease is observed in the Kyzylorda region.

**Changes in industrial output by region**

*in % to the corresponding period of the previous year, increase +, decrease -*

In the Atyrau region, the IPI amounted to 112.1% due to an increase in the production of crude oil, the production of gasoline, diesel fuel, hydrocarbon liquefied gases.

In the city of Almaty, due to the growth in the production of confectionery and chocolate, soft drinks, furniture, mortar, tiles, cement and concrete bricks, cars and trucks, the IPI amounted to 111.5%.

In the Akmola region, due to the increase in the extraction of gold-bearing ores, the production of flour, gold in the doré alloy, natural uranium, ready-mixed concrete, diesel fuel, trucks, the IPI amounted to 110.3%.

In the North Kazakhstan region, due to the growth in the extraction of uranium and thorium ores, the production of flour, milk, butter, cheese, linseed oil, drinking alcohol, bags and packages of packaging, ready-mixed concrete, an increase in the production of freight cars, the IPI amounted to 108.1%.

In the city of Nur-Sultan, the IPI amounted to 107.5% due to the growth in the production of refined gold, soft drinks, ready-mixed concrete, plastic pipes, plastic packaging products, building prefabricated structures made of cement and concrete, and the production of railway locomotives.

In the Almaty region, the IPI was 106.5% due to an increase in the production of soft drinks, pasta, chocolate, cigarettes, prepared animal feed, glass containers, ready-mixed concrete, medicines, paper and cardboard.

In the Zhambyl region, due to the growth in the extraction of limestone and gypsum, the production of sausages, pharmaceuticals, phosphorus, diesel fuel, additives for cements and mortars, the IPI amounted to 106.2%.

In the East Kazakhstan region, the IPI amounted to 105.9% due to an increase in the production of copper concentrates, copper and copper-zinc ores, clay and kaolin, the production of sunflower oil, refined copper, enriched uranium, gold in doré alloy.

In the Karaganda region, the growth of IPI amounted to 105.4% due to an increase in the production of copper and zinc concentrates, the production of pig iron, blister copper, flat and sheet products, unalloyed steel, steel bars and rods.

In the Turkestan region, due to the growth in the extraction of uranium and thorium ores, gold concentrates, the production of cheese, cotton, work clothes, plastic pipes, transformers, automatic switches, ceramic bricks, the IPI amounted to 104.5%.

In the city of Shymkent, due to an increase in the production of confectionery, medicines, fuel oil, diesel fuel, Portland cement, aluminum wire, hot-rolled steel bars and rods, ready-mixed concrete, the IPI amounted to 104.3%.

In the Kostanay region, the IPI amounted to 102.8% due to an increase in the extraction of aluminum ores, iron ore pellets, the production of flour, bran, ready-made animal feed, hot-rolled steel bars and rods, tractors, combines and trucks.

In West Kazakhstan IPI amounted to 102.4% due to the growth in gas condensate production, production of pipes, hoses, hoses and fittings made of plastic, seamless steel pipes, ready-mixed concrete.

In the Mangistau region, the IPI amounted to 100.6% due to an increase in the production of bitumen, Portland cement, oilfield equipment, and ammonia.

In Pavlodar region, the IPI amounted to 100.5% due to an increase in coal mining, the production of ferrosilicochrome, ferrosilicomanganese, aluminum oxide , raw gold and silver, parts of railway locomotives, and electrical equipment.

In the Aktobe region, the IPI amounted to 100.4% due to the growth in the extraction of crude oil, copper, iron and gold ores, the production of flour, diesel fuel, and chromium salts.

In the Kyzylorda region, the IPI amounted to 95.8% due to a reduction in the production of crude oil, the production of rice, Portland cement, hydrocarbon liquefied gases, building prefabricated structures made of concrete.

# *2.1 Electricity consumption by zones and regions*

According to the System Operator, in January-March 2022, there was an increase in the dynamics of electricity consumption of the republic in comparison with the same indicators in 2021 by 352.3 million kWh or 1.2%. Thus, in the western and southern zones of the republic, consumption increased by 6.9% and 4.2%, respectively.

*million kWh*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **No** | **Name** | **January March** | **Δ, million kWh** | **Δ, %** |
| **2021** | **2022** |
|  | **Kazakhstan** | **30 100.3** | **30452.6** | **352.3** | **1.2%** |
| 1 | Northern zone | 19900.9 | 19723.4 | -177.5 | -0.9% |
| 2 | Western zone | 3,678.5 | 3 932.5 | 254.0 | 6.9% |
| 3 | Southern zone | 6,521.0 | 6 796.7 | 275.7 | 4.2% |
|  | ***incl .by regions*** |   |  |  |  |
| 1 | Akmola  | 2560.3 | 2 859.2 | 298.9 | 11.7% |
| 2 | Aktobe | 5,158.9 | 5 132.4 | -26.5 | -0.5% |
| 3 | Almaty  | 2943.0 | 3 069.7 | 126.7 | 4.3% |
| 4 | Atyrau  | 509.0 | 481.7 | -27.3 | -5.4% |
| 5 | East Kazakhstan | 1304.0 | 1 341.6 | 37.6 | 2.9% |
| 6 | Zhambyl  | 5655.3 | 5 098.6 | -556.7 | -9.8% |
| 7 | West Kazakhstan | 1664.8 | 1 795.3 | 130.5 | 7.8% |
| 8 | Karaganda | 1348.9 | 1 379.7 | 30.8 | 2.3% |
| 9 | Kostanay  | 1,770.5 | 1 740.3 | -30.2 | -1.7% |
| 10 | Kyzylorda  | 664.8 | 757.5 | 92.7 | 13.9% |
| 11 | Mangistau  | 3,348.1 | 3 432.6 | 84.5 | 2.5% |
| 12 | Pavlodar | 1405.8 | 1 539.4 | 133.6 | 9.5% |
| 13 | North Kazakhstan | 1223.3 | 1 294.3 | 71.0 | 5.8% |
| 14 | Turkestan | 543.8 | 530.4 | -13.4 | -2.5% |

# *2.2 Electricity consumption by consumers of energy holdings and large energy producing organizations*

In January-February 2022, there is a decrease in electricity consumption by consumers energy holdings and large energy-producing organizations.

*million kWh*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Name** | **January March** | **Δ, million kWh** | **Δ, %** |
| **2021** | **2022** |
|  | **Total** | **11,913.2** | **11,563.1** | **-350.0** | **-2.9%** |
| 1. | ERG | 3938.8 | 3,762.6 | -176.2 | -4.5% |
| 2. | Kazakhmys Corporation LLP | 1,069.2 | 1,051.9 | -17.3 | -1.6% |
| 3. | Kazzinc LLP  | 774.3 | 757.9 | -16.4 | -2.1% |
| 4. | Arcelor Mittal Temirtau" JSC | 959.8 | 657.7 | -302.1 | -31.5% |
| 5. | KKS LLP | 1,732.6 | 1,770.7 | 38.1 | 2.2% |
| 6. | CAEPCO JSC | 1661.3 | 1585.4 | -75.9 | -4.6% |
| 7. | Zhambyl GRES | 448.5 | 701.6 | 253.1 | 56.4% |
| 8. | Oil and gas enterprises | 1328.6 | 1275.3 | -53.3 | -4.0% |

In January-March 2022, there is an increase in electricity consumption by the companies of Samruk-Energy JSC by 29.8 million kWh. or 1.4% compared to the same period in 2021.

*million kWh*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|   | **Name** | **January March** | **Δ, million kWh** | **Δ, %** |
| **2021** | **2022** |
| **I** | **JSC " Samruk-Energo "** | **2165.9** | **2195.7** | **29.8** | **1.4%** |
| 1. | Bogatyr- Komir LLP | 83.1 | 84.8 | 1.7 | 2.0% |
| 2. | JSC Alatau Zharyk Companies » | 289.9 | 320.3 | 30.4 | 10.5% |
| 3. | LLP " AlmatyEnergoSbyt " | 1,792.9 | 1,790.5 | -2.3 | -0.1% |

# *2.3* *Electricity consumption by large consumers in Kazakhstan*

In January-March 2022, compared to the same period in 2021, electricity consumption by large consumers increased by 336.5 million kWh , or 3.9%.

*million kWh*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **No.**  | **Consumer** | **January March** | **Δ, million kWh** | **Δ, %** |
| **2021** | **2022** |
| 1 | Arcelor Mittal Temirtau" JSC | 959.8 | 995.3 | 35.5 | 3.7 |
| 2 | AZF ( Aksuysky ) "TNK Kazchrome " JSC | 1387.9 | 1254.2 | -133.7 | -9.6 |
| 3 | Kazakhmys Smelting LLP | 308.4 | 327.9 | 19.5 | 6.3 |
| 4 | Kazzinc LLP | 733.0 | 713.7 | -19.3 | -2.6 |
| 5 | "Sokolovsko-Sarbayskoye GPO" JSC | 426.9 | 430.9 | 4.0 | 0.9 |
| 6 | Kazakhmys Corporation LLP | 331.9 | 338.1 | 6.1 | 1.8 |
| 7 | AZF (Aktobe) "TNK Kazchrome" JSC | 770.2 | 724.4 | -45.7 | -5.9 |
| 8 | “Channel them. Satpaev" RSE | 38.0 | 53.2 | 15.3 | 40.3 |
| 9 | Kazphosphate LLP | 410.5 | 547.8 | 137.3 | 33.4 |
| 10 | NDFZ(part of the structure of Kazphosphate LLP) JSC | 330.6 | 461.5 | 130.9 | 39.6 |
| 11 | "Taraz Metallurgical Plant" LLP | 95.1 | 30.3 | -64.8 | -68.2 |
| 12 | "Ust-Kamenogorsk titanium -magnesium plant" JSC | 121.5 | 189.3 | 67.7 | 55.7 |
| 13 | Tengizchevroil LLP  | 477.6 | 481.5 | 3.9 | 0.8 |
| 14 | PAS (Pavlodar Aluminum Smelter) JSC | 232.9 | 242.3 | 9.4 | 4.0 |
| 15 | "KEZ" (Kazakhstan electrolysis plant) JSC | 950.1 | 943.0 | -7.2 | -0.8 |
| 16 | "KEGOC" JSC | 1444.6 | 1480.9 | 36.3 | 2.5 |
| **Total** | **8688.6** | **9025.1** | **336.5** | **3.9** |

# *Export-import of electrical energy*

In order to balance the production and consumption of electricity in January-March 2022, exports to the Russian Federation amounted to 261.6 million kWh , imports from the Russian Federation 346.3 million kWh .

Including export from "KEGOC" JSC to the Russian Federation 250 million kWh, import of electricity for the reporting period in the amount of 299.6 million kWh .

*million kWh*

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **January - February** | **Δ, million kWh** | **Δ, %** |
| **2021** | **2022** |
| **Export of Kazakhstan** | **-960.7** | **-645.8** | **314.9** | **-32.8%** |
| **in Russia** | **-258.5** | **-261.6** | **-3.1** | **1.2%** |
| **in the IPS of Central Asia** | **-702.2** | **-384.3** | **318.0** | **-45.3%** |
| **Import of Kazakhstan** | **287.8** | **347.4** | **59.6** | **20.7%** |
| **From Russia** | **287.8** | **346.3** | **58.5** | **20.3%** |
| **Balance- flow "+" deficit, "-" excess** | **-672.9** | **-298.4** | **374.5** | **-55.7%** |

# **Coal**

According to the Bureau of National Statistics, Kazakhstan produced
29,784.4 thousand tons of hard coal in January-March 2022 , which is 7.1% more than in the same period in 2021 (27,810.3 thousand tons).

*thousand tons*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **No.**  | **Region** | **January March** | **Δ, thousand tons** | **Δ, %** |
| **2021** | **2022** |
| 1 | Pavlodar | 17,566.5 | 18,911.1 | 1344.6 | 7.7% |
| 2 | Karaganda | 8,123.1 | 8,571.5 | 448.4 | 5.5% |
| 3 | East Kazakhstan | 2,120.7 | 2301.8 | 181.1 | 8.5% |
|  | **Total for the Republic of Kazakhstan** | **27,810.3** | **29,784.4** | **1974.1** | **7.1%** |

In January-March 2022, Bogatyr Komir LLP produced 12,338.4 thousand tons, which is 4.9% more than in the corresponding period of 2021 (11,758.5 thousand tons).

The volume of coal sold in January-March 2022 amounted to 12,221 thousand tons, of which 9,659.3 thousand tons went to the domestic market of the Republic of Kazakhstan, which is 8.9% less than in the same period in 2021 (10,607.5 thousand . tons) and for export (RF) - 2,561.6 thousand tons, which is 124% more than in the corresponding period of 2021 (1,143.7 thousand tons).

According to the indicators for January-March 2022, in comparison with similar indicators in 2021, Bogatyr Komir LLP has an increase in coal sales by 469.8 thousand tons or 4%.

*thousand tons*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **No.**  | **Region** | **January** | **Δ,** **thousand tons** | **Δ, %****2022/2021** |
| **2021** | **2022** |
| **Total to the domestic market of the Republic of Kazakhstan** | **10,607.5** | **9659.3** | **-948.1** | **-8.9%** |
| **Total for export to Russia** | **1,143.7** | **2561.6** | **1417.9**  | **124%** |

#

# **Renewable energy sources**

# *RES indicators in Kazakhstan*

According to the System Operator, the volume of electricity production by renewable energy facilities (SPP, WPP, BGS, small HPPs) of the Republic of Kazakhstan in January- March 2022 amounted to 928.3 million kWh . Compared to January -March 2021 (804.5 million kWh), the increase was 123.8 million kWh . or 15.4 %. An increase in electricity generation is observed at wind farms, solar power plants and small hydropower plants compared to the same period in 2021, while biogas generation decreased compared to last year.

Total according to As of March 2022, there are 139 renewable energy facilities operating in Kazakhstan as a system operator. In March 2022, new renewable energy facilities were introduced:

- SES LLP "AlmatyEnergoProject ";

- SES "Aisha" "AEC Asa" LLP

According to the Ministry of Energy of the Republic of Kazakhstan, by the end of 2022, it is planned to put into operation 10 facilities with a total capacity of 290.6 MW.

million kWh

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **No.** | **Name** | **2021** | **2022** | **Δ, million kWh** | **Δ, %** |
| **January March** | **share in Kazakhstan, %** | **January March** | **share in Kazakhstan, %** |
| **I** | **Production in the Republic of Kazakhstan** | **30,769.7** | **100%** | **30,773.4** | **100%** | **3.7** | **0.0%** |
| **II** | **RES generation in Kazakhstan** | **804.5** | **2.6%** | **928.3** | **3.0%** | **123.8** | **15.4%** |
| ***III*** | ***RES generation, incl . by zones*** | ***share in the respective zone*** |
|  | *Northern zone* | 347.2 | 1.5% | 437.4 | 1.9% | **90.2** | **26.0%** |
|  | *Southern zone* | 372.4 | 10.9% | 413.9 | 11.2% | **41.5** | **11.1%** |
|  | *Western zone* | 84.9 | 2.3% | 77.0 | 1.9% | **-7.9** | **-9.3%** |
| ***IV*** | ***RES generation, incl . by zones*** | ***share in RES of the Republic of Kazakhstan, %*** |
|  | *Northern zone* | 347.2 | 43.2% | 437.4 | 47.1% | **90.2** | **26.0%** |
|  | *Southern zone* | 372.4 | 46.3% | 413.9 | 44.6% | **41.5** | **11.1%** |
|  | *Western zone* | 84.9 | 10.6% | 77.0 | 8.3% | **-7.9** | **-9.3%** |
| ***V*** | ***RES generation, incl . by type*** | ***share in RES of the Republic of Kazakhstan, %*** |
|  | *SES* | 267.0 | 33.2% | 278.3 | 30.0% | **11.3** | **4.2%** |
|  | *WES* | 432.3 | 53.7% | 543.8 | 58.6% | **111.5** | **25.8%** |
|  | *Small HPPs* | 104.1 | 12.9% | 106.2 | 11.4% | **2.1** | **2.0%** |
|  | *BSU* | 1.1 | 0.1% | 0.0 | 0.0% | **-1.1** | **-100%** |

# *Samruk-Energy JSC in the production of clean electricity*

Samruk-Energy JSC (SPP, WPP and small HPPs) for January-March 2022 amounted to 80.8 million kWh , which is 1.5% higher compared to the same period in 2021 (79.3 million kWh ).

The share of RES electricity of Samruk-Energy JSC in January-February 2022 amounted to 8.7% of the volume of electricity generated by RES facilities in the Republic of Kazakhstan, while in January-March 2021 this figure was 9.9%. The decrease in the share of renewable energy sources of Samruk-Energy JSC in the generation of renewable energy sources in the Republic of Kazakhstan in 2022 is associated with an increase in the generation of electricity from renewable energy sources in the Republic of Kazakhstan, as well as a decrease in generation at First Wind Power Plant LLP and Samruk-Green LLP Energy WPP Shelek 5 MW.

*million kWh*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **No.** | **Name** | **2021** | **2022** | **Δ, million kWh** | **Δ, %** |
| **January March** | **share in Kazakhstan, %** | **January March** | **share in Kazakhstan, %** |
| **I** | **RES of Samruk-Energy, *including:*** | **79.3** | **9.9%** | **80.8** | **8.7%** | **1.5** | **1.9** |
| *1* | *Cascade of small HPPs of AlES JSC 43.7 MW* | 28.8 | **3.6%** | 30.3 | 3.3% | **1.5** | **5.2** |
| *2* | *Samruk - Green LLP Energy » SPP 2MW + SPP 1MW* | 0.7 | **0.1%** | 0.9 | 0.1% | **0.2** | **28.6** |
| *3* | *Samruk - Green Energy LLP WPP Shelek 5 MW* | 4.1 | **0.5%** | 4.0 | 0.4% | **-0.1** | **-2.4** |
| *4* | *First Wind Power Plant LLP WPP 45 MW* | 45.7 | **5.7%** | 45.6 | 4.9% | **-0.1** | **-0.2** |

# **International Relations**

# *5.1 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.

On May 29, 2019, as part of the celebration of the fifth anniversary of the signing of the Treaty, 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).

In addition, in accordance with paragraph 42 of the above international agreement, on December 20, 2019, the Supreme Council adopted Decision No. 31 “On the plan of measures aimed at the formation of a common electric power market of the Eurasian Economic Union”, which establishes, among other things, the terms for approval and entry into force of the rules for the functioning of a common electric power market of the Union, as well as other acts provided for by the said Protocol.

***Reference :***

*The Protocol defines the legal framework and principles for the formation, functioning and development of the OER, establishes the areas that will be regulated by the rules for the functioning of the OER, and also empowers the Intergovernmental Council and the Council of the Commission to approve acts regulating the OER.*

In 2022, one meeting of the Advisory Committee on the Electricity Industry under the EEC Board was held (17th meeting on January 19), 6 meetings of the Subcommittee on the Formation of the EAEU General Electricity Project of the Advisory Committee on the Electricity Industry under the EEC Board (79th meeting on January 13-14, 80th meeting January 26-27, 81st meeting February 11, 82nd meeting February 25, 83rd meeting March 17-18, 84th meeting March 31), as well as March 4, 2022 of the parties on the procedure for registering free bilateral agreements for mutual trade in electric energy on the common electric power market of the Eurasian Economic Union.

During the meetings discussed:

- timing of processes at the Union's OER;

- the possibility of setting prices (tariffs) for services for trade and non-trade interstate transmission of electric energy (capacity) for the planned year, the terms for publishing these prices (tariffs) and the terms for informing about adjusted prices (tariffs) during the year;

- reduction (zeroing) of hourly volumes of deliveries under fixed-term contracts in case of revealing the technical unfeasibility of electric energy balance flows through interstate sections (internal sections).

At the 17th meeting, the following issues were considered:

1. On the uncoordinated provisions of the draft rules for mutual trade in electric energy on the common electric power market of the Union (hereinafter referred to as the rules for mutual trade), including:

definition of the concept of "commercial accounting of electric energy";

exclusion (preservation) from the draft rules of mutual trade of the provision on the need for compensation by suppliers and buyers in the domestic wholesale electricity market in accordance with the legislation of the relevant Member State for deviations in the actual hourly volumes of production and consumption (supply) of the subjects of the internal wholesale electricity markets from the planned values determined in including taking into account transactions in the common electricity market of the Eurasian Economic Union (clause 8 of the draft rules for mutual trade);

procedure for registration of free bilateral agreements (proposal of the Russian Federation) (paragraphs 38, 40, 41 of the draft rules for mutual trade);

exclusion (preservation) from the draft rules of mutual trade of the provision on external balancing as one of the components of the magnitude of hourly deviations in the balance of electricity flows in the interstate section for each hour of the billing period (paragraphs 89, 90 of the draft rules of mutual trade);

the exclusion of paragraph 93, which contains the principle of equal prices for both the purchase and sale of electricity within the allowable range established in the agreements on parallel operation, if there is paragraph 94 of the draft rules for mutual trade (the proposal of the Russian side).

1. On the inconsistent provisions of the draft rules for access to services for the interstate transmission of electric energy (capacity) within the framework of the Eurasian Economic Union (hereinafter referred to as the access rules), including:

clarification of the condition “the person who applied for the conclusion of such an agreement has unfulfilled obligations to pay for the service of non-trade interstate transmission of electric energy (capacity)”, under which an organization authorized for non-trade interstate transmission has the right to refuse to conclude an non-trade interstate transmission agreement with the phrase “in with regard to volumes that do not cause disagreement between the parties under previously concluded agreements” (paragraph 17 of the draft access rules);

exclusion (preservation) from the draft access rules of the provision that the interstate transmission of electric energy (capacity) in the interests of electric power industry entities of third states (deliveries to third states and between third states, transfer from one part of a third state to another part of it) is regulated in accordance with paragraph 2 of the Protocol on the Common Electricity Market of the Union (paragraph 34 of the draft access rules).

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

# *Overview of the media in the CIS countries*

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

**ARMENIA**

**In Armenia, they discussed the "Program of liberalization of the market and trade in electricity", which was developed with the funds of a USAID grant.** Thanks to this program, for the first time, market participants will be able to participate in setting prices (tariffs) for electricity and contribute to the harmonization of supply and demand.

Since February 1, an electronic trading platform has been activated, which allows achieving a certain liberalization of the market.

*About the program*

Globally, the process of liberalization of the Armenian [energy market](http://arka.am/ru/news/economy/poetapnaya_liberalizatsiya_energorynka_armenii_startuet_s_1_fevralya_2022_goda_zamministra/) began in 2018 and is currently at its final stage. For its implementation, USAID provided Armenia with a grant of $8.5 million.

The goals of the program are to support the Armenian government in reforming the electricity market, work on simplifying regulatory practices in Armenia, taking into account EU directives, promoting the creation of a favorable environment for investors to increase competitiveness, development of the electricity industry and regional trade.

The activities of the Program for Liberalization of the Market and Electricity Trade are carried out in three key areas: the development of the electricity market, the diversification of supplies and the promotion of interstate electricity trade with Georgia.

Also, from February 1, 2022, a gradual transition to a new [model](http://arka.am/ru/news/economy/armeniya_s_1_fevralya_planiruet_perekhod_na_novuyu_model_rynka_elektroenergii/%20) of the electricity market began in Armenia. The goal is to create the necessary legal and economic prerequisites for the liberalization of the Armenian electricity market and the introduction of competitive components

**KAZAKHSTAN**

**On the energy balance of Kazakhstan until 2035**

Energy balance up to 2035, within the framework of which modeling of the development of the energy complex was carried out with the calculation of the forecast values of production and consumption of electricity, the required volumes and structure of the commissioning of new generating capacities.

By 2035, electricity consumption will be about 153 billion kWh . At the same time, the generation of currently operating energy sources for a number of objective reasons (decommissioning, increased wear and tear, increased environmental sanctions) will decrease and amount to less than 89 billion kWh .

To cover electrical loads by 2035, taking into account the fact that existing energy sources will not be able to cover the forecast needs of the population and the economy in electrical energy, it will be necessary to ensure the massive commissioning of new generating capacities, the main of which will be sources of low-carbon generation, including facilities for the use of renewable energy sources (RES).

**Kazakhstan in the energy balance until 2035 plans to build a nuclear power plant with a capacity of
2.4 GW.** By this time, electricity consumption in the country will be about 153 billion kWh . The authorities of Kazakhstan in the energy balance of the country until 2035 have planned the construction of a nuclear power plant (NPP) with a capacity of 2.4 GW.

**KYRGYZSTAN**

**The procedure for merging energy companies is being completed in the Kyrgyz Republic**

As part of the structural reforms in the energy industry of the Kyrgyz Republic, from March 23 to March 26, 2022, extraordinary shareholders meetings were held at Severelectro OJSC , NES Kyrgyzstan OJSC, Vostokelectro OJSC , Oshelectro OJSC , Jalalabatelectro OJSC ”, OJSC “Electric Stations” and OJSC “ Bishkekteploset ”.

As a result of the joint stock meetings, a decision was made to reorganize the indicated energy companies, as a result of which the distribution energy companies will be merged with NES Kyrgyzstan OJSC, Bishkekteploset OJSC will be merged with Electric Stations OJSC.

 **In Kyrgyzstan, the construction of the Kambar-Ata-1 hydroelectric power station will be launched in the near future.** Within 3-5 years, the Kambar-Ata-1 hydroelectric power station will be built first, with a capacity of 640 megawatts, the capacity of the second unit will be 120 megawatts, and the Kambar-Ata-2 hydroelectric power station - 360 megawatts. $498 million will be allocated for the first stage of construction of Kambar-Ata-1. This year, $20 million has been earmarked for construction preparation.

**As part of the implementation of the CASA-1000 project in Kyrgyzstan, the construction of a 500 kV transmission line is underway.** In total, 455.6 kilometers of transmission lines will be laid in Kyrgyzstan from a 500 kV cell , which will be built specifically for this transmission line at the 500 kV Datka substation , from there the line will stretch through Jalal-Abad , Osh and Batken regions to the border with Tajikistan .

To date, the following construction works have been completed:

The construction of access roads to the construction sites of supports was completed for 902 supports (73%), digging pits for supports - 844 (68%), reinforcement and pouring of concrete - 708 (57%), installation of supports - 428 (35%). A total of 1241 supports will be built under the project.

Currently, active work is being carried out in Batken , Osh and Jalal-Abad regions. The work involves 84 units of special equipment and special vehicles, 44 units of vehicles and 230 workers, of which almost 70% are local residents.

To mobilize specialists for the construction of infrastructure facilities in these three regions, 6 construction bases have been created.

*Reference: CASA-1000 is designed to connect the energy systems of Central Asia with South Asia - Kyrgyzstan, Tajikistan with Afghanistan and Pakistan and develop mechanisms for electricity trade in accordance with international standards.*

**The Ministry of Energy of the Kyrgyz Republic issued permits to 90 companies for the construction of solar, wind power plants and small hydropower plants, - Minister of Energy**

The Ministry of Energy of the Kyrgyz Republic issued certificates to 90 companies for the construction of solar, wind power plants and small hydropower plants. This was announced on March 31 by Minister of Energy Doskul Bekmurzaev , answering a journalist's question at a press conference in Bishkek.

The question concerned the construction of solar and wind power plants in the country.

“You are right, Kyrgyzstan should not live only with hydro or thermal power plants. We do not lag behind fashion, we go in accordance with global trends. To date, 149 certificates [for the construction of power plants] have been issued to 90 companies for a total capacity of 3,726 MW. This almost corresponds to our entire generation in Kyrgyzstan,” he said.

The minister said that out of the planned capacity, permits for 2098 MW were issued for solar power plants, 390 MW for wind power plants and 938 MW for small hydropower plants.

**REPUBLIC OF BELARUS**

**The Belarusian and Russian sides agreed on most of the issues related to the draft interstate agreement on the formation of a united electricity market of the Union State** . The Ministries of Energy of Belarus and Russia are completing the preparation of a draft interstate agreement on the formation of a united electricity market of the Union State. Most issues on the draft treaty have been agreed upon. The document is at the final stage of preparation for signing.

**UZBEKISTAN**

**In order to accelerate the implementation of renewable energy projects, the government of Uzbekistan signed new cooperation agreements with the International Finance Corporation (IFC) and the European Bank for Reconstruction and Development (EBRD** ).

In 2020, the government of the country set a goal to achieve in 10 years - by 2030 - the capacity of solar photovoltaic stations up to 5 GW and wind power plants (WPP) - up to 3 GW. These goals were enshrined in the concept for the development of the electric power industry for 2020-2030 developed in 2020 by the Ministry of Energy of Uzbekistan.

In 2021, based on an analysis of those proposals that were submitted during the tender for renewable energy projects, including tariff proposals that are beneficial for the population and the economy of the country, the President of the Republic of Uzbekistan instructed to increase the capacity of solar and wind farms to 4 GW each ( with a total capacity of 8 GW) by 2026.

To achieve these goals, it was decided to expand cooperation with the International Finance Corporation and the European Bank for Reconstruction and Development in the framework of obtaining consulting services during the competitive selection of investors for SPP and WPP construction projects by an additional 1 GW with each institution.

**Uzbekistan has launched the construction of a thermal power plant in Surkhandarya with a capacity of 1.56 GW.** The total cost of the project is $1.2 billion. The plant with a capacity of 1560 MW will generate 12 billion kWh of electricity per year. The latest technologies that will be provided to the TPP will save 1 billion cubic meters of natural gas per year.

The first thermal power plant in Surkhandarya and the largest thermal power plant built in the country in recent years will create great opportunities for realizing the huge economic potential of the region.

Currently, 19 power plants with a capacity of 9,000 MW are being built in the country. Their total value is more than 10 billion dollars.

Commissioning of the station is scheduled for the end of 2024.

**RUSSIA**

**The Government of the Russian Federation approved the parameters for the period after 2024 for the selection of renewable energy projects.** The Decree approves financial parameters (capital and operating cost limits) for the period after 2024 for competitive selection of investment projects for the construction of renewable energy generation facilities in the retail electricity markets.

It is noted that we are talking about competitive selection of renewable energy generation facilities for the subsequent sale of electricity generated by them to grid organizations. This is done to compensate for losses of network organizations in power grid facilities (in the regulated amount of 5%). Competitions are held annually by the regions of the Russian Federation for a five-year period in relation to solar, wind, hydro generation facilities , as well as other types of generation using renewable resources.

Previously, the limits on capital and operating costs for renewable energy facilities, on the basis of which the payback of projects and the tariff for the sale of electricity are calculated, were set until 2024. Now these parameters are calculated up to 2035.

In addition, according to the order, the Ministry of Energy must carry out annual monitoring of the dynamics of the development of RES both in the wholesale electricity and capacity market, and in the retail electricity markets, including microgeneration .

**The government of the Russian Federation has expanded the program of concessional lending for strategic enterprises to organizations of the fuel and energy complex, it can be used to obtain a loan at a rate of up to 11% per year, the press service of the Cabinet reported** .

The government is launching a special loan program to support the backbone organizations of the fuel and energy complex (FEC). For such organizations, loans will be available at a rate of no more than 11% per annum for up to 12 months. One enterprise will be able to receive up to 10 billion rubles, a group of companies - up to 30 billion.