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

**JANUARY-MARCH 2023**

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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 2023, 31,046.9 million kWh of electricity was generated, which is 273.5 million kWh or 0.9 % more than the same period in 2022 .

The increase in generation was observed in the Southern zone of the UES of Kazakhstan.

*million kWh*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **No.**  | **Zone** | **Generation type** | **January- March** | **Δ, million kWh** | **Δ, %** |
| **202 2 \_** | **202 3 \_** |
|  | **Kazakhstan** | **Total** | **30,773.4** | **31,046.9** | **273.5** | ***0.9%*** |
| *TPP* | 25 119 | 24,808.5 | -310.5 | *-1.2%* |
| *GTES* | 3016.5 | 3,038.6 | 22.1 | *0.7%* |
| *HPS* | 1,815.8 | 1,850.3 | 34.5 | *1.9%* |
| *WES* | 543.8 | 998.6 | 454.8 | *83.6%* |
| *SES* | 278.3 | 350.3 | 72.0 | *25.9%* |
| *BSU* | 0 | 0.6 | 0.6 |  |
| 1 | **Northern** | **Total** | **23,119.7** | **23,099.8** | **-19.9** | ***-0.1%*** |
| *TPP* | 20,521.2 | 20,326.3 | -194.9 | *-0.9%* |
| *GTES* | 810.1 | 800.1 | -10.0 | *-1.2%* |
| *HPS* | 1368.5 | 1221.8 | -146.7 | *-10.7%* |
| *WES* | 314 | 628.7 | 314.7 | *100.2%* |
| *SES* | 105.9 | 122.3 | 16.4 | *15.5%* |
| *BSU* | 0 | 0.6 | 0.6 |  |
| 2 | **South** | **Total** | **3,698.7** | **4060.8** | **362.1** | ***9.8%*** |
| *TPP* | 2,842.5 | 2,831.5 | -11.0 | *-0.4%* |
| *HPS* | 447.3 | 628.5 | 181.2 | *40.5%* |
| *GTES* | 83.7 | 84.1 | 0.4 | *0.5%* |
| *WES* | 153.4 | 289.3 | 135.9 | *88.6%* |
| *SES* | 171.8 | 227.4 | 55.6 | *32.4%* |
| 3 | **Western** | **Total** | **3 955** | **3,886.3** | **-68.7** | ***-1.7%*** |
| *TPP* | 1,755.3 | 1650.7 | -104.6 | *-6.0%* |
| *GTES* | 2,122.7 | 2154.4 | 31.7 | *1.5%* |
| *WES* | 76.4 | 80.6 | 4.2 | *5.5%* |
| *SES* | 0.6 | 0.6 | 0 | *0* |

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

In January-March 2023, electricity generation in Akmola, Aktobe, Almaty, Zhambyl, Kyzylorda, Mangystau, North Kazakhstan and Turkestan regions increased significantly compared to the same period in 2022.

At the same time, a decrease in electricity generation was observed in Atyrau, East Kazakhstan, Karaganda, West Kazakhstan, Kostanay and Pavlodar regions.

*million kWh*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **No.**  | **Region** | **January- March** | **Δ, million kWh** | **Δ, %** |
| **2022** | **2023** |
| *1* | Akmola | 1585.9 | 1,742.2 | *156.3* | *9.9%* |
| *2* | Aktobe | 1011.9 | 1,129.3 | *117.4* | *11.6%* |
| *3* | Almaty | 1,812.3 | 1,891.4 | *79.1* | *4.4%* |
| *4* | Atyrau | 1970.7 | 1,871.6 | *-99.1* | *-5.0%* |
| *5* | East Kazakhstan | 2206.3 | 1,707.3 | *-499.0* | *-22.6%* |
| *6* | Zhambyl | 1237.2 | 1311.6 | *74.4* | *6.0%* |
| *7* | West Kazakhstan | 681.6 | 617.9 | *-63.7* | *-9.3%* |
| *8* | Karaganda | 3912.2 | 3,291.5 | *-620.7* | *-15.9%* |
| *9* | Kostanay | 365 | 332.4 | *-32.6* | *-8.9%* |
| *10* | Kyzylorda | 182.3 | 183.0 | *0.7* | *0.4%* |
| *11* | Mangistau | 1302.7 | 1396.8 | *94.1* | *7.2%* |
| *12* | Pavlodar | 13,463.3 | 13,293.4 | *-169.9* | *-1.3%* |
| *13* | North Kazakhstan | 575.1 | 593.9 | *18.8* | *3.3%* |
| 14 | Turkestan | 466.9 | 592.9 | *126.0* | *27.0%* |
| *15* | Abai |  | 438.3 |  |  |
| *16* | Zhetysuskaya |  | 81.9 |  |  |
| 17 | Ulytauskaya |  | 571.5 |  |  |
|  | **Total for Kazakhstan** | **30,773.4** | **31,046.9** | ***273.5*** | ***0.9%*** |

# *1.2* *Electricity generation by energy holdings and large energy producing organizations.*

In January - March 2023, electricity generation by energy holdings and large energy-producing organizations amounted to 13,626.4 million kWh, which is 390.8 million kWh less than the same period in 2022 (14,017.2 million kWh), and their total share of the total production amounted to 43.9 %.

*million kWh*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **No.**  | **Name** | **2022** | **2023** | **Δ 2023/2022** |
| **January - March** | **share in Kazakhstan, %** | **January- March** | **share in Kazakhstan, %** | **million kWh** | **%** |
|  | **Total** | **14,017.2** | **45.5%** | **13,626.4** | **43.9%** | **-390.8** | **-2.8%** |
| **1.** | ERG | 5455.7 | 17.7% | 5,190.8 | 16.7% | -264.9 | -4.9% |
| **2.** | “Kazakhmys Energy” LLP | 1519.6 | 4.9% | 1627.8 | 5.2% | 108.2 | 7.1% |
| **3.** | “Kazzinc” LLP  | 645.3 | 2.1% | 554.8 | 1.8% | -90.5 | -14.0% |
| **4.** | “Arcellor Mittal” JSC  | 676.6 | 2.2% | 480.7 | 1.5% | -195.9 | -29.0% |
| **5.** | “KKS” LLP | 1,823.2 | 5.9% | 1860.4 | 6.0% | 37.2 | 2.0% |
| **6.** | CAEPCO | 1583.7 | 5.1% | 1531.0 | 4.9% | -52.7 | -3.3% |
| **7.** | “Zhambylskaya GRES” JSC  | 1004.5 | 3.3% | 1015.8 | 3.3% | 11.3 | 1.1% |
| **8.** | Oil and gas enterprises | 1308.6 | 4.3% | 1365.1 | 4.4% | 56.5 | 4.3% |

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

The volume of electricity generation by energy producing organizations of Samruk-Energy JSC for January- March 2023 amounted to 9,986.4million kWh . The increase in electricity generation compared to the same period in 2022 amounted to 316.2 million kWh or 3.3 %.

*million kWh*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **No.**  | **Name** | **2022** | **2023** | **Δ 2023/2022** |
| **January March** | **share in Kazakhstan, %** | **January - March** | **share in Kazakhstan, %** | **million kWh** | **%** |
|  | **"Samruk-Energy" JSC** | **9670.2** | **31.4%** | **9,986.4** | **32.2%** | **316.2** | **3.3%** |
| *1* | *“AlES” JSC* | *1528.7* | *5.0%* | *1534* | *4.9%* | *5.8* | *0.4%* |
| *2* | *"Ekibastuz GRES-1" LLP* | *5988.9* | *19.5%* | *6011* | *19.4%* | *22.0* | *0.4%* |
| *3* | *"Ekibastuz GRES-2" JSC* | *1879.8* | *6.1%* | *1942.3* | *6.3%* | *62.5* | *3.3%* |
| *4* | *"Shardara HPP" JSC* | *101.2* | *0.3%* | *230.2* | *0.7%* | *129.0* | *127.5%* |
| *5* | *“Moynakskaya HPP” JSC* | *121.1* | *0.4%* | *160.2* | *0.5%* | *39.1* | *32.3%* |
| *6* | *“Samruk-Green Energy” LLP* | *4.9* | *0.0%* | *5.1* | *0.0%* | *0.15* | *3.1%* |
| *7* | *WPP Shelek by “Energy Semirechye” LLP*  |  |  | *55.4* | *0.2%* |  |  |
| *8* | *"First wind power plant" LLP* | *45.6* | *0.1%* | *47.8* | *0.2%* | *2.2* | *4.8%* |

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

*in power generation in Kazakhstan*

“Samruk-Energy” JSC in the electricity market of Kazakhstan remains the leader and amounts to 32.2%.

**Kazakhstan**

**31 046,9 mln.kWh**

**Others**

* 1. *Electricity generation by types of energy producing organizations of “Samruk-Energy” JSC, million kWh*
1. **Electricity consumption in the UES of Kazakhstan**

# *2.1. The results of the industry in January-March 2023*

The index of industrial production in January-March 2023 (hereinafter - IIP) in Kazakhstan amounted to 102.8%

Growth in production is observed in the mining and quarrying industry by 0.2%, manufacturing - by 5.4%, supply of electricity, gas, steam, hot water and air conditioning - by 6.1%, water supply; collection, processing and disposal of waste, activities for the elimination of pollution - by 6.7%.

Among the regions, the largest growth was recorded in the North Kazakhstan, Abay, Ulytau, Almaty regions and Almaty.

**Change in industrial production indices**

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

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# *2.2 Electricity consumption by zones and regions*

According to the System Operator, in January- March 2023 there was an increase in the dynamics of electricity consumption in the republic in comparison with the same indicators in 202 2 by 436.9 million kWh or 1.4%. Thus, in the northern and southern zones of the republic, consumption increased by 0.4% and 5.7%, respectively.

*million kWh*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **No.**  | **Name** | **January March** | **Δ, million kWh** | **Δ, %** |
| **2022** | **2023** |
|  | **Kazakhstan** | **30,452.6** | **30,889.5** | ***436.9*** | ***1.4%*** |
| *1* | Northern zone | 19,723.4 | 19,796.4 | *73.0* | *0.4%* |
| *2* | Western zone | 3,932.5 | 3908.4 | *-24.1* | *-0.6%* |
| *3* | Southern zone | 6,796.7 | 7,184.7 | *388.0* | *5.7%* |
|  | **incl .by regions** |  |  |  |  |
| *1* | East Kazakhstan | 2859.2 | 1995.6 | *-863.6* | *-30.2%* |
| *2* | Karaganda | 5,132.4 | 4169.3 | *-963.1* | *-18.8%* |
| *3* | Akmola  | 3,069.7 | 3196.1 | *126.4* | *4.1%* |
| *4* | North Kazakhstan | 481.7 | 477.8 | *-3.9* | *-0.8%* |
| *5* | Kostanay  | 1341.6 | 1250.7 | *-90.9* | *-6.8%* |
| *6* | Pavlodar | 5,098.6 | 5113.6 | *15.0* | *0.3%* |
| *7* | Atyrau  | 1,795.3 | 1840.8 | *45.5* | *2.5%* |
| *8* | Mangistau  | 1379.7 | 1429.5 | *49.8* | *3.6%* |
| *9* | Aktobe | 1,740.3 | 1642.3 | *-98.0* | *-5.6%* |
| *10* | West Kazakhstan | 757.5 | 638.2 | *-119.3* | *-15.8%* |
| *11* | Almaty  | 3432.6 | 3266.8 | *-165.8* | *-4.8%* |
| *12* | Turkestan | 1539.4 | 1612.2 | *72.8* | *4.7%* |
| *13* | Zhambyl  | 1294.3 | 1329.0 | *34.7* | *2.7%* |
| *14* | Kyzylorda  | 530.4 | 546.9 | *16.5* | *3.1%* |
| *15* | Ulytau |  | 1092.4 |  |  |
| *16* | Abai |  | 858.8 |  |  |
| *17* | Zhetysusky |  | 429.8 |  |  |

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

In January -March 2023, there is a decrease in electricity consumption by consumers energy holdings and large energy-producing organizations.

*million kWh*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **No.**  | **Name** | **January- March** | **Δ, million kWh** | **Δ, %** |
| **2022** | **2023** |
|  | **Total** | **7,817.5** | **7592.0** | **-225.5** | -3% |
| *1.* | ERG | *2440.8* | *2318.9* | *-121.9* | -5% |
| *2.* | “Kazakhmys Energy” LLP | *701.2* | *762.0* | *60.8* | 9% |
| *3.* | “Kazzinc” LLP  | *501.8* | *256.7* | *-245.1* | -49% |
| *4.* | “Arcellor Mittal” JSC  | *657.7* | *643.1* | *-14.7* | -2% |
| *5.* | “KKS” LLP | *1,157.3* | *1211.7* | *54.4* | 5% |
| *6.* | CAEPCO | *1,068.1* | *1101.3* | *33.2* | 3% |
| *7.* | “Zhambylskaya GRES” JSC  | *472.8* | *479.5* | *6.7* | 1% |
| *8.* | Oil and gas enterprises | *817.8* | *818.9* | *1.1* | 0% |

In January-March 2023, there is an increase in electricity consumption by Samruk-Energy JSC companies by 104 million kWh or 5% compared to the same indicators for 2022.

*million kWh*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  **No.**  | **Name** | **January March** | **Δ, million kWh** | **Δ, %** |
| **2022** | **2023** |
|  | **"Samruk-Energy" JSC** | **2195.7** | **2299.6** | **104.0** | **5%** |
| *1.* | *“Bogatyr- Komir” LLP* | 84.8 | 90.3 | *5.5* | 6% |
| *2.* | *“Alatau Zharyk Company” JSC* | 320.3 | 319.8 | *-0.6* | 0% |
| *3.* | *"AlmatyEnergoSbyt" LLP* | 1,790.5 | 1,889.6 | *99.1* | 6% |

*2.4 Electricity consumption by large consumers in Kazakhstan*

In January-March 2023, compared to the same period in 2022, electricity consumption by large consumers decreased by 308.1 million kWh or 3.2%.

*million kWh*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **No.**  | **Consumer** | **January March** | **Δ, million kWh** | **Δ, %** |
| **2022** | **2023** |
| *1* | *“Arcelor Mittal Temirtau" JSC* | *995.3* | *950.9* | *-44.4* | *-4.5* |
| *2* | *AZF ( Aksuysky ) "TNK Kazchrome" JSC* | *1254.2* | *1277.0* | *22.8* | *1.8* |
| *3* | *“Kazakhmys Smelting” LLP* | *327.9* | *143.4* | *-184.5* | *-56.3* |
| *4* | *“Kazzinc” LLP*  | *713.7* | *682.3* | *-31.4* | *-4.4* |
| *5* | *"Sokolovsko-Sarbayskoye GPO" JSC* | *430.9* | *329.9* | *-101.1* | *-23.5* |
| *6* | *“Kazakhmys Corporation” LLP* | *338.1* | *293.0* | *-45.1* | *-13.3* |
| *7* | *AZF (Aktobe) "TNK Kazchrome" JSC* | *724.4* | *643.5* | *-81.0* | *-11.2* |
| *8* | *RSE “Channel them. Satpaev"* | *53.2* | *33.5* | *-19.7* | *-37.1* |
| *9* | *"YDD Corporation" LLP* | *213.2* | *282.1* | *69.0* | *32.4* |
| *10* | *"Ust-Kamenogorsk titanium -magnesium plant" JSC* | *189.3* | *163.0* | *-26.3* | *-13.9* |
| *11* | *"Atyrau Oil Refinery" LLP* | *216.2* | *204.4* | *-11.8* | *-5.5* |
| *12* | *“Tengizchevroil”LLP*  | *481.5* | *503.7* | *22.2* | *4.6* |
| *13* | *PAZ (Pavlodar Aluminum Smelter) JSC* | *242.3* | *235.6* | *-6.7* | *-2.8* |
| *14* | *"KEZ" (Kazakhstan electrolysis plant) JSC* | *943.0* | *932.2* | *-10.7* | *-1.1* |
| *15* | *"NC Kazakhstan Temir Zholy" JSC* | *957.2* | *1011.2* | *53.9* | *5.6* |
| *16* | *"KEGOC" JSC* | *1480.9* | *1567.7* | *86.8* | *5.9* |
| **Total** | **9,561.3** | **9253.2** | **-308.1** | **-3.2** |

# *Export-import of electrical energy*

In order to balance the production and consumption of electricity in January-March 2023, exports to the Russian Federation amounted to 345.2 million kWh , imports from the Russian Federation 603.6 million kWh .

*million kWh*

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **January March** | **Δ, million kWh** | **Δ, %** |
| **2022 \_** | **2023 \_** |
| **Export of Kazakhstan** | **-532.7** | **-831.1** | **-298.4** | **56.0%** |
| *in Russia* | *-313.0* | *-345.2* | *-32.2* | *10.3%* |
| *in the IPS of Central Asia* | *-219.7* | *-485.9* | *-266.2* | *121.1%* |
| **Import of Kazakhstan** | **386.7** | **603.6** | **216.9** | **56.1%** |
| *From Russia* | *386.7* | *603.6* | *216.9* | *56.1%* |
| **Balance- flow "+" deficit, "-" excess** | **-146.0** | **-227.5** | **-81.5** | **55.8%** |

# **Coal**

According to the Bureau of National Statistics, Kazakhstan produced 29,741.6 thousand tons of hard coal in January-March 2023, which is 1% less than in the same period in 2022 (30,013.3 thousand tons).

*thousand tons*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **No.**  | **Region** | **January March** | **Δ, thousand tons** | **Δ, %** |
| **2022** | **2023** |
| 1 | *Pavlodar* | *18,911.1* | *19,493.5* | *582.4* | *3%* |
| 2 | *Karaganda* | *8,571.5* | *7580.5* | *-991* | *-12%* |
| 3 | *East Kazakhstan* | *2301.8* | *2185* | *-116.8* | *-5%* |
|  | **Total for the Republic of Kazakhstan** | **30,013.3** | **29,741.6** | **- 271.7** | **-1%** |

In January-March 2023, Bogatyr Komir LLP produced 12,084 thousand tons, which is 2.1% less than in the corresponding period of 2022 (12,338.4 thousand tons).

The sold volume of coal in January-March 2023 amounted to 12,196.2 thousand tons, of which 9,630.7 thousand tons were delivered to the domestic market of the Republic of Kazakhstan, which is 0.3% less than in the same period of 2022 (9,659, 3 thousand tons) and for export (RF) - 2,565.5 thousand tons, which is 0.1% more than in the corresponding period of 2022 (2,561.6 thousand tons).

According to the indicators for January-March 2023, in comparison with similar indicators in 2022, Bogatyr Komir LLP observed a decrease in coal sales by 24.8 thousand tons or 0.2%.

*thousand tons*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **No.**  | **Region** | **January March** | **Δ,** **thousand tons** | **Δ, %****2023/2022** |
| **2022** | **2023** |
| **Total to the domestic market of the Republic of Kazakhstan** | **9659.3** | **9630.7** | **-28.6** | **-0.3%** |
| **Total for export to Russia** | **2561.6** | **2565.5** | **3.8** | **0.1%** |
| **TOTAL** | **12 221** | **12,196.2** | **-24.8** | **-0.2%** |

# **Renewable energy sources**

# *RES targets*

Since the adoption by Kazakhstan of the vector for the transition to a "green economy", the electric power industry has gone through a serious path of reform.

The state has created the necessary measures to support the development of the renewable energy sources (hereinafter referred to as RES) sector in order to achieve the established target indicators.

- 3% share of RES in total electricity generation by 2020 (achieved);

- 15% share of RES in total electricity generation by 2030;

- 50% share of alternative and RES in total electricity generation by 2050.

Given the large resource potential of RES in Kazakhstan, as well as due to the created conditions for supporting the development of RES, over the past 7 years, the installed capacity of RES facilities has increased by almost 11 times.

# *RES indicators in Kazakhstan*

According to The Ministry of Energy of the Republic of Kazakhstan, there are 130 renewable energy facilities with an installed capacity of 2400 MW.

(46 WPPs - 958 MW; 44 SPPs - 1148 MW; 37 HPPs - 280 MW; 3 BioPPs - 1.77 MW).

According to the System Operator, the volume of electricity supply in the EU of the Republic of Kazakhstan by objects using renewable energy sources (SPP, WPP, BGS, small hydropower plants) of the Republic of Kazakhstan for January-March 2023 amounted to 1470.8 million kWh. Compared to January-March
2022 ( 928.3 million kWh ), the increase was 542.5 million kWh or 58.4 %.

*million kWh*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **No.**  | **Name** | **2022** | **2023** | **Δ, million kWh** | **Δ, %** |
| **January March** | **share in Kazakhstan, %** | **January March** | **share in Kazakhstan, %** |
| **1** | **Production in the Republic of Kazakhstan** | **30773.4** | **100%** | **31046.9** | **100%** | **273.5** | **0.9%** |
| **2** | **RES generation in Kazakhstan** | **928.3** | **3.0%** | **1470.8** | **4.7%** | **542.5** | **58.4%** |
| **3** | **RES generation, incl . by zones** | ***share in the respective zone*** |
|  | *Northern zone* | *437.4* | *1.9%* | *776.9* | *3.4%* | *339.5* | *77.6%* |
|  | *Southern zone* | *412.9* | *11.2%* | *612.0* | *15.1%* | *199.1* | *48.2%* |
|  | *Western zone* | *77.0* | *1.9%* | *81.2* | *2.1%* | *4.2* | *5.5%* |
| **4** | **RES generation, incl . by zones** | ***share in RES of the Republic of Kazakhstan, %*** |
|  | *Northern zone* | *437.4* | *47.1%* | *776.9* | *52.8%* | *339.5* | *77.6%* |
|  | *Southern zone* | *412.9* | *44.5%* | *612.0* | *41.6%* | *199.1* | *48.2%* |
|  | *Western zone* | *77.0* | *8.3%* | *81.2* | *5.5%* | *4.2* | *5.5%* |
| **5** | **RES generation, incl . by type** | ***share in RES of the Republic of Kazakhstan, %*** |
|  | *SES* | *278.3* | *30.0%* | *350.3* | *23.8%* | *72.0* | *25.9%* |
|  | *WES* | *543.8* | *58.6%* | *998.6* | *67.9%* | *454.8* | *83.6%* |
|  | *Small HPPs* | *106.2* | *11.4%* | *121.3* | *8.2%* | *15.1* | *14.2%* |
|  | *BSU* | *-* | *-* | *0.6* | *-* | *0.6* | *-* |

# *RES support tariff*

As part of the support for the development of RES, "Financial Center for Supporting the Development of RES" LLP (hereinafter referred to as RFC LLP) carries out a centralized purchase of electricity produced by RES facilities.

In turn, RFC LLP distributes the total amount of electricity received from RES facilities to conditional consumers and qualified conditional consumers (traditional power plants) at the tariff for supporting RES.

# *Through RES allowance*

In accordance with subparagraphs 4-5) of paragraph 3 of Article 7-1 of the Law on RES Support, from July 1, 2021, a surcharge for supporting the use of renewable energy sources applied by conditional consumers to the ceiling tariff is applied.

Surcharge for supporting the use of renewable energy sources - the price determined by the settlement and financial center in accordance with the zone of consumption of electrical energy for energy-producing organizations that are conditional consumers or qualified conditional consumers.

The amounts of the allowance for supporting the use of renewable energy sources for 2023:

1. for conditional consumers in the first zone of electricity consumption in the amount of 1.97 tenge/ kWh without VAT;

2. for conditional consumers in the second zone of electricity consumption in the amount of 0.56 tenge/ kWh without VAT;

3. for a qualified conditional consumer LLP "GRES Topar " in the amount of 0.87 tenge / kWh without VAT.

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

“Samruk-Energy” JSC (SPP, WPP and small HPPs) for January-March 2023 amounted to 137.7 million kWh , which is 70.4% higher compared to the same period in 2022 (80.8 million kWh ).

The share of RES electricity of Samruk-Energy JSC in January-March 2023 amounted to 9.4% of the volume of electricity generated by RES facilities in the Republic of Kazakhstan, while in 2022 this figure was 8.7%.

*million kWh*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **No.**  | **Name** | **2022** | **2023** | **Δ, million kWh** | **Δ, %** |
| **January March** | **share in Kazakhstan, %** | **January March** | **share in Kazakhstan, %** |
|  | **RES S-E, including:** | **80.8** | **8.7%** | **137.7** | **9.4%** | **56.9** | **70.4%** |
| 1 | *Cascade of small HPPs of AlES JSC 43.7 MW* | *30.3* | *3.3%* | *29.5* | *2.0%* | *-0.8* | *-2.6%* |
| 2 | *Samruk - Green LLP Energy » SPP 2MW + SPP 1MW + SPP 0.4MW* | *4.9* | *0.5%* | *1.1* | *0.1%* | *-3.8* | *-77.6%* |
| 3 | *Samruk - Green Energy LLP WPP Shelek 5 MW* | *0.0* |  | *3.9* | *0.3%* |  |  |
| 4 | *First Wind Power Plant LLP WPP 45 MW* | *45.6* | *4.9%* | *47.8* | *3.2%* | *2.2* | *4.8%* |
| 5 | *Energy Semirechye LLP WPP Shelek 60 MW* | *-* | *-* | *55.4* | *-* | *-* | *-* |

# **International relations**

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

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

**Kazakhstan**

**KEGOC discussed the results of activities for 2022 and determined plans for 2023**

On March 15, KEGOC hosted an annual event dedicated to discussing the results of the past year and identifying priorities for the current year. During the event, the results of the production and economic activities of the Company for 2022 were summed up, as well as the reports of the directors of the MES branches and NDC SO, the first head of Energoinform JSC were heard .

The anniversary year 2022 passed under the sign of the implementation of all the planned plans, such as the fulfillment of production tasks, compliance with the deadlines for the implementation of investment projects, the creation of comfortable and safe working conditions, as well as improving the welfare of KEGOC employees. Key achievements for the reporting period include:

completion of the construction of a substation with a voltage of 220 kV " Ortalyk " within the framework of the project "Strengthening the external power supply scheme of Turkestan ";

early full repayment of the loan of the International Bank for Reconstruction and Development in the amount of 46.3 million US dollars;

successful placement of "green" bonds for the implementation of investment projects;

Samruk-Kazyna JSC , as well as companies from the CIS countries;

resumption of the Program of voluntary medical insurance of the health of the Company's employees;

increase in the total annual income of working personnel by 28%-48%, engineering and technical workers and specialists by 15%-36% and middle managers by 10%-15%;

launch of the Program of concessional housing lending, the purpose of which is to retain and attract highly qualified personnel by providing a bank loan at a preferential interest rate.

In 2023, the Company faces no less ambitious tasks: continuation of work on the projects “Strengthening the electric grid of the Southern zone of the UES of Kazakhstan” and “Unification of the energy system of Western Kazakhstan with the UES of Kazakhstan”; ensuring the Company's entry into the stock market (IPO); obtaining an ESG rating, as well as the implementation of planned measures to improve the well-being of the Company's employees.

**Kyrgyzstan**

**In January, Kyrgyzstan imported 138.7 million kWh of electricity from Kazakhstan**

In January, Kyrgyzstan imported 138.7 million kWh of electricity from Kazakhstan. Such data are contained in the publication of the National Statistical Committee on foreign trade.

Electricity supplies in dollar terms were noted at the level of $4.1 million. Electricity was not imported from other countries.

In January 2022, imports from Kazakhstan amounted to 52.3 million kWh (as part of a barter agreement - approx.). Also in January last year, deliveries were made from Turkmenistan - 112.9 million kWh in the amount of $3.1 million.

**Republic of Belarus**

**kWh by 2030**

The increase in electricity consumption in Belarus by 2030 is projected to reach 47 billion kWh .

According to forecasts, by 2030 we should reach 47 billion kWh of electricity consumption, in 2020 this figure was 38 billion kWh ,” the Minister noted. - The increase in electricity consumption is expected at the level of 9 billion kWh .

It is planned that the increase in electricity consumption will be provided both by the real sector of the economy and through further electrification of the housing stock for heating and hot water supply. Particular attention will also be paid to the development of electric transport.

In addition, the volume of electricity consumption by electric boilers will increase , which were put into operation at 20 energy facilities of the country as part of the integration of the BelNPP into the energy system and are used to supply heat to large settlements. Their total capacity is 916 MW. It is expected that in the future these facilities will consume about 1.7 billion kWh .

During the meeting with the labor collective, the Minister spoke about the main directions for the development of the energy complex , the implementation of the most important investment projects , and the work carried out in the industry on import substitution .

**The single energy market of Belarus and Russia will be based on Russian experience**

The common energy market of the Union State will be based on the Russian experience .

In terms of the electric power industry, to determine the main contours of interaction between participants in the electricity market in Belarus and Russia. The Russian Federation has already created a national market for electricity and oil products, while Belarus has a slightly different scheme for the sale of energy resources. Therefore, in essence, the market will be based more on Russian legislation, on Russian experience, which we build into the agreements reached within the framework of allied programs.

In terms of nuclear energy, Russia also has a lot of experience, unlike Belarus. This, for example, is the solution of the issues of safe storage of radioactive waste during the operation of nuclear power plants, which is now especially important for the Belarusian state.

It is very important to promptly change the legislation as issues arise in this area. Over the past two years, our committee has adopted 12 federal laws on energy development issues.

The parliamentarian also said that the entire regulatory framework for creating a single energy market should be ready by 2025, and authorized organizations should move to full-fledged energy trading by 2027.

The delegation of the State Duma of the Russian Federation is visiting Belarus these days. The program of the visit includes meetings with Belarusian deputies, the leadership of the Ministry of Energy, Gosatomnadzor, Rosatom and other organizations. The key topic is the elaboration of issues on the creation of a single market for energy resources. In addition, Russian parliamentarians will hold a working meeting at the BelNPP .

**Russia**

**Russia and Kyrgyzstan to build a solar power plant with a capacity of 300 megawatts**

Kyrgyzstan and Russia are planning to jointly build a 300-megawatt solar-powered station on Kyrgyz territory.

It will be a joint venture. From the Russian side, the Unigrin Energy " from Kyrgyz - "Bishkek Solar .

According to the agreements reached, the project will be financed by the Russian side.

The station with a capacity of 300 megawatts will be built on an area of 400 hectares in the Issyk-Kul region of Kyrgyzstan. As the deputy minister assured, an agreement on its construction was reached within the framework of the meeting of the Kyrgyz-Russian intergovernmental commission on cooperation taking place in Bishkek on March 29.

As Sultanbekov noted , Kyrgyzstan and Russia, within the framework of the commission meeting, also agreed on the export of Russian electricity to Kyrgyz consumers. in 2024.

In 2022, the trade turnover between the two countries amounted to about $3 billion, which is the highest figure in all the years of Kyrgyz-Russian relations **.**

**Uzbekistan**

**By the end of 2026, 25 modern power plants with a total capacity of 11,954 MW will be put into operation in Uzbekistan**

Over the past 4 years, in order to increase generating capacities in our republic, 25 agreements on the purchase of electricity and investment agreements with a total capacity of 11,954 MW for a total amount of 10 billion 148 million dollars have been signed with international companies.

According to these agreements, by the end of 2026, 25 power plants with a total capacity of 11,954 MW (9 thermal, 9 solar and 7 wind power plants) will be put into operation in our country.

This is 60 percent of the current capacity of the energy system of Uzbekistan.

These power plants are put into operation in the regions:

By 2024, it is planned to put into operation 2 solar and wind power plants with a total capacity of 600 MW in the Navoi region. In particular :

➖ In August 2021, a 100 MW solar photovoltaic plant was put into operation by the Emirati company Masdar in the Karmana region;

➖ In 2024 (the first capacities at the end of 2023), a 500 MW wind farm will be put into operation by the Emirati company Masdar in the Tomdinsky district.

By 2024, 3 solar photovoltaic stations with a total capacity of 1320 MW will be put into operation in the Samarkand region. In particular :

➖ In May 2022, the French company Total Eren » a solar photovoltaic plant with a capacity of 100 MW was put into operation in the Nurabad district;

➖ By the end of 2023, a solar photovoltaic plant with a capacity of 220 MW of the Emirati Masdar company will be put into operation in the Kattakorgan district;

➖ In 2024, a 1000 MW solar photovoltaic plant will be put into operation in the Nurabad district by the Saudi company ACWA Power .

By 2026, 3 modern thermal power plants with a total capacity of 3,293 MW will be put into operation in the Syrdarya region. In particular :

➖ In November 2022, a 220 MW thermal power plant was put into operation by the Turkish company Cengiz Enerji " in the Khavast region.

➖ By the end of 2023, the Saudi company ACWA Power will put into operation a thermal power plant with a capacity of 1500 MW in the city of Shirin and Bayaut district;

➖ In 2026, a consortium of EDF (France), Nebras (Qatar), Sojitz Corporation " (Japan) and " Kyuden International Corporation » (Japan) will put into operation a thermal power plant with a capacity of 1573 MW in Bayautsky district.

➖ By the end of 2023, a solar photovoltaic plant with a capacity of 220 MW will be put into operation by the Emirati company Masdar in the Gallaorol district of the Jizzakh region.

In 2022, 3 thermal power plants with a total capacity of 710 MW were put into operation in the Tashkent region. Also in 2024, one solar photovoltaic plant with a capacity of 400 MW will be put into operation. In particular :

➖ In 2022, the Turkish company Aksa Enerji » a thermal power plant with a capacity of 240 MW was put into operation in the Kibray region;

➖ In 2022, the Turkish company Aksa Enerji » a thermal power plant with a capacity of 230 MW was put into operation in the Kibray region;

➖ In 2022, the Turkish company Cengiz Enerji » a thermal power plant with a capacity of 240 MW was put into operation in the Kibray region;

➖ In 2024, a 400 MW solar photovoltaic plant will be put into operation by the Saudi company ACWA Power in the Yukori-Chirchik region.

By 2024, 4 power plants (thermal, wind and solar) with a total capacity of 1,520 MW will be put into operation in the Bukhara region. In particular :

➖ In 2024, the Saudi company "ACWA Power " will put into operation a wind farm with a capacity of 500 MW in the Peshkun district;

➖ In 2024 , a 500 MW wind power plant will be put into operation by the Saudi company ACWA Power in the Gijduvan region;

➖ In January 2022, in the Bukhara region, the Turkish company Aksa Enerji » a thermal power plant with a capacity of 270 MW was launched;

➖ By the end of 2024, it is planned to launch a solar photovoltaic plant with a capacity of 250 MW of the Emirati company Masdar in the Olot region.

By 2025, solar and thermal power plants with a total capacity of 274 MW will be launched in the Khorezm region. In particular :

➖ In March 2022, the Turkish company Odaş Enerji » a thermal power plant with a capacity of 174 MW was put into operation in the Yangarik region;

➖ By 2025, a 100 MW solar photovoltaic plant will be put into operation in Tuprokkala by the French company Voltalia .

By 2026, solar and thermal power plants with a total capacity of 2017 MW will be put into operation in the Surkhandarya region. In particular :

➖ By the end of 2023, a solar photovoltaic plant with a capacity of 457 MW will be put into operation by the Emirati company Masdar in the Sherabad district;

➖ By the end of 2026, Siemens Energy " (Germany), "EDF" (France), " Stone city Energy » ( Netherlands ) a new thermal power plant with a capacity of 1560 MW will be launched in the Angorsky district.

In 2025, 4 wind power plants with a total capacity of 1,600 MW will be put into operation in the Republic of Karakalpakstan. In particular :

➖ In 2024, a 100 MW wind power plant by the Saudi company ACWA Power will be put into operation in the Karaozak region ;

➖ In 2024, 3 wind farms with a capacity of 500 MW each will be put into operation by the Saudi company ACWA Power in the Kungirot district of the Republic of Karakalpakstan.

The total capacity is 11,954 MW.

Tenders for the construction of wind power plants with a capacity of 200 MW in the Beruni district of the Republic of Karakalpakstan and solar photoelectric power plants with a capacity of 300 MW in the Guzor district of the Kashkadarya region continue.

The total capacity is 500 MW.