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

**OCTOBER 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-October 2022 generated 91,793.5 million kWh of electricity, which is   
2001.5 million kWh or 2.1% less than the same period in 2021. A decrease in generation was observed in the Northern zone of the UES of Kazakhstan.

*million kWh*

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **No.** | **Zone** | **Generation type** | **January- October** | | **Δ, million kWh** | **Δ, %** |
| **2021** | **2022** |
|  | **Kazakhstan** | **Total** | **93 741** | **91,739.5** | ***-2001.5*** | ***-2.1* %** |
| *TPP* | 74335.8 | 71646.9 | *-2688.9* | *-3.6* % |
| *GTES* | 8683.6 | 8949.5 | *265.9* | *3.1* % |
| *HPS* | 7859.6 | 7712.8 | *-146.8* | *-1.9* % |
| *WES* | 1359.5 | 1808.5 | *449.0* | *33.0* % |
| *SES* | 1500 | 1621.4 | *121.4* | *8.1* % |
| *BSU* | 2.5 | 0.4 | *-2.1* | *-84.0* % |
| 1 | **Northern** | **Total** | **72,150.4** | **68,019.2** | ***-4131.2*** | ***-5.7* %** |
| *TPP* | 63081.7 | 59102.1 | *-3979.6* | *-6.3* % |
| *GTES* | 2429 | 2382.6 | *-46.4* | *-1.9* % |
| *HPS* | 5537.9 | 5081.3 | *-456.6* | *-8.2* % |
| *WES* | 615.3 | 936.1 | *320.8* | *52.1* % |
| *SES* | 484 | 516.7 | *32.7* | *6.8* % |
| *BSU* | 2.5 | 0.4 | *-2.1* | *-84.0* % |
| 2 | **South** | **Total** | **9,769.6** | **11,774.6** | ***2005.0*** | ***20.5* %** |
| *TPP* | 5732.9 | 7176.3 | *1443.4* | *25.2* % |
| *GTES* | 2321.7 | 2631.5 | *309.8* | *13.3* % |
| *HPS* | 212.9 | 240.9 | *28.0* | *13.2* % |
| *WES* | 488.9 | 624.1 | *135.2* | *27.7* % |
| *SES* | 1013.2 | 1101.8 | *88.6* | *8.7* % |
| 3 | **Western** | **Total** | **11 821** | **11,945.7** | ***124.7*** | ***1.1* %** |
| *TPP* | 5521.2 | 5368.5 | *-152.7* | *-2.8* % |
| *GTES* | 6041.7 | 6326.0 | *284.3* | *4.7* % |
| *WES* | 255.3 | 248.3 | *-7.0* | *-2.7* % |
| *SES* | 2.8 | 2.9 | *0.1* | *3.6* % |

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

In January-October 2022, compared to the same period in 2021, electricity generation increased significantly in Atyrau, Zhambyl, Kostanay, Kyzylorda and Turkestan regions. A sharp increase in electricity generation in the Zhambyl region by 1,518.8 million kWh or 68.1% due to the inclusion of an additional two blocks 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 Akmola, Aktobe, Almaty, East Kazakhstan, West Kazakhstan , Karaganda, Mangistau, Pavlodar and North Kazakhstan regions.

*million kWh*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **No.** | **Region** | **January- October** | | **Δ, million kWh** | **Δ, %** |
| **2021** | **2022** |
| *1* | *Akmola* | 4361.5 | 4260.3 | *-101.2* | *-2.3* % |
| *2* | *Aktobe* | 3,021.1 | 2968.5 | *-52.6* | *-1.7* % |
| *3* | *Almaty* | 5624.0 | 5449.6 | *-174.4* | *-3.1* % |
| *4* | *Atyrau* | 5,723.6 | 5932.5 | *208.9* | *3.6* % |
| *5* | *East Kazakhstan* | 7,745.6 | 6916.2 | *-829.4* | *-10.7* % |
| *6* | *Zhambyl* | 2231.2 | 3750 | *1518.8* | *68.1* % |
| *7* | *West Kazakhstan* | 1951.4 | 1933.8 | *-17.6* | *-0.9* % |
| *8* | *Karaganda* | 12,939.4 | 8112.4 | *-4,827.0* | *-37.3* % |
| *9* | *Kostanay* | 804.1 | 901.6 | *97.5* | *12.1* % |
| *10* | *Kyzylorda* | 509.7 | 520.1 | *10.4* | *2.0* % |
| *11* | *Mangistau* | 4,146.0 | 4079.4 | *-66.6* | *-1.6* % |
| *12* | *Pavlodar* | 40,997.4 | 39529.4 | *-1,468.0* | *-3.6* % |
| *13* | *North Kazakhstan* | 2281.3 | 1249.2 | *-1,032.1* | *-45.2* % |
| 14 | *Turkestan* | 1404.7 | 1472.9 | *68.2* | *4.9* % |
| *15* | *Abai* | - | 424.6 | - | *-* |
| *16* | *Zhetysuskaya* | - | 582 | - | *-* |
| 17 | *Ulytauskaya* | - | 3657 | - | *-* |
|  | **Total for Kazakhstan** | **93,741.0** | **91739.5** | ***-2001.5*** | ***-2.1* %** |

# *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- October 2022 amounted to 28,597million kWh . The decrease in electricity generation compared to the same period in 2021 amounted to 600.5 million kWh or 2.1 %.

*million kWh*

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **No.** | **Name** | **2021** | | **2022** | | **Δ 2022/2021** | |
| **January- October** | **share in Kazakhstan, %** | **January- October** | **share in Kazakhstan, %** | **million kWh** | **%** |
|  | **"Samruk-Energy" JSC** | **29197.5** | **31.1%** | **28,597.0** | **31.2%** | **-600.5** | **-2.1%** |
| *1* | *AlES JSC* | *4053.4* | *4.3%* | *4181.8* | *4.6%* | *128.4* | *3.2%* |
| *2* | *"Ekibastuz GRES-1" LLP* | *18479.6* | *19.7%* | *18405.8* | *20.1%* | *-73.8* | *-0.4%* |
| *3* | *"Ekibastuz GRES-2" JSC* | *5504.6* | *5.9%* | *4683.7* | *5.1%* | *-820.9* | *-14.9%* |
| *4* | *"Shardara HPP" JSC* | *405.4* | *0.4%* | *402.4* | *0.4%* | *-3.0* | *-0.7%* |
| *5* | *"Moinak HPP" JSC* | *625.8* | *0.7%* | *801.8* | *0.9%* | *176.0* | *28.1%* |
| *6* | *Samruk-Green Energy LLP* | *16.8* | *0.0%* | *16.7* | *0.0%* | *-0.10* | *-0.6%* |
| *7* | *WPP Shelek Energy Semirechye LLP* |  |  | *51.7* | *0.1%* |  |  |
| *8* | *First wind power plant LLP* | *111.9* | *0.1%* | *104.8* | *0.1%* | *-7.1* | *-6.3%* |

# *1.3 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 31.2%.



**Kazakhstan**

**91 739,5**

**mln. kWh**

**Others**

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

The industrial production index (hereinafter referred to as IPI) in January-October 2022 compared to January-October 2021, amounted to 101.4%. An increase in production volumes was recorded in 13 regions of the republic, a decrease is observed in Atyrau, West Kazakhstan, Zhetisu, Kostanay, Kyzylorda, Pavlodar and Turkestan regions.

**Change in industrial production indices**

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

In the Zhambyl region, due to the growth in the production of sugar, sausages, diesel fuel, phosphorus, gold in dore alloy, IPI amounted to 111.1%.

In the Abay region, the IPI amounted to 109.4% due to the growth in the extraction of copper and gold ores, the production of copper concentrates, refined copper.

In the city of Almaty, due to the growth in the production of chocolate, soft drinks, cars, the IPI amounted to 109.2%.

In the Akmola region, due to an increase in the extraction of gold-bearing ores, the production of gold-bearing concentrates, gold in dore alloy, the IPI amounted to 108.8%.

In the city of Shymkent due to the increase in the production of gasoline, kerosene, diesel fuel, heating oil, medicines, the IPI amounted to 105.8%.

In the Ulytau region, the IPI amounted to 105.1% due to the growth in the extraction of non-agglomerated iron and lead-zinc ores, the production of blister and refined copper, and copper wire.

In the Almaty region, the IPI amounted to 104.8% due to an increase in the production of beer, soft drinks and cigarettes.

In the East Kazakhstan region, the IPI amounted to 103.4% due to the growth in the production of refined gold and silver, refined copper.

In the Mangystau region, the IPI amounted to 102.1% due to an increase in the production of mortars, prefabricated structural elements for construction, pumps for pumping liquids, and oilfield equipment.

In the Karaganda region, the growth of IPI amounted to 101.5% due to an increase in the production of hot-rolled bars and rods from steel, refined gold and silver, blister and refined copper.

In the city of Astana, the IPI amounted to 101.2% due to the growth in the production of prefabricated structural elements for construction, refined gold.

In the Aktobe region, the IPI amounted to 101.2% due to an increase in the extraction of copper-zinc ores, ferrochromium.

In the North Kazakhstan region, due to the growth in the extraction of uranium and thorium ores, the production of flour, ready-made animal feed, drinking alcohol, combines, IPI amounted to 101.1%.

In the Pavlodar region, the IPI amounted to 99.1% due to a decrease in the extraction of copper ores and concentrates, the production of diesel fuel, raw aluminum, ferrochromium, and electricity.

In the Kyzylorda region, the IPI amounted to 98.7% due to a reduction in the production of crude oil, the production of hydrocarbon liquefied gases.

In West Kazakhstan IPI amounted to 98.7% due to a decrease in gas condensate production.

In the Atyrau region, the IPI was 98.1% due to a reduction in crude oil production.

In the Zhetisu region, the IPI amounted to 97.6% due to a decrease in the production of metal structures, malt, and electric batteries.

In the Turkestan region, due to a decrease in the extraction of uranium and thorium ores, the IPI amounted to 95.8%.

In the Kostanay region, the IPI amounted to 95.7% due to a decrease in the production of non-agglomerated iron ores, iron ore pellets and concentrates.

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# *2.1 Electricity consumption by zones and regions*

According to the System Operator, in January-October 2022, there was a decrease in the dynamics of electricity consumption of the republic in comparison with the same indicators in 2021 by 1,321.9 million kWh or 1.4%. Thus, in the western and southern zones of the republic, consumption increased by 0.6% and 0.5%, respectively.

*million kWh*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **No.** | **Name** | **January- October** | | **Δ,  million kWh** | **Δ, %** |
| **2021** | **2022** |
|  | **Kazakhstan** | **93,024.6** | **91,702.7** | ***-1,321.9*** | ***-1.4*** |
| *1* | *Northern zone* | 60,459.5 | 58,959.8 | *-1,499.6* | *-2.5* |
| *2* | *Western zone* | 11,866.9 | 11,936.1 | *69.2* | *0.6* |
| *3* | *Southern zone* | 20,698.3 | 20,806.7 | *108.5* | *0.5* |
|  | ***incl .by regions*** |  |  |  |  |
| *1* | *East Kazakhstan* | 7,757.9 | 7684.5 | *-73.4* | *-0.9* |
| *2* | *Karaganda* | 15,563.0 | 8,864.3 | *-6,698.7* | *-43.0* |
| *3* | *Akmola* | 8215.9 | 16,913.4 | *8,697.5* | *105.9* |
| *4* | *North Kazakhstan* | 1402.6 | 1282.6 | *-120.0* | *-8.6* |
| *5* | *Kostanay* | 3916.0 | 3,739.0 | *-176.9* | *-4.5* |
| *6* | *Pavlodar* | 17,938.1 | 15,899.5 | *-2,038.6* | *-11.4* |
| *7* | *Atyrau* | 5442.1 | 10,937.6 | *5495.6* | *101.0* |
| *8* | *Mangistau* | 4337.6 | 4341.0 | *3.4* | *0.1* |
| *9* | *Aktobe* | 5665.9 | 5,718.9 | *53.0* | *0.9* |
| *10* | *West Kazakhstan* | 2087.2 | 2126.2 | *39.1* | *1.9* |
| *11* | *Almaty* | 10,042.8 | 9,182.7 | *-860.1* | *-8.6* |
| *12* | *Turkestan* | 4,698.6 | 4,871.3 | *172.7* | *3.7* |
| *13* | *Zhambyl* | 4372.5 | 4,089.3 | *-283.2* | *-6.5* |
| *14* | *Kyzylorda* | 1584.3 | 1544.6 | *-39.7* | *-2.5* |
| *15* | *Ulytau* | *-* | 6,653.3 | *-* | *-* |
| *16* | *Abai* | *-* | 660.7 | *-* | *-* |
| *17* | *Zhetysusky* | *-* | 1118.7 | *-* | *-* |

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

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

*million kWh*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **No.** | **Name** | **January-October** | | **Δ, million kWh** | **Δ, %** |
| **2021** | **2022** |
|  | **Total** | **40,171.4** | **35,327.8** | **8502.6** | **-12.1%** |
| *1.* | *ERG* | *12,591.8* | *12,425.5* | *-166.3* | *-1.3%* |
| *2.* | *Kazakhmys Corporation LLP* | *6438.4* | *3,179.6* | *-3,258.9* | *-50.6%* |
| *3.* | *Kazzinc LLP \_* | *2473.2* | *1,706.7* | *-766.6* | *-31.0%* |
| *4.* | *JSC Arcelor Mittal Temirtau"* | *3,055.7* | *2861.5* | *-194.1* | *-6.4%* |
| *5.* | *KKS LLP* | *5,199.1* | *5,579.9* | *380.8* | *7.3%* |
| *6.* | *CAEPCO JSC* | *4418.1* | *4407,* | *-10.3* | *-0.2%* |
| *7.* | *Zhambyl GRES* | *1,794.8* | *1,056.0* | *-738.8* | *-41.2%* |
| *8.* | *Oil and gas enterprises* | *4200.3* | *110.9* | *-89.4* | *-2.1%* |

In January-October 2022, there is an increase in electricity consumption by the companies of Samruk-Energy JSC by 741 million kWh or by 12.7% compared to the same indicators for 2021.

*million kWh*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **No.** | **Name** | **January-October** | | **Δ, million kWh** | **Δ, %** |
| **2021** | **2022** |
|  | **"Samruk-Energy" JSC** | **5861.57** | **6,603.2** | **741.7** | **12.7%** |
| *1.* | *"Bogatyr-Komir" LLP* | *243.10* | *224.8* | *-18.3* | *-7.5%* |
| *2.* | *“Alatau Zharyk Company”JSC* | *750.95* | *823.0* | *72.1* | *9.6%* |
| *3.* | *“AlmatyEnergoSbyt” LLP* | *4867.52* | *5555.5* | *687.9* | *14.1%* |

*2.3 Electricity consumption by large consumers in Kazakhstan*

In January-October 2022, compared to the same period in 2021, electricity consumption by large consumers decreased by 772.5 million kWh or 2.7%.

*million kWh*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **No.** | **Consumer** | **January-October** | | **Δ, million kWh** | **Δ, %** |
| **2021** | **2022** |
| *1* | Arcelor Mittal Temirtau JSC | *3,112.9* | *3,048.0* | *-64.9* | *-2.1* |
| *2* | AZF ( Aksuysky ) "TNK Kazchrome " JSC | *4313.9* | *4,289.1* | *-24.8* | *-0.6* |
| *3* | Kazakhmys Smelting LLP | *898.3* | *966.9* | *68.6* | *7.6* |
| *4* | Kazzinc LLP | *2299.6* | *2227.3* | *-72.4* | *-3.1* |
| *5* | "Sokolovsko-Sarbayskoye GPO" JSC | *1334.4* | *1,137.8* | *-196.7* | *-14.7* |
| *6* | Kazakhmys Corporation LLP | *1,075.0* | *1,097.6* | *22.6* | *2.1* |
| *7* | AZF (Aktobe) "TNK Kazchrome" JSC | *2,710.6* | *2,748.8* | *38.2* | *1.4* |
| *8* | “Channel them. Satpaev" RSE | *316.5* | *310.5* | *-6.0* | *-1.9* |
| *9* | Kazphosphate LLP | *1688.0* | *1740.0* | *52.0* | *3.1* |
| *10* | NDFZ  (part of the structure of Kazphosphate LLP) JSC | *1429.6* | *1476.2* | *46.6* | *3.3* |
| *11* | "Taraz Metallurgical Plant" LLP | *249.8* | *30.3* | *-219.5* | *-87.9* |
| *12* | "Ust-Kamenogorsk titanium -magnesium plant" JSC | *563.6* | *587.2* | *23.6* | *4.2* |
| *13* | Tengizchevroil LLP | *1513.2* | *1564.6* | *51.5* | *3.4* |
| *14* | PAS (Pavlodar Aluminum Smelter) JSC | *789.9* | *808.2* | *18.3* | *2.3* |
| *15* | "KEZ" (Kazakhstan electrolysis plant) JSC | *3,143.8* | *2959.5* | *-184.3* | *-5.9* |
| *16* | "KEGOC" JSC | *4,577.8* | *4,026.8* | *-551.0* | *-12.0* |
| **Total** | | ***28,587.4*** | ***27,814.9*** | ***-772.5*** | ***-2.7*** |

# *Export-import of electrical energy*

In order to balance the production and consumption of electricity in January-October 2022, exports to the Russian Federation amounted to 991.5 million kWh , imports from the Russian Federation 848.8 million kWh .

Including export of JSC "KEGOC" to the Russian Federation 956.4 million kWh , import of electricity for the reporting period in the amount of 706.4 million kWh.

*million kWh*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Name** | **January - October** | | **Δ, million kWh** | **Δ, %** |
| **2021** | **2022** |
| **Export of Kazakhstan** | ***-2162.1*** | ***-1572.3*** | ***589.8*** | ***-27.3%*** |
| *in Russia* | *-978.3* | *-991.5* | *-13.3* | *1.4%* |
| *in the IPS of Central Asia* | *-1183.8* | *-580.8* | *603.1* | *-50.9%* |
| **Import of Kazakhstan** | ***1399.8*** | ***1153.3*** | ***-246.6*** | ***-17.6%*** |
| *From Russia* | *1094.6* | *848.8* | *-245.8* | *-22.5%* |
| **Balance- flow "+" deficit, "-" excess** | ***-762.3*** | ***-419.0*** | ***343.3*** | ***-45.0%*** |

# **Coal**

According to the Bureau of National Statistics, in Kazakhstan in January-October 2022, 96,793.8 thousand tons of coal were mined, which is 8.3% more than in the same period in 2021 (89,343.7 thousand tons).

*thousand tons*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **No.** | **Region** | **January- October** | | **Δ, thousand tons** | **Δ, %** |
| **2021** | **2022** |
| 1 | *Pavlodar* | *53,716.9* | *56,005.9* | *2289* | *4.3%* |
| 2 | *Karaganda* | *31,435.2* | *31,435.2* | *3,296.3* | *11.7%* |
| 3 | *East Kazakhstan* | *7020.3* | *7278.4* | *258.1* | *3.7%* |
|  | **Total for the Republic of Kazakhstan** | **89,343.7** | **96,793.8** | **7450.1** | **8.3%** |

In January-October 2022, Bogatyr Komir LLP produced 35,331.8 thousand tons, which is 4% less than in the corresponding period of 2021 (36,821.2 thousand tons).

The sold volume of coal in January- October 2022 amounted to 35,117.8 thousand tons, of which 26,529.9 thousand tons went to the domestic market of the Republic of Kazakhstan, which is 7.9 % less than in the same period in 2021 ( 28,792, 9 thousand tons) and for export (RF) - 8,587.9 thousand tons, which is 6.8 % more than in the corresponding period of 2021 ( 8,038.1 thousand tons).

According to the indicators for January-October 2022, compared to the same indicators in 2021, Bogatyr Komir LLP has a decrease in coal sales by 1,713.2 thousand tons or 4.7%.

*thousand tons*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **No.** | **Region** | **January-October** | | **Δ,** **thousand tons** | **Δ, %**  **2022/2021** |
| **2021** | **2022** |
| **Total to the domestic market of the Republic of Kazakhstan** | | **28,792.9** | **26,529.9** | **-2 263** | **-7.9%** |
| **Total for export to Russia** | | **8,038.1** | **8,587.9** | **549.7** | **6.8%** |

# 

# **Renewable energy sources**

# *RES indicators in Kazakhstan*

According to Ministry of Energy of the Republic of Kazakhstan as of October 2022, there are 148 renewable energy facilities operating in Kazakhstan with a total capacity of more than 2,333.2 MW.

14 facilities have been put into operation:

- SES 4.95 MW by "AlmatyEnergoProject" LLP;

- SPP "Aisha" 50 MW by "AEC Asa" LLP;

- SPP "Makpal" 4.95 MW by "Engineering Arena" LLP;

- WPP Shelek 50MW by “Zheruyik Energy” LLP;

- WPP Shelek 60 MW "Energy Semirechye" LLP;

- VES 100 MW Abai-1 LLP;

- WES 250 MW Abai LLP;

- SPP Balkhash 50 MW by "KAZ GREEN ENERGY" (as part of PMC) LLP;

- Net consumer;

- SES Otrar by "Cascade NRG" LLP;

- SES Zhalagash by "Nomad Solar" LLP;

- WPP "Shengeldi-1, 2" LLP;

- VES Novoteks LLP.

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- October 2022 amounted to 4,245.1 million kWh . Compared to January -October 2021 (3,546.3 million kWh ), the increase was 698.8 million kWh or 19.7 %. 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.

million kWh

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **No.** | **Name** | **2021** | | **2022** | | | **Δ, million kWh** | **Δ, %** |
| **January October** | **share in Kazakhstan, %** | **January October** | | **share in Kazakhstan, %** |
| **1** | **Production in the Republic of Kazakhstan** | **93741.0** | **100%** | **91739.5** | | **100%** | **-2001.5** | **-2.1%** |
| **2** | **RES generation in Kazakhstan** | **3546.3** | **3.8%** | **4245.1** | | **4.6%** | **698.8** | **19.7%** |
| **3** | **RES generation, incl . by zones** | **share in the respective zone** | | | | | | |
|  | *Northern zone* | *1231.6* | *1.7%* | *1610.7* | *2.4%* | | *379.1* | *30.8%* |
|  | *Southern zone* | *2056.6* | *21.1%* | *2383.2* | *20.2%* | | *326.6* | *15.9%* |
|  | *Western zone* | *258.1* | *2.2%* | *251.2* | *2.1%* | | *-6.9* | *-2.7%* |
| **4** | **RES generation, incl . by zones** | **share in RES of the Republic of Kazakhstan, %** | | | | | | |
|  | *Northern zone* | *1231.6* | *34.7%* | *1610.7* | *37.9%* | | *379.1* | *30.8%* |
|  | *Southern zone* | *2056.6* | *58.0%* | *2383.2* | *56.1%* | | *326.6* | *15.9%* |
|  | *Western zone* | *258.1* | *7.3%* | *251.2* | *5.9%* | | *-6.9* | *-2.7%* |
| **5** | **RES generation, incl . by type** | **share in RES of the Republic of Kazakhstan, %** | | | | | | |
|  | *SES* | *1500.0* | *42.3%* | *1621.4* | *38.2%* | | *121.4* | *8.1%* |
|  | *WES* | *1359.5* | *38.3%* | *1808.5* | *42.6%* | | *449.0* | *33.0%* |
|  | *Small HPPs* | *684.3* | *19.3%* | *814.8* | *19.2%* | | *130.5* | *19.1%* |
|  | *BSU* | *2.5* | *0.1%* | *0.4* | *0.0%* | | *-2.1* | *-84.0%* |

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

Samruk-Energy JSC (SPP, WPP and small HPPs) in January-October 2022 amounted to 325.3 million kWh , which is 20.9% higher compared to the same period in 2021 (269.1 million kWh ).

The share of renewable energy electricity of Samruk-Energy JSC in January-October 2022 amounted to 7.7% of the volume of electricity generated by renewable energy facilities in the Republic of Kazakhstan, while in January-October 2021 this figure was 7.6%. 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.

*million kWh*

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **No.** | **Name** | **2021** | | **2022** | | **Δ, million kWh** | **Δ, %** |
| **January-October** | **share in Kazakhstan, %** | **January-October** | **share in Kazakhstan, %** |
|  | **RES S-E, including:** | **269.1** | **7.6%** | **325.3** | **7.7%** | **56.2** | **20.9%** |
| 1 | *Cascade of small HPPs of AlES JSC 43.7 MW* | *140.4* | *4.0%* | *152.1* | *3.6%* | *11.7* | *8.3%* |
| 2 | *Samruk - Green LLP Energy » SPP 2MW + SPP 1MW + SPP 0.4MW* | *4.8* | *0.1%* | *4.8* | *0.1%* | *0.0* | *0.0%* |
| 3 | *Samruk-Green Energy LLP WPP Shelek 5 MW* | *12.0* | *0.3%* | *11.9* | *0.3%* | *-0.1* | *-0.8%* |
| 4 | *First Wind Power Plant LLP WPP 45 MW* | *111.9* | *3.2%* | *104.8* | *2.5%* | *-7.1* | *-6.3%* |
| 5 | *Energy Semirechye LLP WPP Shelek 60 MW* | *-* | *-* | *51.7* | *-* | *-* | *-* |

# **International Relations**

# *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, two meetings of the Advisory Committee on the Electricity Industry under the EEC Board were held ( 17th meeting on January 19, 18th meeting on   
August 24-25 , 19th meeting on October 10-12 ), 16 meetings of the Subcommittee on the formation of the Power Industry under the EEC Board (79th meeting 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, 85th meeting April 8, 86th meeting April 15,   
87th meeting April 26, 88th meeting May 17-18, 89th meeting, 90th meeting   
June 30, 91st meeting, 92nd meeting on 22 July, 93rd meeting on 29 July,   
94th meeting on 10 August) and also on 4 March

2022, the Kazakhstani and Russian parties took part in a working meeting on the procedure for registering free bilateral agreements for mutual trade in electricity on the common electricity 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.

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

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

**Kazakhstan**

**The first forum on safety and labor protection was held at KEGOC JSC**

KEGOC JSC held the first forum on safety and labor protection in Astana.

The event was attended by representatives of the Ministry of Energy of the Republic of Kazakhstan, managers and experts in the field of HSE ( Health Safety Environment ) of Samruk-Kazyna JSC and companies included in its structure, KEGOC JSC, as well as representatives of companies from the CIS countries.

At the forum, held under the auspices of the Year of Occupational Safety and Health - 2022, HSE specialists and leaders shared best practices in ensuring safe working conditions, talked about industrial medicine and modern protective equipment at work.

At the event, the chairman of the business council " Vision Zero Kazakhstan awarded KEGOC with a certificate confirming that the company is a member of the international movement of zero injuries - Vision Zero ( Vision concept Zero , based on the three main aspects of work at all levels - safety, health and well-being, brings together leading manufacturing companies around the world).

Another significant event at the forum was the signing by the heads of KEGOC's branches (9 production branches throughout the country) of personal commitments in the field of Health & Safety , according to which any employee of the company is entitled to stop work if he discovers unsafe working conditions.

**The Minister of Energy of the Republic of Kazakhstan spoke about the transition to a new tariff policy "Tariff in exchange for investments"**

October 21, 2022 Minister of Energy of the Republic of Kazakhstan Bolat Akchulakov, in his speech at the Central Communications Service, spoke about how the transition to the updated tariff policy in the generation sector “Tariff in exchange for investments” will take place as part of the implementation of the Message of the Head of State Kassym- Jomart Tokaev .

The continuing shortage of electric energy since 2021 is a consequence of more frequent cases of emergency disposal of obsolete equipment from domestic energy sources .

Compared to the same period in 2021, the number of emergency shutdowns of power equipment increased by 22%, and their duration - by 16%. Depreciation of generating capacities today is about 60%.

During the briefing, the head of the department Bolat Akchulakov noted that the current situation and factors hindering the development of the industry, against the backdrop of record consumption growth, could become a serious threat to the country's energy sustainability in the future.

Recall that from 2009 to 2015, the country had a program "Tariff in exchange for investments" with the introduction of marginal tariffs for electricity. Over the above period, a medium-term reserve of capacity was created by commissioning 1.2 GW of new capacities and restoring 1.7 GW of capacities, which eventually made it possible to cover the deficit that had arisen earlier.

Now the task of transitioning to the updated tariff policy in the generation sector “Tariff in exchange for investment” is to achieve a 15% reduction in the depreciation of generating capacities by 2035 by transforming approaches to tariff setting with an increase in annual investments by 3 times . An important part of the updated model is the strengthening of existing support mechanisms and reverse obligations from the market.

The current policy to curb electricity tariffs does not fully take into account the growth of inflation, which also affects the investment attractiveness of the industry, since a predictable tariff policy is necessary to ensure the stability of the operation of energy enterprises, which provides for indexation to the level of inflation.

Within the framework of the current Electric Power Market, the limit on the amount of funds allocated for the return of investments invested in the industry has been set at 32 billion tenge . The Ministry of Energy of the Republic of Kazakhstan is working on the issue of increasing the specified limit by 100 billion tenge, it is expected that this will provide an opportunity for additional modernization and expansion of existing power plants.

In addition, in order to ensure the inflow of investments, it is necessary to increase the current tariff on the Electric Power Market from the current 590 thousand tenge per 1 MW per month to 885 thousand, which will attract an additional 35 billion tenge to the industry . in year.

Also, the issue of compensation for the costs of generating heat at the expense of the sale of electricity and services to maintain the readiness of electric power should remain in the past. That is, cross-subsidization should be excluded, - said the Minister of Energy of the Republic of Kazakhstan Bolat Akchulakov .

The head of the department also noted that in order to protect certain categories of consumers from the impact of tariff growth, conditions for targeted subsidies will be created, taking into account today's experience.

The thermal power sector, taking into account the social aspect, requires the introduction of a hybrid model that will stimulate the attraction of investments and provide guarantees for the return on investment, including the existing mechanisms for budgetary financing of the thermal power industry and the corresponding obligations of owners to invest.

**Fulfillment of the instructions of the President: Kazakhstan has developed a Concept for the development of the country's electric power industry until 2035.**

During the meeting of the Government chaired by the Prime Minister of the Republic of Kazakhstan Alikhan Smailov considered the development of the country's electric power industry. The Minister of Energy of the Republic of Kazakhstan Bolat reported on the current state and prospects for its development Akchulakov .

According to the Minister of Energy, the unified electric power system is currently operating stably.

“Electricity generation as of October 16 of this year, taking into account exports, amounted to 86.9 billion kWh . Consumption amounted to 86.8 billion kWh , which is 1.4% lower than the figure for the same period last year .

According to him, the decrease in consumption is largely due to the work carried out to identify individuals who carried out illegal digital mining activities . In this regard, given the dynamics of the energy system over the past years, according to the Ministry, in the autumn-winter period of 2022-2023. the maximum load in the power system will be about 16.1 GW.

In the regions of the country, according to the minister, the heating season has begun and is running normally. The readiness of energy producing and energy transmission organizations is 95%.

The warehouses of energy sources have accumulated 4.1 million tons of coal and 81 thousand tons of fuel oil, which corresponds to the approved standards.

The procedures for issuing readiness certificates for energy producing , energy transmission organizations to work in the autumn-winter period have been completed. As a result, 95 passports were issued to energy producing organizations, and 66 passports were issued to energy transmission organizations.

In general, the ministry constantly monitors the course of the heating season, especially in these regions.

Speaking about the prospects for the development of the industry, the minister noted that at present the ministry has prepared a vision for the development of the electric power industry until 2035, the implementation of which requires the adoption of a number of systemic measures.

“Firstly , the electricity market needs to be reformed with a transition to a new functioning model based on a centralized purchase and sale of electricity.”

“To ensure the stability of the work of energy enterprises, a predictable tariff policy is required, which provides for indexation to the level of inflation. Today, within the framework of the electric power market, a limit has been set on the amount of funds allocated for the return of investments invested in the industry. Currently, the limit is 32 billion tenge and requires an increase of 100 billion tenge .

“The availability of coal and a developed transport infrastructure determine the reliability of coal generation and the low cost of electricity, which is the basis for the competitiveness of the economy.”

“According to the target indicators, by 2025 the share of RES in the total electricity generation should be 6%. As part of taking measures to achieve this indicator, it is planned to hold auctions for renewable energy projects with a total capacity of 690 MW in November this year .

**Kyrgyzstan**

**The Kyrgyz Republic doubled electricity imports in January-September to 2 billion kWh**

The Kyrgyz Republic doubled the import of electricity in January-September. Such data are contained in the statistics of the Kyrgyz Energy Settlement Center OJSC.

Import for 9 months amounted to 2 billion 85.6 million kWh . At the same time, electricity generation in Kyrgyzstan decreased by 12% to 9.5 billion kWh .

Electricity came from the following countries:

- Republic of Uzbekistan - 993.4 million kWh ;

- Republic of Kazakhstan - 423 million kWh ;

- Turkmenistan - 669.2 million kWh .

**Forecast: In 2023, the amount of financing in the energy industry of the Kyrgyz Republic is provided at 1.3 billion soms (projects)**

In 2023, large investment projects will be implemented in the energy and transport industries, which will make a major contribution to the development of construction. This is stated in the Forecast of socio-economic development of Kyrgyzstan for 2023–2027.

In the energy sector, the volume of financing is provided in the amount of 11 billion 335.9 million soms (24.2% of total public investment), which is expected through the implementation of projects:

"CASA-1000" (1 billion 997.6 million KGS - WB, EIB, IDB), "Commissioning of the second hydroelectric unit of the Kambar -Ata HPP-2" (2 billion 811.2 million KGS - EDB),

"Rehabilitation of the Toktogul HPP, Phase II" (2 billion 72.1 million soms - ADB, EDB),

"Rehabilitation of the Toktogul HPP, Phase III" (1 billion 493.2 million soms - ADB),

“Heat supply improvement project” (795 million soms - WB),

"Project for the modernization of the Uch -Kurgan HPP" (1 billion 939.9 million soms - ADB) and others.

The implementation of these projects will significantly improve the state of the energy industry in the Kyrgyz Republic and create a favorable basis for increasing the exchange of electrical energy between neighboring states, as well as transit flows .

**PJSC Rosseti and OJSC NES Kyrgyzstan have agreed on strategic cooperation**

Kyrgyzstan” concluded an agreement on long-term strategic cooperation aimed at developing the power grid complexes of the parties. The document was signed by the heads of the companies Andrey Ryumin and Altynbek Rysbekov on the sidelines of the REW-2022 forum in Moscow.

The agreement provides for the possibility of implementing joint projects in the field of construction and modernization of infrastructure, interaction in the development of schemes and programs for the development of electric power systems of the Kyrgyz Republic. The companies also plan to hold events for the exchange of experience on a wide range of issues, including training and retraining of specialists on the basis of corporate training centers, technological connection of consumers, design and construction of power facilities, digital transformation of the power grid complex .

OJSC "National Electric Grid of Kyrgyzstan" is an energy company that transports and distributes electricity generated by power plants throughout the Kyrgyz Republic to residential and large industrial consumers. The company is also a system operator, carrying out centralized operational and dispatch control of the national energy system of the republic.

The company's area of responsibility includes more than 12,000 km of 35-110-500 kV transmission lines and 547 substations.

**Uzbekistan**

**Uzbekistan to buy electricity from Turkmenistan this winter**

The Republic of Uzbekistan plans to purchase 4 billion kWh of electricity from Turkmenistan in the coming autumn-winter period. An agreement on this was reached during the recent visit of the President of Uzbekistan Shavkat Mirziyoyev in Turkmenistan.

Details, including information about the cost of Turkmen electricity for Uzbek consumers, were not disclosed.

Recall that Tajikistan annually in the spring-summer period (April-August) exports up to 1.5 billion kilowatt-hours of electricity to Uzbekistan.

Electricity supplies from Tajikistan to Uzbekistan have resumed since April 2018 after a 9-year break on the basis of agreements concluded annually by the electric power companies of the two countries.

Each kilowatt of Tajik electricity for Uzbekistan is 2 cents.

The low tariff for Uzbekistan is due to the fact that Tajikistan, in turn, receives Uzbek natural gas at a reduced price.

dirams ) for each kilowatt .

In Turkmenistan, about 90% of electricity is produced at thermal power plants (CHP, TPP), and in Tajikistan, almost 95% of electricity is produced at hydroelectric power plants.

Due to the reduction of water in the autumn-winter period, Tajikistan faces a shortage of electricity during the cold season.

Currently, the population of rural areas of Tajikistan receives electricity in limited quantities.

**Ministries of Energy of Uzbekistan and Turkmenistan signed a memorandum**

During the official visit of the President of the Republic of Uzbekistan to Turkmenistan, the leaders of the two countries Shavkat Mirziyoyev and Serdar Berdimuhamedov signed a Declaration on deepening strategic partnership.

Also, a memorandum of understanding was signed between the ministries of energy of the two countries on the further development of cooperation in the field of electric power industry.

The specific areas of this cooperation are:

Cooperation of the parties with the aim of developing electricity trade between the two countries and establishing its transit to other countries;

Extending the term of existing contracts for the supply of electricity on mutually beneficial terms;

Increasing the volume of trade in electricity;

Cooperation in the field of repair of energy facilities;

Carrying out repairs at facilities.

**International and local experts discussed the development of a wholesale competitive electricity market in Uzbekistan**

On October 14, the Ministry of Energy of the Republic of Uzbekistan hosted a “Round Table” dedicated to international experience in the development of a wholesale competitive electricity market and further plans of Uzbekistan in this area.

The event was attended by representatives of interested ministries, departments and enterprises of the energy sector, including the Ministry of Finance, the Agency for Strategic Reforms, the Antimonopoly Committee and others.

During the Round Table, the participants discussed the current results and plans for further modernization and reform of the country's electricity industry by the government.

As noted in the welcoming speech of the Deputy Prime Minister of the Republic of Uzbekistan - Minister of Energy Zhurabek Mirzamakhmudov , over the past few years, the country has made progress in the field of reforms in the energy sector, despite this, there is an understanding that there is a lot of work to be done in the transition to market relations and the creation of a competitive energy market.

The event was attended by experts from the World Bank and the International Finance Corporation. Both organizations are part of the World Bank Group and provide financial and advisory assistance to the government in modernizing and reforming the country's energy industry.

World Bank Country Manager for Uzbekistan Marco Mantovanelli and World Bank Global Energy Practice Manager for Europe and Central Asia, Ms. Sudeshna Ghosh Banerjee noted that the World Bank will continue to provide financial and advisory assistance in the development of the wholesale concrete electricity market in Uzbekistan working in cooperation with the Ministry of Energy, other interested ministries and departments, private investors and international financial institutions on the implementation of specific plans and tasks.

During the event, the audience was presented with advanced foreign experience in the development of a specific wholesale electricity market in Turkey, Armenia, Latin America and Eastern Europe, where the World Bank Group played a key role in the development and implementation of energy sector reforms and attracting private investment in its modernization.

The meeting participants were also presented with a draft roadmap for the transition to a competitive electricity market in Uzbekistan, including the creation of the necessary institutional and legislative conditions for attracting private investment in this sector.

**Russia**

**PJSC Rosseti notes a decrease in the accident rate in the Unified National Electric Grid of the Russian Federation for 9 months of 2022 by 11%**

In January-September 2022, the specific accident rate in the Unified National Electric Grid was reduced by 11%. The main electrical networks of the Volga, the Urals and the South became the best, where the indicators improved by 17–22%.

PJSC Rosseti is the largest electric grid company in Russia. The company combines in its structure the main power grid complex, interregional and regional distribution power grid companies. It manages 2.4 million km of power transmission lines, 528 thousand substations with a transformer capacity of more than 809 gigavolt-amperes.

**Deputy Prime Minister of the Russian Federation Alexander Novak said that about 15 GW of renewable energy capacities will be commissioned in Russia by 2035**

The Deputy Prime Minister emphasized that Russia does not need a significant share of renewable energy generation, since thermal energy generation occupies a significant share in the energy balance

The total capacity of renewable energy generation (renewable energy sources) in Russia by 2035 will be about 15 GW. This was announced by Deputy Prime Minister of the Russian Federation Alexander Novak during a panel discussion at the Russian Energy Week forum.

To date, 5.5 GW of capacities have been built in the country. We plan to reach 12 GW by 2030, and up to 15 GW by 2035. Now it is 2.2%, it will be 10-12% by 2040 .

**Belarus**

**A meeting of the Advisory Committee on the Electricity Industry under the Board of the Eurasian Economic Commission was held in Minsk**

On October 11 - 12, 2022, the regular 19th meeting of the Advisory Committee on the Electricity Industry under the Board of the Eurasian Economic Commission was held in Minsk.

In person, the meeting was attended by representatives of the Department of Energy of the Eurasian Economic Commission represented by Vadim Alexandrovich Zakrevsky, Director of the Department of Energy, Svetlana Vladimirovna Zaitseva, Head of the Department of Electricity and Nuclear Policy of the Department of Energy, Melnik, Darya Alexandrovna, consultant of the Department of Electricity and Nuclear Policy of the Department of Energy.

From the Russian Federation, the meeting of the Advisory Committee was attended by: Zaikina Natalia Vyacheslavovna - Deputy Chairman of the Board, Head of the Monitoring and Control Department of the Association "NP Council of the Market", Trofimenko Sergey Ivanovich - Managing Director for Gas and Electricity Markets of JSC " SPIMEX ", Chernoshtan Yulia Vladimirovna - Deputy Head of the Legal Department of ATS JSC, etc.

From the Belarusian side, the meeting was attended by Deputy Minister of Energy of the Republic of Belarus Moroz Denis Ravilievich , Head of the Department of the Fuel and Energy Complex, Petrochemistry and Housing and Communal Services MART of the Republic of Belarus Bibikov Denis Vladimirovich, Deputy General Director of the Belenergo State Production Association Andrei Petrovich Shershen, Deputy General Director State Production Association " Belenergo " Kovalev Denis Vasilyevich, consultant of the Department of Strategic Development and External Investment Cooperation of the Ministry of Energy Olga Vladimirovna Neverovich and others.

Members of the Advisory Committee from Armenia, Kazakhstan, Kyrgyzstan, the Russian Federation took part in the meeting via videoconferencing.

At the 19th meeting of the Advisory Committee, the following issues were discussed:

On the implementation of the decisions of the 18th meeting of the Advisory Committee for the Electricity Industry.

On the projects proposed for inclusion in the list of projects - symbols of Eurasian integration.

On the draft rules for the functioning of the common electric power market of the Eurasian Economic Union.

On supplementing Section XX "Energy" of the Treaty on the Eurasian Economic Union dated May 29, 2014 with Article 79.1 "Coordinated Energy Policy within the Union".

Those who arrived in the Republic of Belarus at the Belarusian Energy and Industrial Forum, international specialized exhibitions: “Energy. Ecology. Energy saving. Electro "(ENERGY EXPO), "Innovative industrial technologies" (Green INDUSTRY), salon of innovative transport "E-TRANS" ( eTRANS ), "Technologies for the petrochemical industry" (OIL & GAS Technologies ), " Atomexpo -Belarus", " ExpoSVET ”, “Water and air technologies” and “ ExpoGorod ”.

**State Production Association " Belenergo ", JSC " Belenergoremnaladka " and JSC " Rusatom Service" signed a Memorandum of Cooperation in the field of service maintenance of nuclear, thermal and renewable energy facilities**

On October 12, 2022, at the site of the XXVI Belarusian Energy and Environmental Forum, Pavel Drozd, General Director of State Production Association Belenergo , Sergey Kramarenko, General Director of JSC Belenergoremnaladka , and Alexei Yemelyanov, General Director of Rusatom Service JSC, signed a Memorandum of Cooperation in the field of servicing nuclear facilities, thermal and renewable energy.

The provisions of this Memorandum provide for the development of industrial and technical cooperation in the areas of service maintenance of nuclear, thermal and renewable energy facilities, for the subsequent implementation of specific business cooperation projects between the parties or their authorized organizations.

The parties intend to cooperate in the following areas:

• training and advanced training of repair personnel;

• supply of equipment, spare parts and materials necessary for the operation, maintenance, repair, modernization of energy facilities;

• technical support (consulting and engineering services, including chief engineering from equipment manufacturers);

• development of operational and repair documentation;

• preparation and implementation of maintenance and repair of equipment of power facilities;

• performance of start-up, adjustment works and testing of equipment of power facilities;

• development and supply of digital models and simulators for energy facilities.

By mutual agreement, the parties to the Memorandum may expand the areas of business cooperation, not limited to the above.