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THE IMPORTANCE OF DEVELOPING POWER SECURITY IN BELARUS

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Energy security is a crucial element for the sustainable development of Belarus. A reliable and affordable energy supply is essential for economic stability, as it ensures the functioning of industries, transport, and social infrastructure. By increasing its own energy generation, such as through the Belarusian Nuclear Power Plant (NPP), Belarus can reduce its dependence on energy imports and strengthen its national independence. At the same time, Belarus is actively exploring various energy resources and developing alternative energy sources to minimize the risks of monopolistic dependence.

The importance of the issue of maintaining energy independence was evident in early February this year. The Baltic states – Lithuania, Latvia and Estonia – have completed the process of disconnecting from the BRELL energy system, which connected them with Russia and Belarus. This step was part of their long-term strategy to achieve energy independence and synchronization with the ENTSO-E2 European energy system. The shutdown process began with the shutdown of power transmission lines between Lithuania and the Kaliningrad region of Russia. After that, the Baltic States' energy system temporarily operated in an isolated mode to test its autonomy. The following evening, the Baltic power grid was connected to the European one via the Poland-Lithuania overhead line [1].

The average price of electricity in the Baltic States has increased by approximately 25% since disconnection from the BRELL system. The price has reached €125 per megawatt-hour. By February 12th, the price had more than doubled, standing at €230 per megawatt-hour. Earlier, the European Commission clearly stated its position on nuclear power, label-

ing it a green energy source in its classification system, which establishes a list of environmentally friendly economic activities [2].

The NPP of Belarus plays a crucial role in the country's environmental, economic, and social development. It replaces 5.6 billion cubic meters of natural gas, reducing greenhouse gas emissions by 9 million tons and improving the environmental situation. The project has brought together specialists and organizations from Russia and Belarus, enhancing their technological capabilities.

By the end of 2025, the Ministry of Energy of Belarus aims to increase electricity use for heating, hot water, and cooking by 900 million kilowatt-hours (kWh), and to boost total electricity production from 18.5 billion kWh to 41 billion kWh. To achieve these goals, the energy infrastructure is undergoing modernization, with more power lines being rebuilt each year, aiming to increase the annual volume of reconstruction from 2,000 km to 3,000 km. These efforts contribute to the growth of industry and the overall power safety. Vitaly Polyanin, vice-president of ASE JSC and project director for the Belarusian NPP, highlighted the importance of the collaboration between Russian and Belarusian specialists, which ensured the successful and timely completion of the plant's construction. He also expressed confidence that the Belarusian NPP would serve as a model for future international projects by “Rosatom”, noting that similar VVER-1200 units are already under construction in countries like Bangladesh, Hungary, Egypt, Turkey, and China [3].

References

1. ENTSO-E confirms successful synchronization of the Continental Europe electricity system with the systems of the Baltic countries // ENTSO-E: Electrifying Europe. – URL: https://www.entsoe.eu/news/2025/02/09/entso-e-confirms-successful-synchronization-of-the-continental-european-electricity-system-with-the-systems-of-the-baltic-countries/ (date of access: 13.03.2025).

2. The Advantages and Disadvantages of Nuclear Energy // EARTH. ORG. – URL: https://earth.org/the-advantages-and-disadvantages-of-nuclear-energy/ (date of access: 17.03.2025).

3. Second Belarus Unit Enters Commercial Operation // World Nuclear News. – URL: https://www.world-nuclear-news.org/articles/second-belarus-unit-enters-commercial-operation/ (date of access: 19.03.2025).