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## SPOTLIGHT

# Baltic States Synchronise Electricity Grids with the EU

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On 9 February, just 24 hours after disconnecting from the Russian-managed BRELL system, the electricity grids of the Baltic States were synchronised with European grids. It is the culmination of years of preparation by countries of the region and a definitive symbol of the Baltics' independence from Russia. It also demonstrates their determination to enhance their security and achieve strategic, long-term goals in the energy sector.

### **What does synchronisation of the Baltic States mean and why did it happen now?**

Synchronisation is the matching of voltage, phase, and frequency of electricity grids. It was necessary for the Baltic States because for years they operated with a post-Soviet electricity system, dependent on a Russian operator in full control. With tensions rising in relations with Russia since 2014, Estonia, Latvia, and Lithuania were determined to integrate with the EU networks. For security reasons, especially the Russian aggression against Ukraine, the process was accelerated from its planned deadline of the last quarter of 2025. The undertaking required a large amount of funding—more than €1.2 billion (75% of the total cost)—which was provided mainly by the EU under the Connecting Europe Facility. Due to the project's high capital intensity and technical challenges, the rationale for synchronisation had been questioned over the years, including at the feasibility study stage. For the three countries, however, it is both symbolic, marking the final step to independence of these former Soviet republics from Russia, and practical, by liberating them from the risk of Russian energy blackmail.

### **What does the disconnection of the Baltic States from the BRELL system mean for Russia?**

Russia pointed to risks associated with the detachment of the Kaliningrad region from the BRELL system and ensuring its autonomy. This resulted in difficult negotiations between Lithuania, Latvia and Estonia and Russia. Despite repeated

attempts to delay the process, Russia eventually allowed it to separate before the Baltic States did so. This then intensified the pressure to complete the Baltic States' synchronisation with the EU.

Until 2005, the Kaliningrad Oblast had basically no power-generation capacity of its own and imported energy through Lithuania. Between 2016 and 2020, four new thermal power plants were built and the electricity infrastructure was improved. As a result, the Russian exclave can now generate about 2 GW, double its demand. This confirmed its strategic importance for Russia, especially in view of the constant strengthening of its military potential. Since 8 February, the Kaliningrad region has been operating as an island system, responsible for its own power generation.

### **What are the implications of synchronisation for Estonia, Latvia, Lithuania, and the EU?**

From the perspective of the Baltic States and the EU, the key has been to stabilise the electricity grids to eliminate the risk of transmission system disruptions caused by Russia, which, because BRELL is managed from its territory, it has exploited more than once, including in May 2022. The intentional disruptions then caused energy shortages in the Baltic States. This required the immediate balancing of the system and raising their own generation capacity, even to the maximum in the case of Latvia. In the face of such disruptions, instability resulted in price increases on the Nord Pool power exchange (in mid-August 2022, up to €4,000 per 1MWh, when they usually do not exceed €1,000).

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The stability and flexibility of the Baltic States' grid system are important in connection with their aspirations for an effective energy transition, increasing the share of RES in the energy mix (including a dynamic expansion of wind farms in the Baltic) and a projected increase in energy demand estimated at 60% by 2050 (according to Nordic Energy Research).

To strengthen regional energy integration, the completion of the interconnector Harmony Link (between Poland and Lithuania) and the fourth Estonia-Latvia connection will be a priority. Increasing the stability but also the flexibility of the system will improve the region's energy security and help stabilise the market. Within the EU, it also will be easier to meet obligations to have the capacity to import or export a minimum of 15% of domestically produced energy to other EU countries.