

Baltic energy systems: synchronisation by 2025

Lithuania, Latvia and Estonia joined the European Union in 2004, but their grids are still synchronised with Russia and Belarus. Now they have agreed a target date to become a part of the continental Europe's energy system

At the end of June 2018 the Baltic countries and Poland [came](#) to a political agreement for synchronising the Baltic States' electricity grid with the continental European network by 2025.

The power systems of Lithuania, Latvia and Estonia historically were a part of the Soviet Union “unified energy system”. In 1992, when the USSR fell apart, the technical problem of separating the power systems arose. At that time [a range of factors](#) (limited options and high reliability of the Soviet network) spoke in favour of keeping the energy systems integrated.

In 2001 the existing synchronisation of Baltic countries' grids with Russia and Belarus was reflected in the [BRELL](#) agreement, which focused on technical aspects of the power exchange. “It was a technical agreement signed at a time when no other conditions were available,” [said](#) Dangiras Mikalajunas, the former CEO of Lietuvos Energija (Lithuanian energy company).

At present, the power systems of the Baltic States are tightly interconnected with Russian and Belarussian power systems [with AC 330 kV lines](#). They import electricity produced in Russia, have access to the other countries' power reserves, and participate in dispatch and regulation.

Lithuania, Latvia and Estonia have always considered their dependence on Moscow as a threat, and their concerns have increased since the crisis in Ukraine. However, cutting this “umbilical cord” has been an uphill struggle.

First, in the beginning of 2000s the Baltic energy system was virtually isolated, there were not enough power lines connecting the countries with the rest of Europe. The negotiations about **the first submarine cable [Estlink 1](#) between Estonia and Finland started in 1999, but the project was completed only in 2006,** after a harsh winter gave it a boost.

The line quickly became [one of the most congested](#) on the [Nordpool Elspot](#) market, so another interconnector, **Estlink 2**, was launched in 2014.

A third link the Baltic States have with the Scandinavian countries is [Nordbalt](#), connecting Lithuania and Sweden. This high voltage direct current cable with 700 MW capacity started transmitting electricity in 2016. These interconnectors allow the Baltic countries establish a smoothly running Nordic-Baltic power market.

The only link the Baltic States have with continental Europe – [LitPol](#) – was launched also in 2016. The line connects Lithuania and Poland, carrying 500 MW of electricity. This interconnector is of key importance for the [Baltic synchronisation plan](#). However, experts [say](#) at least one more link with Poland would be needed.

"In a true 'Energy Union' there is no room for energy islands and electricity has to be able to flow freely across borders. Today we are taking a significant step forward in bringing more security of supply for electricity consumers in the region and in boosting competition on the electricity market," [said](#) Miguel Arias Cañete, European Commissioner for Climate Action and Energy on the Nordbalt and Litpol links inauguration ceremony.

Technical barriers often go hand in hand with economic ones. **The countries have needed generous investments in power assets to make the transition from BRELL to the European energy system possible.**

The investments in the first link, Estlink 1, [were estimated](#) as high as 110 M EUR. They were made by private investors, and then recovered from [special tariffs](#) (designated fees paid by the interconnector users).

The next interconnector Estlink 2 cost [320 M EUR](#), and was funded by the European Investment Bank. Nordbalt, [552 M EUR](#), was built with [funding](#) from the European Energy Programme for Recovery. Finally, Litpol, which received [over 550 M EUR](#), featured on the "[Projects of the Common Interest](#)" 2015 list.

In addition to the infrastructure investments made so far, the countries will need to pour more money into the grids: strengthening links with European countries and their internal grids, upgrading generation and back-to-back converters towards Russia and Belarus to handle the asynchronous functioning with these countries.

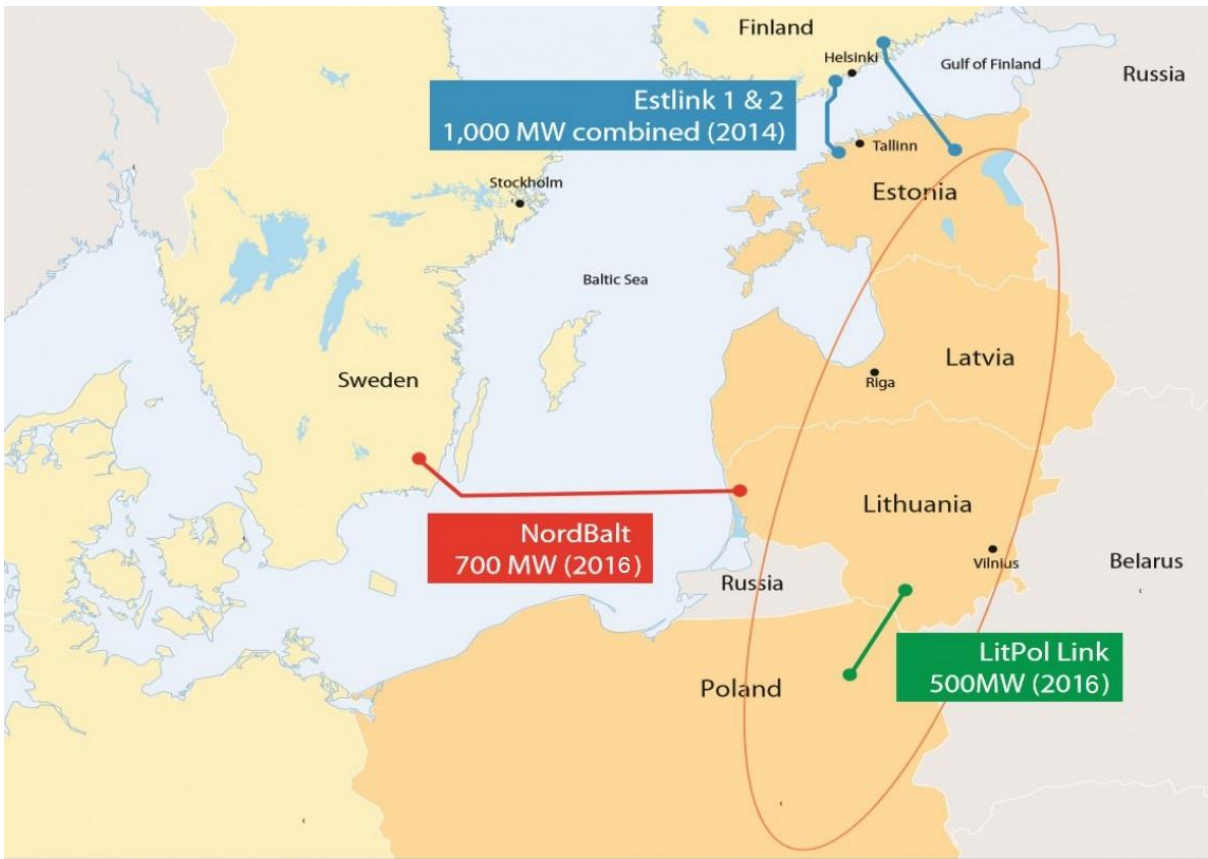
The three countries now face the risk of heightened tension with Russia over its Kaliningrad exclave becoming isolated, and they need to secure a political deal with Poland.

Kaliningrad is the smallest and highly militarised region of Russia, located between Poland and Lithuania. It is now connected to Russia through Baltic States, but after the de-synchronisation it might remain in island mode. The region currently has enough generation capacity to cover its needs, and additional investments in power reserves [are being made](#). However, some experts fear that the electricity crisis can become a political tinderbox.

Relations with Poland have not been going smoothly either. The country has been reluctant about building a LitPol link 2 with Lithuania, possibly because of high investments (ca. 300 M EUR from the Polish side), potential price competition from the electricity exported by Lithuania, concerns about environmental impact as well as the reaction of the local communities impacted by the project.

According to the roadmap agreed in June, the countries will evaluate feasibility of **an alternative to LitPol link 2, namely, a submarine HVDC cable between Poland and Lithuania**. To facilitate the process, the European Commission will enable the involved transmission system operator to apply for financial support from EU funds.

By Alina Fedosova



[Source of the image](#)