The Gathering Storm: As the Baltic States Prepare to Disconnect from the Russian Power Grid, the Kremlin is Ready to ‘Help’

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With the Baltic states on-track to become independent from centralised Russian control over their power networks, the Kremlin has demonstrated an alarming potential to disconnect them from its power grid before they are ready to join the continental European network.

On 22 May 2019, Russia disconnected all power lines linking Kaliningrad with Lithuania and operated its electricity grid autonomously for 72 hours. This seemingly unimportant and therefore underreported episode shows that Moscow is now capable of disconnecting Lithuania, Latvia and Estonia from its Integrated Power System/Unified Power System (IPS/UPS) before they are prepared to disconnect themselves in 2025. Since earlier decoupling of Russian–Baltic electrical grids would, at best, significantly weaken the reliability of the Baltic power systems and increase the average electricity price or, at worst, lead to a blackout, it opens a window of opportunity for Moscow to exploit such capability to its advantage.

The Baltic Power Systems: Between East and West

Looking from the contemporary perspective, the synchronous operation of Russian–Baltic power systems is a unique geopolitical paradox – the Baltic states perceive Russian expansionism as their primary security threat, but they continue to rely on the Kremlin to ensure the stability of their power systems’ day-to-day operation. To understand the reasons behind such an anomaly, one needs to go back to the Cold War.

Amid the great power rivalry, the Soviet Union created Mir – the largest synchronous power system in the world – interconnecting its republics and the Warsaw Pact members. Even though one of the possible English translations of Mir is ‘peace’, the system first and foremost enabled Moscow to control the electricity grids within its sphere of influence and therefore had little to do with the common good.

After the Soviet Union collapsed, Russian authorities reorganised Mir into IPS/UPS, but it gradually lost most of its European members due to rapid enlargement of the Euro–Atlantic space. When Romania and Bulgaria synchronised their power grids with the continental European network (CEN) in 2004, the Baltic states became the last members of NATO and the EU whose electricity networks still operated with IPS/UPS, managed from a central dispatch in Moscow. Thus, the Baltic states are still in the captivity of Moscow’s oversight due to the legacy of Soviet central planning.

Recognising the absurdity of such a situation, the Baltic prime ministers decided to disconnect from the Russian grid in 2007 and to integrate their power systems with CEN. What seemed like a distant or even unfeasible political ambition at that time is now called an irreversible process by the Lithuanian energy minister.

Indeed, there is plenty of room for optimism. In June 2018, the Baltic states overcame prolonged discord on how to best integrate their power systems with European networks and agreed to join CEN through Lithuanian–Polish power lines by 2025. In January 2019, the EU awarded the Baltic states the largest possible share of financial assistance (75% or €323 million) for the infrastructure upgrades foreseen in the preliminary stage of synchronisation. Finally, their transmission system operators signed the so-called synchronisation agreement in May 2019 specifying their contractual obligations, including the timeline and technical details.

As the agreements are in place, and the budget is secured, the Baltic states are preparing to disconnect their power systems from the East and to integrate them into the West. However, the Kremlin, which opposed the Baltic withdrawal from the IPS/UPS from the very beginning, is now capable of making the synchronisation process more challenging.

Explaining Russian Opposition

While the Baltic states, Poland and the European Commission were negotiating the terms of synchronisation, Russia frequently expressed its opposition to the break-up of the IPS/UPS, occasionally on the highest political level. Russian President Vladimir Putin personally spoke against the synchronisation of the Baltics in an interview during his visit to the UN General Assembly in 2015: ‘we
will have to reform the system, spending billions of dollars, as well as our European partners who will also have to spend billions of dollars to integrate the Baltic countries into their power grid. What for? In another interview, the president specified that the Baltic synchronisation would cost Russia approximately €2–2.5 billion, a number that exceeds the overall estimated costs of the project itself.

The Baltic withdrawal from the Russian power grid contradicts Russia’s strategic interest of maintaining influence in its close neighbourhood, which has been steadily decreasing since the Baltic states joined NATO and the EU in 2004. Even the importance of the Russian energy supply that Moscow actively exploits to attain its foreign policy priorities in the Baltic states has diminished because they have successfully diversified their supply routes.

In the power sector, the Baltic states have interconnected their national systems with Finland (via Estlinks), Poland (via LitPol Link) and Sweden (via NordBalt), while Lithuania has also secured access to the global natural gas market by building a liquefied natural gas (LNG) terminal in Klaipėda. Moreover, the Baltic states continue to improve their interconnectivity by constructing a submerged natural gas pipeline linking Estonia and Finland (Balticconnector) and building another pipeline connecting Lithuania and Poland through the Suwalki corridor.

By synchronising electricity grids with CEN, the Baltic states will fully integrate their energy infrastructure into the European networks and eliminate the remaining legacy from the Soviet times: dependence on Moscow for maintaining the stable day-to-day operations of their power grids.

Spheres of influence aside, Russia has other reasons to be concerned about the Baltic plans. The plug to the European synchronous area enables the Baltic states to manage not only the commercial but also the physical electricity flow on their borders with Russia and Belarus, and it is disadvantageous for Moscow considering Rosatom’s nuclear energy projects near the Lithuanian border.

The capability to manage the physical electricity flow enables Lithuania to de facto enforce its law banning electricity imports from nuclear power plants it considers unsafe. In 2017, Lithuanian authorities declared Ostrovets nuclear power plant in Belarus (built by Rosatom’s subsidiary, Atomstroyexport, 40km away from the capital city, Vilnius) to be a threat to national security, environment and public health. While the Lithuanian power system still operates in IPS/UPS, however, it cannot stop the physical electricity flow coming through its power lines with Belarus. After Lithuania joins CEN, this situation will change as Vilnius will be capable of preventing the Belarusian electricity from entering Lithuanian territory (power lines linking Lithuania and Belarus will cease to be operational unless converter stations are built, and Vilnius has no intention to do that).

If Russia decides to renew the construction of the Baltic nuclear power
On 22 May 2019, Russia and Lithuania discussed the construction of a converter station enabling electricity exchange between Kaliningrad and Lithuania after the border with the Baltic states and Russia also established an alternative natural gas supply route for its strategically important enclave by constructing an LNG terminal to supply Kaliningrad, making the supply of their gas-fired thermal power plants independent from a traditional pipeline route through Lithuanian territory. In the mainland, Russia has constructed two power lines, Pskov-Luzhskaya and Novosokolniki-Talashkino, along the border with the Baltic states and Belarus. Their strategic purpose is to ensure the reliability of the IPS/UPS after Lithuania, Latvia and Estonia leave the system.

The construction of additional energy infrastructure and the success of the recent test in Kaliningrad highlight fundamental changes in the interdependence between Russian and Baltic power systems. Kaliningrad’s power network is now capable of operating independently from IPS/UPS, while Lithuania, Latvia and Estonia will continue to rely on the Russian system until 2025.

Since the most pressing motives to oppose the synchronisation are gone, the Kremlin is free to rethink its objectives towards the Baltic project and try to exploit its advantageous position. No longer does Russia need to think about whether it should continue to oppose the Baltic withdrawal from the IPS/UPS and therefore, it can raise the following questions: should Russia continue to operate its power system synchronously with the Baltic electrical grids until 2025? If it should, what could Moscow gain from that? If not, when and how it is most beneficial for Russia to disconnect its Baltic neighbours?

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Before the construction of three new power plants in 2018–19, Kaliningrad already had a surplus generation capacity but could not function independently from the IPS/UPS for a long time, as an isolated test showed in 2012. Russia operated Kaliningrad’s power system in an isolated mode on a summer night, when the electricity demand is low, and only for 10 minutes, therefore not even attempting to test the system’s capability to react to fluctuations in electricity demand, especially during the working hours. A year later, a malfunctioned power line connecting the Kaliningrad-2 power plant left 30% of the region’s residents without electricity for 45 minutes and the crisis was solved not by internal measures, but with the help of electricity flows from Lithuania.

Even though Lithuania had no intention of isolating the strategically important Russian region and is ready to discuss the construction of a converter station enabling electricity exchange between Kaliningrad and Lithuania after its withdrawal from the IPS/UPS, such a position failed to persuade Russia to rethink its hostile approach towards the project.

New Infrastructure Expands Russian Policy Options

Despite opposing the Baltic attempts to join CEN publically, behind the scenes Russia acted as if their withdrawal from the IPS/UPS was only a matter of time by planning and implementing one strategic energy infrastructure project after another.

In Kaliningrad, Moscow built three new flexible gas-fired thermal power plants in 2018–19 and they are already paying off. On 22 May 2019, Russia disconnected Kaliningrad from the IPS/UPS and its power system successfully operated in an isolated mode for 72 hours (as long as planned). It is a stark contrast to the similar test that Russian authorities conducted in August 2012, when Kaliningrad’s power system managed to operate independently only for 10 minutes and then had to reconnect with the IPS/UPS.

What to Expect from Moscow

If Moscow continues to maintain a synchronous operation with the Baltic states, it will probably impose certain conditions. The Estonian transmission system operator, Elering, claims that Russia will most likely charge the Baltic states for the so-called systemic services (primary power reserve capacity) and has already made calculations specifying how much Tallinn is willing to pay, but the Baltic states may also face political demands.

Considering the previously discussed Russian national interests, Moscow may ask for the construction of converter stations for the power lines along the Lithuanian–Belarusian border or to entirely reconsider Lithuania’s approach towards electricity trade with Belarus after the launch of the Ostrovets nuclear power plant.

Moreover, the Kremlin might require compensation for the expenses it will choose to associate with the...
desynchronisation of the Baltic states from the IPS/UPS, for example, construction of transmission lines along the Baltic states’ borders or new generation units in Kaliningrad. Even though the Belarus, Russia, Estonia, Latvia, Lithuania (BRELL) agreement regulating the current synchronous regime forbids demanding financial compensations, Russia can raise such demand without explicit reference to the document mentioned above.

To enforce its demands, Moscow can put pressure on the Baltic states by starting to debate publically wherever the synchronous operation remains beneficial or by using other instruments of coercion. According to the Lithuanian State Security Department, Russia frequently attempts to shape a negative public opinion towards Baltic strategic energy projects by arguing that they are economically unreasonable and will, therefore, decrease the well-being of Lithuanian, Latvian and Estonian citizens.

Even though this spread of misinformation has mostly failed to achieve its objectives (such as halting the construction of various strategically important energy infrastructure projects), the general expert consensus is that it did help Russia to prevent its Baltic neighbours from building the Visaginas nuclear power plant – the largest project ever attempted by the joint Baltic effort. For example, Lithuanian public opinion changed dramatically from consistently being pro-nuclear for two decades to suddenly become anti-nuclear, as results of the advisory referendum on nuclear power in 2012 have shown.

In pursuing its objectives, Moscow has other cards to play. One of the already tested possibilities is to disconnect the power lines in its territory without prior warning, as such a move limits the power transfer capacity along Russian–Baltic borders and thus forms a higher electricity price in the Baltic states. This has already happened in August 2012, when Russia unplugged the power line between Pskov and Kingisepp. Since Russia disconnected only one power line, while others were operational, the consequences were minor, limited to a short spike in the electricity market price. However, the more lines Russia will simultaneously disconnect, the stronger pressure it can exert on the Baltic states, ranging from a slight decrease in systemic reliability of their power grids and temporarily increase in electricity price, to a total blackout of their systems.

To amplify the pressure, Russia can strike when the Baltic states are most vulnerable: during an election period or when the major Lithuanian, Latvian and Estonian interconnections or generation units are not working due to planned outages. Since the Baltic and Russian power systems operate together, Russian authorities will know when and which facilities will be under maintenance.

The recent test in Kaliningrad sketches a blueprint of expectations. The test started two days earlier than previously announced and took place during the same week when Lithuania elected its president and representatives to the European Parliament. In addition, Belarus had intentions to limit its electricity trade with Lithuania on May 22–26 due to power line maintenance but changed its mind later.

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If Russia decides to withdraw from the IPS/UPS earlier than planned, it has two general options to do so. The first way is to honour the BRELL agreement by informing the Baltic states of its plans to terminate the synchronous operation in advance and coordinating its exit. The second option is to disconnect the Baltic states from the IPS/UPS unexpectedly.

One can argue that Russia will refrain from disconnecting the Baltic states prematurely because it would be disadvantageous for Belarus, but contemporary infrastructural developments suggest otherwise. The Belarusian power system is undergoing a rapid modernisation programme as Minsk is preparing to accommodate Ostrovets nuclear power plant. In 2010, the Belarusian Council of Ministers adopted a resolution envisaging the construction of 34 energy facilities (generation units, substations and transmission networks) with the help of Chinese loans. As far as the national transmission system is concerned, Belarus will construct 1,032km of new 330kV transmission lines and will reconstruct another 672km of existing 110–330kV transmission lines before launching Ostrovets nuclear power plant.

Conclusion

Despite the arguments presented above, this is not to say that the Kremlin will certainly resolve to desynchronise the Baltic States before 2025, but merely suggests that recently built Russian strategic energy infrastructure and the successful operation of Kaliningrad’s power system in an isolated mode makes the premature desynchronisation possible and its consequences could be dire for Lithuania, Latvia and Estonia. For this reason, the Baltic states, together with Poland and the EU, need to assume the worst and prepare a contingency plan, outlying ways to mitigate the problems that an early desynchronisation will cause and specifying the response to be levied against Russia.

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