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Baltic States' Synchronisation with Continental European Network: Navigating the Hybrid Threat Landscape

Dr. Justinas Juozaitis

Vilnius, 2021

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Summary

The study analyses the Baltic States' synchronization with Continental European Network(CEN), identifying Russian and Belarusian approaches towards the Baltic energy project and their potential hybrid activities. With the help of the European Commission, Poland and other regional partners, Lithuania, Latvia, and Estonia aim to synchronise their power grids with CEN by 2025, establishing important strategic implications for the Baltic Sea Region. The Baltic States will further solidify their infrastructural integration in the Euro-Atlantic space by synchronising with the European system. Such a development will end a bizarre geopolitical paradox – Russia's management of the Baltic State's power grids through a centralized dispatch of Integrated Power System/Unified Power System (IPS/UPS). In turn, they will discontinue electricity trading with Russia once synchronization is complete. Even though the Baltic States had stopped trading electricity with Belarus in November 2020, when it launched the first unit of Ostrovets NPP, synchronization will help to enforce the trading restrictions better.

The report indicates that Russia and Belarus perceive the Baltic States' desynchronization from the IPS/UPS as a disadvantageous political development. The negative Russian perception stems from geopolitical considerations and economic interests. The former deals with the Russian ambition to maintain a degree of influence in its 'near abroad' through energy, economic, cultural and other ties, where a joint synchronous operation in IPS/UPS plays a part in doing so. The latter prompts Russia to maintain its lucrative electricity exports to the Baltic States that surged since 2010 when Lithuania closed down its Ignalina NPP and continues to be a significant part of its electricity trading portfolio. With surplus generation capacity that has further increased after introducing nuclear power to the energy mix, Belarus aims to enter the Baltic energy market. However, the Baltic States' plans to discontinue electricity trade with the third countries once the synchronisation is complete and the above-mentioned trading restrictions stand in Lukashenko's way, denying Belarus access to the most promising market for its nuclear power.

Due to these reasons, Russia opposed the Baltic States' desynchronization from the IPS/UPS, while Belarus tried to persuade Lithuania to reverse its electricity trading ban and dissuade Latvia and Estonia from supporting the Lithuanian policy. At first, Russia regarded the 2007 declaration of the Baltic States' prime ministers envisaging synchronization with CEN as their shared strategic priority as an unfeasible ambition. Instead of opposing the Baltic intent, it sought to exploit the emerging generation deficit in the Baltic States due to the Lithuanian commitment to shut down

Ignalina NPP by the end of 2009 and increasing interconnectivity in the Baltic Sea Region (development of LitPol link and NordBalt projects) to its advantage. Hoping to fill the generation gap with its electricity and make Lithuania a transit state for its West-bound export, Russia started implementing nuclear power plant projects in Kaliningrad (Baltic NPP) and Belarus (Ostrovets NPP).

As European Commission designated the Baltic States' synchronization with CEN as the EU's Project of Common Interest in October 2013, thus opening the way for the EU's financial assistance, Russia began systematically opposing the Baltic withdrawal from the IPS/UPS and modernizing its power grid. Russia questioned the techno-economic utility of synchronization, aiming to persuade the Baltic States to abandon the project and convince the European Commission to withhold its funding. Russia also played the victim card by emphasising that the Baltic withdrawal from IPS/UPS will disconnect Kaliningrad, and its power grid cannot function in isolation from IPS/UPS. On the other hand, Russia started developing strategic energy infrastructure to prepare for the desynchronization of the Baltic States from IPS/UPS before they are ready to do so themselves. To this end, Russia built four new power plants in Kaliningrad, diversified its natural gas (primary fuel of the power plants) supply by constructing an FSRU 'Marshal Vasilevskiy' and upgraded the transmission network in the mainland to compensate for the upcoming loss of the Baltic power lines. Moreover, Kaliningrad has showcased its capabilities to operate autonomously from the IPS/UPS in 2019 and 2020, contradicting the Russian narratives that Baltic synchronization with CEN will allegedly damage its energy system.

This development is crucial from the strategic perspective as it breaks the long-term logic of interdependence between the power grids of the Baltic States and Russia. Since the collapse of the Soviet Union, the Baltic States' relied on Russia to ensure their power systems' stable functioning. Simultaneously, Russia counted on the Baltic transmission networks to supply Kaliningrad with electricity as its exclave was experiencing a severe deficit. The interdependence between the power grids constrained Russian energy geopolitics in the electricity sector (contrary to oil and natural gas) – Russia could not exert pressure on the Baltic transmission networks without endangering Kaliningrad's power grid. After the infrastructural upgrades are completed, this constraint might no longer apply, allowing Russia to use the energy blackmail to achieve its ends.

The report argues that stopping the synchronization or delaying its implementation is the primary Russian objective, albeit difficult to achieve given the project's solid political and financial foundations and overall progress. However, Russia will continue its attempts to preserve electricity

trading possibilities with the Baltic States once their withdrawal from the IPS/UPS is complete. To this end, it might pressure the Baltic States to build a back-to-back converter station (allegedly for technical purposes) that could create infrastructural preconditions for electricity trade in the future. Further Russia demands for compensating the infrastructural upgrades that it will choose to associate with preparation for desynchronization are also likely even if Moscow has no legal right for making such requests.

The Belarusian behaviour towards the Baltic States' synchronization with CEN will increasingly mimic Russian foreign policy objectives because of its isolation after the recent falsified presidential election. Since 2017, Lukashenko's regime was very active in opposing any potential barriers to electricity trade. In doing so, Belarus tried to export the emerging electricity surplus, secure a revenue stream to repay the loan for Ostrovets NPP, and resist Russian pressure to establish a Union State and expand its military presence by diversifying its political and economic relations. These efforts collapsed in August 2020 when the West isolated the Belarusian regime, and it turned to seek shelter in the Russian embrace. With the Russian influence in Belarus increasing, the Belarusian approach towards the Baltic States will be increasingly subordinated to Russian interests *vis-à-vis* Baltic synchronisation with CEN and elsewhere. Additionally, Lukashenko's regime already facilitates illegal migration to force the European Union to open the negotiations with Belarus, a method which Lukashenko would not resort to if economic pragmatism remained the guiding principle of his behaviour.

Given the discussed geopolitical developments and Russian and Belarusian attitudes, the Baltic States synchronization with CEN navigates the hybrid threat landscape. Baltic States' synchronization with CEN is in the priming phase of Russian hybrid activity despite clearly articulated malign intentions. So far, Russia has tried to persuade the Baltic States and the EU to make harmful choices voluntarily by diplomatic means and disinformation but have refrained from deliberately destabilising their power grid. However, with Kaliningrad's ability to operate autonomously ensured, Belarusian capability to maintain its power grid disconnected from Lithuania tested, and Russian influence on Belarus increased, Russia is well-positioned to increase the scope and intensity of hybrid activities towards the Baltic States.

The history of Russian energy geopolitics towards the Baltic States shows that Moscow has various instruments (hindering the functionality of energy infrastructure on made-up grounds, manipulating energy prices, breaking diplomatic compromises, launching disinformation campaigns

forming societal unrest and dissatisfaction with energy policies, etc.) and experience in simultaneously targeting infrastructural, economic, informational, societal, political and diplomatic domains to achieve its ends. To hinder the synchronization project by exploiting its new infrastructure, Russia might attempt to destabilise their power grids and increasing electricity prices by tampering with its transmission network. Increasing the pressure on the Baltic States, such methods could be used then their power grids are most vulnerable (primary generation units or largest cross-border interconnections are not operational). Belarus could be instrumental in this regard if Russia synchronises its actions with planned transmission system tests requiring disconnecting from the Lithuanian power grid or other instances. Cyberattacks, an active information campaign and diplomatic pressure can also support such actions. Damaging infrastructural domain exerts pressure on other domains, such as economic (inflating energy prices/creating resource shortages), informational (questioning the rationale of synchronisation), societal (framing dissatisfaction in the society), diplomatic (persuading partners that implementing synchronisation is untenable) and political (pressuring government to rethink synchronisation) domains.

The report indicates a clear hierarchy of domains that must be protected from Russian and Belarusian malign activities. The infrastructural and economic domains are the most important ones that mainly determine the societal attitudes toward strategic energy projects in the Baltic States. If the energy supply is stable and its prices are affordable, Russia will find it difficult to persuade the Baltic States' societies to pressure the governments to rethink their energy policy priorities. To navigate the hybrid threat environment and protect their power grid, the Baltic States need to hasten their efforts to upgrade strategic energy infrastructure and test the operation of their power grids in an isolated mode as soon as possible. Capable of ensuring the reliability of the power grids and testing the readiness in field conditions when the interdependence between the Baltic and Kaliningrad power systems no longer constrains Russian malign activities, the Baltic States will mitigate the most pressing national security risks in the energy sector.

The diplomatic domain ranks in second place. The synchronisation project is built on many consensuses (between Lithuania, Latvia, and Estonia; the Baltic States, Poland and the EU; transmission system operators and the ENTSO-E, etc.). Breaking these consensuses would result in attempts to renegotiate the synchronisation conditions, potentially delaying the implementation of the project. The Baltic States need to resist Russian and Belarusian attempts to divide them by showing unity on controversial issues. For instance, Ostrovets NPP has already proved instrumental for Russia in promoting political divisions among the Baltic States as Lithuania, Latvia, and Estonia negotiated

for a common political approach to the electricity trade with Belarus from 2017 to 2020. They still have not operationalized the agreement by brokering a common trading methodology with 3rd countries. Latvia argues that the certificate of origin system is working. At the same time, Lithuania maintains that Belarusian electricity is occasionally entering the Baltic States despite the legislation banning electricity trade with Belarus.

To solve the disagreement, the Baltic States should consider gradually lowering the capacity available for electricity trade on the Latvian – Russian border by creating a ‘capacity bottleneck’, forcing Russia to choose between its electricity exports and Belarusian electricity ‘smuggling’. Moreover, such a policy will help smoothen the transition period of trading with third countries instead of stopping the trade instantaneously. To further limit the possibilities of Belarusian electricity entering the Baltic States, the ‘capacity bottleneck’ can be supplemented by imposing an electricity infrastructure tax for 3rd countries and persuading Ukraine not to reopen electricity trade with Belarus.

Another critical element of the diplomatic domain is the negotiations for the withdrawal from the IPS/UPS. Negotiating on the technical level within the boundaries of the BRELL agreement does not allow Belarusian and Russian transmission system operators to demand financial compensations for the termination of the agreement from the respective Baltic operators. On the contrary, opening a political negotiation with Russia and Belarus for smooth unbundling Baltic power grids from the IPS/UPS creates better conditions to extract side payments for investments allegedly associated with the Baltic synchronization process.

Informational, societal and political domains play a secondary role as their effectiveness largely depends on Kremlin’s ability to trigger dissatisfaction with the government and its energy policies in the Baltic societies by inflating energy prices or disturbing its supply. That does not mean, however, that the Baltic States can afford complacency. They need to focus on public relations by developing a unified message that clearly and consistently explains why specific decisions related to synchronization are necessary.

In the end, cooperation is key given the multilayered nature of the synchronization, involving many stakeholders with different areas of responsibilities and the complexity of hybrid threats. Hence, institutions responsible for implementing synchronisation must also work in synchronism, finding a common position on most pressing issues and assisting each other in times of need.

Introduction

Over the last three decades, the Baltic States' synchronisation with CEN generated numerous debates. Shortly after the restoration of independence, Lithuanian, Latvian and Estonian energy experts and politicians started discussing wherever the synchronisation project was feasible and weighted potential benefits and costs of such an endeavour. As the Baltic States gradually interconnected their transmission networks with Finland, Poland and Sweden, they have also analysed alternative synchronisation scenarios, such as creating a separate Baltic synchronous zone or synchronising with the Nordic power system via Estonian – Finnish interconnections. Given that desynchronisation from the IPS/UPS is a prerequisite to synchronisation with CEN, the Russian approach towards the Baltic energy project and emerging security challenges were reoccurring themes in such discussions.

This topic was fueled mainly by Russia's willingness to use energy to advance its foreign policy ends *vis-à-vis* neighbouring countries. Given the Baltic States' aspirations for energy independence from Russia, the Kremlin often employed energy geopolitics against them to maintain its advantageous position in the energy supply chain.¹ It was relatively straightforward that Lithuanian, Latvian, and Estonian synchronisation with CEN would not go unopposed as Russia perceived it as an unfavourable geopolitical development. The Baltic withdrawal from the IPS/UPS contradicted the Russian interests of maintaining a degree of influence in the Baltic States and threatened the Kremlin's entrenched position in Lithuanian, Latvian and Estonian electricity markets.² Observing the negative Russian perception towards the Baltic flagship energy project, the

¹ For a historical overview and specific examples of Russian energy geopolitics towards the Baltic States, please see: Baran, Z. *Lithuanian Energy Security: Challenges and Choices*. Hudson Institute and Centre for Strategic Studies, 2006. Česnakas, G. Energy Security in the Baltic-Black Sea Region: Energy Insecurity Sources and their Impact upon States. *Lithuanian Annual Strategic Review* no. 10, 2013. Grigas, A. *The Gas Relationship between the Baltic States and Russia. Politics and Commercial Realities*. Oxford: The Oxford Institute for Energy Studies, 2012. Grigas, A. *Energy Policy: the Achilles Hell of the Baltic States*. Grigas, Kasekamp, A. Maslauskaitė, K. Zorgenfrei, L. (eds.) *The Baltic States in the EU: Yesterday, Today and Tomorrow*. Paris: Notre Europe – Jacques Delors Institute, 2013. Grigas, A. *The Politics of Energy and Memory between the Baltic States and Russia*. London and New York, Routledge, 2014. Hedenskog, J. Larsson, L. L. *Russian Leverage on the CIS and the Baltic States*. Stockholm: Swedish Defence Research Agency, 2007. Maigre, M. *Energy Security Concerns of the Baltic States*. Tallinn: International Centre for Defence Studies, 2010. Molis, A. Building methodology, assessing the risks: the case of energy security in the Baltic States. *Baltic Journal of Economics* 11(2), 2011. Sprūds, A. Rostoks, T. *Energy: Pulling the Baltic Sea Region Together or Apart?* Riga: Zinatne, 2009. Švedas, R. EU Energy Island – Characteristics, Threats, and How to Break out of it: A Case Study of Lithuania. *Lithuanian Annual Strategic Review* 15, 2017.

² The initial concepts of the Baltic States' synchronisation with CEN have not suggested changing the electricity trading regime with Russia and Belarus by limiting their access to Lithuanian, Latvian and Estonian electricity markets. The Baltic States, Poland and the European Commission started scrutinizing electricity trading with the 3rd countries more thoroughly after the annexation of Crimea and subsequent advances in multilateral negotiations. The Baltic transmission system operators have officially communicated their intent to discontinue electricity trading with Russia and Belarus in March 2019. This notion was included in the political roadmap on the Baltic States' synchronization with CEN that they signed with Poland and the European Commission in June of the same year. Please see: *Political Roadmap on*

experts sought to foresee its upcoming response and identify potential security threats it would entail for the Baltic States and beyond.³

For the most part, the Russian approach towards the Baltic States' synchronisation unravelled in 2014–2015. On the one hand, Russia expressed its opposition towards the Baltic States' synchronisation with CEN by questioning its techno-economic rationale. Russia made the case that the Baltic withdrawal from the IPS/UPS would weaken its reliability by creating energy islands and breaking the BRELL loop.⁴ At the same time, however, the Kremlin started upgrading its power system to accommodate the Baltic States' withdrawal from IPS/UPS even before they agreed on the political and technical principles of the project. By the time the Baltic States, Poland and the European Commission have reached the basic political consensus on the synchronisation in June 2018,⁵ Russia was mostly finished strengthening its transmission network.

Russia built two 330 kV overhead transmission lines in its mainland, linking Novosokolniki with Talashkino and Pskov with Luzhskaya parallel to its national borders with the Baltic States and Belarus, narrowing the BRELL ring by excluding their Baltic neighbours. With other upgrades to its transmission network, Russia has increased its interconnectivity between the North-West and the Central parts of the IPS/UPS, compensating for the upcoming loss of Lithuanian, Latvian and Estonian transmission capacity.⁶ In parallel, Belarus has also substantially upgraded its transmission system to accommodate Ostrovets nuclear power plant (NPP). Belarus constructed approximately 1 000 km new 330 kV overhead power lines and reconstructed additional 700 km 110-330 kV power lines enabling the distribution of electricity generated in Ostrovets NPP across the country.⁷ Belarus

implementing the synchronisation of the Baltic States' electricity networks with the Continental European Network via Poland, 20 June 2019. https://ec.europa.eu/energy/sites/ener/files/political_implementation_roadmap.pdf?redir=1

³ For examples, please see: Jermalavičius, T. et. al. *The Geopolitics of Power Grids. Political and Security Aspects of Baltic Electricity Synchronization*. Tallinn: International Centre for Defence and Security, 2018. Juozaitis, J. The Gathering Storm: As the Baltic States Prepare to Disconnect from the Russian Power Grid, the Kremlin is Ready to 'Help'. *Royal United Services Institute Newsbrief* 7(39), 2019. Tuohy, E. Bulakh, A. Tsarik, J. Desynch or Sink. *A Political Analysis of Baltic Electricity Desynchronization*. Tallinn: International Centre for Defence and Security, 2017.

⁴ The BRELL ring or the BRELL loop, a part of IPS/UPS, refers to a circular transmission system linking Belarus, Russia, Estonia, Latvia and Lithuania. For a visual representation of the BRELL ring and new Russian power lines, please see the first annex.

⁵ *Political Roadmap on the synchronisation of the Baltic States' electricity networks with the Continental European Network via Poland Signed in Brussels on June 28, 2018.* https://ec.europa.eu/energy/sites/ener/files/c_2018_4050_en_annexe_acte_autonome_nlw2_p_v2.pdf

⁶ Бизнес России. ЛЭП «Белозерская — Ленинградская»: поток энергии от Северо-Запада до Центра. <https://glavportal.com/materials/lep-belozerskaya-leningradskaya-potok-energii-ot-severo-zapada-do-centra>

⁷ Belta. *Belarus' nuclear power plant expected to meet 40% of domestic energy needs*, 1 April, 2021. <https://eng.belta.by/economics/view/belarus-nuclear-power-plant-expected-to-meet-40-of-domestic-energy-needs-138694-2021/> Energybase. *Подходит к завершению реализация проекта выдачи мощности Белорусской АЭС*, 4 October, 2018. <https://energybase.ru/news/companies/podhodit-k-zaverseniu-realizacia-proekta-vydaci-mosnosti-beloruskoj-ae-2018-10-04>

tested the capability of its power system to operate without interconnections with Lithuania in April 2021,⁸ but Ostrovets NPP was disconnected during the tests.⁹

The most critical infrastructural developments, however, took place in Kaliningrad. The Russian exclave has showcased its capability to operate independently from the IPS/UPS system for 72 hours in May 2019 and 8 hours in September 2020. Russia achieved this by constructing three additional natural gas-fired power plants: ‘Pregolskaya’, ‘Talakhovskaya’ and ‘Mayakovskaya’, and one coal-fired power plant – ‘Primorskaya’. Russia solidified Kaliningrad’s energy autonomy by diversifying its traditional natural gas supply route through the Lithuanian pipeline system (commissioning of floating storage regasification unit (FSRU) Marshal Vasilevskiy in 2019) and expanding its natural gas storage.¹⁰

Having received the first share of EU’s funding only in January 2019,¹¹ the Baltic States have lagged with their infrastructural developments. Despite diversifying their power supply in 2014 – 2016 by constructing ‘LitPol link’, ‘Nord Balt’ and ‘Estlink 2’, the Baltic States still rely on Russia’s centralised frequency management. Just as the Baltic States are still dependent on Russia, their Eastern neighbour relied on them. Kaliningrad could not function autonomously from the IPS/UPS for a prolonged time, making Kaliningrad’s interconnections with Lithuania indispensable for maintaining its power system’s stability until 2019. Therefore, the interdependence between the systems constrained Russian malign activities as potential issues in the Baltic power grid would have similar consequences for Kaliningrad’s power system. Due to recent infrastructural upgrades in Kaliningrad, mainland Russia and Belarus, the logic of interdependence becomes less relevant.¹²

With the further advancement of the synchronisation project and the eroding infrastructural constraints for Russian energy geopolitics, the Baltic States navigate the hybrid threat landscape. For example, does the speedy infrastructural upgrades indicate that the Kremlin is turning to its classic playbook of energy geopolitics to undermine the Baltic States’ synchronisation with CEN or achieve

⁸ Nuclear Engineering. *Belarus disconnects power lines with Lithuania for testing*, 12 April, 2021.

<https://www.neimagazine.com/news/newsbelarus-disconnects-power-lines-with-lithuania-for-testing-8663391>

⁹ Государственное предприятие «Белорусская АЭС». *Первый энергоблок БелАЭС сегодня будет отключен от сети*, 07 April 2021. <https://belaes.by/ru/novosti/item/3218-pervyj-energoblok-belaes-segodnya-budet-otklyuchen-ot-seti.html>

¹⁰ Natural gas is the primary fuel for generating electricity and central heating in Kaliningrad.

¹¹ Central Europe Energy Partners. *EU invests almost EUR 800 million on energy infrastructure in Central Europe*. 25 January, 2019. <https://www.ceep.be/eu-invests-almost-eur-800-million-on-energy-infrastructure-in-central-europe/>

¹² Zdanavičius, L. The impact of the Kaliningrad factor on the Lithuanian national security. Statkus, N. and Česnakas, G. (eds.). *Lithuania in the Global Context. National Security and Defence Policy Dilemmas*. Vilnius: General Jonas Žemaitis Military Academy of Lithuania, 2020. P. 209 – 211.

other strategic objectives? How should they perceive infrastructural developments in Russia and Belarus? Are Russia and Belarus merely preparing for the shrinkage of the IPS/UPS in advance to sufficiently test the functioning of their systems in isolation from the Baltic States, or malevolent intentions are in play? If so, how Russia could use its infrastructural upgrades against the Baltic States and at what cost? On the other hand, how can the Baltic States protect synchronisation from foreign meddling?

The report addresses these questions applying the conceptual model of hybrid threats prepared by The European Centre of Excellence for Countering Hybrid Threats (Hybrid COE) and the EU's Joint Research Centre (JRC).¹³ The study aims to identify the Russian and Belarusian objectives towards the Baltic States synchronisation with CEN and potential hybrid influencing activities to achieve these aims. It consists of five parts. The first part briefly introduces the Baltic synchronisation project. The second part established the conceptual framework by introducing the hybrid threats and their research principles. The third chapter identifies Russian and Belarusian interests towards the Baltic States' synchronisation with CEN. The fourth part overviews Russian and Belarusian hybrid campaigning potential in infrastructural, economic, informational, societal, political and diplomatic domains to achieve their interests. Here, the report primarily focuses on the potential instruments and their impact. Finally, the report identifies further steps for the Baltic States to navigate the hybrid threat environment and synchronise with CEN successfully.

¹³ Giannopoulos, G. Smith, H. Theocharidou, M. et. al. *The Landscape of Hybrid Threats: A Conceptual Model Public Version*. Joint Research Centre and the European Centre of Excellence for Countering Hybrid Threats, 2020.

1. The Baltic Synchronisation Project

To better understand the logic behind Baltic States' synchronisation with CEN, one should first note that a synchronised interstate area is an economic, technological, legal and geopolitical bond linking national power grids in one system of rules and procedures. In such a system, national grids operate in synchronism under the same system frequency and are dependent on one another. There are three major interstate synchronous areas in Europe. The smallest of the three is the Nordic energy system (formerly known as NORDEL). In terms of installed generation capacity and the number of countries operating their power grids together, CEN (formerly known as Union for the Coordination of the Transmission of Electricity – UCTE) is the largest European synchronous area, with which the Baltic States are synchronising their power grids and aim to do so by 2025. In terms of territory, IPS/UPS (before the collapse of the Soviet Union – 'Mir') is the most geographically extended synchronous grid, from which the Baltic States are desynchronising.



1 figure. Synchronous areas in Europe. Source. **Litgrid.**¹⁴

¹⁴ *Condensed Interim Consolidated and the Company's Financial Statements, Prepared According to International Financial Reporting Standards as Adopted by the European Union (Unaudited), for the Period Ended 31 December 2018.*

Operating national power systems in an interstate synchronous area creates conditions for various beneficial exchanges, increasing the power network's reliability being one of the most important advantages.¹⁵ For example, the transmission system operators (TSOs) achieve the stability of the frequency (a vital parameter of the system) within the synchronous area by maintaining the balance between the electricity generation (supply) and consumption (demand). When electricity generation units or transmission lines switch off due to technical failures, extreme weather conditions or human-made malign activities, TSOs address the emerging imbalances by activating their reserve capacities.¹⁶ Being in an interstate synchronous area allows the TSOs to collectively solve these issues by sharing their reserves instead of stabilising the system only with national means, thus increasing the reliability and cutting expenses by pooling their resources.

Sometimes, however, the logic of advantageous interdependence does not fully apply as belonging to a synchronous area might establish geopolitical risks. Due to historical reasons, Lithuania, Latvia and Estonia are the only European Union and NATO members whose power grids currently operate synchronously within IPS/UPS established by the Commonwealth of Independent States (CIS) and *de facto* controlled by Russia. Such a situation creates a strategic paradox. On the one hand, the Baltic States perceive Russia as a primary threat to their national security. On the other hand, however, they still rely on Russia to maintain their power grids' frequency through a centralised dispatch system.¹⁷

Even though the discussions on the potential Baltic States' synchronisation with CEN have started during the 1990s, Lithuania, Latvia and Estonia designated synchronisation as a shared strategic priority only in 2007 during the meeting of their prime ministers. At its core, the Baltic States' synchronisation is a techno-political project requiring agreements between multiple stakeholders on various levels and envisaging many infrastructural developments. On the infrastructural level, the Baltic States first needed to integrate their transmission networks with the West by constructing interstate power cables to lay the groundwork for synchronisation with CEN. For the synchronisation project to move forward, they also had to make internal grid reinforcements,

¹⁵ For an exhaustive list of examples, please see: United Nations. *Multi Dimensional Issues in International Electric Power Grid Interconnections*. United Nations: New York, 2006. P. 16, 52 – 67.

¹⁶ ENTSO-E. *PI – Policy 1: Load-Frequency Control and Performance [C]* https://eepublicdownloads.entsoe.eu/clean-documents/pre2015/publications/entsoe/Operation_Handbook/Policy_1_final.pdf

¹⁷ Purvins, A. et. al. *The Baltic Power Systems Between East and West Interconnections. First Results from a Security Analysis and Insights for Future Work*. European Union: Brussels, 2016.

further increase interconnection capacities with the EU and demonstrate their capability to operate in an isolated mode.

In addition, the Baltic States had to reach various consensuses on the diplomatic level, clarifying synchronisation's basic technical principle. Should they synchronise their power grids with CEN through Lithuanian-Polish interconnections or with the Nordic power grid via Estonian-Finnish power lines? It was critical as the Baltic States had to secure their neighbour's consent allowing the synchronization to move forward. In parallel, their TSOs had to interact with the European Network of Transmission System Operators for Electricity (ENTSO-E) regarding synchronisation's technical conditions and the connection agreement. Lithuania, Latvia and Estonia also must come to terms with Russia and Belarus concerning the withdrawal from the IPS/UPS. Finally, they were in constant contact with European Commission that facilitated the consensus-building by mediating the emerging disagreements among the negotiating parties and allocating funding for the infrastructure projects associated with the synchronisation.¹⁸

Given the complexity of the process and prior isolation of Lithuanian, Latvian and Estonian power systems from the respective European grids, the Baltic synchronisation project moved rather slowly. Creating incentives to facilitate the process, the European Commission made clear in October 2013 that the Baltic States' synchronisation with CEN would be eligible to receive funding from the Connecting Europe Facility (CEF) by designating synchronisation as the Project of Common Interests (PCI).¹⁹ By that time, the Baltic States were already creating infrastructural preconditions for synchronisation by constructing Estlink 2 (650 MW), Nord Balt (700 MW) and LitPol link (500 MW) interconnections with the help of the EU's financial instruments and its political support.²⁰

However, synchronisation progress stalled in 2015 as the Baltic States disagreed on synchronisation's technical principle. Despite the initial idea to synchronise their power systems with CEN, Estonia wanted to explore the Nordic option as the talks between Lithuania and Poland on constructing a second LitPol link interconnection reached a deadlock (at that time, the Baltic States considered this project as vital to achieving synchronisation with CEN). The Nordic TSOs, however,

¹⁸ For a detailed chronological overview of the Baltic States' synchronisation with CEN and its political, economic and technical dilemmas, please see: Janeliūnas, T. Maskoliūnaitė, E. *Elektros tinklų sinchronizacija su kontinentine Europa: politinis procesas 1999–2019 m.* Vilnius: Energetinių tyrimų institutas.

¹⁹ *Commission Delegated Regulation (EU) No 1391/2013 of 14 October 2013 amending Regulation (EU) No 347/2013 of the European Parliament and of the Council on guidelines for trans-European energy infrastructure as regards the Union list of projects of common interest* <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32013R1391&from=EN>

²⁰ Švedas, R. *Ibid.*

approached the potential synchronisation with the Baltic States somewhat cautiously. In November 2016, they finalised a brief study that highlighted the potential problems of such an endeavour. Even though Nordic TSOs concluded that the Nordic-Baltic synchronisation option is possible, they maintained that Baltic States' synchronisation with CEN is a better alternative.²¹ To compare different synchronisation scenarios, JRC has also conducted a study that defined Baltic States' synchronisation with CEN as the most cost-effective option in 2017.²² Breaking the deadlock, Lithuania managed to secure Poland's support for the Baltic synchronisation with CEN by the end of the year, but the parties agreed to look for an alternative technical solution to the previously proposed second LitPol link interconnection.²³

The Baltic States, Poland and the European Commission have reached the first significant political consensus on the Baltic synchronisation project's basic principles in June 2018 by signing a political roadmap on implementing the Baltic States' synchronisation. They agreed that Lithuania, Latvia and Estonia would synchronise their power systems with CEN through Poland, discarding the Nordic route. The political roadmap also stated that the Baltic States' synchronisation through the existing LitPol link interconnection is not sufficiently reliable without additional infrastructural upgrades. Simultaneously, the document clarified that the parties do not consider building a second land-based interconnection between Poland and Lithuania. Instead, they agreed to explore additional infrastructural options to ensure the 'adequate level of operational safety and economic feasibility', such as building a new submerged high-voltage direct current (HVDC) interconnection between Lithuania and Poland and constructing synchronous condensers and making other grid reinforcements based on the existing technologies. The document has clarified that Lithuanian, Latvian, Estonian and Polish TSOs may apply for financial support from CEF, the European Structural and Investment Funds (ESIF) and the European Fund for Strategic Investment (EFSI) to fund the synchronisation project.²⁴

The political roadmap also has touched upon the desynchronisation arrangements from Russia and Belarus. The parties made a joint political commitment that the desynchronisation from

²¹ *Impact of Baltic Synchronization on the Nordic Power System Stability*. 2016. P. 33. <https://www.svk.se/siteassets/om-oss/rapporter/impact-of-baltic-synchronization-on-the-nordic-power-system-stability.pdf>

²² Purvins, A. et. al. *Integration of the Baltic States into the EU electricity system: A technical and economic analysis (Executive Summary)*. European Union, 2017. <https://op.europa.eu/en/publication-detail/-/publication/8d3b7da2-562e-11e7-a5ca-01aa75ed71a1/language-en/format-PDF/source-31392329>

²³ Janeliūnas, T. Maskoliūnaitė, E. Ibid. P. 18 – 19.

²⁴ *Political Roadmap on the synchronisation of the Baltic States' electricity networks with the Continental European Network via Poland Signed in Brussels on June 28, 2018*. https://ec.europa.eu/energy/sites/ener/files/c_2018_4050_en_annexe_acte_autonome_nlw2_p_v2.pdf

the IPS/UPS should not create risks for the Russian and Belarusian transmission networks. As expected, Kaliningrad received significant attention. Here, the parties pledged to ensure the necessary system services for Kaliningrad, preferably with two BtB (back-to-back) converter stations, if such services are proven critical for maintaining its power system. The parties have also authorised the European Commission to open discussions with Russia and Belarus regarding the Baltic withdrawal from the IPS/UPS. The European Commission has also committed to providing ‘full support at all levels to the process of synchronising the Baltic States’ electricity networks with the continental European networks’.²⁵

After signing the political roadmap, the Baltic synchronisation project gained momentum, with multiple milestones reached in the following years. In September 2018, the High-Level Group of the Baltic Energy Market Interconnection Plan (BEMIP) endorsed a Dynamic and Frequency Stability Study. The study noted that the Baltic States’ synchronisation with CEN through the existing LitPol link interconnection and a new submerged HVDC cable (Harmony link) connecting Lithuania and Poland is ‘technically feasible at reasonable cost’.²⁶ In January 2019, the European Commission allocated €323 million for the first phase²⁷ of the synchronisation project.²⁸ In May, the Baltic and Polish TSOs have secured a connection agreement and technical connection conditions from the ENTSO-E²⁹, defining the parties’ rights and obligations. During the same month, the national regulatory authorities of Lithuania, Latvia, Estonia and Poland have also signed a memorandum of understanding to facilitate the timely and effective synchronisation process.³⁰

In June 2019, the European Commission, Baltic States and Poland updated the high-level political consensus they reached the year before.³¹ The parties have endorsed the progress achieved

²⁵ Ibid.

²⁶ European Commission. *Synchronisation of the Baltic States’ electricity grid with the continental European system*, 14 September, 2018. https://ec.europa.eu/info/news/synchronisation-baltic-states-electricity-grid-continental-european-system-2018-sep-14_en

²⁷ The first phase covers internal reinforcements to the Baltic States’ transmission network. For a list of projects covered by the first phase, please see: European Commission. *Baltic Synchronisation Project – Phase 1* <https://ec.europa.eu/inea/en/connecting-europe-facility/cef-energy/4.8.1-0021-ltlv-w-m-18>

²⁸ Ministry of Energy of the Republic of Lithuania, *European Commission funding for synchronisation: proof that this is an EU-wide project*, 23 January 2020. Please see: <https://enmin.lrv.lt/en/news/european-commission-funding-for-synchronisation-proof-that-this-is-an-eu-wide-project>

²⁹ *The Agreement on the Conditions of the Future Synchronous Interconnection of power system of the Baltic States and power system of Continental Europe containing the Catalogue of Measures*, 7 May, 2019.

³⁰ *Memorandum of Understanding Concerning the Process of the Synchronisation of the Baltic States’ Electricity System with the Continental Europe Electricity System*, 14 May, 2019.

³¹ *Political Roadmap on implementing the synchronisation of the Baltic States’ electricity networks with the Continental European Network via Poland*, 20 June 2019. https://ec.europa.eu/energy/sites/ener/files/political_implementation_roadmap.pdf?redir=1

since 2018 and modified certain positions of the previous agreement. For example, the roadmap signatories mandated Baltic TSOs to finalise the desynchronisation from the IPS/UPS agreement with respective Russian and Belarusian TSOs, leaving the European Commission and the ENTSO-E a supportive role. Experts argue that transferring the negotiations from the political to the technical level aims to limit Belarusian and Russian possibilities to secure financial compensations from the European Union or other concessions that could potentially undermine the agreed-upon principles of Baltic States' synchronisation.³² If the negotiations localise on the technical level between the Baltic, Russian and Belarusian TSOs, the BRELL agreement's principles would effectively apply,³³ thus constraining their capabilities to extract side-payments from the Baltic States or the EU. The agreement clarifies that the remaining parties cannot demand any compensation from the withdrawing parties provided they inform about their intentions in advance and coordinate the withdrawal.³⁴ In multilateral negotiations between countries, however, the principles of such an agreement might not apply as the governments might raise additional requirements.

The negotiations' format is especially relevant because the updated political roadmap indicates that electricity trade between the Baltic States, Russia and Belarus will cease after Lithuania, Latvia, and Estonia synchronise with CEN in 2025. Despite such a development, the Baltic States once again stressed that they are ready to ensure the security of Kaliningrad's power grid after their withdrawal from the IPS/UPS if their assistance is proven critical for its power system's functioning.³⁵

Moving forward, Lithuanian, Latvian, Estonian and Polish energy regulators signed the agreement on cross-border cost allocation regarding the implementation of the second phase³⁶ of the synchronisation project in April 2020.³⁷ In October 2020, the European Union allocated an additional €720 million for the Baltic synchronisation project. The European Union designated most of the funds (€493 million) to construct Lithuanian-Polish submerged HDVC interconnection 'Harmony link',

³² Janeliūnas, T. Maskoliūnaitė, E. Ibid. P.

³³ BRELL agreement regulates the synchronous operation of the Baltic States with Russia and Belarus in IPS/UPS. The signatories of the agreement are Baltic, Belarusian and Russia TSOs, not countries themselves.

³⁴ *Соглашение между ГПО «Белэнерго», ОАО «ФСК ЕЭС», ОАО «СО ЕЭС», АО «Augstsprieguma tīkls», «Elering OU» и ЗАО «LITGRID» о параллельной работе энергосистем.* https://so-ups.ru/fileadmin/files/company/international/icdevelopment/BRELL/BRELL_Agreement_051015.pdf

³⁵ *Political Roadmap on implementing the synchronisation of the Baltic States' electricity networks with the Continental European Network via Poland, 20 June 2019.*

https://ec.europa.eu/energy/sites/ener/files/political_implementation_roadmap.pdf?redir=1

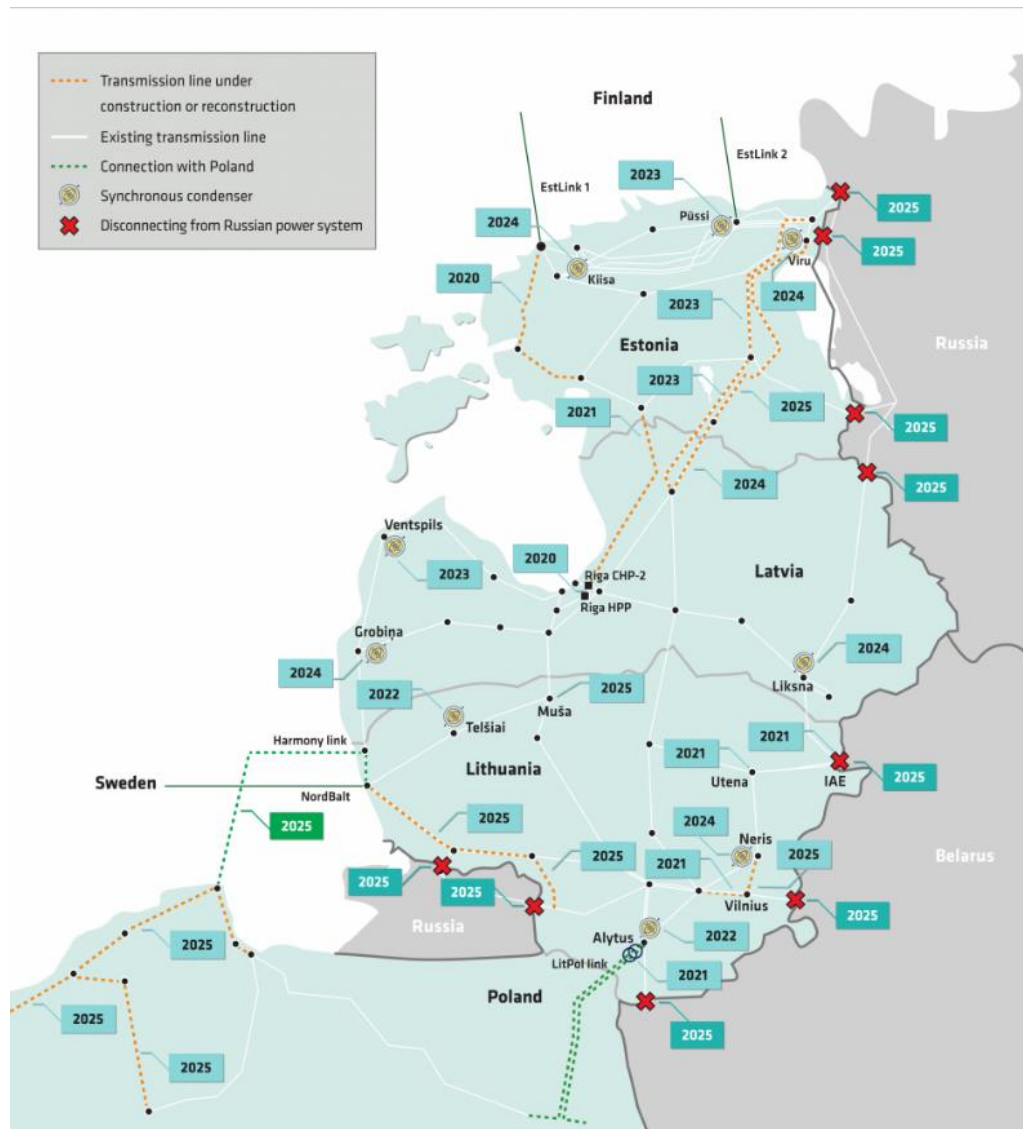
³⁶ European Commission. *Implementation of Baltic Synchronisation Project Phase II.*

<https://ec.europa.eu/inea/en/connecting-europe-facility/cef-energy/4.8.10-0005-1vee-w-m-20>

³⁷ National Energy Regulatory Council. *NERC: The Agreement on Cost Allocation for Baltic Synchronisation Project Phase II is signed by Lithuanian, Latvian, Estonian, and Polish Energy Regulators.*

<https://www.vert.lt/en/Pages/Updates/2020/NERC-THE-AGREEMENT-ON-COST-ALLOCATION-FOR-BALTIC-SYNCHRONISATION-PROJECT-PHASE-II-IS-SIGNED-BY-LITHUANIAN,-LATVIAN,-ESTONIA.aspx>

€166.5 million for constructing synchronous compensators and allocated the rest for further reinforcements of internal power grids.³⁸ Please see the map below for a visual representation of the planned and, in some instances, completed infrastructural rearrangements.



2 figure. Baltic States’ synchronisation with CEN: critical infrastructure developments and their timetable. **Source.** AST.³⁹

³⁸ PSE. *EU secured €720 mln for energy infrastructure projects in Poland and the Baltic States*, 1 October, 2020. https://www.pse.pl/web/pse-eng/news/news/-/asset_publisher/6OMoxwXL8Emh/content/eu-secured-720-mln-for-energy-infrastructure-projects-in-poland-and-the-baltic-states?safeargs=696e686572697452656469726563743d66616c73652672656469726563743d6874747073253341253246253246777772e7073652e706c2532467765622532467073652d656e672532466e6577732532466e657773253346705f705f69642533443130315f494e5354414e43455f364f4d6f7877584c38456d68253236705f705f6c6966656379636c6525334430253236705f705f73746174652533446e6f726d616c253236705f705f6d6f646525334476696577253236705f705f636f6c5f6964253344636f6c756d6e2d32253236705f705f636f6c5f636f756e7425334431

³⁹ AST. *Synchronisation*. https://www.ast.lv/sites/default/files/editor/Sync_onepager_ENG.pdf

With the political consensus achieved and the funding secured, the Baltic States are on track in completing the historic feat – integrating to the European synchronous area. To complete the synchronisation project by 2025, the Baltic States have to take the following steps. They must finish constructing key infrastructure projects. Namely, 700 MW submerged HVDC interconnection ‘Harmony link’ and synchronous condensers. With completing internal grid reinforcements, Lithuania, Latvia, and Estonia will also need to develop frequency stability assessment and automatic generation control systems to manage the system frequency in their control area.⁴⁰ The Baltic States will have to jointly test their power networks’ ability to operate in an isolated mode in preparation for possible disruptions. Lithuania, Latvia, and Estonia are behind schedule as they were supposed to perform an isolated system test in June 2019, but they have postponed the date due to Latvian and Estonian TSOs’ requests.⁴¹

The Baltic synchronisation project is also about completing the requirements designated in the Catalogue of Measures accompanying the Connection Agreement. It is a ‘collection of technical and practical operational standards and indicators that, once implemented, will enable Lithuania, Latvia and Estonia to join and operate at one frequency with the CEN.’⁴² When they signed the agreement in 2019, the Baltic States fulfilled approximately 40 % of the measures. However, ENTSO-E might add additional requirements after the synchronous trial operation between the Baltic States and CEN before finalising the synchronisation project.⁴³

In the end, the Baltic States TSOs will need to coordinate their withdrawal from IPS/UPS with the respective Belarusian and Russian TSOs. Perhaps this is the most tricky part of the project as it might involve additional unexpected investments related to the Baltic desynchronisation from the IPS/UPS. ENTSO-E maintains that ‘Baltic State TSOs have to keep in mind and plan for some unexpected investments that could appear during project implementation’ concerning the ‘Kaliningrad electrical enclave’.⁴⁴ As the following sections will show, Russia and Belarus are interested in pushing for the ‘unexpected investments’ that would ensure a degree of interconnectivity

⁴⁰ Litgrid. *Synchronisation Project Newsletter, 03 2021*. https://www.litgrid.eu/uploads/files/dir572/dir28/dir1/3_0.php

⁴¹ The Baltic Course. *Estonia, Latvia postpone power grids' isolated operation test*, 5 February 2019. <http://www.baltic-course.com/eng/energy/?doc=147087>

⁴² Central Europe Energy Partners. *Baltic synchronisation with Continental Europe: first milestone*, 4 June, 2019. <https://www.ceep.be/baltic-synchronisation-with-continental-europe-first-milestone/>

⁴³ *Memorandum of Understanding Concerning the Process of the Synchronisation of the Baltic States' Electricity System with the Continental Europe Electricity System*

⁴⁴ ENTSO-E. *Ten-Year Network Development Plan 2020. Regional Investment Plan Baltic Sea January 2021. Version for ACER opinion*. https://eepublicdownloads.blob.core.windows.net/public-cdn-container/tyndp-documents/TYNDP2020/Foropinion/RegIP2020_BS.pdf

with the Baltic States after their synchronisation occurs to create infrastructural preconditions to open the electricity trade in the future. Before analysing Russian and Belarusian interests and means of implementation, the study introduces the hybrid threat concept first.

2. Hybrid Threats: a Conceptual Framework

After the Russian annexation of Crimea in 2014, the usage of the hybrid threat concept has proliferated in both political and academic environments. Hybrid COE defines such threat as ‘an action conducted by a state or non-state actors, whose goal is to undermine or harm a target by influencing its decision-making at the local, regional, state or institutional level’.⁴⁵ These actions exploit vulnerabilities within the targeted states, create confusion and hinder decision-making. Hybrid threats are difficult to detect and even harder to attribute as they are multidimensional, combining a wide range of non-military and military activities.⁴⁶ Hence, hybrid threats stem from malign foreign interference that simultaneously takes place in multiple domains by applying various instruments.

Even though academics often question the value of hybrid threats because it resembles a mere restatement of power relations observed throughout history, hybrid threats remain a profoundly entrenched concept in contemporary politics.⁴⁷ For example, NATO and the EU saw value in understanding the nature of hybrid threats in a rapidly changing security environment, raising awareness and developing tools to protect against them. Among other things, their joint efforts⁴⁸ facilitated the Hybrid COE’s establishment in 2017 that aims to strengthen the capabilities of participating states ‘to prevent and counter hybrid threats.’⁴⁹ Most recently, Hybrid COE, together with JRC, published an extensive study, ‘The landscape of Hybrid Threats: A Conceptual Model (Public Version)’ that outlines methodological principles for analysing hybrid threats.⁵⁰ In essence, the model emphasises the research on sources of hybrids threats – state or non-state actors – together with their aims, motives and tools to advance strategic interests. Given its depth and relevance, the study applies the model to analyse the hybrid threat landscape surrounding the Baltic States’ synchronisation with CEN.

The conceptual framework focuses on four pillars allowing one to structure analysis on the hybrid threat landscape, identifying the complex analytical ties between sources of hybrid threats (the

⁴⁵ Hybrid COE. *Hybrid Threats as a Concept*. <https://www.hybridcoe.fi/hybrid-threats-as-a-phenomenon/>

⁴⁶ European Union External Action Service. *A Europe that Protects: Countering Hybrid Threats*, 13 June, 2018. https://eeas.europa.eu/topics/economic-relations-connectivity-innovation/46393/europe-protects-countering-hybrid-threats_en

⁴⁷ For a more extensive debate, please see Bajarūnas, E. Keršanskas, V. Hybrid Threats: Analysis of Content, Challenges Posed and Measures to Overcome. *Lithuanian Annual Strategic Review* no 16, 2018.

⁴⁸ For the cooperation among NATO and the EU in the area of hybrid threats, please see: *Common set of new proposals on the implementation of the Joint Declaration signed by the President of the European Council, the President of the European Commission and the Secretary General of the North Atlantic Treaty Organization*, 5 December, 2017. https://www.nato.int/cps/en/natohq/official_texts_149522.htm

⁴⁹ Hybrid COE. *What is Hybrid COE*. <https://www.hybridcoe.fi/who-what-and-how/>

⁵⁰ Giannopoulos, G. Smith, H. Theocharidou, M. et. al. Ibid.

actors engaged in hybrid activity) and their targets. The first pillar introduces an actor pursuing its strategic objectives and using hybrid means to attain them. According to the conceptual model, hybrid threats emerge as ‘force multipliers and/or a coercion tactic used to support a policy or strategy that is not delivering the desired results.’⁵¹ Therefore, to understand the hybrid threats, one must first grasp the strategic objectives of actors that might choose to achieve them by conducting the hybrid activities towards their targets. Given that synchronisation will separate Lithuanian, Latvian and Estonian power systems from Belarusian and Russian systems, these countries naturally emerge as the primary focus points.

The following two pillars – domains and tools – shed further light on how actors might exploit the vulnerabilities of their targets by trying to influence their decision making. The domains expose critical sectors that malign actors might choose to target in advancing their interests, while tools identify how they will target these sectors. Even though the conceptual framework defines 13 strategic domains⁵² within the state and the list of instruments that actors could use against them is even more exhaustive,⁵³ the report narrows its focus on domains and tools closely related to the specific nuances of the Baltic States’ synchronisation with CEN and the broader context of their energy security challenges.

For the study, infrastructure emerges as the critical domain through which Russia tried to exert pressure on Lithuania, Latvia and Estonia. By exploiting its historic infrastructural advantages (supply monopoly and level playing field⁵⁴), Russia used natural gas and oil supplies to achieve its foreign policy objectives *vis-à-vis* Baltic States. One of the most notable historical examples of Russian geopolitics directed towards the Baltic States was Lukoil’s attempts to acquire a strategic Lithuanian oil refinery, ‘Mazeikiu Nafta’. In 1998 – 2006, a Russian state-owned company, ‘Transneft’, supported the attempted takeover by disrupting oil supplies on many occasions leading to a permanent closure of the ‘Druzhba-2’ pipeline in 2006. Russia tried to show that Lithuanian oil refinery cannot be profitable unless owned by a Russian company, as disruptions in oil supplies would continue until the Lithuanian government backs down.⁵⁵

⁵¹ Ibid, p. 10.

⁵² Diplomacy, Political, Culture, Social/Societal, Legal, Military/Defense, Space, Administration, Infrastructure, Economy, Intelligence, Information and Cyber. Ibid, p. 27 – 32.

⁵³ Ibid, p. 33 - 35

⁵⁴ Ability to deal with each Baltic State individually.

⁵⁵ Česnakas, G. Ibid.

At its core, Russia utilised the infrastructural domain by positioning its energy supplies as a more cost-efficient alternative to the projects designated to strengthen Baltic energy independence. For example, Russia publicly questioned the need to build a new regional Visaginas NPP by drawing attention to the Baltic NPP in Kaliningrad and Ostrovets NPP in Belarus. The argument went that Visaginas NPP will fail to compete with Russian and Belarusian nuclear power plants. Even though it remains precisely unclear to what extent Russia succeeded in framing negative attitude towards Visaginas NPP and to what degree it was affected by other factors,⁵⁶ Lithuanian public opinion has changed substantially from one of the most pro-nuclear countries in 2008 to ones showing only marginal support for the development of nuclear energy in 2012.⁵⁷

Russia exploited the level playing field in the natural gas sector by applying selective policies towards the Baltic States. As Lithuania was the first to move towards ownership unbundling and rushing with the LNG terminal construction, Gazprom started charging Lithuania more for natural gas than Latvia and Estonia. Consequentially, Lithuania paid a higher price for Russian natural gas supplies than its Baltic neighbours from 2011 to 2014 before the LNG terminal 'Independence' started working, and Gazprom agreed to provide a discount for the natural gas.⁵⁸ Thus, Russia bluntly positioned natural gas prices as conditional to the Baltic States' domestic politics (implementing the Third Energy Package and constructing an LNG terminal). It was the infrastructural advantages that enabled Russia to simultaneously affect the economic (inflating energy prices and making industries unprofitable), informational (questioning the merits of energy independence by referring to high energy prices and infrastructure project costs), societal (framing dissatisfaction towards the government) and political (pressuring to rethink strategic energy projects) domains.⁵⁹

⁵⁶ Prolonged rivalry among Lithuanian political parties, allegations of corruption and general delay of the project, for example. For an extensive debate, please see Genys, D. Leonavičius, V. *Energetinio saugumo sociologija: teorija ir praktika*. Kaunas: Vytauto Didžiojo universitetas, 2017. P. 164 – 177.

⁵⁷ For example, in the referendum on the Extension of the Running of the Ignalina Nuclear Power Plant in 2008, 88 % of the participants voted to extend the lifespan of Ignalina NPP, and only 8 % of the voters objected. However, the referendum was not valid because only 48 % of Lithuanians voted in total (for a referendum to be valid, 50 % of the eligible voters must participate in the referendum). In the Consultative referendum on the Construction of the New Nuclear Power Plant in the Republic of Lithuania in 2012, the results were the opposite. 34 % of Lithuanians voted for constructing the new NPP, while 62 % objected to the build (52 % voter turnout). For voting patterns in nuclear referendums, please see: <https://www.vrk.lt/en/ankstesni> For changes in Lithuanian public opinion, please see: Genys, D. Leonavičius, V. *Ibid.*

⁵⁸ Pakalkaitė, V. *Lithuania's Strategic Use of EU Energy Policy Tools: A Transformation of Gas Dynamics*. Oxford, the Oxford Institute for Energy Studies, 2016. P. 15 – 17.

⁵⁹ Lithuanian State Security Department summarizes it as follows: 'Russia will continue to seek to weaken Lithuania's (Baltic, EU) energy independence: it will exploit the political situation in individual countries, business entities loyal to Russia, and will form an opinion in the public sphere that energy independence is an unnecessary, unprofitable, unwise choice for the country's population.' *Lietuvos Respublikos Valstybės Saugumo Departamentas*. Grėsmių nacionaliniam saugumui vertinimas. Vilnius, 2015.

At its core, the success of Baltic States' synchronisation with CEN depends on timely and smooth implementation of infrastructure projects (constructing cross-border interconnection 'Harmony link' and making internal grid reinforcements). The project also shares a similar intersection with economic, informational, societal and political domains presented above as opposition to synchronisation could be achieved by persuading Baltic States' societies and the political elite that the project is not beneficial from an economic point of view. Given the collective nature of the Baltic States' synchronisation with CEN, one also needs to account for the diplomatic domain. As indicated in the previous part, synchronisation builds on multiple and complex diplomatic consensuses between stakeholders in the Baltic States, Poland and the European Union, and Russia could design hybrid threat activities to break the diplomatic compromises.

The last pillar exposes the phases of hybrid threats, allowing one to understand the severity of the hybrid threat landscape better – the more detectable the hybrid threats become, the further the hybrid campaign progressed and the harder it is to contain it. The JRC and Hybrid COE define the first phases of the hybrid threat activity as priming. During this phase, the hybrid threats are undetectable as the actors avoid an escalation that could lead to attribution. Here, the actors are trying to persuade their targets to make harmful decisions voluntarily. They are also creating advantageous conditions to influence their targets later when 'opportunity, necessity or impatience present themselves'.⁶⁰ For example, the Baltic States could perceive grid reinforcements in mainland Russia and Kaliningrad as preparation for the shrinkage of IPS/UPS as both Russia and the Baltic States needs to modernise their grids to prepare for their separate operations. Given the fact that Russia started preparing for this development before the Baltic States have agreed on the political principles of synchronisation and also made additional investments in Kaliningrad's strategic energy infrastructure to secure an additional supply route, these developments could also indicate that Russia is preparing to move to the second stage of hybrid activity – destabilisation.

Unlike priming, which broadly resembles preparatory work or reconnaissance, the actor launches multiple operations against its targets to achieve a clearly defined goal during the destabilisation phase. By capitalising on the work done during the priming phase, the hybrid activity becomes more aggressive, and therefore, visible as 'there is a deliberate push to force decisions under pressure'.⁶¹ Concerning the Baltic States synchronisation with CEN, destabilisation would most likely involve premature desynchronisation of Lithuania, Latvia and Estonia from the IPS/UPS before

⁶⁰ Giannopoulos, G. Smith, H. Theocharidou, M. et. al. Ibid. P. 40.

⁶¹ Ibid. P. 40

2025 or any other malign activities that would weaken the reliability of their power systems and inflate the electricity prices.

The last phase of hybrid activities is coercion that resembles hybrid warfare, where the actor combines covert and open military operations with political, economic, cyber, disinformation and other means to force preferential political outcomes towards their targets. Military force becomes the defining element of coercion as actors employ other activities to supplement the military operations by adding additional pressure on the opponent.⁶² In a hybrid warfare scenario, Russia could use desynchronisation as an additional mechanism allowing Russia to achieve its broader strategic aims towards the Baltic States or, broadly speaking, the West. Preventing synchronisation, however, can hardly constitute a reason for launching a hybrid warfare campaign in itself. More likely, premature desynchronisation could play a part in a broader geopolitical struggle.

Building on the research principles outlined by the JRC and Hybrid COE, the study scrutinises the hybrid threat landscape surrounding the Baltic synchronisation with CEN. Since the hybrid campaigning activities support the implementation of actors' objectives towards their targets, the following section introduces the Russian and Belarusian approaches towards the Baltic States' synchronisation with CEN. After introducing Russian and Belarusian interests, the report maps the hybrid threat landscape by focusing on the following questions. First, are Russian or Belarusian hybrid campaigning activities already taking place? If so, which domains are affected? What is the phase of hybrid activity, and does it have the potential for further escalation? How the Baltic States and their allies could mitigate the risks emanating from the hybrid activities?

⁶² Ibid. P. 41, 42.

3. Actors, Interests and Targets

This chapter argues that Russia, and to a lesser extent – Belarus, has interests regarding the Baltic States’ synchronisation with CEN. Russia pursues general and specific objectives ranging from geostrategic ambitions to more pragmatic but less grandiose aspirations. The former covers a broad geopolitical aim to maintain a degree of influence in the Baltic States through energy, economic, cultural and other ties,⁶³ where joint synchronous operation with Lithuania, Latvia and Estonia plays its part. The latter deals with Russian interests of continuing a lucrative electricity trading regime after the Baltic States’ synchronisation with CEN in 2025. On the other hand, Belarusian interests stem from economic considerations. The electricity trading regime with the Baltic States is crucial for Belarus due to the launch of the first unit of Ostrovets NPP in November 2020 (the second unit is currently under construction). The Baltic States’ decision to block the electricity trade with Belarus due to the safety and environmental issues of Ostrovets NPP in 2020 and Ukrainian plans to desynchronise from IPS/UPS leaves Belarus with Russia as the only possible, albeit not promising,⁶⁴ electricity export market in the near future. However, with the eroding Belarusian autonomy after the presidential election in August 2020,⁶⁵ the Belarusian approach towards the Baltic States’ synchronisation might increasingly mimic Russian strategic interests.

3.1. Russia

Since the collapse of the Soviet Union, Russia tries to maintain its influence within its former boundaries. Joint synchronous operation with the Baltic States plays an important role here as it allows Russia to manage the frequency of their power systems via a central dispatch in Moscow and influence physical and commercial electricity flows.⁶⁶ The Kremlin gains access to detailed and timely information on Lithuanian, Latvian and Estonian power systems through the central dispatching system.⁶⁷ As long as the Baltic States are in the IPS/UPS, the BRELL agreement partially

⁶³ Heinrich Brauß and András Rácz summarize Russian approach to the Baltic States elegantly: ‘Moscow’s actions in foreign, security and defense policy have been designed to restore Russia’s great power status while at the same time re-establishing the cordon sanitaire it enjoyed until the end of the Cold War. In particular, it wants to regain control of Russia’s “near abroad,” making demands for an allegedly historically justified “zone of privileged interest.” This would come at the expense of the sovereignty and security of neighboring states.’ Brauß, H. Rácz, A. *Russia’s Strategic Interests and Actions in the Baltic Region*. Berlin: German Council on Foreign Relations, 2021.

⁶⁴ Russia has generation surplus and the electricity prices on the market are significantly lower than the generation costs of Ostrovets NPP.

⁶⁵ Żochowski, P. *Russia on Belarus: modifying the tactic, not the strategy*. Centre for Eastern Studies, 30 March 2021. <https://www.osw.waw.pl/en/publikacje/analyses/2021-03-30/russia-belarus-modifying-tactic-not-strategy>

⁶⁶ Elering. *Synchronization with continental Europe*. <https://elering.ee/en/synchronization-continental-europe>

⁶⁷ Please see the fifth article of the BRELL Agreement: ‘The parties exchange operational and technical information and teleinformation (TV signals and telemetry) necessary for operational planning, control and maintenance of a reliable regime of the Ring’s electrical network.’ Ibid.

regulates their power grids, and Lithuanian, Latvian and Estonian transmission system operators must coordinate their actions with Russia and Belarus through the BRELL Committee.⁶⁸ Simultaneously, joint synchronous operation with the Baltic States allows Russia a possibility to purposefully weaken the Baltic transmission grids' reliability or create worse conditions by disconnecting power lines on its territory for alleged repairs without a prior warning.⁶⁹ Given the reasons presented above, the Baltic States' ongoing withdrawal from the IPS/UPS directly contradicts Russia's interest in maintaining influence in nearby countries, and the Kremlin opposes such a Baltic endeavour.

Russia has other reasons to oppose the synchronisation of the Baltic States. As already mentioned, the Baltic States is a significant export destination for Russian electricity both from the mainland and Kaliningrad. Exempt from EU's environmental regulations, Russian fossil generation has a competitive advantage over the indigenous electricity producers bound by the European rules. Since Russia is a surplus electricity region, having access to additional markets allows a greater utilisation rate of their power plants, especially in Kaliningrad. On the other hand, the Baltic States made clear that they will discontinue electricity trade with Russia and Belarus after the synchronisation is complete, providing another motive to dispute the synchronisation process.

In the following sections, the study explains in detail how Russia approached the Baltic synchronisation project. The first section shows that Russia questioned the Baltic synchronisation project based on techno-economic utility. The second section explains how Russia perceived 'the Kaliningrad question' concerning the Baltic States withdrawal from the IPS/UPS. Here, the paper highlights the regional infrastructural developments in the exclave and Russian official motives for doing so. The third section argues that even after failing to prevent the synchronisation project to move forward, Russia has a vested interest in maintaining electricity interconnections with the Baltic States due to economic and geopolitical reasons.

3. 1. 1. Questioning Techno-Economic Utility

Russian official position downplays the abovementioned strategic considerations and emphasises various techno-economic issues of the Baltic States' synchronisation with CEN. As far as the argument goes, Russia claims that the Baltic States' withdrawal from the IPS/UPS would result in Kaliningrad's energy isolation, forcing the country to allocate sizeable investments to its

⁶⁸ Please see the second article of the BRELL Agreement: 'The Parties are guided by common criteria and principles to ensure the stability of the parallel operation of the Ring's power systems, as well as documents that are developed and agreed upon by the Committee and approved by the Authorized Representatives of the Parties.' Ibid.

⁶⁹ Juozaitis, J. Ibid.

transmission network. At the same time, Russia maintains that the European Union should not fund the Baltic States' synchronisation with CEN as these investments would not improve their transmission networks' reliability.⁷⁰ Perhaps the bluntest position towards the Baltic States' synchronisation with CEN was delivered on 29 September 2015 by Russian President Vladimir Putin himself during an interview to the U.S. journalist Charlie Rose that took place before his address at the UN General Assembly's 70th session:

'Nowadays, there are plans to separate the Baltic states from the common power system of the former Soviet Union and to integrate them into the European system. What does it mean for us in practice? In practice, it means that a number of zones will emerge between several regions of the Russian Federation, where we will have no power transmission lines, since previously we used to have a loop transition through the Baltic countries. And it means that 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?'⁷¹

Russian President has also specified that the Baltic synchronisation with CEN would force the country to invest around €2 – 2.5 billion in infrastructural upgrades, further making project costs exceed the potential benefits.⁷² He later implied that the Baltic governments are wasting their taxpayer money, and Russia must do the same.⁷³ The previous Russian Energy Minister Alexander Novak has also pushed this narrative through regular contacts with the Vice-President of the European Commission, Maroš Šefčovič, discussing, among other things, the Baltic States' desynchronisation from the IPS/UPS. Novak argued that the Baltic synchronisation project is impractical during the conversations with the high-ranking EU official responsible for the European Energy Union.⁷⁴ Further adding to the criticism, Rosatom's Sergei Boyarkin argued that synchronisation of the Baltic States'

⁷⁰ On the contrary to the Russian official position, the synchronization of the Baltic States with CEN will allow the Baltic States' to modernise their power grids and changing the synchronous operation will have other economic, regulatory, technical and geopolitical benefits. For some examples, please see: Tuohy, E. Bulakh, A. Tsarik, J. Ibid, p. 4 – 6.

⁷¹ President of Russia. *Interview to American TV channel CBS and PBS*, 29 September, 2015.

<http://en.kremlin.ru/events/president/news/50380>

⁷² Gurzu, A. *Baltics threaten to unplug Russian region*. Politco, 4 November, 2015.

<https://www.politico.eu/article/baltics-threaten-to-unplug-russian-region-power-kaliningrad-electricity-interconnectors-lithuania-poland-sweden/>

⁷³ President of Russia. *Launch of LNG regasification terminal*, 8 January, 2019.

<http://en.kremlin.ru/events/president/transcripts/59646>

⁷⁴ Ministry of Energy of the Russian Federation. Александр Новак: "Тема продолжения транзита газа через Украину после 2019 года была основной на трехсторонних переговорах", 21 January, 2019. <https://minenergo.gov.ru/node/13759>

power system would isolate Kaliningrad, constituting a significant violation of the BRELL agreement⁷⁵ (for Kaliningrad's situation, please see the next section).⁷⁶

Russia has also reminded the European Union officials about mostly forgotten discussions on the grandiose project – a potential synchronisation of the IPS/UPS with CEN to question the Baltic synchronisation project's techno-economic utility. On 22 January, just a few months after the European Commission designated the Baltic synchronisation project as a PCI and a month before the Russian military operation in Crimea, Permanent Russian Representative at the EU, Vladimir Chizhov, suggested that Commonwealth of Independent States (CIS) and the European Union should synchronise their electricity grids. The Russian diplomat argued that such a synchronisation project would facilitate electricity trade between the EU and CIS and is more cost-efficient than the Baltic synchronisation with CEN,⁷⁷ breaking the BRELL ring.⁷⁸

In making a case for the Baltic synchronisation project's technical, economic, and even legal issues, Russia attempted to stall its progress and extract side payments. As the presented examples show, Russia emphasised the project's financial aspect due to the costly infrastructural upgrades. On the one hand, Russia tried to persuade the European Union not to fund the Baltic synchronisation with CEN. On the other hand, Russia was laying the groundwork for extracting compensation from the European Union or the Baltic States by inflating the investments it would have to make to its power system because of the upcoming break-up of the BRELL ring.

3. 1. 2. The Kaliningrad Factor

For the most part, Russia actualised Kaliningrad's perceived isolation to justify the estimated expenses and emphasise the projected technical issues that the Baltic States' synchronisation with CEN would entail for the region. Even though this section will show that Russia indeed spent a similar amount on Kaliningrad's energy infrastructure to the one proposed by President Putin (€2 – 2.5

⁷⁵ As already noted in the first chapter, the BRELL agreement has an exit clause, and the Baltic withdrawal from the IPS/UPS, therefore, does not constitute a violation of this document.

⁷⁶ Staselis, R. *Koja kiša ne Rusija: lietuvių brandintą elektros tinklų idėją perima estai*. Verslo žinios, 31 October, 2015. <https://www.vz.lt/sektoariai/energetika/2015/10/31/koja-kisa-ne-rusija-lietuviu-brandinta-elektros-tinklu-ideja-perima-estai&asefl>

⁷⁷ The statement is counterintuitive given the combined size of the European and the CIS power systems. As a matter of fact, the study conducted on the synchronisation of UCTE and IPS/UPS in 2008 has underlined the need for substantial investments to complete such a project and identified other technical and regulatory difficulties. For specific examples, please see: *Feasibility Study: Synchronuous Interconnection of the IPS/UPS with the UCTE. Summary of Investigations and Conclusions*. Union for the Co-ordination of Transmission of Electricity: Brussels, 2018. https://www.soups.ru/fileadmin/files/company/international/ucte-ees/Summary_of_Investigations_and_Conclusions.pdf

⁷⁸ TASS. *Russia suggests energy synchronization with the Baltic states*, 22 January, 2014. <https://tass.com/economy/715647>

billion) in 2015, most of the expenditures exceeded the reasonable threshold required for their power systems' stable functioning after the Baltic withdrawal from IPS/UPS. Elaborating on this point, the following paragraphs present the Russian approach on the 'Kaliningrad question' regarding the Baltic States' withdrawal from the IPS/UPS and underline its strategic implications.

Russian accusations regarding the isolation of Kaliningrad stems from the historic 'electrical interdependence' between the Baltic States and its strategic exclave. For five decades, the Soviet Union projected Lithuanian, Latvian, and Estonian power grids as national systems and interdependent parts of its centralised power system. The Soviet Union designed the power plants in Lithuania, Latvia, and Estonia to meet their domestic needs and transfer the electricity surplus to neighbouring Soviet territories. Soviet Union relied on Estonian shale-fired Balti and Eesti TPPs (765 MW and 1615 MW respectively) to supply the Leningrad region, while Lithuanian thermal power plant (TPP) in Elektrėnai (1800 MW) and Ignalina NPP (3000 MW) used to transfer electricity to Belarus and Kaliningrad. The Soviet Union developed the transmissions networks accordingly – the Baltic States' power systems were strongly interconnected with mainland Russia, Kaliningrad and Belarus, while Kaliningrad's transmission grid was only connected with Lithuania⁷⁹ (please see the map below).

⁷⁹ Kadisa, S. et. al. Challenges for the Baltic Power System connecting synchronously to Continental European Network. *Electric Power Systems Research*, vol.140, 2016



3 Figure. The transmission networks of the Baltic States and Kaliningrad. **Source.** Energy Analysis.⁸⁰

The inherited infrastructural arrangement meant that maintaining joint synchronous operation with the Baltic States was essential for Russia as the break-up of the Soviet Union left the Kaliningrad exclave utterly reliant on electricity supply through its interconnections with Lithuania. Only by having access to the Baltic States' transmission network was Russia able to maintain the stable functioning of Kaliningrad's power system. Due to this reason, the 'Kaliningrad question' remained a sensitive issue throughout the synchronisation process, allowing Russia to maintain Kaliningrad on the Baltic States' synchronisation agenda. For example, CEOs of the strategic Baltic States' energy companies wrote a letter to the President of UCTE in 1999. The letter expressed their intention to interconnect the Baltic power systems with European grids through Poland. Among other things, UCTE's reply made clear that to synchronise their power systems with the European network, the Baltic States would have to desynchronise from IPS/UPS creating issues for the respective systems in Russia (especially – Kaliningrad) and Belarus.⁸¹ Twenty-two years later, ENTSO-E's draft

⁸⁰ Energy analysis. *Energy Perspectives for the Kaliningrad Region as an Integrated Part of the Baltic Sea Region*, 2010. https://www.bdforum.org/wp-content/uploads/2010/12/thematic_reports_energy_persp_kaliningrad_2010.pdf

⁸¹ Janeliūnas, T. Maskoliūnaitė, E. Ibid.

investment plan for the Baltic States still contains notions exposing the sensitivity of the Kaliningrad region: ‘Currently, one of the most serious challenges standing in the way of the synchronisation project’s development is clarity regarding the operation and status of the Kaliningrad electrical enclave - part of the Russian power system.’⁸²

Russia started improving its energy system despite the diplomatic convenience of the Kaliningrad’s remoteness before the Baltic synchronisation project gained momentum. The first idea was to build a new natural gas-fired power plant to satisfy Kaliningrad’s electricity demand. The second idea was to build a new nuclear power plant for electricity exports to the Baltic States and beyond, turning Kaliningrad into an electricity trading hub.

Starting from the latter, Russia wanted to exploit the foreseen closure of Ignalina NPP as Lithuania committed to phasing out nuclear power by 2010 during the accession negotiations. Not believing that the Baltic States will successfully proceed with synchronisation, Russia decided to launch the Baltic NPP (2400 MW) project in Kaliningrad in 2008 to capitalise on the emerging generation deficit and compete against the proposed Visaginas NPP project. Due to this reason, Russia saw the emerging interconnectivity between the Baltic States, Poland and Scandinavian countries as a long-term opportunity to export its electricity further to the Western markets.⁸³

To do so, Russia insisted on building additional power lines between Kaliningrad, Lithuania, Poland and Germany (the generation capacity of the Baltic NPP alone exceeded the combined Kaliningrad’s demand and export capacities).⁸⁴ The first Russian idea was to extend the existing 600 MW transfer capacity with Lithuania to 1000 – 1500 MW by 2016 as it was the cheapest option as long as the Baltic States and Russia operate in the IPS/UPS. The second project was supposed to interconnect Kaliningrad with Poland by 2017 with a total transmission capacity of 600 – 1140 MW, requiring spending up to €1 billion. Finally, Russia considered linking Kaliningrad with Germany via an undersea power cable by 2020 (800 – 1000 MW capacity). In the end, Russia failed to persuade

⁸² ENTSO-E. Ibid.

⁸³ *Baltic NPP: After 2015 the Baltic region will face energy crisis – Sergey Boyarkin*, 27 July 2009. <https://web.archive.org/web/20101010052312/http://www.rosenergoatom.ru/eng/press/news/article/?article-id=E68875B6-7221-4391-992E-2EDCC683189B>

⁸⁴ Inter RAO UES. *Development of the energy sector of Russian Federation in the Baltic Sea Region – new possibilities for cooperation between EU and Russian Federation Brussels*, November 2012. http://www.europeanenergyforum.eu/sites/default/files/events/doc/development_of_the_energy_sector_of_rf_in_baltic_region.pdf

these countries to build new transmission projects, and the Baltic NPP folded in 2013.⁸⁵ However, officially Russia continued to promote the Baltic NPP project and, at times, it used the power plant as an argument, implicitly criticising the Baltic synchronisation project for limiting the regional trade possibilities.⁸⁶

Even though Russia failed to construct the Baltic NPP, it successfully transformed the Kaliningrad region from an electricity importer to an exporter. Before starting the nuclear option, Russia began upgrading Kaliningrad's generation capacities in the early 2000s by constructing Kaliningradskaya Central Heating Power Plant-2 (CHPP-2). Russia has built the first unit in 2005, and the second unit followed in 2010. Both units added 900 MW generation capacity (450 MW each), making Kaliningrad a surplus region.⁸⁷

This development, however, has not created any strategic advantages over the Baltic States – Kaliningrad could not operate independently from IPS/UPS as it concentrated electricity generation in a single power plant. For example, during an isolated power system test conducted in August 2012, Kaliningrad functioned independently only for 10 minutes twice during the night.⁸⁸ A malfunction in the transmission network (unrelated to the Baltic synchronisation project) caused a partial blackout in Kaliningrad one year later, leaving a third of its population without electricity for 45 minutes.⁸⁹ Given the techno-geographic circumstances, the prospects of the Baltic States' synchronisation with CEN meant that Kaliningrad could either synchronise together with its neighbours or Russia, individually or in consultations with the Baltic States, had to find other ways to ensure the stable functioning of its power system in isolation from IPS/UPS.

Building on the isolation argument, Russia started upgrading Kaliningrad's power grid in 2015. On 9 September that year, the Energy Ministry of the Russian Federation approved the Scheme and Programme for the Development of the Unified Power System of Russia for 2015 – 2021,

⁸⁵ For reasons of failure, please see: Menkiszak, M. *Russia freezes the construction of the nuclear power plant in Kaliningrad*. Center for Eastern Studies, 12 June, 2013. <https://www.osw.waw.pl/en/publikacje/analyses/2013-06-12/russia-freezes-construction-nuclear-power-plant-kaliningrad>

⁸⁶ TASS, *Ibid*.

⁸⁷ Annual electricity consumption in Kaliningrad hovers around 4.5 TWh. After the completion of Kaliningradskaya CHPP-2 in 2010, Kaliningrad approximately generates 6 – 7 TWh of electricity per year. Since when, the region exports the electricity surplus to the Baltic States.

⁸⁸ Ministry of Energy of the Republic of Lithuania. *Kaliningrad performed isolated power system work tests*, 3 August, 2012. <https://enmin.lrv.lt/en/news/kaliningrad-performed-isolated-power-system-work-tests>

⁸⁹ Czekaj, M. *Blackout Points to Kaliningrad's Future in Europe*, 16 August 2013. <https://jamestown.org/blackout-points-to-kaliningrads-future-in-europe/>

envisaging the construction of an additional 1 000 MW capacity in Kaliningrad.⁹⁰ Following the document, Russia has built four additional power plants increasing Kaliningrad's generation capacity from roughly 900 MW to 1 905 MW. In 2018 – 2019, Russia commissioned three natural gas-fired TPPs (Talakhovskaya – 161 MW, Mayakovskaya – 157 MW and Pregoskaya – 454 MW). In 2021, Russia has also completed a coal-fired Primorskaya TPP (195 MW).⁹¹

Additional generation capacities, combined with upgrades in the regional transmission network, eventually ensured Kaliningrad's capability to operate in an isolated mode from IPS/UPS. Two independent power system tests showcased this. Russia conducted the first isolated power system test in Kaliningrad in May 2019 (the test lasted 72 hours)⁹² and the second in September 2020 (lasted 8 hours).⁹³

Russia has also diversified Kaliningrad's natural gas supplies, a primary fuel for electricity generation, adding to the infrastructural upgrades. In December 2017, Gazprom enlarged Kaliningrad's natural gas storage capacity to 174 million cubic meters by building two underground storage reservoirs near Svetlogorsk. The Russian state-owned company plans to increase the storage capacity to 800 million cubic meters by 2024.⁹⁴ Gazprom completed FSRU Marshal Vasilevskiy in January 2019, which serves as an alternative to the natural gas supply route via Minsk – Vilnius – Kaunas – Kaliningrad pipeline (via Belarus and Lithuania).⁹⁵ FSRU Marshal Vasilevskiy also contributes to Kaliningrad's natural gas storage capacity as the ship is capable of storing 174 000 cubic meters of LNG that equals roughly 100 million cubic meters of natural gas. Gazprom is also building the Portovaya LNG plant near the port of Ust-Luga (in the Leningrad region) that will provide LNG for Kaliningrad if required⁹⁶ and plans to finish the plant in 2021 (the construction of

⁹⁰ Приказ Минэнерго России от 09.09.2015 № 627 «Об утверждении Схемы и программы развития Единой энергетической системы России на 2015-2021 годы» <http://minenergo.gov.ru/node/1287>

⁹¹ For a detailed list of operational power generation capacities in Kaliningrad please see: *Схема и Программа перспективного развития электроэнергетики Калининградской области на 2020 – 2024 годы.* https://infrastruktura.gov39.ru/upload/165%D0%A0_30042020.pdf

⁹² EER. *Kaliningrad successfully tests independent local electricity grid*, 26 May 2019. <https://news.err.ee/945951/kaliningrad-successfully-tests-independent-local-electricity-grid>

⁹³ Inter Rao. *Testing of the power system operation in an isolated mode completed in the Kaliningrad Region.* <https://irao-generation.ru/en/press/news/detail.php?ID=24235>

⁹⁴ Gazprom. *Kaliningradskoye UGS facility.* <https://www.gazprom.com/projects/kaliningradskoye-ugs/>

⁹⁵ NS Energy. *Kaliningradskoye Underground Gas Storage Facility Expansion.* <https://www.nsenergybusiness.com/projects/kaliningradskoye-facility-expansion/>

⁹⁶ *Gazprom LNG Portovaya - Liquefied Natural Gas (LNG) Plant.* <https://www.dmsprojects.net/russia/projects/gazprom-portovaya-lng-plant/PRJ00024846>

the plant is already three years behind schedule).⁹⁷ The plant will be capable of producing 1.5 million tonnes of LNG per year.⁹⁸

So far, the utilisation of the newly built natural gas infrastructure in Kaliningrad was meagre. After FSRU Marshal Vasilevskiy arrived in Kaliningrad, the ship was not used for regular natural gas deliveries as Gazprom continued to supply the region through the Lithuanian pipeline system.⁹⁹ It is probably because natural gas deliveries through Lithuanian transit were 4.5 cheaper when LNG imports via FSRU Marshal Vasilevskiy. Moreover, Lithuanian and Russian companies have a natural gas transit agreement that involves a ‘take or pay’ clause (the agreement expires in 2025), providing further incentives for Gazprom to utilise the pipeline system for natural gas transit.¹⁰⁰ Given the low utilisation of the ship, ‘Gazprom’ leased FSRU Marshal Vasilevskiy to an Austrian company, ‘OMV’ in 2019.¹⁰¹ When ‘Gazprom’ tested its underground storage facilities in February 2021 by temporarily halting natural gas transit deliveries through Lithuania, FSRU Marshal Vasilevskiy sailed near Cape Town.¹⁰²

The current infrastructural arrangement dictates that the ship must be present in Kaliningrad to halt the natural gas supply via Minsk – Vilnius – Kaunas – Kaliningrad pipeline for a prolonged period. Given the natural gas consumption in Kaliningrad of approximately 2.5 billion cubic meters per year, the combined underground and LNG storage capacity within FSRU Marshal Vasilevskiy can roughly supply the region for a month (depending on the daily demand intensity). After completing the underground storage facility enlargement to 800 million cubic meters by 2024, Kaliningrad should be capable of stockpiling three months worth of natural gas consumption.¹⁰³ For natural gas infrastructure projects in Kaliningrad, please see the map below.

⁹⁷ Argusmedia. *Gazprom to boost LNG sales in 2020*, 27 October 2020.

<https://www.argusmedia.com/en/news/2153953-gazprom-to-boost-lng-sales-in-2020>

⁹⁸ Global Energy. *LNG will grow in the Arctic*, 4 April, 2021. <https://globalenergyprize.org/en/2021/04/01/lng-will-grow-in-the-arctic/>

⁹⁹ PJSC Gazprom Annual Report 2019. P. 95. <https://www.gazprom.com/f/posts/72/802627/gazprom-annual-report-2019-en.pdf>

¹⁰⁰ Jokūbaitis, M. *Dujų tranzitas į Kaliningradą Lietuvai per metus atneša 10 mln. eurų, bet tai naudinga ir rusams*, 8 January 2019, <https://www.15min.lt/verslas/naujiena/energetika/10-milijonu-euru-per-metus-lietuvai-atnesanti-duju-tranzita-nutraukti-neapsimoketu-ir-rusams-664-1084870>

¹⁰¹ Argus Media. *Kaliningrad FSRU set to return to Russian exclave*, 3 January, 2020.

<https://www.argusmedia.com/news/2044687-kaliningrad-fsru-set-to-return-to-russian-exclave>

¹⁰² The Baltic Times. *Russia's probably testing Kaliningrad's ability to secure gas supplies – experts*, 9 February, 2021. <https://www.baltictimes.com/russia-s-probably-testing-kaliningrad-s-ability-to-secure-gas-supplies-experts-bns-theme/>

¹⁰³ Grivach, A. *The Marshal Vasilevsky Factor: Energy Blockade of Kaliningrad Is Now Impossible*, 17 January 2019. <https://valdaiclub.com/a/highlights/energy-blockade-of-kaliningrad/>



4 figure. Natural gas infrastructure in Kaliningrad. **Source.** Gazprom.¹⁰⁴

Highlighting the importance of infrastructural developments, the Russian President participated in the opening ceremonies of new power plants and the LNG terminal in Kaliningrad. During these events, Vladimir Putin argued that the country built this infrastructure ‘in connection with EU plans to withdraw the Baltic states from the Russian energy ring.’¹⁰⁵ He added that ‘Kaliningrad Region is already completely autonomous and can resolve all its energy supply and consumption problems, not only of the primary resource, but also electricity.’¹⁰⁶ The President also argued that new strategic energy infrastructure is critical for maintaining the capability of the Kaliningrad region operating in an isolated mode.¹⁰⁷ Hence, Russian official statements emphasise implementing these projects because of the Baltic States’ desynchronisation from the IPS/UPS.

From the Baltic States perspective, most of the discussed infrastructure projects in Kaliningrad seem redundant if one considers the particularities of the synchronisation process. The first argument justifying the redundancy considers the cost of Kaliningrad’s infrastructural upgrades as there were significantly cheaper technological solutions in ensuring the stable functioning of Kaliningrad’s power system after the Baltic desynchronisation from the IPS/UPS. According to the JRC, the Russian expenditures to Kaliningrad varied between zero investments if the exclave would

¹⁰⁴ Gazprom. *Project for LNG supplies to Kaliningrad Region*. <https://www.gazprom.com/projects/kaliningrad-terminal/>

¹⁰⁵ President of Russia. *Ibid.*

¹⁰⁶ *Ibid.*

¹⁰⁷ President of Russia. *The President launched two thermal power plants in Kaliningrad Region*, 2 March 2018. <http://en.kremlin.ru/events/president/news/56968>

synchronise together with the Baltic States to between €178 (operating Kaliningrad synchronously with Russia via a direct Kaliningrad-Belarus interconnection) and €528 if it pursues other technological options (operating Kaliningrad autonomously, but maintaining a reserve exchange with the Baltic States via a BtB converter). However, Russia went significantly beyond these investments by spending approximately 1.3 billion euros to construct additional generation capacities in Kaliningrad¹⁰⁸ and 800 million euros on the LNG infrastructure, including FSRU Marshal Vasilevskiy.¹⁰⁹ For a summary of technical solutions available for the Kaliningrad region and their costs concerning the Baltic synchronisation project, please see the 1 table below.

1 table. Kaliningrad synchronisation scenarios by technical solutions and projected investments

Kaliningrad synchronisation scenarios	Technical solution	Projected investments
1. Synchronous with the Baltic States	Kaliningrad synchronises with CEN together with the Baltic States	None
2. Synchronous with IPS/UPS	Kaliningrad is maintained in the IPS/UPS by a direct interconnection with Belarus through Lithuanian territory	~ €178 (new 330 kV power line and BtB converter station)
3. Partially autonomous	Local power plants maintain Kaliningrad, and it exchanges power reserve capacities with Lithuania via BtB converter station	~ €528 (new 450 MW power plant and BtB converter station)
4. Fully autonomous	Kaliningrad has sufficient generation capacities to maintain its power system in isolation from the Baltic States	~ €1 300 (new 1 000 MW generation capacity)
5. Independent	Kaliningrad maintains its power system in isolation and has alternatives to natural gas supply route through Lithuania and Belarus	~ €2 100 (new 1 000 MW generation capacity, Marshal Vasilevskiy FSRU, Kaliningrad LNG receiving terminal and underground storage)

Source. Compiled by the author.

As the table clearly shows, Russia has chosen the most expensive option for Kaliningrad to enable total energy independence from the Baltic States by ensuring its ability to function in isolation

¹⁰⁸ Harper, J. Kaliningrad gets Moscow energy boost as Baltic states pull plug, 22 March 2019.

<https://www.dw.com/en/kaliningrad-gets-moscow-energy-boost-as-baltic-states-pull-plug/a-47979106/>

¹⁰⁹ Grivach, A. Ibid.

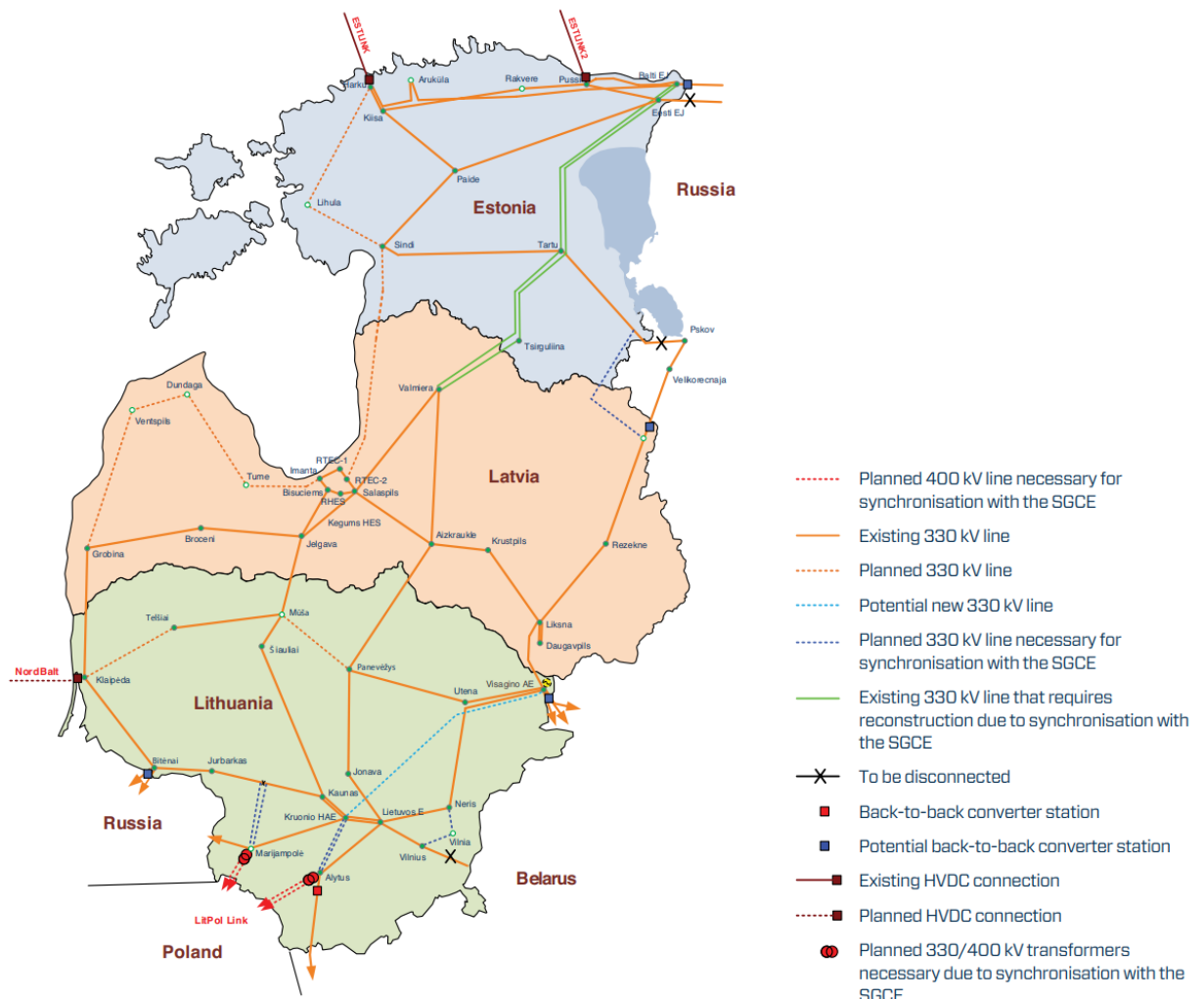
from Lithuanian electricity and natural gas transmission networks. Russia could justify making these investments because of the Baltic pursuit of synchronisation project only if the Baltic States had a vested interest in isolating the Kaliningrad region. However, the Baltic States were not aiming for Kaliningrad's isolation or leaving the region worse off after their synchronisation with CEN took place, nor they had any aspirations for making Russia allocate substantial funding to its power transmission network. For example, Lithuania drafted the National Energy Independence Strategy in 2012 that outlined its willingness to cooperate with Russia on building a back-to-back (BtB) converter station¹¹⁰ on its borders with Kaliningrad or synchronising the exclave together with the Baltic States:

‘An additional converter would be constructed at the border with the Kaliningrad region depending on Russia’s decision on the integration of the Kaliningrad region into the Continental Europe grid for synchronous or asynchronous operation. The project on the construction of such converter would cost about LTL 250 million. Such additional converter, however, would not be required in case of an agreement with Russia on the Kaliningrad region’s integration with the synchronous grid of Continental Europe jointly with the Baltic States.’¹¹¹

To elaborate on this point, one could observe the initial ideas of the Baltic States’ synchronisation with CEN containing potential converter stations on the borders with Kaliningrad, mainland Russia and Belarus. For earlier infrastructure proposals, please see the 5 figure below.

¹¹⁰ BtB converter stations allow for electricity exchanges between different synchronous zones, IPS/UPS and CEN for example.

¹¹¹ Seimas of the Republic of Lithuania, Resolution on the Approval of the National Energy Independence Strategy, art. 54. <https://e-seimas.lrs.lt/portal/legalAct/lt/TAD/TAIS.432271>



5 figure. Previous Baltic States’ synchronisation ideas containing BtB converter stations on their borders with Russia and Belarus (2014). **Source.** Litgrid.¹¹²

Even after the Russian annexation of Crimea and the subsequent breakdown of relations between the West and Russia, the Baltic States and the European Union maintained that the Baltic desynchronisation from the IPS/UPS should keep its interconnections with Kaliningrad if proven necessary from the technical point of view. Both political roadmaps on the implementation of the Baltic States’ synchronisation with CEN emphasise this notion. Hence, one can make a valid argument that Russian infrastructural upgrades in Kaliningrad were not solely driven by the Baltic synchronisation project but also by strategic aims to create an independent energy system in its militarily significant exclave.

¹¹² Litgrid. *Development of the Lithuanian Electric Power System and Transmission Grids*. Vilnius, 2014. <http://www.leea.lt/wp-content/uploads/2015/05/Network-development-plan-2015.pdf>

The strategic implications of infrastructural upgrades in Kaliningrad are significant. From the geopolitical perspective, these developments change the logic of interdependence between the Baltic States and Russia. Just as Russia relied on the Baltic transmission networks to transfer electricity to Kaliningrad, they depended on Russia to maintain their power systems' day-to-day functioning. After modernising energy infrastructure in Kaliningrad, the Baltic States' power grids remain dependent on the Russian dispatching system, while Kaliningrad showcased its ability to operate independently from its connections with Lithuania. Moreover, the construction of LNG infrastructure provides Kaliningrad with alternatives to the natural gas supply that serves as a primary fuel for its electricity generation that it used to be delivered only through Lithuanian and Belarusian pipeline systems.

Adding to the geopolitical significance, Russia has also upgraded its transmission network in the mainland by narrowing the BRELL ring in parallel with infrastructural developments in Kaliningrad. Along the Baltic States and Belarus borders, Russia has built two power lines, linking Novosokolniki with Talashkino¹¹³ and Pskov with Luzhskaya¹¹⁴ (please see the first annex). In the Scheme and Programme for the Development of the Unified Power System of Russia for 2014 – 2020, the need for building these power lines is justified by preparing the Russian power system for the possible electricity supply disruptions with the Baltic States and Belarus and ensuring the reliable functioning of the North-West part of the Russian transmission system when working separately from the Baltic States.¹¹⁵

In the North-West and Central regions, Russia has made more upgrades to its transmission network. They have increased the electricity throughput between the North-West and the Central part of the IPS/UPS, compensating for the upcoming loss of the transmission capacity associated with the Baltic power lines.¹¹⁶ All in all, this indicates a coordinated Russian effort to prepare for the upcoming Baltic desynchronisation from the IPS/UPS before Lithuania, Latvia, and Estonia prepares to do so themselves.

¹¹³ Energybase. *ФСК ЕЭС начала строительство линии электропередачи между Северо-Западом и Центром России*, 25 November 2015. <https://energybase.ru/news/companies/fsk-ees-nacala-stroitelstvo-linii-elektroperedaci-mezdu-severo-zapadom-i-2015-11-25>

¹¹⁴ The Leningrad Region. *Строительство ВЛ 330 кВ ПС 330 кВ Лужская – ПС 330 кВ Псков*. <https://map.lenoblinvest.ru/objects-of-development-programs/2912/>

¹¹⁵ *Приказ Минэнерго России №495 от 01.08.2014 «Об утверждении схемы и программы развития ЕЭС России на 2014-2020 годы»*. https://www.so-ups.ru/fileadmin/files/laws/orders/sipr_ups/sipr_ups_14-20.pdf

¹¹⁶ Бизнес России. *ЛЭП «Белозерская — Ленинградская»: поток энергии от Северо-Запада до Центра*. <https://glavportal.com/materials/lep-belozerskaya-leningradskaya-potok-energii-ot-severo-zapada-do-centra>

From the economic perspective, the doubling of the already surplus generation capacity in Kaliningrad creates incentives for maintaining its interconnections with Lithuania operational. Kaliningrad's power system data shows that the monthly electricity peak demand averages fluctuate between approximately 500 MW to roughly 800 MW, leaving most indigenous generation capacities (1905 MW) underutilised.¹¹⁷ To a significant extent, Kaliningrad's market access to the Baltic States via its interconnections with Lithuania (600 MW trading capacity) helps mitigate this problem by increasing the utilisation of local power plants (Kaliningrad exports around 1/3 of its annual electricity generation to the Baltic States).¹¹⁸

In the end, one can distinguish a threefold Russian approach to Kaliningrad concerning the infrastructural developments in the Baltic Sea region. At first, Russia reacted to the shrinking electricity generation capacity in the Baltic States, primarily due to the Lithuanian commitment to close the Ignalina NPP by the end of 2009. Not believing that the Baltic synchronisation with CEN was possible and competing with a Visaginas NPP project, in 2010, Russia started constructing Baltic NPP in Kaliningrad to create a regional electricity export hub. As the project failed in 2013 and the European Commission proposed making the Baltic States' synchronisation with CEN eligible for European funding later that year, Russia became more vocal in questioning the techno-economic utility of the Baltic flagship energy project. Given its isolation from the Russian mainland and historical dependence on the electricity transfers through Lithuanian interconnections, the Kremlin used Kaliningrad as an argument in making its case to the European Union that proceeding with the synchronisation of the Baltic States creates technological issues for its strategic exclave and forces it to make substantial investments. Despite such a line of argument, Russia strengthened Kaliningrad's natural gas and electricity networks, making the region capable of operating in an isolated mode, weakening the validity of the isolation argument made earlier.

3. 1. 3. Electricity Trade

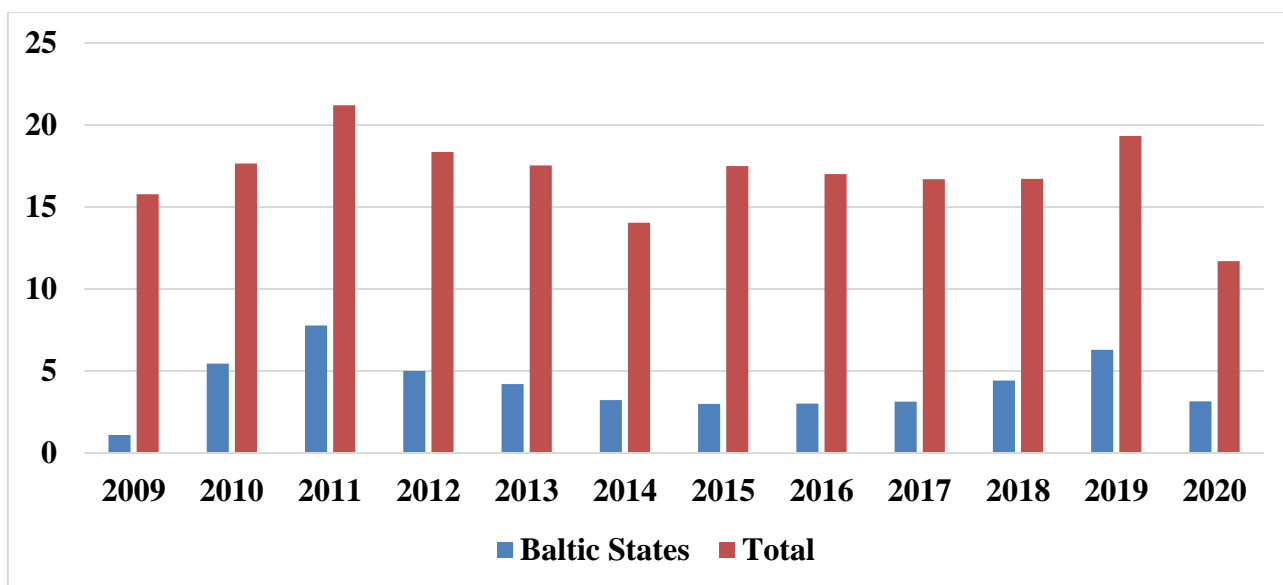
As already noted in the previous section, keeping electricity trade with the Baltic States is yet another Russian interest, providing incentives to keep the Baltic States in the IPS/UPS or to at least persuade them (or the EU) to maintain the interconnectivity via BtB converters after their synchronisation with CEN in 2025. Under the present political agreement between the Baltic States, Poland and the European Commission, the Baltic States intend to terminate electricity trading with

¹¹⁷ *Схема и Программа перспективного развития электроэнергетики Калининградской области на 2021 – 2025 годы*. P. 25. https://infrastruktura.gov39.ru/upload/165%D0%A0_30042020.pdf

¹¹⁸ Lohse, U. et. al. *Enabling PV in Russia*. Berlin, 2019. P. 63.

the 3rd countries.¹¹⁹ That means that Baltic States will stop trading electricity with Russia after completing their synchronisation with CEN in 2025. Kaliningrad’s interconnections with Lithuania could remain operational only if Russia proves that they are necessary to ensure the stable functioning of its power system. Even if this will be the case, the Baltic States will not use the interconnections for trading purposes.

In expanding the argument mentioned above, one needs to address the broader question of electricity trading between Russia and the Baltic States. From the economic perspective, the Baltic States emerged as a lucrative electricity market for Russia since the closing second unit of Ignalina NPP in 2010. For example, in 2009, when Ignalina NPP was still operational, Russia exported 15,77 TWh of electricity in total, and it directed just over 1 TWh (7 %) of this amount to the Baltic States. After Lithuania closed its central generation unit in 2010, Russian electricity exports to the Baltic States increased fivefold, reaching 5,45 TWh or 31 % as of total electricity export. Next year, Russian electricity exports to the Baltic States peaked at 7,78 TWh (37 %). Please see the figure below for the changes in annual Russian energy export patterns to the Baltic States.

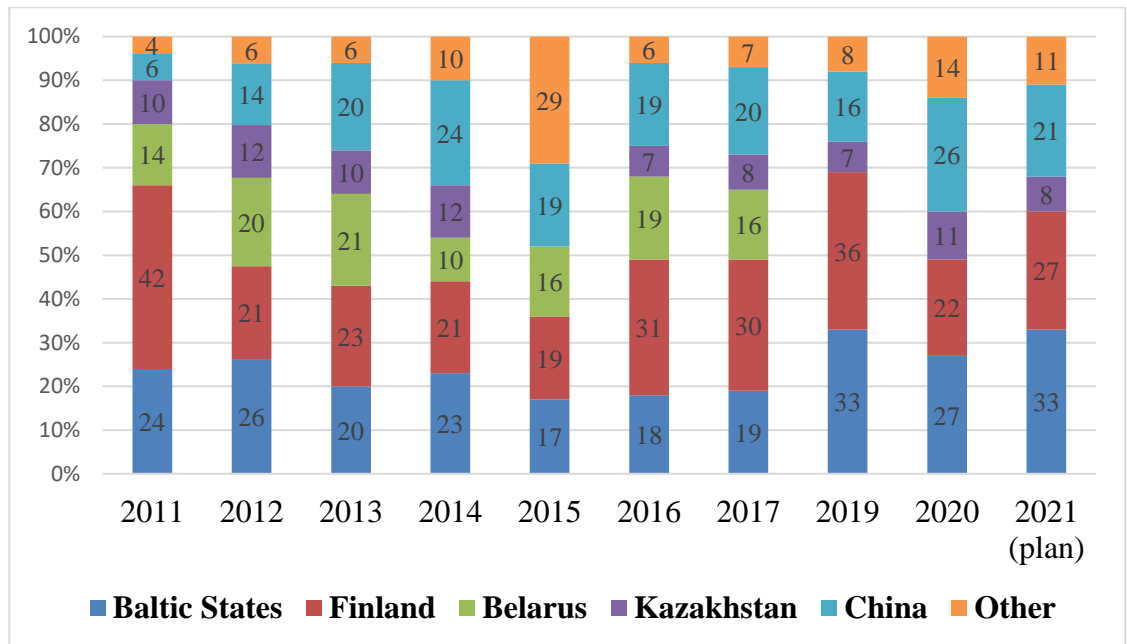


6 figure. Total Russian electricity exports and exports to the Baltic States by year. **Source.** Inter RAO annual reports.¹²⁰

¹¹⁹ Political Roadmap on implementing the synchronisation of the Baltic States' electricity networks with the Continental European Network via Poland, 20 June 2019. Please see: https://ec.europa.eu/energy/sites/ener/files/political_implementation_roadmap.pdf?redir=1

¹²⁰ Inter RAO holds a monopoly over Russian electricity import and export. Please note that if Russian electricity export to Latvia and Estonia are very small in a given year, the annual Inter RAO reports might group them under the category

Even though Russian electricity exports to the Baltic States fluctuated over time, they constituted an important market segment for electricity trading. In 2019, Russia exported 6,377 TWh of electricity to the Baltic States (3,754 TWh came from the mainland, while 2,623 TWh originated from Kaliningrad).¹²¹ Such a result made the Baltic States the second biggest electricity export market for Russia, lagging from Finland only with a small margin.¹²² In 2020, Russian electricity exports to the Baltic States decreased due to lower electricity demand concerning the COVID-19 restrictions, but the Baltic States emerged as the top electricity export destination, surpassing Finland by five percentage points. Inter RAO believes that the Baltic States will be the primary destination for Russian electricity exports in 2021, taking 33 % of the total Russian electricity export (Inter RAO plans to deliver 27 % of Russian electricity exports to Finland and 21 % to China).¹²³ For the yearly breakdown of Russian electricity export shares by destination, please see the graph below.



7 figure. Russian electricity export shares by destination and year (%). **Source.** Inter RAO annual financials.¹²⁴

of 'Other' exports including additional countries that does not allow to precisely calculate the export to the Baltic States. In some instances, therefore, the figures on the Baltic States are approximate (they can be slightly higher than represented).

¹²¹ Litgrid. Elektros gamybos ir vartojimo balanso duomenys. Please see: <https://www.litgrid.eu/index.php/energetikos-sistema/elektros-energetikos-sistemas-informacija/elektros-gamybos-ir-vartojimo-balanso-duomenys/2287>

¹²² Inter RAO. Trading. Please see: <https://www.interrao.ru/en/activity/trading/>

¹²³ https://www.interrao.ru/upload/iblock/7c6/IFRS_F2020_fin_eng.pdf

¹²⁴ Inter RAO. *Financial reporting*. <https://www.interrao.ru/en/investors/financial-information/financial-reporting/#460>

Electricity trading with the Baltic States also provides Russia with lucrative economic opportunities. Free of the EU’s environmental regulations, Russia has an edge in electricity trading, allowing the country to compete better with other generation sources subject to such regulations.¹²⁵ After the closure of the Ignalina NPP in 2010, electricity trading in the Baltic States constituted a quarter of the total annual Russian revenue from electricity trading abroad. In 2011, the number increased to roughly 32 %, and it fluctuated between 20 % and 30 % after that. In 2019, the Baltic share of Russia’s trading revenue abroad amounted to 20.5 billion roubles, approximately 30 % of all electricity trading revenues¹²⁶ (please see the second table).

2 table. Inter RAO electricity trading revenues and trading revenues in the Baltic States (billion RUB)

Year	Total trading revenue	Revenue excluding trading in Russia	Baltic States (% as of total revenue excluding trading in Russia)
2019	77,1	68,9	20,5 (29,75 %)
2018	73,5	61,6	18,2 (29,54 %)
2017	58,6	44,6	8,8 (19,73 %)
2016	80,7	50,7	9,2 (18,14 %)
2015	80,5	50,4	9,7 (19,24 %)
2014	56,7	34,1	9,3 (27,27 %)
2013	47,5	34,6	8,2 (23,7 %)
2012	45,24	32,9	9,3 (28,27 %)
2011	58,2	44,5	32,8 (31,9 %)
2010	46,3	32,3	8,6 (26,6 %)

Source. Inter RAO annual reports.¹²⁷

Going back to strategic considerations, maintaining electricity trade with the Baltic States also benefits Russia from a geopolitical perspective. As mentioned before, a Baltic States energy market presence allows Russia to maintain a foothold in its close neighbourhood through economic and energy ties. There are clear indications that Russia aims to maintain an electricity trading regime with the Baltic States. In meetings with the EU officials, Russian Energy Minister Alexander Novak consistently brought up the Baltic synchronisation process.¹²⁸ He argued that Russia is

¹²⁵ Since November 2020, when the Baltic States prohibited electricity trading with Belarus due to the completion of Ostrovets NPP, Russia is the only non-EU direct participant in their trading areas. ERR. Russia and Belarus electricity suppliers exploit EU law, grow in Baltics, 10 January 2019. Please see: <https://news.err.ee/897408/russia-and-belarus-electricity-suppliers-exploit-eu-law-grow-in-baltics>

¹²⁶ Inter Rao. Annual report | 2019 Sustainable Development and Environmental Responsibility Report. Please see: https://www.interrao.ru/upload/InterRAO_AR19_ENG.pdf

¹²⁷ Data for 2017 – 2019 accounts only for the European and Russian trading segments. Other data includes Kazakhstan and China.

¹²⁸ Please see: Министр энергетики Российской Федерации Александр Новак провел телефонный разговор с вице-президентом Еврокомиссии по энергосоюзу Марошем Шефчовичем, 16 October, 2019 <https://minenergo.gov.ru/node/16094> Россия рассчитывает на то, что новое руководство Украины проявит

interested in maintaining operational interconnections with the Baltic States.¹²⁹ Moreover, when the Baltic TSO' drafted a new methodology for electricity trading with the third countries in 2020, Alexander Novak asked to revise the regulations by removing a 38 % reduction in electricity trading capacity with the Baltic States.¹³⁰ Inter RAO echoed the request as the company is interested in maintaining trading capacity on the Latvia – Russian border.¹³¹

Summarising the Russian interests regarding the Baltic synchronisation project, they stem from both economic and geopolitical considerations. Given the synchronisation's solid institutional, political and financial foundations, Russia will likely push for electricity trading possibilities with the Baltic States after 2025. However, it is not to say that Russia's critical approach to the project changes or that the premature synchronisation scenario can be discarded as it could be used as a tool in its broader geopolitical game towards the EU and US.

3.2. Belarus

Before the yet another falsified Belarusian presidential election in August 2020 and the following violent crackdown of protests, the interests of Lukashenko's regime towards the Baltic synchronisation project were clear, and its behaviour was predictable – Belarus sought to secure markets for exporting electricity because the launch of the first unit of Ostrovets NPP was fast approaching.¹³² Lithuanian electricity embargo on Belarusian electricity and the Baltic States' plans to discontinue electricity trade with the third countries once the synchronisation is complete stood in Lukashenko's way, denying Belarus access to the most promising market for its nuclear power.

Contrary to the Russian national interests balancing economic and geopolitical calculations, Belarusian ambition to export electricity to the Baltic States was pragmatic. By trying to open an

прагматычны падход у трохсторонніх перамовах, 13 June, 2019 <https://minenergo.gov.ru/node/15039> Состоялся телефонный разговор Александра Новака с вице-президентом Еврокомиссии по энергосоюзу Марошем Шефчовичем 30 April, 2019 <https://minenergo.gov.ru/node/14704> Александр Новак встретился с заместителем председателя Европейской комиссии Марошем Шефчовичем 28 June, 2018 <https://minenergo.gov.ru/node/11709> Александр Новак встретился с заместителем председателя Европейской комиссии Марошем Шефчовичем, 24 January, 2018 <https://minenergo.gov.ru/node/10375>

¹²⁹ Россия рассчитывает на то, что новое руководство Украины проявит прагматичный подход в трехсторонних переговорах, 13 June, 2019 <https://minenergo.gov.ru/node/15039>

¹³⁰ Interfax. РФ призывает Литву пересмотреть новую методику торговли электроэнергией, 28 October 2020 <http://interfax.az/view/817772>

¹³¹ Inter RAO Lietuva. Pastabos dėl „Tarponinio pralaidumo apskaičiavimo, nustatymo ir paskirstymo su Rusija sąlygų, nuostatų ir metodikos“ projekto, 5 November 2020. Please see: https://www.regula.lt/SiteAssets/viesosios-konsultacijos/pastabos_2020_lapkritis/AB_INTER_RAO_Lietuva_2020-11-06.pdf

¹³² After a number of delays, the first unit of Ostrovets NPP was launched on November 2020. Ostrovets NPP is mostly financed by a Russian loan, built by a Russian state-owned contractor 'Atomstroyexport' and uses Russian reactor technology (VVER-1200). However, the plant is owned by a Belarusian state enterprise 'Belarusian Nuclear Power Plant'.

electricity export route to the Baltic States, Lukashenko’s regime tried to solve three problems associated with the completion of Ostrovets NPP and the country’s general economic and political situation. The first problem dealt with the electricity generation surplus, which would increase substantially once Ostrovets NPP is fully operational. Since 2018, Belarus started producing more electricity (38.92 TWh) than it consumed (37.94 TWh) and kept its electricity imports (0.05 TWh) to a bare minimum. The integration of Ostrovets NPP to the Belarusian power grid means adding 18.5 TWh annual electricity generation to an already surplus system that equals roughly 40 % of its yearly electricity consumption (hovering around 36.5 – 38 TWh over the last ten years). For Belarusian electricity indicators, please see the 3 table.

3 table. Selected Belarusian electricity indicators (2010 – 2020) and Ostrovets NPP

<i>Year</i>	2010	2014	2015	2016	2017	2018	2019	2020
<i>Generation Capacity (GW)</i>	8.46	9.21	10.22	9.79	9.92	10.05	9.98	10.07
<i>Generation (TWh)</i>	34.89	34.61	34.23	33.57	33.93	38.92	39.84	38.06
<i>Consumption (TWh)</i>	37.59	38.06	36.85	36.59	37.11	37.94	37.51	37.56
<i>Exports (TWh)</i>	0.27	0.51	0.19	0.16	0.15	1.05	2.37	0.65
<i>Imports (TWh)</i>	2.97	3.83	2.82	3.18	2.73	0.05	0,03	0.15
<i>Ostrovets NPP Factor</i>	Capacity 2.4 (2 x 1.2) GW Projected annual electricity generation 18.5 TWh							

Source. National Statistical Committee of the Republic of Belarus.¹³³

The second problem was the emerging deadline to pay the debt to Russia for financing the construction of Ostrovets NPP and the consequences for failing to do so. In 2011, Russia and Belarus signed an intergovernmental agreement on constructing a nuclear power plant in Belarus, and Russia has agreed to allocate a loan of up to \$10 billion to Belarus. The loan was to finance 90% of construction costs, with 10% paid by Belarus, and the repayment had to begin no later than 1 April 2021, and Belarus had to pay the debt in full by 2036. One half of the loan had a fixed annual interest rate of 5.23%, while the other half had a fixed annual interest rate of 1.83% plus a six month USD

¹³³ Национальный статистический комитет Республики Беларусь. Энергетический баланс Республики Беларусь. Статистический сборник. Minsk, 2019. <https://www.belstat.gov.by/upload/iblock/673/673156e0f624e85c3516a4a51e1f0d36.pdf>

LIBOR interest rate.¹³⁴ Due to the delays in constructing Ostrovets NPP from 2016 – 2018 to 2020 – 2022 and the decrease of oil and natural gas prices, Belarus sought to renegotiate the loan conditions to make the power plant more competitive.¹³⁵

Belarus succeeded in renegotiating the loan on 14 July 2020, during the meeting of Belarusian and Russian prime ministers. Under the new agreement, Belarus secured a lower interest rate (3.3 %) for the entire loan and persuaded Russia to postpone the repayment until April 2023. However, the agreement also clarified that any delays in repaying the debt would result in the obligation to pay the entire loan after 180 days.¹³⁶ Hence, Russia has an instrument to pressure Belarus, while Minsk risks losing Ostrovets NPP's ownership if it misses debt payments, yet again pushing the country to look for electricity export opportunities.

The third problem emanates from the political and economic pressure from Russia. Since 2015, Belarus has found itself under increasing pressure to establish a Union State and expand the Russian military presence in its territory. Due to this reason, Belarus sought to diversify its political and economic relations, resulting in yet another temporary rapprochement between Minsk, Washington and Brussels.¹³⁷ From the Belarusian perspective, diversifying its natural gas and oil imports and securing an independent revenue stream by finding markets for exporting electricity produced in Ostrovets NPP were tools for resisting Russian pressure.

To deal with these issues related to Ostrovets NPP, Belarus essentially could take two measures: to restructure its power sector by promoting electricity consumption and closing older generation units or securing additional export markets. Since the domestic measures can only address the first issue (generation surplus) and, at best, yield marginal effects,¹³⁸ Lukashenko's regime was very active in persuading its neighbours to purchase electricity from Ostrovets NPP that potentially could solve the issues mentioned above.

So far, Belarusian efforts were not successful. In spring-summer 2017, Lithuania declared Ostrovets NPP as an unsafe nuclear installation posing a threat to its national security, environment

¹³⁴ Interfax. Премьеры Белоруссии и РФ утвердили изменения в кредитное соглашение по БелАЭС, 14 July 2020. <https://www.interfax.ru/world/717373>

¹³⁵ Nuclear Engineering International. Russia amends terms for Belarus NPP loan agreement, 29 March 2021 <https://www.neimagazine.com/news/newsrussia-amends-terms-for-belarus-npp-loan-agreement-8633297>

¹³⁶ Ibid.

¹³⁷ Preiherman, Y. Belarus and the EU: Where Could Another Rapprochement Lead? The Jamestown Foundation. https://jamestown.org/program/belarus-and-the-eu-where-could-another-rapprochement-lead/#_ftnref18

¹³⁸ Valynets, H. The new nuclear power plant in Belarus and reminders of Chernobyl, 26 April, 2021. <https://eu.boell.org/en/2021/04/26/new-nuclear-power-plant-belarus-and-reminders-chernobyl>

and public health and introduced a ban on electricity imports from Belarus once it becomes operational.¹³⁹ Even though not having operational electricity interconnections with Belarus, Poland supported Lithuania by declaring its intention not to buy electricity from Belarus during the same year. This made it clear to Minsk that Poland is not interested in developing a cross-border power transmission network with Belarus to trade electricity and served as an important act of solidarity with Lithuania struggling to persuade its neighbours not to buy electricity from Ostrovets NPP.

At that time, Estonia and Latvia were cautious about Lithuanian attempts to isolate Belarus from the regional electricity market even though they recognised the safety issues of Ostrovets NPP. After lengthy negotiations, the tables had eventually turned when Belarusians went to the streets to protest against the electoral fraud in August 2020, and the Baltic States jointly declared that they are not going to buy electricity from Ostrovets NPP.¹⁴⁰ In December 2020, even the European Council that have long shied away from speaking about imposing an electricity embargo on Belarus, invited the European Commission ‘to investigate possible measures preventing commercial electricity imports from third countries’ nuclear facilities that do not fulfil EU recognised safety levels.’ – with ‘nuclear facilities’ explicitly referring to Ostrovets NPP.¹⁴¹

The Lithuanian, Latvian and Estonian position not to purchase electricity from Ostrovets NPP was achieved despite various Belarusian attempts to prevent its isolation. At first, Belarus challenged the criticism towards the safety of Ostrovets NPP. To this end, Belarus promoted Ostrovets NPP through International Atomic Energy Agency (IAEA). By utilising IAEA’s favourable rules allowing the nuclear power developers to choose the scope and set the mandate of its peer-review missions and relying on Rosatom’s ex-employees working in the organisation, Belarus secured a stable stream of positive publicity for the Ostrovets NPP.¹⁴² IAEA’s public statements emphasising the commitment of Belarusian nuclear specialists to maintaining the safety of Ostrovets NPP and failing to mention incidents during its construction, Belarusian attempts to conceal them and

¹³⁹ *Branduolinės elektrinės, statomos Baltarusijos respublikoje, Astravo rajone, pripažinimo nesaugia, keliančia grėsmę Lietuvos Respublikos nacionaliniam saugumui, aplinkai ir visuomenės sveikatai įstatymas*, <http://www.infolex.lt/ta/429238:str1> *Būtinųjų priemonių, skirtų apsisaugoti nuo trečiųjų šalių nesaugių branduolinių elektrinių keliamų grėsmių, įstatymas*, <https://e-seimas.lrs.lt/portal/legalAct/lt/TAD/544fa8122b3f11e79f4996496b137f39?jfwid=-wd7z6npi7>

¹⁴⁰ Lietuvos radijas ir televizija. *Baltic states sign deal to block Belarusian nuclear imports* <https://www.lrt.lt/en/news-in-english/19/1223682/baltic-states-sign-deal-to-block-belarusian-nuclear-imports>

¹⁴¹ Conclusions – 10 and 11 December 2020. <https://www.consilium.europa.eu/media/47296/1011-12-20-euco-conclusions-en.pdf>

¹⁴² Karasik, T. Lithuania’s European Energy War. The National Interest. July 26, 2018. <https://nationalinterest.org/feature/lithuania%E2%80%99s-european-energy-war-26151>

violations of international law (Espoo and Aarhus conventions)¹⁴³ served as a tool for the Belarusian regime in questioning Lithuanian concern for the safety of Ostrovets NPP.¹⁴⁴ However, IAEA's public posture ignoring the shortcomings mentioned above has persuaded neither the European Union nor Lithuanian neighbours of the safety of Ostrovets NPP.

Second, Belarus sought to divide the Baltic States by offering lucrative economic opportunities. Here, the country positioned Ostrovets NPP as a competitive generation source that could create macroeconomic value for the buyers of its electricity and linked their position to Ostrovets NPP with bilateral cooperation in other sectors—for example, looking for possibilities to reroute Belarusian freight cargo exported through Lithuanian Klaipeda port elsewhere in the Baltic Sea Region.¹⁴⁵ Even though that has not prevented Lithuania, Latvia, and Estonia from eventually finding common ground on electricity trade with Belarus, analysts believe that the prospect to increase cooperation in the transport sector has promoted a more cautious approach to Ostrovets NPP.¹⁴⁶

Third, Belarus tried to convince Lithuanian decision-makers to rethink their position on the electricity trade with Belarus by playing on their threat perception. Since Lithuania is interested in having a neighbour with a degree of autonomy from Russia, Belarusian analysts argued that purchasing electricity from Belarus would weaken Russian influence in the country. Even though this position is logical, Lithuania has not bought the argument as importing electricity from Ostrovets NPP would have had profound negative effects: enabling Russian energy geopolitics¹⁴⁷ and knocking out the most serious national instrument to oppose the Russian backed project (electricity embargo).

Trying to find export markets for Ostrovets NPP, Belarus was also active in the South by securing a deal with Ukraine. During the short time perspective, Belarus was partially successful in opening such a route. In 2019, Ukraine allowed trading electricity with Russia and Belarus after a

¹⁴³ Juozaitis, J. The (De)Legitimation of Lithuanian Opposition to Ostrovets Nuclear Power Plant through the International Atomic Energy Agency <https://www.zurnalai.vu.lt/politologija/article/view/22338/23296>

¹⁴⁴ Preiherman, Y. Belarus and the EU: Where Could Another Rapprochement Lead? The Jamestown Foundation. https://jamestown.org/program/belarus-and-the-eu-where-could-another-rapprochement-lead/#_ftnref18

¹⁴⁵ Astapenya, R. Can Belarus punish Lithuania for its position on the Astraviec NPP? Belarus Digest, 8 December 2016 <https://belarusdigest.com/story/can-belarus-punish-lithuania-for-its-position-on-the-astraviec-npp/>

¹⁴⁶ Astapenya, R. Belarus-Lithuania Relations: Common Interests and the Nuclear Dispute. Minsk: Ostrogorski Center, 2018. <https://belarusdigest.com/belarus-lithuania-relations-en.pdf>

¹⁴⁷ For some examples, please see: Česnakas, G. Juozaitis, J. Nuclear geopolitics in the Baltic Sea region: Exposing Russian strategic interests behind Ostrovets NPP. Washington: Atlantic Council, 2017. https://www.atlanticcouncil.org/wp-content/uploads/2017/07/Nuclear_Geopolitics_in_the_Baltic_Sea_Region_web_0731.pdf

five-year pause¹⁴⁸, raising Minsk's hopes that Belarusian electricity exports to Ukraine could reach as much as 4 – 5 TWh.¹⁴⁹ Despite the changes in Ukrainian legislation, Ukraine imposed temporary restrictions on Belarusian electricity imports in April 2020 as the national electricity consumption dropped due to the COVID-19.¹⁵⁰ Electricity trade between Ukraine and Belarus restarted in 2021¹⁵¹ but was suspended again in May 2021 until 1 October 2021.¹⁵²

Despite short term victories, the long term outlook does not look very promising for Belarus. Like the Baltic States, Ukraine aims to disconnect from the IPS/UPS and synchronise with CEN by 2023, where the synchronisation would not allow the countries to trade electricity unless they agree to build back-to-back converters.¹⁵³ On the political level, it seems that Ukraine is not planning to do so. Previous Ukrainian Energy Minister Olha Buslavets argued that ‘Any talk about imports from these countries [Russia and Belarus] will undermine our further full technical synchronisation with ENTSO-E, weaken our generation and make it impossible to fulfil our plans. And we must work strategically’.

Similarly, acting Energy Minister German Galushchenko asked to suspend electricity imports from Russia and Belarus. In his letter to the Ukrainian regulator, Ukrainian official argued that such imports ‘contradicts the strategic goals of Ukraine in the energy sector, in particular, the synchronisation of the United Energy System of Ukraine with ENTSO-E, and potentially threatens energy security’.¹⁵⁴ Belarus, however, still has a card to play in persuading Ukraine to maintain electricity trade.

¹⁴⁸ 112 Ukraine. *Changes in energy legislation: Electricity import*. September 24, 2019. <https://112.international/finance/changes-in-energy-legislation-electricity-import-43840.html>; 112 Ukraine. *USAID: New Ukrainian electrical energy market launched successfully*. July 11, 2019. <https://112.international/finance/usaid-new-ukrainian-electrical-energy-market-launched-successfully-41592.html>

¹⁴⁹ Open4 Business. *Belarus plans to double electricity export, Ukraine is premium market*. November 28, 2019. <https://open4business.com.ua/belarus-plans-to-double-electricity-export-ukraine-is-premium-market/>

¹⁵⁰ 112 Ukraine. *Ukraine refuses to buy electricity from Russia and Belarus*, May 8, 2020. <https://112.international/society/ukraine-refused-to-buy-electricity-from-russia-and-belarus-51191.html>

¹⁵¹ Ukrinform. *Ukraine resumes electricity imports from Belarus*, January 5, 2021 <https://www.ukrinform.net/rubric-economy/3166342-ukraine-resumes-electricity-imports-from-belarus.html>

¹⁵² Belta. *Energy Ministry comments on ban to export Belarusian electricity to Ukraine*, May 26, 2021. https://atom.belta.by/en/news_en/view/energy-ministry-comments-on-ban-to-export-belarusian-electricity-to-ukraine-11344/

¹⁵³ Zachmannand, G. Feldhaus, L. *Synchronising Ukraine’s and Europe’s electricity grids*. <https://www.lowcarbonukraine.com/wp-content/uploads/Synchronising-Ukraine%C2%B4s-and-Europe%C2%B4s-electricity-grids.pdf>

¹⁵⁴ Украина временно запретила импорт электроэнергии из России и Белоруссии, 26 May, 2021. https://news.mail.ru/politics/46472341/?fbclid=IwAR2okwv_b5ubMbh24IhyOIupLLY_s6BK0JbV_Cyyh1SmO8FotOlKYwpGR-E

With the Ukrainian ambition to synchronise with CEN also comes the aim to increase electricity exports to Western markets from 5 TWh to 18-20 TWh per year once synchronisation is completed.¹⁵⁵ Since Ukraine will have to decommission some of its ageing nuclear reactor fleet,¹⁵⁶ Belarusian electricity could be used for reexporting electricity to Western markets, and there are supporters of such an idea on economic grounds. For example, the previous CEO of Ukrenergo recently made the following argument:

‘I believe that we cannot discuss any trade issues with Russia at all. As for Belarus ... Ukraine is interested in such an insert. They will not demolish their nuclear power plant. This electricity can come in without the slightest damage to Energoatom, which will be able to export its electricity to The European Union. This will mix the price situation on the Ukrainian market downward. Speaking about ideological issue: I do not understand why there might be objections to electricity from Belarus if we transit Gazprom’s gas in Ukrainian pipes and talk openly about the advantages that this gives the Ukrainian economy.’¹⁵⁷

The former head of Ukrenergo stated that Belarus and Ukraine would need to build back-to-back converters on the high-voltage lines connecting the two countries between Mozyr and Chernobyl NPPs and Gomel and Chernigov for this arrangement to work. The parties would have to divide the construction costs and sign a long-term trading agreement to accomplish this. Some discussions have already taken place towards that end. In 2019, the former Minister of Energy of Ukraine Oleksiy Orzhel discussed the construction of such converters with the Belarusian counterparts. Minister’s position on the potential electricity trade with Belarus was somewhat more favourable than his successors: ‘Electricity is among the priority issues. Next February, Belarus NPP should start working. There may be an excess of electricity in which we are interested. Although, of course, the capacity of the interstate lines for electricity exchange must be taken into account.’¹⁵⁸ So far, Belarus can only count on exporting limited amounts of electricity to Ukraine during the cold periods, while the long-term prospects of electricity trade depend on its ability to persuade Ukraine in constructing back-to-back converter stations.

¹⁵⁵ Varfolomeyev, O. Ukraine Moves to Integrate Its Power Grid With European Network. *Eurasia Daily Monitor*, 91 (14), 2017. <https://jamestown.org/program/ukraine-moves-integrate-power-grid-european-network/>

¹⁵⁶ Bankwatch. *Zombie Reactors in Ukraine*. <https://bankwatch.org/project/zombie-reactors-in-ukraine> World Nuclear Association. *Nuclear Power in Ukraine*, <https://www.world-nuclear.org/information-library/country-profiles/countries-t-z/ukraine.aspx>

¹⁵⁷ Holubeva, O. Ukraine's disconnection from power grids of Russia and Belarus: Prices and consequences, 112 Ukraine, 28 April, 2021. <https://112.international/politics/disconnection-of-ukraine-from-power-grids-of-the-russia-and-belarus-prices-and-consequences-60945.html>

¹⁵⁸ Open4business. *Ukraine and Belarus Plan to Build New Interstate Power Lines*. <https://open4business.com.ua/ukraine-and-belarus-plan-to-build-new-interstate-power-lines/>

Observing how actively Belarus promoted electricity exports from Ostrovets NPP, one could easily support the argument that the primary interest of Lukashenko's regime towards the Baltic and Ukrainian synchronisation projects is keeping the electricity trade open. Nevertheless, profound changes in the regional security environment after the falsified presidential elections in 2020 indicate that pragmatic economic interests might no longer guide Belarusian behaviour towards the Baltic synchronisation project. On the one hand, Lukashenko's regime is already using destabilising hybrid activities by forcing the European Union to open the negotiations with Belarus. To this end, Belarusian tourist agencies started working with people smugglers to recruit anyone capable of paying¹⁵⁹ for the possibility of entering the EU through Lithuanian territory. Belarus issues tourist visas to such persons, while Belarusian State Border Committee allows them to leave Belarus unchallenged.¹⁶⁰ As a result, Lithuanian authorities have detained more than 2 000 persons who crossed the Lithuanian border illegally from Belarus by the end of July 2021.¹⁶¹ Given Lukashenko's growing desperation and hostility, Minsk's pragmatic approach towards the Baltic synchronisation project might change to a political, when opposing the synchronisation becomes one of the tools for the regime to open a dialogue with the EU.

On the other hand, one can observe a profound change in Belarusian and Russian relations that also affects how it will approach Baltic States' synchronization with CEN. Starting from 2015, Russia has increased the pressure on Lukashenko to expand its military presence in the country and create a Union State, while Belarus has successfully, albeit with great difficulty, resisted Russian attempts to subdue it fully. Belarus has once again reproached the West with former Secretary of State Pompeo's statement promising U.S. help diversifying Belarusian energy supply during his visit to Belarus exposed the success of such efforts. Here, one of the guiding principles of Belarusian ambition to export electricity to its neighbours was attempts to maintain a degree of autonomy from Russia, thus keeping the pragmatic logic in place. However, protests in Minsk following the presidential elections in August 2020 has isolated Belarus from the West and ended the rapprochement. Lukashenko's regime hopes to survive, and increasing dependence on Russia

¹⁵⁹ Prices for entry are disputed at the moment of writing. Polish think-tank Centre for Eastern Studies suggest that migrants pay between \$10 000 and \$15 000, while Lithuanian investigative journalists estimate the price can be even lower than \$1 000. Please see: Balkūnas, V. Navickaitė, G. Vartai atidaryti: pigiausias kelias į Europą. *15 min.* 29 July, 2021. https://www.15min.lt/media-pasakojimai/vartai-atidaryti-pigiausias-kelias-i-europa-1310?fbclid=IwAR2V8Z44ofQQLPGrwq_uey2JXqvZM2ZJu367HO0OtcGddcZdJY54QtOCWU

¹⁶⁰ Hussein, J. H. Kryzys migracyjny na Litwie. *Centre for Eastern Studies.* <https://www.osw.waw.pl/pl/publikacje/analizy/2021-07-23/kryzys-migracyjny-na-litwie>

¹⁶¹ So far, Lithuania remains the main target for Belarusian hybrid activities as its border guards does not allow the migrants to cross the border to Latvia or Poland. Balkūnas, V. Navickaitė, G. Ibid.

emerges as the only viable option. With the Russian influence in Belarus increasing, the Belarusian approach towards the Baltic synchronisation project will be increasingly subordinated to Russian interests that balance economic and geopolitical motives. Hence, the lack of possible partners for Belarus will make it easier for Moscow to execute its foreign policy by subordinating Minsk's behaviour to serve its interests vis-à-vis Baltic withdrawal from the IPS/UPS.

4. Domains, Tools and Timing

With Russian and Belarusian interests laid out, one can start analysing the instruments that they could use to hinder the Baltic States' synchronization with CEN by trying to push for market access (maintaining electricity trade), demanding side payments (compensations for infrastructural upgrades) or attempting to delay/stop the project. However, the purpose of this chapter is not to predict specific measures that Russia and Belarus might use against the Baltic States or foresee their intensity. Instead, the chapter aims to map the tools that could be employed against the Baltic States and discuss how they could affect them across various domains typically targeted by hybrid activities. At the same time, the report tries to avoid unnecessary speculation or fearmongering by providing (where possible) specific examples of already documented malign Russian activities towards the Baltic States and beyond.

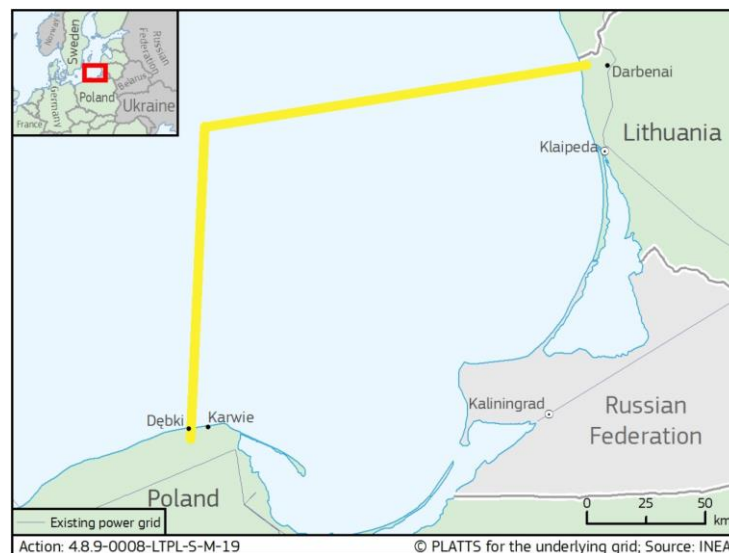
If one approaches the synchronization project in isolation from other macropolitical developments, the conceptual framework on the hybrid threats allows arguing that the project is in the priming phase. For the time being, Russia tried to persuade the Baltic States and the EU to make harmful choices voluntarily and has increased its readiness to destabilise them in the future, but its actions against the Baltic power grids were somewhat limited so far. Russia consistently challenged the Baltic synchronization with CEN on economic and technical grounds at the national and the EU levels. However, by upgrading its strategic energy infrastructure, Russia has reduced the interdependence between the Baltic and Kaliningrad's energy systems and created preconditions for destabilising Baltic power grids in the future.

One could challenge such an assessment by pointing out that infrastructural upgrades in Kaliningrad do not necessarily represent Russian preparation to exert damage on the Baltic States as Moscow merely prepared for their withdrawal from the IPS/UPS. Closer scrutiny of Russian infrastructure projects in Kaliningrad (please see chapter 3) reveals that Russia has invested significantly more than required to maintain its power grid. Building four additional power plants, LNG terminal and expanding the underground gas storage facility cannot be justified on technical or economic grounds. With Kaliningrad's ability to operate autonomously from the Baltic States ensured, Belarusian capability to maintain its power grid disconnected from Lithuania tested, and Russian influence on Belarus increased, Russia is well-positioned to exert damage Baltic power grids.

Here, the infrastructural domain emerges as the critical target of hybrid activities against the Baltic States. The successful completion of the Baltic States synchronisation project first and

foremost rests upon upgrading their power grids, just as the stable functioning of the Baltic power systems depends on functional generation units and major electricity interconnections. In the energy sector, issues with the infrastructural domain resulting from supplying interruptions or system failures establish consequences on other domains, especially on economic, societal and political dimensions. Russia can exert pressure on the Baltic power grids and experience using energy infrastructure to implement its strategic objectives.

In the infrastructural domain, the most apparent moves hindering the Baltic States' synchronisation with CEN is to constrain the implementation of infrastructure projects critical to the successful implementation of synchronisation or weaken their power grids' reliability. Starting from the former, most infrastructure development occurs in Polish, Lithuanian, Latvian or Estonian territory, allowing for a degree of physical security (please see figure 2). However, the 700 MW HVDC interconnection project 'Harmony link' that will connect Polish and Lithuanian power grids in 2025 via the Baltic Sea is a more vulnerable target for Russian hybrid activities. The largest segment (around 300 km) of the cable will be laid on the bottom of the Baltic Sea, circumventing Kaliningrad's exclusive economic zone. The purpose of the cable is to maintain an electricity trading route between the Baltic States and Poland as the land-based interconnection 'LitPol link' will no longer be used for that end (please see the map below).



8 figure. Harmony link project. **Source.** Offshorewind.biz.¹⁶²

¹⁶²

<https://cdn.offshorewind.biz/wp-content/uploads/sites/6/2020/10/02142659/Harmony-Link-project-lands-%E2%82%AC720-million.jpg>

Looking at the construction of previously submerged electricity interconnections, one cannot rule out Russia disturbing the ‘Harmony link’ implementation as similar events happened before. In 2015, during the construction of the ‘NordBalt’ interconnection linking Lithuania and Sweden also via the Baltic Sea, Russian naval vessels obstructed the cable-laying activities. Under the pretext of military exercises, the Russian navy ordered a cable laying vessel to leave the area on several occasions despite the construction activity in the Lithuanian exclusive economic zone.¹⁶³

Even though Russian navy ‘drills’ has not prevented or significantly delayed the construction of ‘NordBalt’ interconnection, it encourages to look deeper at the physical protection of undersea power cables, linking the Baltic States with Poland, Sweden and Finland. At present, the submerged electricity interconnections (Nord Balt and Est links) spawn for roughly 700 km and accounts for 1700 MW of transfer capacity. With the addition of the Harmony link, it will increase to 1056 km and 2400 MW, respectively (please see table 4). Given the documented Russian interference and capabilities to damage undersea infrastructure,¹⁶⁴ submerged electricity infrastructure needs to be protected from Russian malign activities for synchronisation to be successful and the reliability of Baltic power grids ensured.

4 table. Baltic States submerged electricity interconnections

Project	Completed	Capacity	Length
Estlink 1	2007	350 MW	105 km
Estlink 2	2014	650 MW	171 km
NordBalt	2016	700 MW	450 km
Harmony link	2025 (estimate)	700 MW	330 km
Total		2400 MW	1056 km

Source. Compiled by the author.

Since the act of disrupting the construction of ‘Harmony link’ does not avoid negative publicity (wherever the pretext might be), while ‘accidents’ with other submerged power lines run a similar risk of detection and attribution, Russia could hinder the reliability of the Baltic power grids by tampering with the transmission system situated in its territory. Given the modernisation of transmission systems in Kaliningrad, continental Russia and Belarus, Moscow can exploit this

¹⁶³ Zander, C. Undersea Electricity Cable Generates Friction Between Russia and Baltics. *Wall Street Journal*, May 6, 2015. <https://www.wsj.com/articles/undersea-electricity-cable-generates-friction-between-russia-and-baltics-1430931797>

¹⁶⁴ Kabanenko, I. *Russian ‘Hybrid War’ Tactics at Sea: Targeting Underwater Communications Cables*. *The Jamestown Foundation*, January 23, 2018. <https://jamestown.org/program/russian-hybrid-war-tactics-sea-targeting-underwater-communications-cables/>

situation to its advantage. It is not an overstatement that Russia could switch off power cables interconnecting Russia with the Baltic States for ‘unexpected repairs’ or reporting ‘technical failures’. Depending on the circumstances and the extent of such measures, disconnecting power cables on purpose would weaken the reliability of Baltic power systems and inflate the electricity prices.

To amplify the damage, Russia could exploit times of weakness in the Baltic power grid when the major generation units or electricity links are not operating. Moreover, Russia could also subordinate Belarus to this end by synchronising its infrastructure ‘failures’ with ‘incidents’ in the Belarusian transmission system or during its planned system tests, when the power lines with Lithuania are switched off. As mentioned before, such measures could be applied when the regional power systems are experiencing technical issues. For example, 10 of the 11 Polish 3900 MW Belchatow coal-fired power plant’s units switched off due to the network failure, leading to Polish TSO scrambling for emergency energy imports from Germany, Sweden, Czech Republic and Slovakia and electricity prices spiking to over 300/MWh.¹⁶⁵ According to the reports, Belchatow provided the system with 3.3 GW of power, covering 16% of the Polish power demand at the time of the incident.¹⁶⁶ If Russia applies pressure during similar outages in the Baltic States, the consequences could be dire. A similar event, albeit on a much smaller scale, took place in August 2012, when Russia unplugged the power line between Pskov and Kingisepp without prior warning. Since Russia disconnected only one power line, the consequences were limited to an abrupt increase in the electricity price.¹⁶⁷

On paper, the Baltic States has surplus capacities to deal with such threats as the installed generation capacities greatly exceeds peak electricity demand. Lithuanian peak demand in 2019 amounted to 2 032 MW,¹⁶⁸ while it reached 1 570 MW in Estonia.¹⁶⁹ Without counting the 900 MW capacity of Kruonis hydro pump storage power plant,¹⁷⁰ Lithuania has 2722 MW of installed

¹⁶⁵ Scisłowska, M. Outage hampers Poland’s main power plant, felt across Europe. May 18, 2021. <https://apnews.com/article/europe-poland-technology-business-968b9576c4dee644c2a61b2765f5d353>

¹⁶⁶ Wysokie napięcie. *Almost all of Belchatów power plant has been cut-off from the power grid*, May 17, 2021. <https://wysokienapiecie.pl/37688-almost-belchatow-power-plant-cut-off-power-grid/>

¹⁶⁷ BNS. *Lietuva tirs incidentą, kai Rusija neįspėjusi atjungė elektros liniją*, August 30, 2012. <https://www.delfi.lt/verslas/energetika/lietuva-tirs-incidenta-kai-rusija-neispejusi-atjunge-elektros-linija.d?id=59412457>

¹⁶⁸ Litgrid. *Elektros gamybos ir vartojimo balanso duomenys*. <https://www.litgrid.eu/index.php/energetikos-sistema/elektros-energetikos-sistemas-informacija/elektros-gamybos-ir-vartojimo-balanso-duomenys/2287>

¹⁶⁹ Elering. *Electricity consumption and production*. <https://elering.ee/en/electricity-consumption-and-production>

¹⁷⁰ The generation of the power plant is temporary and depends on the amount of water that its reservoir has pumped-up at the moment of incident.

generation capacity,¹⁷¹ Latvia – 2923 MW¹⁷² and Estonia – 2337 MW.¹⁷³ However, a sizable part of generation capacity will not be instantaneously available due to technical (slow start, maintenance, repairs) and economic (mothballing due to unfavourable market conditions) reasons. In contrast, the accessibility of renewable generation depends on the weather conditions (wind, sun, precipitation, etc.) and is never available to the extent written on paper. Having to launch older and less efficient generation sources, the Baltic States will have to deal with larger electricity prices even if the grid stability is ensured.

To put the instrument of ‘purposeful infrastructural failure’ in perspective, one should remember that a similar event occurred on a far larger scale in the Lithuanian oil sector. On 29 July 2006, Transneft stopped supplying oil to Lithuania via the Druzhba pipeline to block the Polish company PKN Orlen from acquiring oil refinery Mazeikiu Nafta, which was owned at that time by Khodorkovsky's Yukos International. Russia claimed that an oil spill took place where a section of Druzhba branches to Lithuania does not affect oil deliveries to Europe, thus reducing the likelihood of diplomatic rebuke from the European Union and continental powers. Russian Natural Resources Oversight Agency explained that this section cannot be repaired and needs to be replaced by new pipes, and this would take one year and nine months.¹⁷⁴ By doing so, Russia sought to prevent the deal and supported its own oil companies’ bid to acquire the Lithuanian refinery by tampering with the oil supply infrastructure. Even though Lithuania offered to help Russia with the repairs, the section of Druzhba remains closed to this day, forcing the PKN Orlen to rely on alternative oil supply routes (Būtingė and Klaipėda oil terminals).¹⁷⁵

Russia cyberattacks might also target the infrastructural domain. As reported by the Lithuanian MOD, Russia was responsible for a number of cyber incidents in Lithuania, and a significant amount of reconnaissance of Lithuanian cyberspace came from Russia.¹⁷⁶ In 2018, Lithuanian National Cyber Security Centre reported that the energy sector was one of the primary

¹⁷¹ International Energy Agency. *Lithuania 2021. Energy Policy Review*. https://iea.blob.core.windows.net/assets/4d014034-0f94-409d-bb8f-193e17a81d77/Lithuania_2021_Energy_Policy_Review.pdf

¹⁷² International Renewable Energy Agency. *Latvia. Energy Profile*. https://www.irena.org/IRENADocuments/Statistical_Profiles/Europe/Latvia_Europe_RE_SP.pdf

¹⁷³ Elering. Ibid.

¹⁷⁴ Socor, V. Russian Oil Supplies to Lithuania Cut Off. *The Jamestown Foundation*. August 3, 2006. <https://jamestown.org/program/russian-oil-supplies-to-lithuania-cut-off/>

¹⁷⁵ Vitkus, G. *Russian Pipeline Diplomacy: A Lithuanian Response*, 2008. <https://src-h.slav.hokudai.ac.jp/publicn/acta/26/02Vitkus.pdf>

¹⁷⁶ Lietuvos Respublikos krašto apsaugos ministerija, Nacionalinė kibernetinio saugumo būklės ataskaita 2020 m. https://www.nksc.lt/doc/nacionalinio_kibernetinio_saugumo_bukles_ataskaita_2020.pdf

targets of signal intelligence.¹⁷⁷ The past events show that Russia is willing to use cyber attacks in dealing with damage to its adversaries. Russian cyberattacks during the Bronze soldier riots in 2007 affected Estonian Government bodies, banks and media outlets, taking down their online services, obstructing the functions of Estonian officials and interfering with the day-to-day routines of its citizens.¹⁷⁸ Given that Russia does not refrain from attacking the US critical infrastructure, one can expect that the Baltic power grids might be targeted.¹⁷⁹

As mentioned before, damaging infrastructural domain exerts pressure on other domains, such as economic (inflating energy prices/creating resource shortages), informational (questioning the rationale of synchronisation), societal (framing dissatisfaction in the society), diplomatic (persuading partners that implementing synchronisation is untenable) and political (pressuring government to rethink synchronisation) domains. At the same time, Russian capabilities to hinder these domains largely depends on its success in executing hybrid activities on the infrastructural domain. Russia can hardly persuade the Baltic States' societies to believe that synchronisation is a costly and redundant project if the electricity supply is not interrupted and the prices are stable. On the contrary, unstable electricity supply and volatile prices enable promoting such a message with infrastructural domain serving as a primary gateway to achieving this end.¹⁸⁰

In some instances, Russia could use its presence in the Baltic market to advance their hostile narratives to synchronization by utilizing its market presence and a competitive edge. In the past, Russia made natural gas prices conditional to delaying the implementation of the EU's Third Energy Package and constructing an LNG terminal. The electricity embargo constraints Belarusian capabilities to influence electricity prices in the Baltic States, and the regime currently can only use rhetorics. If the electricity trading restrictions would not be in place, Belarus could dump electricity to the Baltic States to negotiate for long-term trading opportunities after the synchronization is complete. To this end, Belarus has a short window of opportunity that is rapidly closing. Belarus will start repaying its loan for Ostrovets NPP to Russia only in April 2023, allowing it to sell the electricity for a price that temporarily does not account for capital cost – the main component of the electricity price structure. By drawing on the example of Ignalina NPP, which sold electricity for a price that

¹⁷⁷ Lietuvos Respublikos krašto apsaugos ministerija, Nacionalinė kibernetinio saugumo būklės ataskaita 2018 m. https://www.nksc.lt/doc/NKSC_ataskaita_2018.pdf

¹⁷⁸ McGuinness, D. How a cyber attack transformed Estonia, *BBC*. April 27, 2017. <https://www.bbc.com/news/39655415>

¹⁷⁹ Temnycky, M. Russian cyber threat: US can learn from Ukraine. Atlantic Council, May 27, 2021. <https://www.atlanticcouncil.org/blogs/ukrainealert/russian-cyber-threat-us-can-learn-from-ukraine/>

¹⁸⁰ In general, Russia remains active in promoting naratives that the Baltic energy policies envisagin the construction of strategic energy infrastructure are costly and unnesesary.

has not included the capital costs, Belarus could make a temporary offer its electricity for as much as 2 euro cents/kWh, hoping to sell it for the market price later, once it secures the access to the Baltic energy market.

Moving to the diplomatic domain, Ostrovets NPP has already proved instrumental for Russia in promoting political divisions in the Baltic Sea Region. Being the closest to the location of Ostrovets NPP, Lithuania has chosen the most strict policy (electricity trade embargo issued in 2017) towards the nuclear power plant in Belarus and sought to persuade its neighbours to do the same. In Tallinn, however, the Ostrovets question was ‘framed more in terms of the impact on markets and technical systems than as a highly political and national security issue.’¹⁸¹ While Riga ‘sought to prevent a spillover of potential disagreements with Moscow and Minsk over electricity trade into the transport sector, parts of which—especially railways and ports—still rely heavily on the transit of goods from Russia and Belarus’.¹⁸²

The divergence of positions resulted in three years of diplomatic friction between the Baltic States on how to best deal with the Ostrovets NPP that is not fully solved. Even if the political agreement has been successfully brokered in late 2020, the Baltic States still have not agreed on the common electricity trading methodology with the third countries, leaving room for further disagreements. For example, the Lithuanian Energy Minister argues that the electricity produced in Ostrovets NPP enters the Lithuanian market because of swap deals involving Ukraine,¹⁸³ while Latvia maintains that the certificate system is working and Belarusian electricity is not entering the market.¹⁸⁴ Such disagreements run the risk of spilling over to the synchronization process.

In the end, Russia has various tools to exert pressure on the Baltic synchronisation project, while Belarus mostly play the supportive role for Russian hybrid activities. The analysis indicates a clear hierarchy of domains that needs to be protected from Russian and Belarusian interference. At first comes the infrastructural and economic domain that mainly determines the attitude of the Lithuanian, Latvian and Estonian societies to the synchronization with CEN as their primary concerns

¹⁸¹ Jermalavičius, T. *Hybrid Atoms: Rosatom's Projects and Russia's Geopolitical Strategy*. International Centre for Defense and Security, November 19, 2020. <https://icds.ee/en/hybrid-atoms-rosatoms-projects-and-russias-geopolitical-strategy/>

¹⁸² Ibid.

¹⁸³ Budzinauskas, V. Kreivys: Baltarusija laikinai nebegauna pajamų iš Baltijos šalių už Astravo elektrą. *Lietuvos radijas ir televizija*, April 24, 2021. <https://www.lrt.lt/naujienos/verslas/4/1388502/kreivys-baltarusija-laikiniai-nebegauna-pajamu-is-baltijos-saliu-uz-astravo-elektra>

¹⁸⁴ Šemelis, A. Latvija atmeta kaltinimus dėl prekybos baltarusiška elektra: naudojama sistema užtikrina, kad tai būtų neįmanoma. *Lietuvos radijas ir televizija*, February 4, 2021. <https://www.lrt.lt/naujienos/verslas/4/1337103/latvija-atmeta-kaltinimus-del-prekybos-baltarusiska-elektra-naudojama-sistema-uztikrina-kad-tai-butu-neimanoma>

are uninterrupted and affordable electricity supply. The diplomatic domain ranks in second place. Synchronisation is built on many consensuses on various levels (between Lithuania, Latvia, and Estonia; between the Baltic States, Poland and the EU, between Baltic and Polish TSOs and the ENTSO-E, etc.). Braking these subtle consensuses would result in attempts to renegotiate the synchronisation conditions, potentially delaying its implementation. Informational, societal and political domains play a secondary role as their effectiveness largely depends on Kremlin's ability to trigger dissatisfaction with the government and its energy policies in the Baltic societies by inflating energy prices or disturbing its supply.

5. Synchronisation Moving Forward

The Baltic States are preparing to meet the challenges that lay ahead to navigate the hybrid threat landscape. Consistently with the findings in the previous chapter, this section argues that Baltic States' readiness to counter Russian and Belarusian hybrid activities towards their synchronization with CEN rest upon implementing the foreseen infrastructure projects, maintaining the functionality of their power grids and keeping electricity prices at stable and affordable levels.

To navigate the hybrid threat environment unscathed, the Baltic States need to hasten their efforts to upgrade strategic energy infrastructure and test the operation of their power grids in an isolated mode. It is crucial as Russia has already tested Kaliningrad's capability to work independently from the IPS/UPS, and the interdependences between Baltic and Kaliningrad's power grids no longer constrain Russian coercive policies. With Belarus also showcasing its capability to operate independently from its interconnections with Lithuania and its regime's survival becoming increasingly dependent from favours from Moscow, the Baltic States must not lag behind and enhance their readiness to operate in isolation from the IPS/UPS and jointly test this capability in practice.

The Baltic States have already achieved significant progress in this regard. In 2014, Estonia completed the natural gas-fired Kiisa Emergency Reserve Power Plant that can provide 250 MW of power in 10 minutes and stabilise Estonia's power grid.¹⁸⁵ Lithuania will add an additional 200 MW of emergency power reserve capacity by constructing four 50 MW batteries by 2022, capable of storing 200 MW/h of electricity.¹⁸⁶ In 2020, Lithuania also announced intentions to strengthen its capabilities to work in an isolated mode by making older power generation capacities available. In particular, to restore the capacities of the Lithuanian power plant's 7th and 8th units in Elektrėnai (600 MW total generation capacity) and the first unit of the 3rd Vilnius power plant (180 MW).¹⁸⁷ Lithuania is also upgrading the HVDC 'LitPol link' interconnection to create the conditions for emergency synchronous connection with Poland this year.¹⁸⁸

¹⁸⁵ *ABB generators play a key role in securing Estonia's electricity supplies*, ABB. <https://new.abb.com/motors-generators/case-studies/kiisa-emergency-reserve-power-plant>

¹⁸⁶ Lietuvos Respublikos energetikos ministerija. *Vyriausybė pritarė elektros kaupiklių projekto įgyvendinimui*, January 10, 2020. <https://enmin.lrv.lt/lt/naujienos/vyriausybe-pritare-elektros-kaupikliu-projekto-igyvendinimui>

¹⁸⁷ *Dėl Lietuvos Respublikos elektros energetikos sistemos savarnkiškumo ir patikimumo stiprinimo priemonių plano patvirtinimo*, <https://e-seimas.lrs.lt/portal/legalAct/lt/TAD/6bbffb7427e511eb8c97e01ffe050e1c?jfwid=3d5v25azk>

¹⁸⁸ *Galingiausias Baltijos šalyse autotransformatorius sėkmingai atgabentas iki „LitPol Link“ jungties, 15 min.* May 18, 2021. <https://www.15min.lt/verslas/naujiena/energetika/galingiausias-baltijos-salyse-autotransformatorius-sekmingai-atgabentas-iki-litpol-link-jungties-664-1505376>

To protect the integrity of the Baltic power grids, Lithuania, Latvia, and Estonia also need to test their operation in an isolated mode. The joint test of the Baltic power systems was scheduled to take place in June 2019, but Latvian and Estonian TSOs decided to delay the test as there were doubts whether it will be successful.¹⁸⁹ Not having tested their power grids in isolation, the Baltic States have delayed implementing one of the requirements of the principle for completing the synchronisation with CEN and has not scrutinised the weakness and strengths of their network in field conditions. Despite delaying the joint isolated system trial, the Baltic States have accumulated some national and regional experience. Estonia has conducted some tests in the past, while the Baltic States and Belarus have jointly tested their capabilities to run the power grids in isolation from the Russian mainland in 2002.¹⁹⁰ Lithuania recently tested its power grid by creating artificial energy islands and reconnecting them later in May 2019 and August 2020 with the help of HVDC interconnections.¹⁹¹ By the end of the year, Lithuania also plans to conduct an isolated system test on the national level. Such a test, even though contributing to the security of the national power grid, cannot substitute the isolated joint trial of the Baltic power networks that should be completed as rapidly as possible, and Lithuania encourages its Baltic partners to conduct the test by 2023 and be ready to work in isolation from Russia and Belarus if circumstances would force them to do so.¹⁹²

Capable of ensuring the reliability of the power grids at a time when the interdependence between the Baltic and Kaliningrad power systems no longer constrains Russian malign activities, the Baltic States will mitigate the most pressing national security risks in the energy domain. Dealing with other risks cannot be achieved without openness, compromise and cooperation. For example, protecting the submerged cross-border transmission cables, fending against cyberattacks, disinformation campaigns and economic and diplomatic pressure requires interagency work to identify and neutralize the emerging hybrid threats. Willingness to cooperate is key given the multilayered nature of the synchronisation project, involving many stakeholders with different areas of responsibilities and the already introduced complexity of hybrid threats. For the Baltic flagship energy project to succeed, institutions responsible for implementing synchronisation must also work

¹⁸⁹ The Baltic Course. *Estonia, Latvia postpone power grids' isolated operation test*, February 5, 2019. <http://www.baltic-course.com/eng/energy/?doc=147087>

¹⁹⁰ AST. *Baltic TSOs Postpone the Baltics' Power System Isolated Operation Test*. <https://www.ast.lv/en/events/baltic-tsos-postpone-baltics-power-system-isolated-operation-test>

¹⁹¹ Litgrid. *Lietuvos elektros energetikos sistemos savarankiško darbo bandymas įvyko sklandžiai*. <https://www.litgrid.eu/index.php/naujienos-ir-ivykiai/naujienos/lietuvos-elektros-energetikos-sistemos-savarankisko-darbo-bandymas-ivyko-sklandziai-10106>

¹⁹² *Aštuonioliktosios Lietuvos Respublikos Vyriausybės programos nuostatų įgyvendinimo planas*. <https://lr.lt/uploads/main/documents/files/VPN%C4%AEP%20projektas.pdf>

in synchronism, finding a common position on most pressing issues, assisting each other in times of need and communicating a coherent message.

To that end, the officials representing different states and institutions must be aware of each others mandate, responsible personnel, available resources and various constraints, allowing to facilitate efficient and rapid cooperation both on a regular basis and at times of crisis. Here, the Baltic States can lean on a diverse pool of international institutions. Three NATO's centres of excellence are working in the Baltic States working on the thematical fields that are more or less related with the hybrid challenges facing the Baltic synchronization with CEN: Energy Security Centre of Excellence in Vilnius, Strategic Communications Centre of Excellence in Riga and Cooperative Cyber Defence Centre of Excellence in Tallinn. The Hybrid COE and EC's JRC can also create value. By preparing analytical/academic studies, organizing workshops and exercises and conducting educational activities, these institutions not only promote situational awareness or communicates the importance of the Baltic synchronization project with a broad international audience, but they also help to build institutional linkages between the stakeholders responsible for the smooth transition from the IPS/UPS to CEN. Contributing to the institutional pool, Lithuania has established a Regional Cyber Defence Centre as an element of the National Cyber Security Centre under the Ministry of National Defence in July 2021. With the support of the United States, the Centre will focus on daily practical cooperation¹⁹³ and could also assist national authorities in protecting the critical energy infrastructure from cyber attacks.

To put this in perspective, the NATO Energy Security Centre of Excellence organises Table Top Exercises Coherent Resilience (CORE) since 2014, and in 2021 the exercises will focus on protecting critical energy infrastructure in the Baltic Sea Region, with a specific emphasis on electricity supply resilience during desynchronization from the IPS/UPS. With the participation of the JRC and the European Commission, the exercises will serve as an essential step in supporting national authorities and Baltic TSO's to deal with the hybrid threats by facilitating interoperability between different national bodies.¹⁹⁴ The exercises will also help to scrutinize current readiness to

¹⁹³ For more information, please see: Ministry of National Defence of the Republic of Lithuania. *Regional Cyber Defence Centre officially starts work*, 15 July, 2021. https://kam.lt/en/news_1098/current_issues/regional_cyber_defence_centre_officially_starts_work.html

¹⁹⁴ Transmission system operators, national authorities in the field of energy, national defense and foreign affairs, EU and international institutions, and other stakeholders from the Baltic States, Finland, Poland and Sweden will participate in the exercise.

face hybrid challenges to the synchronization project by identifying weaknesses in the existing procedures and plans.¹⁹⁵

In some instances, only the Baltic States can find diplomatic compromises. For example, the Baltic States have all the necessary instruments at their disposal to minimize the possibilities of Belarusian electricity entering the Nord Pool market, neutralizing a major source of diplomatic friction and not reducing the reliability of their power system at the same time. First, the Baltic States should consider gradually lowering the capacity available for electricity trade on the Latvian – Russian border (Lithuania propose to lower the capacity to 320 MW).¹⁹⁶ Recognising that Belarusian and Russian interests of selling electricity to the Baltic markets are competing, such a ‘capacity bottleneck’ will make it harder for Belarus to persuade Russia in helping to smuggle its electricity Westward as Russia would be forced to choose from exporting its electricity or helping Belarus. Since Belarus is already indebted to Russia and its larger neighbour sets the natural gas supply price that then determines the competitiveness of its natural gas-based generation, Russia should not be interested in promoting ‘electricity smuggling’. The gradual reduction of trading capacity will help reduce the chances of Belarusian electricity entering the Baltic States, but it will also smoothen the transition period to the full stop in trading electricity with the third countries once the synchronisation is complete in 2025.

The Baltic States can also utilize diplomatic and regulatory instruments to that end. Starting from the former, the Lithuanian energy minister connects Belarusian electricity entering Lithuania and periods when Belarus and Ukraine are trading electricity.¹⁹⁷ Hence, the Baltic States should support Lithuanian attempts to persuade Ukraine not to trade electricity with Belarus even if they disagree with the statement as it also contributes to isolating Ostrovets NPP. Moving to the latter, the Baltic States should not limit themselves to maintaining a certificate of origin system and use the infrastructure tax for the electricity imported from the third countries that would ensure fairer conditions for competition between electricity that is subject to environmental regulations and taxation (EU) and the one that is not subject to them (3rd countries). By combining these tools, the

¹⁹⁵ Ministry of Economics of the Republic of Latvia. *NATO ENSEC COE started the preparation for its flagship exercise Coherent Resilience 2021-Baltic*, 18 December, 2020. <https://www.em.gov.lv/en/article/nato-ensec-coe-started-preparation-its-flagship-exercise-coherent-resilience-2021-baltic>

¹⁹⁶ Ministry of Energy of the Republic of Lithuania. *Minister of Energy Dainius Kreivys meets with Latvian Minister of Economics Jānis Vitenbergs in Riga*, 1 July, 2021. <https://enmin.lrv.lt/en/news/minister-of-energy-dainius-kreivys-meets-with-latvian-minister-of-economics-janis-vitenbergs-in-riga>

¹⁹⁷ Budzinauskas, V. Ibid.

Baltic States will successfully block the export of Belarusian electricity and better prepare their markets for the upcoming unbundling from trading with the third countries.

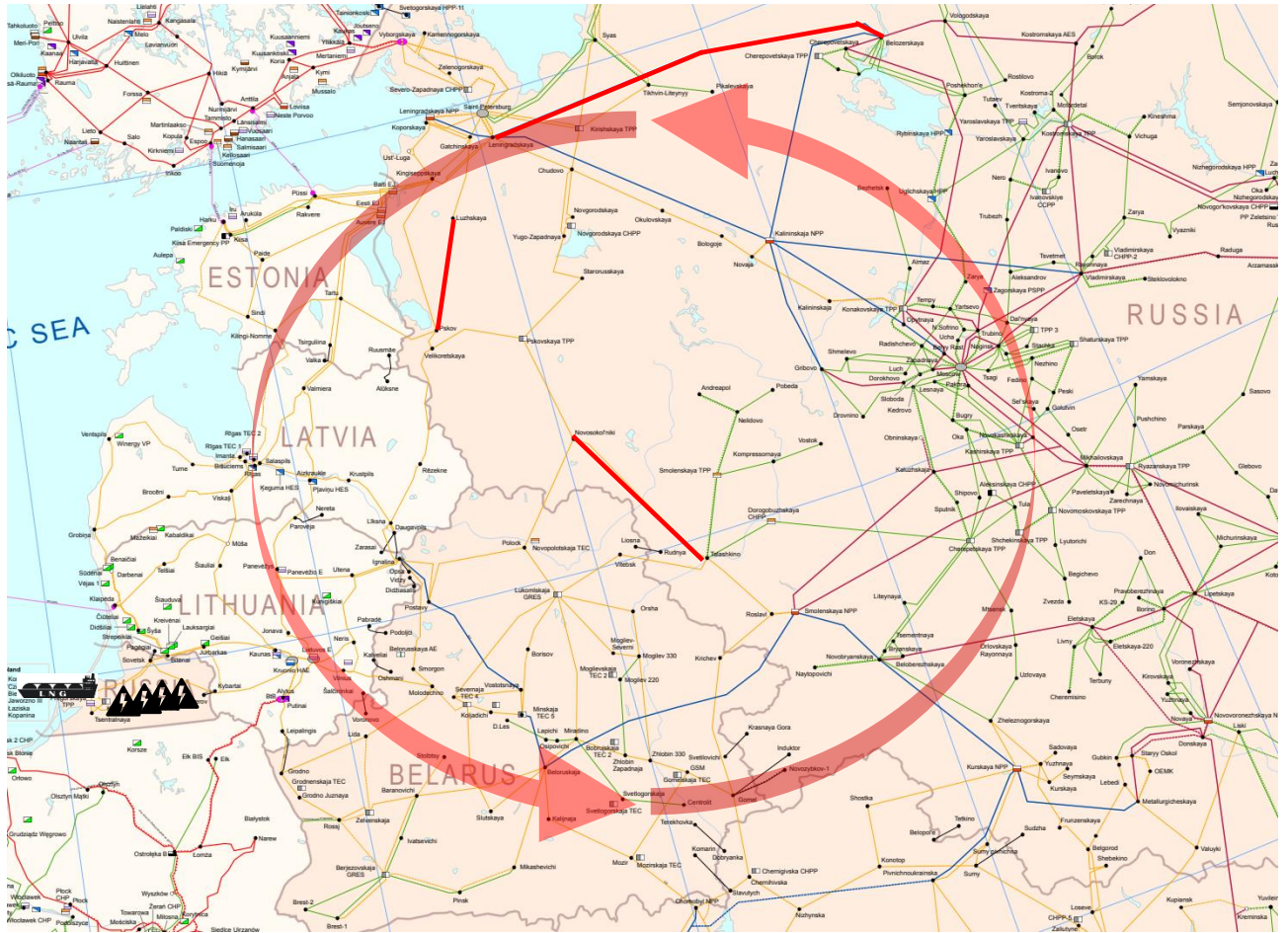
Continuing the discussions on diplomacy, the Baltic States should keep the negotiations for exiting the BRELL agreement on the TSO level. Negotiating on the technical level within the boundaries of the BRELL agreement does not allow Belarusian and Russian system operators to demand financial compensations for the termination of the agreement. On the contrary, opening a political negotiation with Russia and Belarus for smooth unbundling of Baltic power grids from the IPS/UPS creates an opportunity for them to extract side payments. Their requirements might include maintaining electricity trading once synchronization is complete, constructing BtB converters on the cross-border interconnections between the Baltic States and Russia and Belarus to allow a technical possibility to trade electricity in the future or to compensate for Russian investments in Kaliningrad's power generation units or grid reinforcements in its mainland.

Lastly, the Baltic States should focus on public relations by developing a unified message that clearly and consistently explains why specific decisions related to synchronization are necessary—for example, clarifying to the societies why synchronization is beneficial on geopolitical, economic and technical grounds and how Russia might attempt to exert pressure on the project. One also need to explain why electricity trading with the 3rd countries should be discontinued and present the macroeconomic and geopolitical implications of this endeavour. Given the current state in public discussion, where disagreement to state's policies is often interconnected with implicit accusations of being loyal to Russia, public information strategy should not create further divisions in the society by attaching labels to the critics. On the contrary, standard messaging should focus on explaining geopolitical, economic, technical, societal and environmental factors that win hearts and minds and counter the Russian narrative of synchronization being an expedient energy project.

About the author. Justinas Juozaitis is a Policy analyst at the Centre for the Defence Analysis, General Jonas Žemaitis Military Academy of Lithuania and a Fellow at NATO ENCEC COE. He also teaches energy security policy at the Faculty of Political Science and Diplomacy, Vytautas Magnus University, where he defended his PhD thesis on Lithuanian foreign policy vis-à-vis Ostrovets NPP. Previously, Justinas worked at the Energy Security Research Centre and participated in the Future Energy Leaders (FEL-100) programme at the World Energy Council.

Annex

The BRELL Ring and Russian Grid Reinforcements



Source. ENTSO-E.