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DEVELOPMENT POLICY DIRECTIONS ON CLIMATE CHALLENGES IN SELECTED CENTRAL AND EASTERN EUROPEAN COUNTRIES

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Purpose: The aim of this article is to identify and comparatively analyse the development policy directions of four Central and Eastern European countries - Poland, Latvia, Lithuania and Estonia - in the context of the climate requirements arising from the EU Fit for 55 package. Particular attention is paid to Poland, facing an unprecedented decarbonisation challenge in its coal-dependent energy sector, and to Latvia, which stands out as the regional leader in the energy transition owing to the dominance of renewables in its generation mix.
Design/methodology/approach: The article is based on a review of national energy and climate plans (NECPs), reports of the International Energy Agency (IEA), documents and legislation of the European Commission and the European Parliament, and peer-reviewed academic literature published up to 2024. A comparative analysis approach and strategic document analysis were applied.
Findings: The four countries studied, operating within the same EU legal framework, pursue their climate transitions along markedly different paths, reflecting their distinct structural starting points. Poland faces the most capital-intensive transformation; Latvia benefits from an established renewable base; the three Baltic states demonstrate high effectiveness of regional cooperation, confirmed by the synchronisation of their electricity grids with the Continental European Network in February 2025.
Research limitations/implications: The analysis is of a review character and relies on strategic documents that may be updated in the rapidly changing policy environment. Future research should include empirical studies measuring the actual effects of specific national policy instruments, with particular focus on emissions indicators and energy efficiency benchmarks.
Practical implications: The findings may be of use to policymakers and energy analysts seeking comparative models for national climate and energy policy design. Latvia's example of integrating energy security with climate goals, and the Baltic model of cross-border cooperation, offer reference points for strategy formulation across the CEE region.
Social implications: Just transition - the social dimension of climate policy - is of particular significance in Poland, given the hundreds of thousands of workers employed in the coal sector. Similar challenges, though on a smaller scale, affect Estonia's Ida-Virumaa region, which is dependent on oil-shale extraction.
Originality/value: The article combines an analysis of four distinct energy systems within a single comparative framework, highlighting both the common EU regulatory architecture and the structural differences that determine divergent transition pathways. The synthesis covers the literature up to 2024, including the key IEA Energy Policy Review of Latvia (2024).

Keywords: climate policy, energy transition, Fit for 55, Central and Eastern Europe, Poland, Latvia, Baltic states, renewable energy sources, decarbonisation.
Category of the paper: General review.

1. Introduction

Climate change has become one of the defining civilisational challenges of the twenty-first century, exerting ever-increasing pressure on the direction of public policy at both the global and the continental level. The European Union has consistently positioned itself as a global leader in this field. The adoption in 2021 of the Fit for 55 package - a comprehensive set of legislative instruments aimed at reducing greenhouse gas (GHG) emissions by at least 55% by 2030 relative to the 1990 baseline, with a perspective of full climate neutrality by mid-century - gave these ambitions a hard, legally binding form (European Commission, 2021). However, meeting such ambitious targets is far from equally straightforward for all member states; differences in financial capacity and inherited energy structures mean that EU climate commitments present a profoundly differentiated challenge in practice.

This article focuses on four Central and Eastern European countries: Poland, Latvia, Lithuania and Estonia. The selection is deliberate. Poland represents the extreme case in terms of the difficulty of decarbonisation, being the only EU member state that still derives more than half of its electricity from coal. Latvia offers a regional counterexample: a country whose generation mix has long been dominated by renewables and which exploits this advantage to bolster energy security as well. Lithuania and Estonia complete the picture, illustrating how the geopolitical ramifications of Russia's aggression against Ukraine can paradoxically accelerate decarbonisation decisions that had previously remained in the realm of long-term plans.

The article's principal objective is to identify and critically assess the key directions of national energy and climate strategies in the selected countries, with particular attention to: renewable energy targets and their share in national energy balances, support mechanisms for sectors undergoing structural change, institutional and financial barriers to transition, and regional cooperation initiatives. The evidence base comprises national energy and climate plans (NECPs), IEA reports, documents and acts of the European Commission and the European Parliament, and peer-reviewed academic literature published up to 2024.

2. Analytical framework: climate development policy in Central and Eastern Europe

The Fit for 55 package represents the most far-reaching legislative initiative ever launched by the European Union in the area of climate and energy. It encompasses the revision of the Renewable Energy Directive (RED III, setting a 42.5% RES target by 2030), the amended Energy Efficiency Directive, an expanded Emissions Trading System (ETS) - including its extension to maritime transport and a new mechanism for buildings and road transport (ETS2) - an Effort Sharing Regulation (ESR) distributing national GHG reduction obligations, and a Carbon Border Adjustment Mechanism (CBAM) (European Commission, 2021; Ringel, Knodt, 2018). Together, these instruments impose on the countries of the CEE region a set of legally binding obligations that must be translated into concrete sectoral actions.

European Commission estimates point to the need for annual investments equivalent to roughly 5% of EU-wide GDP - a figure unprecedented in the history of European structural policy (European Commission, 2021). For CEE economies, which combine lower GDP per capita with a stronger reliance on capital-intensive heat and power generation based on fossil fuels, the investment burden is proportionally greater than for the more prosperous Western member states. This is precisely why the Just Transition Fund (JTF) - a tool designed to cushion the consequences of restructuring for coal-dependent regions and communities - has become such a contested instrument in budget negotiations (World Bank, 2024; Stala-Szlugaj, Mirowski, 2021).

A distinct layer of complexity was added by Russia's military aggression against Ukraine, launched in February 2022. The invasion triggered a profound reordering of energy security priorities across the CEE region. The near-immediate consequence was a shift towards diversifying supply routes and accelerating investment in domestic renewable sources as substitutes for imported fossil fuels. The cascade of measures embedded in the REPowerEU framework strengthened this impulse, creating new obligations and funding streams specifically oriented towards reducing dependence on Russian energy carriers (IEA, 2024a). For the Baltic states, this translated into an urgent imperative to complete the desynchronisation of their electricity systems from the BRELL ring and their integration into the Continental European Network (CEN) (China-CEE Institute, 2023).

3. Poland: decarbonisation as a structural challenge

Poland occupies a singular position in the European energy landscape. It is the only EU member state in which hard coal and lignite together still account for more than 60% of national electricity generation. This structural dependence, deeply rooted historically in both the industrial and the social fabric, constitutes the most acute transformation challenge in the entire CEE region (Ember, 2023; Clean Energy Wire, 2024). Coal-fired electricity output has been declining year on year - from approximately 88 TWh in 2019 to around 76.6 TWh in 2023 (Brodny, Tutak, 2022; MDPI/Energies, 2024) - yet the pace of this decline still falls short of what EU climate policy requires.

There is an instructive paradox at the heart of Poland's situation: the renewable energy sector has been developing far faster than official planning documents foresaw. Installed solar capacity reached approximately 14 GW as early as mid-2023, whereas the Energy Policy of Poland until 2040 (PEP2040), adopted only two years earlier, projected 5-7 GW by the end of the decade (ECFR, 2024). Total installed RES capacity grew from 7.5 GW to 31.8 GW between 2019 and 2024 (MDPI/Energies, 2024). This gap between official planning and market dynamics reveals a fundamental weakness of Polish energy governance.

PEP2040, adopted in February 2021, set the following targets: a maximum 56% coal share in electricity generation and 23% RES in final energy consumption by 2030, commissioning of the first nuclear power plant by 2033, and a 30% reduction in GHG emissions relative to 1990 (IEA, 2021). Even at the time of adoption, these targets were widely regarded by analysts as inadequate in the light of Fit for 55 requirements (Ember, 2023). In response, Poland submitted in 2024 a draft updated National Energy and Climate Plan (NECP) presenting two scenarios: the baseline WEM - with a 43% GHG reduction by 2030 - and the more ambitious WAM, projecting a 53% reduction and a 53.2% RES share in electricity generation (CEE Energy News, 2024; European Parliament, 2024). The European Commission acknowledged the update while pointing out that the declared RES share in final energy consumption (29.8%) remains below the calculated national contribution of 32% needed to achieve the EU-wide target of 42.5% (European Parliament, 2024).

Four main investment axes of the Polish energy transition can be identified. The first is the accelerated expansion of renewable sources, with a strong emphasis on household and industrial photovoltaics and offshore wind on the Baltic Sea - current plans envisage up to 9.6 GW of offshore capacity by 2040. The second is nuclear energy: the planned construction of three large AP1000 reactors (Westinghouse) and the exploration of small modular reactor (SMR) concepts, with the first unit expected to enter service around 2033, aim to provide a stable, zero-emission backbone for the power system after 2035 (ECFR, 2024; CATF, 2024). The third axis is the decarbonisation of district heating - a priority explicitly flagged in the Council of the EU's 2024 country-specific recommendations - combined with large-scale building renovation. The fourth

is the electrification of transport and the build-out of charging infrastructure; transport remains the only sector that has registered an increase in emissions compared to 1990 (Clean Energy Wire, 2024).

Poland's challenge is not purely technological. Estimated investment requirements for the five-year period 2026-2030 alone amount to approximately EUR 185 billion (European Parliament, 2024). Furthermore, the Social Agreement concluded with mining trade unions in 2021 - which guarantees the continued operation of most collieries until 2049 and regulates the pace of their gradual closure - sets real political constraints on the speed of change. While criticised by environmental organisations for locking in coal far too long, the agreement does provide legal certainty for miners and creates a framework for an orderly rather than chaotic exit from coal (Stala-Szlugaj, Mirowski, 2021). The change of government following the October 2023 elections opened a more pro-European chapter in Polish climate policy, though inherited social commitments continue to define the realistic boundaries of transformation (Forum Energii, 2024).

4. Latvia: transition from a privileged starting position

The characteristics of Latvia's energy sector are fundamentally different from Poland's. Already in 2022, without any special adaptive measures, renewable sources accounted for approximately 76% of the country's total electricity generation - a dominance owed primarily to hydropower on the Daugava River (roughly 55% of generation) and supplemented by biomass and biogas capacity (IEA, 2024a). Such a high initial position means that Latvia has already largely achieved what Poland is still striving for on the 2030 horizon.

An important critical caveat must nonetheless be entered here. A large share of Latvia's historical GHG reductions - approximately 59% relative to 1990 levels by 2021 - was the product of the severe economic recession of the 1990s rather than deliberate climate action. The IEA explicitly notes that without additional effort the country may fail to maintain the trajectory required to achieve its 65% reduction target by 2030 (excluding LULUCF) (IEA, 2024a). In other words, a comfortable starting point does not excuse a country from continuing purposeful action.

Latvia's updated National Energy and Climate Plan for 2021-2030 sets as its headline indicator a 57% RES share in final energy consumption by 2030, with an updated ambition closer to 60% communicated to the European Commission (IEA, 2024a; IEA News, 2024). The establishment in January 2023 of a dedicated Ministry of Climate and Energy - consolidating competences previously dispersed across several ministries - was assessed by the IEA as a meaningful step towards greater policy coherence. One of the ministry's early visible results was the activation of the public debate on accelerated onshore wind development and

the streamlining of permitting procedures for wind farms. Latvia has simultaneously set a target of 1.5 GW of installed solar capacity by 2030; in 2024 solar capacity more than tripled and photovoltaics advanced to the third position among domestic electricity sources (IEA, 2024a).

Battery energy storage systems (BESS) constitute a critical element of the new infrastructure. Latvenergo - the dominant state-owned energy group - has planned 250 MW/500 MWh of cumulative battery storage capacity by 2030. Co-financing is drawn from Latvia's Recovery and Resilience Plan (NRRP), which allocates 38.1% of total funds to green transition objectives (European Parliament, 2022). The IEA (2024a) simultaneously flags areas requiring reinforcement: the absence of detailed sectoral roadmaps for the pathway to 2050, delays in simplifying administrative procedures for RES investment, and the energy-intensive building stock and ageing vehicle fleet that necessitate intensive renovation and electrification programmes.

5. Lithuania and Estonia: geopolitical catalyst for energy transition

Among the Baltic states, Lithuania has adopted the most resolute stance on severing energy dependence on Russia. In April 2023 it became the first of the three to conduct a full island-mode test of its electricity system - for ten uninterrupted hours the Lithuanian grid operated in complete isolation from the BRELL network, demonstrating technical readiness for desynchronisation (China-CEE Institute, 2023). Lithuania initially lobbied for completing the entire project as early as the first half of 2024; ultimately, following negotiations with Latvia and Estonia, a date of February 2025 was agreed upon.

In terms of its target energy mix, Lithuania aims to generate at least 70% of its electricity from domestic sources by 2030, effectively reversing a long-standing net import balance. The long-term goal - 100% renewable electricity by 2050 - will require intensive offshore wind development in the Baltic Sea along with adequate system flexibility through energy storage and demand-side management (IEA, Lithuania review). Lithuania is also the principal advocate of the Baltic Energy Hub concept - a shared integration point for regional renewable generation with transmission capacity sized to export clean power to Central Europe, estimated to be capable of producing up to seven times the Baltic region's combined electricity consumption (Baltic Wind, 2024).

Estonia grapples with a challenge that is unique among the four countries studied: the need to phase out oil shale, the fuel that formed the backbone of the country's energy security for decades and sustained the livelihoods of thousands of workers in the north-eastern Ida-Virumaa region. Analysts project that, from around 2027 onwards, Estonian oil-shale power plants may lose market viability under high ETS allowance prices, creating a natural economic incentive for transition even without direct regulatory mandates (European Commission/Estonia NECP,

2023). Estonia's emerging generation mix is to be built around onshore wind and biomass, complemented by a growing photovoltaics share and energy storage. As a country with a strong digital tradition, Estonia sees smart grid technologies and artificial intelligence in grid management as a distinguishing feature of its own decarbonisation pathway (ScienceDirect, 2024; European Commission/Estonia NECP, 2023).

6. Regional energy cooperation as a driver of climate transition

The synchronisation of the electricity systems of Lithuania, Latvia and Estonia with the Continental European Network (CEN) - completed over the weekend of 8-9 February 2025 - is arguably the most momentous infrastructure achievement in the history of Baltic Sea energy cooperation. The project, formalised by agreement in 2018 and dramatically accelerated following Russia's invasion of Ukraine, attracted total financing of over EUR 2 billion, of which more than EUR 1.2 billion was provided by the European Union through the Connecting Europe Facility (CEF) (European Commission/BEMIP, 2024). The technical transition - disconnecting from the BRELL ring and synchronising via the LitPol Link interconnector with the Polish PSE grid - lasted approximately 24 hours. The legal and market consequence is the full integration of the Baltic states as equal participants in the common European electricity market, with access to its pricing mechanisms, trading rules and emergency solidarity arrangements.

The Baltic Energy Market Interconnection Plan (BEMIP) has been coordinating multilateral energy cooperation in the Baltic Sea region since 2009, encompassing transmission infrastructure, gas and hydrogen markets, and offshore wind. Three hydrogen project corridors under BEMIP, including the Nordic-Baltic Hydrogen Corridor linking production sites in Finland with demand centres in Germany via Estonia, Latvia, Lithuania and Poland, were included on the first EU list of Projects of Common Interest (PCIs) that entered into force in April 2024 (European Commission/BEMIP, 2024). The Baltic Energy Hub initiative - announced in October 2024 by the energy ministers of the three Baltic states - envisages the creation of an integrated renewable energy centre capable of exporting clean electricity to Central Europe at volumes far exceeding regional domestic consumption (Baltic Wind, 2024)).

Table 1 below provides a comparative overview of the key indicators and climate policy priorities of the four countries analysed.

Table 1.
Key climate policy indicators and priorities for Poland, Latvia, Lithuania and Estonia

Criterion	Poland	Latvia	Lithuania	Estonia
Dominant energy source	Coal ~60-65% of electricity generation (2023)	RES ~76%; mainly hydropower and biomass	Growing RES share; net electricity importer	Oil shale; rapid phase-out underway
RES target 2030	29.8% of final energy consumption (NECP)	57-60% of final energy consumption	70% of electricity from domestic sources	Full renewable electricity by 2050
GHG reduction by 2030 (vs. 1990)	43-53% (WEM/WAM scenarios)	65% (excl. LULUCF)	In line with EU ESR	In line with EU ESR
Nuclear energy	3 AP1000 units + SMR (from ~2033)	No plans	Visaginas project (regional discussions)	Under consideration (SMR technologies)
CEN grid integration	LitPol Link interconnector (since 2015)	Synchronisation completed February 2025	Synchronisation completed February 2025	Synchronisation completed February 2025
Just transition	Social Agreement: mines operational until 2049	Regional support under NRRP	Regional RES support programmes	Restructuring of Ida-Virumaa oil-shale region

Source: Own compilation based on national NECP documents, IEA reports (2024a, 2024b) and European Commission documentation.

7. Discussion: shared framework, divergent transition pathways

Setting the analysed strategies side by side, one is compelled to conclude that the divergence in the routes taken towards a commonly declared goal is not a faulty anomaly but an inevitable consequence of heterogeneous starting points. Poland's climate transformation is, in equal measure, a political and social transformation - it requires dismantling an industrial fabric that has defined the economic identity of entire regions for generations. The Latvian pathway is an effort to extend existing advantages to sectors that still resist decarbonisation. The Lithuanian and Estonian approaches combine geopolitical necessity with technological ambition, manifesting in projects ranging from grid synchronisation to offshore wind farms and grid-scale energy storage.

It is worth noting that the Central and Eastern European institutional context may in certain respects slow the transition. Ringel and Knodt's (2018) research on the governance of the Energy Union identifies persistent difficulties in ensuring coherence between national and EU-level objectives when member states perceive climate requirements as encroachments on their energy sovereignty. In Poland, this tension was especially pronounced under the previous

government; in the Baltic states, security imperatives caused the decarbonisation narrative and the energy sovereignty narrative to merge into a single, mutually reinforcing discourse.

Financing the transition remains the paramount shared challenge across the region. Estimated investment requirements for Poland alone in the five-year period 2026-2030 run to approximately EUR 185 billion (European Parliament, 2024). Mobilising such sums demands the effective channelling of EU mechanisms - the Recovery and Resilience Facility, cohesion funds, ETS revenues, JTF and CEF - into private-sector investment flows, which in turn requires stable and predictable regulatory frameworks. The repeated revision of wind farm planning rules in Poland serves as a cautionary tale about the costs of regulatory unpredictability for investors (Forum Energii, 2024).

A separate but equally important issue is society's capacity to absorb the consequences of the transition. Rising energy costs in the short run, energy poverty, and the need to retrain coal and oil-shale workers are challenges that climate policies must treat as co-equal with emissions reduction targets. The experience of Poland's Clean Air programme - suspended in 2024 following the discovery of widespread irregularities and administrative mismanagement - carries a sobering lesson for the architects of similar schemes across the region (Clean Energy Wire, 2024; World Bank, 2024).

8. Conclusions

The comparative analysis carried out in this article supports several overarching conclusions.

First, the EU's common legal framework embodied in the Fit for 55 package is necessary but not sufficient to ensure a fair and effective climate transition across Central and Eastern Europe. It must be complemented by instruments tailored to the specific structural circumstances of individual economies - which is precisely the rationale behind the differentiated national contribution mechanism embedded in the ESR.

Second, Poland - facing the most demanding decarbonisation challenge among the four countries studied - confronts a task without precedent: the simultaneous transformation of its power generation sector, modernisation of district heating, electrification of transport, and delivery of a just social transition in coal-dependent regions. The success or failure of this process will have consequences extending well beyond national borders, bearing directly on the credibility of EU climate policy as a whole.

Third, Latvia's energy model - with its durably high RES base, a new dedicated ministry for climate and energy, and a clear ambition to lead the region on energy prices - can serve as a case study for shaping transition strategies across the CEE area. The country demonstrates

that energy security and decarbonisation are not competing objectives but mutually reinforcing ones.

Fourth, Baltic regional cooperation in delivering the CEN synchronisation project is a textbook example of effective multilateral energy governance in practice. The capacity to act in a coordinated manner - overcoming individual TSO interests and differing national timetables - is a competence the Baltic states have demonstrably developed, and one that can serve as a reference model for future joint initiatives in offshore wind auctions, hydrogen corridors and the Baltic Energy Hub.

Fifth, the credibility of long-term climate strategies - measured by the coherence between declared targets and implementing instruments, budget allocations and intermediate milestones - remains a shared weakness of the countries studied, to varying degrees. Bridging this gap calls for political will, strengthened administrative capacity, investment in monitoring and evaluation, and the building of a durable societal coalition in favour of the energy transition: one robust enough to survive the inevitable shifts in public mood and government composition.

References

1. Baltic Wind (2024). *Baltic offshore wind market and regional cooperation overview*. BalticWind.EU, March 2024. Retrieved from: https://balticwind.eu, 1 April 2024.
2. Brodny, J., Tutak, M. (2022). Analysis of the efficiency and ecology of hydrogen, electrical and conventional drives in a car used in urban traffic. *Journal of Cleaner Production, 375*, 134049. DOI: 10.1016/j.jclepro.2022.134049
3. Brodny, J., Tutak, M., Grebski, W. (2024). Empirical Assessment of the Efficiency of Poland's Energy Transition Process in the Context of Implementing the European Union's Energy Policy. *Energies, 17(11),* 2677. DOI: 10.3390/en17112677
4. Carbon Free Europe / CFE (2024). *Poland's Pathways to Net-Zero Emissions*. *Report by Evolved Energy Research.* Silesian University of Technology and Princeton University. Retrieved from: https://www.carbonfreeeurope.org, 1 June 2024.
5. CATF (2024). *A Vision for Poland's Clean Energy Transition*. Clean Air Task Force. Retrieved from: https://www.catf.us/resource/a-vision-for-polands-clean-energy-transition/, 1 June 2024.
6. China-CEE Institute (2023). *Lithuania external relations briefing: Synchronization of the Baltic Electricity Network and breaking dependence on Russian energy market*. China-CEE Institute, October 2023. Retrieved from: https://china-cee.eu, 1 April 2024.
7. Clean Energy Wire (2024). CLEW *Guide: Poland stumbles through energy transition with uneven progress and political headwind*. Retrieved from: https://www.cleanenergywire.org, 1 June 2024.

8. ECFR (2023). *From coal to consensus: Poland's energy transition and its European future*. European Council on Foreign Relations, September 2023. Retrieved from: https://ecfr.eu/publication/from-coal-to-consensus-polands-energy-transition-and-its-european-future/, 1 April 2024.
9. Ember (2023). *PEP2040: Progress or disappointment? Ember Energy Insights*. Retrieved from: https://ember-energy.org, 1 April 2024.
10. European Commission (2021). *Fit for 55: delivering the EU's 2030 Climate Target on the way to climate neutrality*. COM(2021) 550 final. Brussels: European Commission.
11. European Commission (2024). *Commission assessment of Poland's draft updated National Energy and Climate Plan 2021-2030.* COM(2024) 174 final, 26 April 2024. Brussels: European Commission. Retrieved from: https://commission.europa.eu, 1 April 2024.
12. European Commission / BEMIP (2024). *Baltic Energy Market Interconnection Plan*. Retrieved from: https://energy.ec.europa.eu/topics/infrastructure/high-level-groups/baltic-energy-market-interconnection-plan_en, 1 June 2024.
13. European Commission / Estonia NECP (2023). *Draft update of Estonia's National Energy and Climate Plan for 2030.* Retrieved from: https://commission.europa.eu, 1 April 2024.
14. European Commission / Latvia NECP (2023). *Latvia's National Energy and Climate Plan 2021-2030 (updated draft).* Retrieved from: https://commission.europa.eu, 1 April 2024.
15. European Parliament (2022). *Latvia's Recovery and Resilience Plan*. EPRS Briefing PE 698887. Brussels: European Parliament.
16. European Parliament (2022). *Latvia's Recovery and Resilience Plan*. EPRS Briefing PE 698887. Brussels: European Parliament.
17. Fang, S., Jaffe, A.M., Loch-Temzelides, T., Lo Prete, C. (2024). Electricity grids and geopolitics: A game-theoretic analysis of the synchronization of the Baltic States' electricity networks with Continental Europe. *Energy Policy, 188*, 114068. DOI: 10.1016/j.enpol.2024.114068
18. Forum Energii (2024). *Energy Transition in Poland*. 2024 Edition. Warsaw: Forum Energii. Retrieved from: https://www.forum-energii.eu/en/transformacja-edycja-2024, 1 June 2024.
19. Forum Energii (2024). *Planning Poland's Climate and Energy strategies in a new political opening.* Retrieved from: https://www.forum-energii.eu, 1 June 2024.
20. IEA (2021). *Energy Policy of Poland until 2040 (PEP2040) - Policies*. International Energy Agency. Retrieved from: https://www.iea.org/policies/12882-energy-policy-of-poland-until-2040-pep2040, 1 April 2024.
21. IEA (2024a). *Latvia 2024: Energy Policy Review*. Paris: International Energy Agency. Licence: CC BY 4.0. Retrieved from: https://www.iea.org/reports/latvia-2024, 15 June 2024.
22. IEA (n.d.). *Lithuania is well placed to lead on clean energy and energy security in the Baltic region.* Retrieved from: https://www.iea.org/news, 15 June 2024.

23. IEA News (2024b). *Latvia's transition to clean energy presents an important opportunity to bolster energy security and lower energy prices*. International Energy Agency, June 2024. Retrieved from: https://www.iea.org/news, 15 June 2024.
24. Ringel, M., Knodt, M. (2018). The governance of the European Energy Union: Efficiency, effectiveness and acceptance of the Winter Package 2016. *Energy Policy, 112*, 209-220. DOI: 10.1016/j.enpol.2017.09.047
25. Stala-Szlugaj, K., Mirowski, T. (2021). Challenges for Poland's coal energy sector resulting from the European Green Deal. *Energy Sources, Part B: Economics, Planning, and Policy, 16(7),* 625-638.
26. U.S. Department of Energy (2024). *Joint Statement by the U.S. and the Baltic Countries following the 2024 Baltic 3+1 Dialogue*. Retrieved from: https://www.energy.gov/ia/articles/joint-statement-us-and-baltic-countries-following-2024-baltic-31-dialogue, 1 June 2024.