

No Longer an Energy Island

**How diversification, storage and interconnection
boost Baltic energy security and resilience**

Baltic Barometer

Security, Opportunity and Risk
in the Baltic States

**A PUBLICATION BY THE BALTIC INTERNATIONAL
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Executive Summary

Once a vulnerable energy island, the Baltic states (B3) have since 2014 built diversified, resilient energy systems increasingly integrated with global, continental and regional markets.

The Gulf crisis has tested and vindicated this transformation.

One of Europe's fastest renewable expansions shields Baltic consumers from rising global gas prices. Transport, heating and some industries remain vulnerable.

Better energy storage and deeper interconnection will broaden this price shield, making low-marginal-cost electricity more consistently available. Further electrification will also reduce dependency on fossil-fuel imports.

Pooling expertise and resources could make emerging technologies such as SMRs another pillar of Baltic energy security.

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Introduction

The first edition of the *Baltic Barometer* challenged the belief that international investors are spooked by the Baltic states' proximity to Russia. This second edition confronts another misconception: that Estonia, Latvia and Lithuania (the B3) remain a vulnerable energy island on Europe's margin. That picture is out of date. Baltic energy systems now demonstrate remarkable adaptability, resilience and deepening integration.

The Gulf crisis has highlighted these strengths. The de-facto closure of the Strait of Hormuz has upended global supply chains and triggered profound commodity price hikes, yet the B3 face this latest energy shock with systems transformed through more than a decade of sustained investment and effort. New import infrastructure and cross-border connections, built both before and after Russia's full-scale invasion of Ukraine, have diversified supply channels, whilst a rapid expansion in renewable generation has added a further layer of protection. As this report highlights, these developments have greatly reduced the threat of physical shortages and helped shield Baltic consumers from the worst effects of rising global prices.

There is a difference, however, between growing resilience and total insulation from shocks. Vulnerabilities remain for the B3. Internationally-priced oil still dominates transport; gas remains important in heating and pockets of industry; and costly thermal generation remains necessary when renewable output is weak. The central argument of this report is that the next phase of Baltic energy policy must render cheap local renewable power and access to low-cost electricity imported from regional neighbours more dependable across hours, days and seasons. Crucial too, will be bolstering efforts encouraging electrification. Combined, this would allow the B3 to build on their recent successes and further reduce exposure to price-volatile hydrocarbons.

From Dependence to Diversification: Remaking Baltic Energy Systems



Baltic energy systems have been radically reconfigured over the last twelve years. As late as 2013, the B3 effectively constituted an energy island. Their gas systems retained a near-total dependency on Russian pipeline imports, connections to the broader European electricity market were confined to a single interconnector (Estlink1) and their grids continued to operate within the Moscow-controlled IPS/UPS synchronous system. Add to this a deep commercial, if not infrastructural, dependence on Russia for crude oil and refined products and the B3 were in many respects beholden to their eastern neighbour to keep the lights on in households, factories operating and transport moving.¹ In the years since, dependence on Russia has been eliminated, new gas and electricity import infrastructure has been commissioned in an effort to guarantee future security-of-supply and renewable electricity capacity built-out at scale.

Diversifying Supply

The opening of the Klaipėda LNG terminal, centred on the *Independence* floating storage and regasification unit (FSRU) in 2014, provided the region with its first large-scale alternative to Russian pipeline gas. With an annual regasification capacity of around 3.75bcm, the terminal was stated at its opening to be theoretically capable of meeting approximately 90% of the B3's combined annual gas-supply needs.² Capital expenditure of circa €800m facilitated integration with regional markets, when Balticconnector and the Gas Interconnector Poland-Lithuania (GIPL), entered operation in 2020 and 2022 respectively, which together allow for the movement of gas between Finland, the Baltic states and Continental Europe.

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A parallel programme of investment yielded new electricity interconnectors, integrating the B3 with the Nordic and Continental power markets. Between 2014 and 2016, EstLink2, NordBalt, and the LitPol Link, which together cost around €1.5bn, established new connections to Finland, Sweden and Poland, providing an additional 1.85GW in external transfer capacity.

The value of this emerging energy architecture was already demonstrated in the wake of Russia's full-scale invasion of Ukraine. Increased LNG send-out from Klaipėda, which nearly doubled between 2021-2022 to reach 32.1TWh, together with shared regional access to Latvia's Inčukalns storage facility, did much to help displace remaining Russian pipeline inflows – which were still equivalent to roughly 65% of regional gas demand in 2021 - allowing the Baltics to largely avoid the severe supply disruption experienced elsewhere. The new interconnectors to Western Europe facilitated the substitution of remaining Russian electricity imports with Nordic-Polish alternatives, with the LitPol Link's AC design also enabling eventual B3 disconnection from the Russia-controlled grid and synchronisation with Continental Europe in February 2025.

¹ Russian pipeline crude oil flows to Ventspils (Latvia) and the Mažeikiai refinery (Lithuania) ceased in 2003 and 2006 respectively.

² Using the European Commission's approximate conversion, 1 bcm ≈ 11 TWh, rendering the terminal's annual regasification capacity equivalent to circa 41.3 TWh.

Figure 1. Cross-border infrastructure has dismantled the Baltic states' energy isolation and direct dependence on Russia.

Operational gas and electricity interconnectors, terminals, storage and principal transmission routes, 2026.



Expanding domestic renewable generation

Diversifying import channels has been only one pillar of recent Baltic energy policy. The global energy shock that followed the Kremlin's full-scale invasion of Ukraine helped trigger the most severe inflationary episode in the B3's post-EU-accession history, with annual inflation peaking at around 22-25% across the region in August and September 2022. Rising oil, gas and electricity costs hit Baltic consumers particularly hard relative to many of their European peers, reflecting the large weight of energy in Baltic consumer-price baskets.

Against this backdrop, the expansion of renewables has accelerated. Alongside the need to meet EU and nationally-determined

decarbonization targets and further strengthen supply security, renewables have been cast as a vital means of limiting exposure to price-volatile oil and gas imports, safeguarding energy affordability for consumers and protecting future industrial competitiveness.³

Lithuania has played host to the fastest recent renewable expansion in Europe.⁴ Installed capacity has risen by close to a factor of seven since the start of 2021, driven in particular by an almost 30-fold expansion in solar capacity and five-fold increase in onshore wind. Estonia has likewise undergone substantial renewable development, with capacity tripling over the same period. Here, the strategic calculus has been somewhat different, with wind and solar regarded as mechanisms through which to ease dependency on domestic legacy oil-shale generation, which is subject to carbon taxation and is due to be phased out by 2035. Latvia's recent build-out has been more measured, reflecting its much stronger renewable starting position. The Daugava cascade of hydropower plants, in operation since the middle of the twentieth century, continue to account for more than one-third of total national capacity. Even so, there have been material developments, particularly in solar. Virtually non-existent at the beginning of the decade, it now constitutes around a quarter of Latvia's total installed capacity.

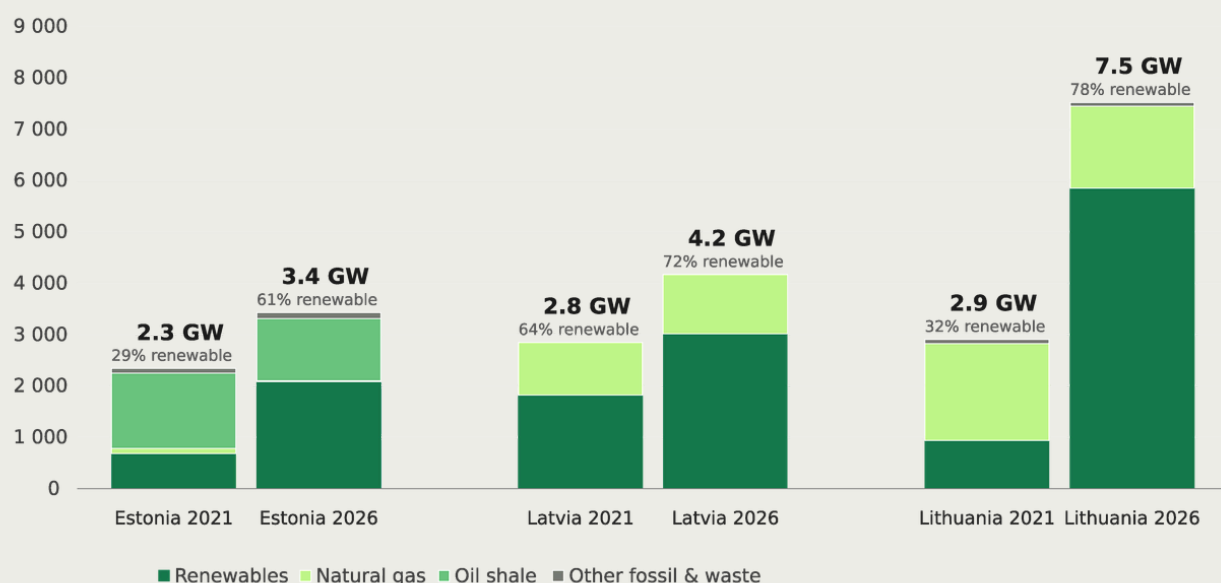
³ See, Republic of Lithuania, National Energy Independence Strategy, (2024), Republic of Estonia, Energy Sector Development Plan 2035, (2026); Republic of Latvia, Updated National Energy and Climate Plan 2021-2030, (2024).

⁴ This was recognised by the European Parliament. See, Interreg Europe (EAGER Project), '[Lithuania Leads Europe's Rapid Shift to Renewable Energy](#)', (2026).

Figure 2. Renewables have driven the B3's recent generation-capacity expansion.

Installed electricity-generation capacity (MW), 2021 and 2026.⁵

*Renewables comprise solar, wind, hydropower and biomass



Source: ENTSO-E Transparency Platform

The Gulf Crisis: A Test for the Baltic states' New Energy Architecture

The 2026 Gulf crisis constitutes the first big test of the B3's recent efforts to strengthen supply security and diminish exposure to price-volatile hydrocarbons.

Although direct shipments of Gulf oil, petroleum products and LNG have historically only accounted for a modest share of Baltic total energy supply, the de-facto closure of the Strait of Hormuz, through which 25% of global seaborne oil and circa 20% of LNG trade passes, has drastically tightened international energy markets and precipitated substantial commodity price increases.⁶ In the first eight months of this year, the European spot price of Brent crude rose from a monthly average of

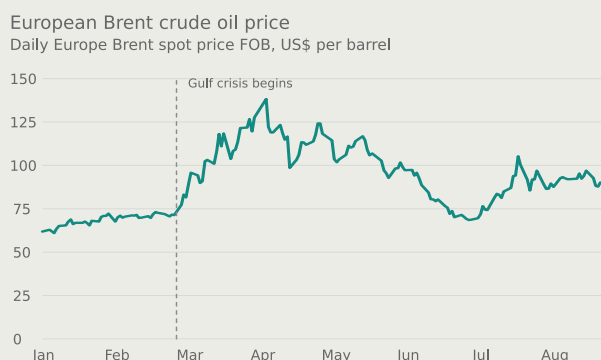
\$70.89 per barrel in February, to a monthly peak of \$117.29 per barrel in April – an increase of circa 65%. Whilst costs eased to average \$91.08 per barrel in August, they remained circa 28% higher than during the last pre-crisis month. Price hikes have not spared Baltic gas buyers. BISC's proxy for the indicative delivered price of spot LNG at Klaipėda, the region's principal gas-import channel, suggests that costs more than doubled from a pre-crisis February average of \$10.22/MMBtu to an average of \$20.82/MMBtu in August.⁷

⁵ Figures represent capacity registered with ENTSO-E on 1st January of each year.

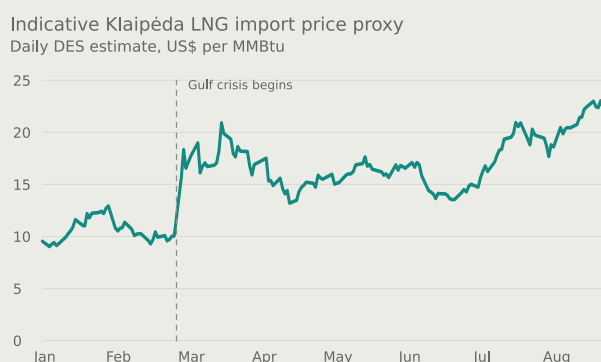
⁶ International Energy Agency, [Strait of Hormuz: Factsheet](#), (2026).

⁷ MMBtu refers to one million British thermal units, a measure of energy commonly used in natural gas pricing. One MMBtu is equivalent to circa 293kWh.

Figure 3. The Gulf crisis has driven-up international oil and LNG prices.



Source: US Energy Information Administration (EIA), based on Thomson Reuters data.



Proxy combines S&P's LNG NWE DES price assessment with the assessed Rotterdam-Klaipėda freight rate.

Source: S&P Global Energy; author's calculations

A supply shock without a supply crisis

Despite severe disruption to global energy markets, the B3 do not currently face a physical energy supply crisis. This is in part a reflection of the market structure of the global oil trade, but likewise demonstrates the success of the Baltics' post-2014 infrastructural build-out in bolstering regional resilience.

Whilst substantial volumes of Gulf oil have been taken offline since the beginning of U.S./Israeli-Iranian hostilities on 28th February, the depth, liquidity and geographic source diversity of the global oil market means adequate supplies have so far remained available to European and Baltic buyers.

Securing necessary gas supplies poses a more demanding challenge. Conflict in the Middle East comes off the back of a harsh European and Baltic 2025/26 winter. Frigid temperatures in January and February prompted withdrawals from the Inčukalns storage facility that were some 19% higher than during the same period in 2025 and more than halfway through the typical 'injection season' on 31st August, storage stocks stood at only 45.03% – almost seven percentage points lower than a year prior.

This alone does not indicate an impending shortage. The unfavourable pricing conditions that followed the start of the Gulf crisis and pushed summer gas purchase costs above contracts for winter delivery, might have led market participants to secure contracts for later in the year or defer purchases in anticipation of more favourable conditions in the coming months.

Whilst this may add pressure to procure additional cargoes closer to the winter high-demand season, there is little indication that the region presently lacks the market access or import infrastructure needed to meet any resulting shortfall. Despite intensified global competition for flexible cargoes, KN Energies, Klaipėda's LNG terminal operator, has seen the additional spot-cargo delivery allocations it offers alongside scheduled contract-guaranteed slots, filled by prospective buyers. Crucially, supply security is not contingent on Klaipėda and Inčukalns alone. The GIPL and Finland's Inkoo LNG terminal, opened in 2023 and situated in close proximity to the Balticconnector, provide additional gas import channels to the Baltic states. Combined these assets can theoretically provide up to circa 150GWh of gas to the region per day – roughly twice average daily demand in 2023-2025.

Under normal weather conditions and infrastructural functionality, this expanded import infrastructure should therefore remain capable of servicing regional demand through the winter. If a long cold spell as in 2025/26

coincided with the loss of multiple key infrastructural chokepoints – Inčukalns, Inkoo and Klaipėda or the gas interconnectors – through damage, sabotage or otherwise, and global LNG markets remain tight into 2027, supply difficulties could yet emerge. These highly conditional vulnerabilities, however, underscore the success of the recent infrastructural transformation. Whereas B3 gas supply security was once almost wholly dependent on uninterrupted Russian pipeline flows, market participants believe that a regional shortage would likely require several independent supply safeguards to fail at once.

The primary challenge is price-exposure, chiefly to oil

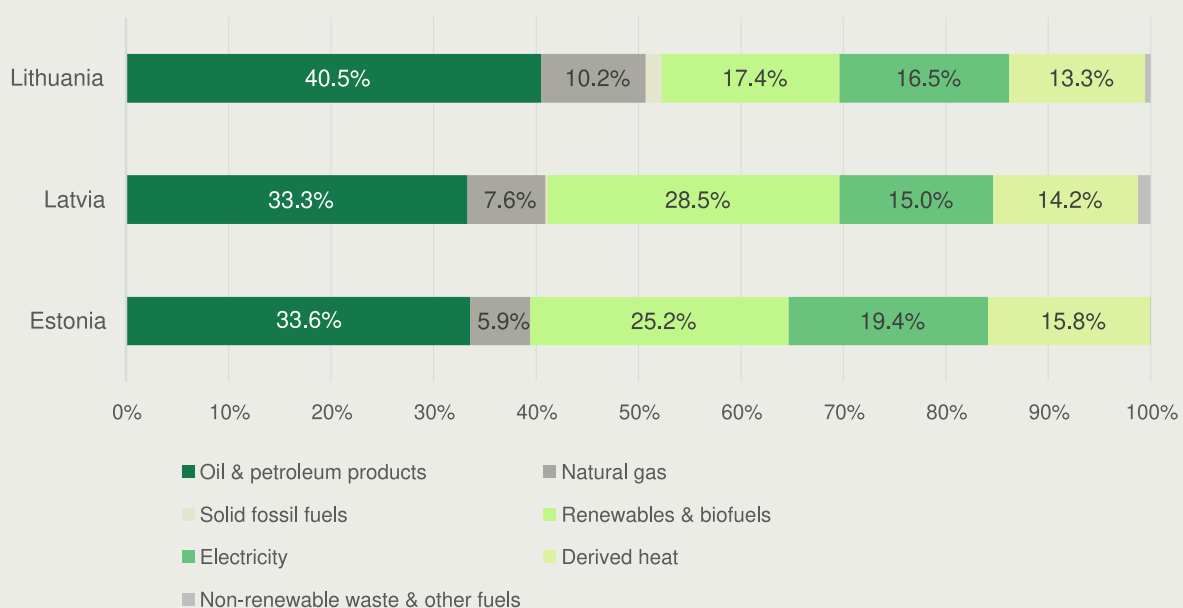
Elevated commodity prices do, however, herald difficulties for the Baltic economies and they remain particularly exposed to the economic effects of higher oil prices. As of 2024, oil and petroleum products remain the largest fuel source as a share of final energy consumption in each of the Baltic states, accounting for

approximately 33-34% in Estonia and Latvia and more than 40% in Lithuania. This exposure is above all concentrated in transport, a sector which accounts for roughly a quarter of final energy consumption in Latvia and in excess of a third in Estonia and Lithuania. Indeed, in each of the B3, petroleum products account for more than 90% of the sectoral fuel mix.

Recent oil price spikes have therefore fed directly into household mobility and road-freight operating costs. Relative to the prices of 23rd February, the final pre-crisis data recorded in the European Commission's weekly oil bulletin, tax-inclusive petrol costs rose by as much as 23% in Latvia and around 25% in Estonia and Lithuania in the period to the end of August. Diesel price hikes were even more pronounced, ranging between peaks of 35% in Lithuania and 48% in Estonia.

Figure 4. Oil remains the largest component of final energy consumption across the B3.

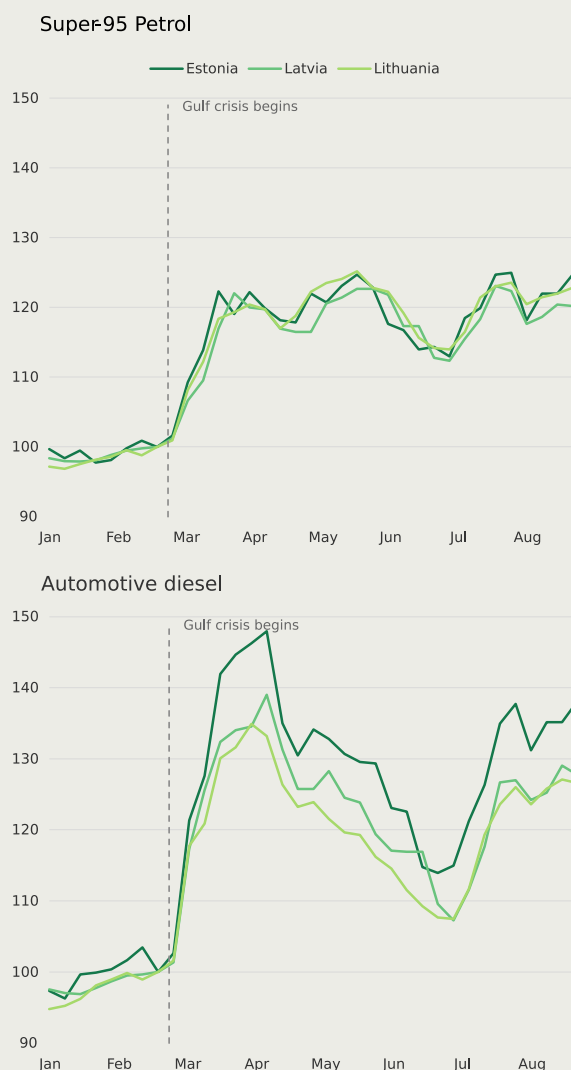
Share of final energy consumption by fuel, 2024.



Source: Eurostat

Figure 5. The Gulf crisis has raised pump prices – particularly for diesel.

Weekly consumer prices, index: 23 February 2026 = 100



Source: European Commission Weekly Oil Bulletin; author's calculations.

Latvia and Lithuania have sought to cushion consumer exposure through temporary tax relief. Both states reduced diesel excise duties in the spring, with Lithuania subsequently allowing its measure to expire in June whilst Latvia extended its tax reduction through to the end of 2026. Estonia has stopped short of cutting existing rates, but the government did cancel planned excise tax increases. Such measures, however, come with risks. Whilst they can provide short-term relief to consumers and suppress headline inflation, they also impose fiscal costs on governments and cannot remove the underlying price-exposure long-term.

Gas-price exposure is narrower, but concentrated in key sectors and geographically defined

Regional price-exposure to natural gas is considerably narrower than to that of oil. In 2024, gas accounted for approximately 5.9% of final energy consumption in Estonia, 7.6% in Latvia and 10.2% in Lithuania.

Yet, belying these aggregate figures is a regionally and sectorally differentiated picture. Natural gas remains an important fuel source in Lithuanian industry, accounting for 26.4% of sectoral fuel use, more than twice the figures recorded for Latvia (9.2%) and Estonia (11.1%). Moreover, its industrial significance is not merely tied to use as fuel alone. The fertilizer producer Achema, which uses natural gas as its primary feedstock, consumes nearly half of Lithuania's annual gas supplies. Elevated prices could therefore affect Lithuanian industrial output and competitiveness, especially if cost increases prompt Achema or other energy-intensive firms to curtail or suspend production, as some did in the wake of Russia's invasion of Ukraine. The risk of this occurring should not be overstated. European wholesale gas prices as of August 2026, remain some 70% below peak monthly averages four years earlier. Likewise, energy-intensive firms have themselves pursued measures since the last crisis aimed at moderating price-exposure through energy efficiency improvements, or in the case of firms like Panevėžio stiklas, through investments in fuel-switching equipment. The Lithuanian glass manufacturer installed infrastructure enabling it to substitute LPG for natural gas to fire its continuously operating furnace, when the latter becomes comparatively expensive. To be sure, this is no silver bullet. LPG is itself an internationally-priced hydrocarbon, but this supply flexibility, the firm suggest, has resulted in seven figure savings on energy costs since its 2022 installation and is helping to blunt the worst effects of the current price hikes.

Natural gas also retains a residual role in direct household space and water heating, accounting in 2024 for approximately 6.2% of the energy used for these purposes in Estonia, 7.2% in Latvia and 9.9% in Lithuania. Its role is greater in centralized heat production, much of which supplies the B3's extensive district-heating networks. In 2024, natural gas fuelled 32.2% of gross heat output from Latvia's main-activity combined heat and power (CHP) and heat-only plants, compared with 17.3% in Estonia and 13.4% in Lithuania. Higher international gas prices will therefore likely raise bills for directly connected households and district-heating tariffs over the coming winter, particularly in Latvia.

Renewables and electricity market integration as a price shield

The post-2022 renewable expansion has, however, begun to reduce the exposure of Baltic consumers to elevated gas costs. Far from a build-out on paper alone, the expansion of low-marginal-cost wind and solar capacity has materially transformed the region's electricity generation profile. Between 1st January and 1st August 2021 and the corresponding period in 2026, average hourly wind-and-solar output increased from just 13MW to 255MW in Latvia, from 121MW to 304MW in Estonia and from 124MW to 882MW in Lithuania. Substantially more low-cost renewable electricity is entering the integrated Baltic power market as a result, reducing the need to draw on expensive gas-fired generation – or, in Estonia's case, carbon-priced oil shale.

The price effects of this transformation are visible across the region. After accounting for seasonality and hour of the day, average wholesale day-ahead prices in the first seven months of 2026 were approximately 19% lower in Latvia, and circa 40% lower in Estonia and Lithuania during the quarter of hours with the highest wind-and-solar output than during the lowest output quarter. Demand, cross-border flows and other market conditions

also influence local electricity prices, but the consistency of this pattern across the B3 points to a clear renewable dividend: greater local renewable output is associated with materially cheaper electricity.

The temporal distribution of this dividend, however, is uneven. During periods of weak wind, solar and hydro generation, the B3 are often still reliant on costly thermal generation. The result is a pronounced price divide between periods of cheap renewable abundance and periods of more expensive renewable scarcity, when hydrocarbon-fired generation frequently sets the market-clearing price. The recent renewable build-out has therefore offered a buffer against elevated gas prices, but its protective strength varies considerably across hours, days and seasons.

Figure 6. Seasonal renewable scarcity yields sharp wholesale electricity price-spikes.

Monthly average day-ahead prices, €/MWh, Jan 2024-Aug 2026



Source: Ember, based on ENTSO-E data.

Cross-border market integration can offer a further layer of protection in periods of local renewable scarcity, though its price-insulating benefits differ across the B3. The clearest beneficiary has been Estonia. The combined 1GW capacity of EstLink1 and Estlink2 is large relative to Estonia's average daily demand of circa 940MW over 2023-25, and connects the country to a Finnish power system in which substantial wind and hydro generation is complemented by low-marginal-cost nuclear capacity. When sufficient interconnector capacity is available, imports from Estonia's northern neighbour can reduce its reliance on local oil-shale or gas-fired imports from Latvia

and Lithuania, drawing its wholesale prices towards Finnish levels, which have historically been lower than B3 averages.

Latvia and Lithuania can also benefit from lower-cost Finnish electricity when this flows southwards and the 700MW NordBalt interconnector provides Lithuania with a separate route into a Swedish power system with a similarly renewable and nuclear heavy profile. The price-insulation this can provide, however, is more limited. Much of the Finnish

electricity inflow is typically absorbed by Estonian demand, reducing the volume available to markets farther south and NordBalt's capacity equates to only circa half of Lithuanian average daily demand. This goes some way in explaining why Estonia's monthly average day-ahead electricity prices have been some €20/MWh lower than those of its Baltic peers in the period between the start of the Gulf crisis and 31st August.

What comes next? How to capitalize on successes and diminish existing exposure to volatile hydrocarbon prices



The Gulf crisis demonstrates how far Baltic energy security has progressed over the past twelve years. Diversified import channels have allowed the B3 to weather global market disruption without immediate fears over supply adequacy and expanding renewable generation and market integration have taken the sharpest edges of its economic costs. Nevertheless, challenges remain.

The full economic benefits of B3 renewable growth are yet to be realised. Hydrocarbon-fired generation is still required in periods of renewable scarcity and dependence on oil and gas imports persists in transport, heating and parts of industry. The B3 are already addressing these challenges through a new phase of infrastructural build-out and have developed ambitious plans to further reshape regional energy architectures over the coming decades. Converting their expanding, variable renewable output into a more dependable source of power, whilst better harnessing competitively-priced electricity from regional neighbours, must form the bedrock of this next phase. Beyond this immediate agenda, the B3 should also cooperate and pool technical, institutional and financial resources to develop promising technologies like nuclear SMRs, which might offer remedies to residual

hydrocarbon dependencies that cannot be eliminated through cross-border interconnection and the more effective integration of renewables alone.

Rendering low-cost power dependable

By retaining cheap electricity generated during periods of abundant renewable output and returning it to the market when output is lower, energy storage systems can extend the renewable price dividend across a greater number of hours, smoothing intra-day price volatility and diminishing the need to rely on costly thermal generation across large proportions of any given day. The B3 are already making remarkable progress in expanding their energy storage capacities.

Negligible at the start of the decade, battery storage systems now encompass a pipeline of circa 10.5GWh of either installed, under construction or planned capacity, and when combined with other storage assets like Lithuania's Kruonis pumped-storage facility – with its capacity of 10.8GWh – hold the prospect of materially strengthening the B3's ability to address short-term price fluctuations. This is a particularly valuable function in the

Baltic context where during the first seven months of 2026, the median daily spread between the highest and lowest hourly day-ahead electricity price stood at approximately €120/MWh in Estonia and €130/MWh in Latvia and Lithuania.

Despite this progress, much remains to be done. A recent Swedbank report found that regional storage frontrunner, Lithuania, still only has operational capacity capable of covering circa a third of average daily consumption, with the corresponding figures for Latvia and Estonia considerably lower.⁸ Moreover, an emerging challenge is that the comparatively shallow B3 short-term power and balancing markets on which commercially viable battery assets depend, may saturate well before the region's wider need for flexibility is met. As progressively greater capacity will compete to exploit intra-day price spreads, the price-volatility on which merchant returns rely will progressively erode. Indeed, narrower price spreads might be positive news for consumers, but these can weaken the investment case for further battery projects.

Even with further capacity build-out and firmer financial foundations, conventional storage can still only go so far in displacing hydrocarbon generation. The bulk of the B3's existing and planned battery assets have discharge durations of between two and eight hours – and sites like Kruonis only twelve at full output. Whilst well-suited to addressing intra-day volatility, they do little to help bridge consecutive days of weak solar, wind or hydro output, let alone carry seasonal surpluses into periods of high winter demand, when electricity prices soar.

Where storage cannot carry cheap electricity far enough through time, stronger interconnection can shift it across geography. Expanding Baltic-Nordic transfer capacity therefore represents an important

complementary response. The planned 700MW EstLink3, now projected for completion around 2038, would raise direct Baltic-Nordic transfer capacity from 1.7GW to 2.4GW - an expansion of circa 41% - and do much to strengthen access to low-marginal-cost external supply when this is scarce at home. Plans for a direct 700MW Latvia-Sweden (LaSGo) interconnection could further broaden price-insulation. As significant as the Nordic-facing interconnectors themselves, will be ensuring that sufficient intra-Baltic transfer capacity exists which might extend these benefits across the region. The 700MW fourth Estonia-Latvia link, provisionally targeted for 2035, and the programme to raise Lithuanian-Latvian transfer capacity by a further 1GW should therefore be treated as essential companion projects, vital in allowing low-cost Nordic electricity to reach consumers beyond the country where it first lands.

Deeper interconnection would likewise help put the Baltic renewables sector on a firmer economic footing. As similarly profiled wind and solar capacity expands faster than local demand, grid or storage capacity, renewable producers face increasing periods during which output exceeds what local markets can absorb, pushing wholesale prices towards or below zero. By allowing these surpluses to reach consumers elsewhere, cross-border interconnectors can help limit the 'price cannibalisation' that erodes producer revenues precisely when their output is highest. Improved interconnection with Poland, via the new 700MW Harmony Link, scheduled to enter operation in 2030, will deepen links to a market with a broad consumer base and crucially also bolster Baltic grid stability by providing a second synchronous link to continental Europe. The proposed 2GW Latvian-Lithuanian-German interconnector (Baltic-German PowerLink), would provide access to an even larger market, though the project currently remains at an early feasibility assessment stage.

⁸ Paulsson & Ilektye, Energy shock déjà vu: How exposed are the Baltics and Nordics?, Swedbank, (2026), 15.

Ambitious plans are not the same as concrete results. Estlink3 has already seen its delivery date delayed, as has that of the fourth Estonia-Latvia link, with final investment decisions for both projects only estimated to arrive in 2031-33. Indeed, high prospective costs of around €1.1bn and €1.3bn respectively, warrant careful consideration of feasibility, as do concerns regarding infrastructural security, especially given the 2024 sabotage of EstLink2. Nevertheless, long-planning horizons ought not to become open-ended delay.

Pooling Baltic expertise could unlock SMRs' energy-security potential

Greater storage and further interconnection would help diminish rather than eliminate dependency on B3 firm gas- or oil-shale-fired generation. All three Baltic transmission system operators (TSOs) expect gas-fired dispatchable capacity to remain available into the 2030s to cover periods of peak demand and regional renewable scarcity. Litgrid (Lithuania) in its latest development plan envisages a maintenance of circa 800MW of gas-fired capacity, Latvia's TSO, AST, anticipates it will keep the circa 1GW capacity of Riga's two large CHPs and Elering (Estonia) has contracted new gas-fired reserve capacity as it phases out oil shale, whilst stating that further gas capacity might be needed to meet the 500-900MW of controllable capacity it says it will require by 2035.

Beyond this immediate horizon, new technologies like small modular reactors (SMRs) may provide an alternative local source of firm generation. Estonia is part of the European vanguard here. Whilst no concrete financing decisions have been made, the Riigikogu (Estonian parliament) has in principle endorsed the development of SMRs and local developer Fermi Energia has plans for two 300MW reactors and has provisionally earmarked 2035 for first generation. Lithuania too, is exploring a return to nuclear energy following the closure of the Ignalina plant in 2009 with a national decision on SMR

deployment due in 2028 and Latvia recently began its own nuclear feasibility study. If realised, these programmes could prove transformative. SMRs could provide continuous low-carbon electricity with operating costs far less exposed to international commodity prices. Moreover, abundant firm electricity could also support the production of hydrogen and synthetic fuels, potentially extending this insulation to energy-intensive industries whose processes cannot reasonably be electrified. There could be benefits in heating too. Paired with large heat-pumps and thermal storage, SMRs could eventually help displace the gas-fired boilers and CHP units in district-heating systems currently needed to meet peak demand periods.

Nevertheless, SMRs remain a long-term prospect rather than an immediate answer to near-term capacity requirements, and political endorsement alone cannot deliver new capacity. The B3's previous attempt to develop new nuclear energy in the years surrounding Ignalina's decommission involved substantial preparatory work on the proposed 1.35GW Visaginas plant and the expense of considerable political capital, only for the project to fail after Lithuania's 2012 referendum and disagreements over commercial terms. If SMRs are to be pursued, deeper regional cooperation, combining Estonia's emerging project-development and regulatory expertise with the nuclear engineering and institutional capabilities Lithuania retains from Ignalina, will be essential. Such collaboration could not only boost effective workforce development and ameliorate procurement and waste challenges, but render these profoundly capital-intensive undertakings more commercially credible.

Diminishing hydrocarbon exposure through electrification

Dependable low-cost electricity can only deliver its full price-insulating benefits if it serves to displace hydrocarbon use elsewhere in the B3 economies. Electrification of the transport sector presents the clearest near-term opportunity to extend the renewable dividend across economic sectors. The Baltic states retain some of the oldest, least fuel-efficient vehicle fleets in Europe, but progress is being made. There has been a 10-fold expansion in the number of B3 EV charging points in the four years since Q3 2022. Smart charging infrastructure, which allows consumers to draw on renewable electricity when this is abundant, has expanded fast and historically low EV penetration rates are showing signs of improvement. According to the IEA, EV car purchases accounted for between 17-19% of new sales across the region in 2025, up from 10% in Estonia and 12% in Lithuania and Latvia the year before. These figures, however, remain below the European average of 28% and BEVs and PHEVs combined still only account for between 1.8% and 2.4% of the region's total passenger and light commercial vehicle fleets.

The primary challenge limiting electrification appears less one of infrastructural adequacy than one of consumer preference. By the end of 2025 there were approximately 7-9 EVs for every charging point across the region. By contrast, in Sweden and Norway, two of Europe's leaders with regards to EV adoption, the corresponding figures stood at 13 and 43 EVs per charger, respectively.

Part of the gulf between the EV market share of new sales and the low prevalence of EVs in vehicle fleets reflects the Baltics' large second-hand vehicle market.⁹ Baltic consumers have historically spent less than many of their European counterparts on cars and recent consumer data points to persistent anxieties

regarding EVs' high upfront costs as stifling the transition towards broader fleet electrification.¹⁰

Latvia and Lithuania's new EV purchase support schemes, worth €40m and €20m respectively, could help broaden uptake. Grants of up to €3,000 and €2,500 towards used EVs may make electric mobility more accessible to less affluent households and meet consumers closer to existing preferences. Further support is envisaged through both countries' Social Climate Plans. Lithuania's programme, approved by the EU in June 2026, will cover up to 90% of a BEV's purchase cost for economically vulnerable, car-dependent households, while Latvia's will provide vulnerable transport users with up to €15,000 towards an EV. These support schemes' aggregate contribution to transport electrification will, however, be modest. A generous estimate of the funding capacity of the two national schemes combined with the targets outlined in the Social Climate Plans, suggests that these will support, at most, a little over 34,000 purchases by 2032.

Materially accelerating fleet electrification will therefore require a multi-faceted approach, combining support schemes with other mechanisms encouraging EV adoption. Firstly, the B3 could build on the emissions-related vehicle taxes already present across the Baltics. Governments could progressively widen the cost differential between zero-emission and highly polluting vehicles and recycle part of the proceeds into further EV support. The petrol and diesel price increases triggered by the Gulf crisis also provide an opportunity to articulate an affordability argument for EVs with renewed strength to publics who have, for the second time in four years, acutely felt the detrimental effects of commodity price-exposure at the petrol pump.

⁹ Market-wide figures cited in, Baltic Classifieds Group, 'Annual Report and Accounts', (2026), 8, suggest that in Lithuania and Estonia used cars accounted for 425,000 out of a total of 488,000 vehicle transactions in the year to 30 April 2026.

¹⁰ See, Citadele, 'Beveik kas antras lietuvis norėtų persėsti į elektromobilį, tačiau sprendimą atitolina kelios priežastys', (2025); Citadele, 'Eestlane otsib elektriauto puhul säästu, leedukas ootab tuge, lätlane alles kaalub', (2026).

Bolstering industrial electrification on the basis of low-cost power, particularly in Lithuania, likewise remains a key energy-policy challenge. For firms with production processes that can already be electrified, the principal obstacle inhibiting this is often commercial in nature. Replacing existing equipment requires substantial upfront expenditure, while volatile electricity prices can make prospective returns uncertain. Improvements to storage capacity and interconnection to reduce price-volatility are therefore vital in ensuring that electrification offers industrial consumers clearer price benefits.

More profound challenges regarding electrification persist in those industrial sub-sectors where this remains a question of technical feasibility. Enterprises whose industrial processes require stable high-temperature heat generation, like Baltic glass or cement manufacturers whose furnaces and kilns operate at 1400-1600°C, cannot easily replace existing fossil-fueled combustion systems, given the absence of all-electric alternatives. Over the medium-term, phasing-out fossil-only systems through hybrid solutions, where these are available, might offer a mechanism through which some firms might reduce their hydrocarbon price-exposure.

In the more distant future, green or low-carbon hydrogen and other synthetic fuels may offer a practicable means of harnessing low-marginal-cost electricity to displace hydrocarbons in energy-intensive industries. All three Baltic states are investigating domestic hydrogen production and are jointly developing the proposed Nordic-Baltic hydrogen corridor alongside Finland, Poland and Germany, which envisages the eventual creation of a regionally integrated hydrogen market. Lithuania has the most ambitious hydrogen production targets, having laid-out in its *National Energy Independence Strategy* plans for 1.3GW in electrolyser capacity and a green hydrogen output of circa 129,000 tonnes per annum by 2030.

Amid wider scepticism about the 'hydrogen economy' progress has so far not matched ambition. As of August 2026, the combined capacity of B3 hydrogen electrolysers totals just 3.25MW with a further 3MW expected to come online before the end of the year, in small-scale projects principally oriented towards demonstrating green hydrogen feasibility in transport. Moreover, Achema's postponement of its proposed 171MW electrolyser in 2024 -- which would have replaced up to 30% of the natural-gas-derived hydrogen in its ammonia production - highlights the persistent cost and operational difficulties associated with green hydrogen adoption in energy-intensive industry. Despite securing €122m in EU funding for the project, Achema ultimately argued that it was commercially unviable to facilitate the continuous production of ammonia on which its business depends through an electrolyser powered by variable renewable electricity alone.

In short, hydrocarbons persist in Baltic electricity generation, heating and industry largely because they retain one clear advantage over weather-dependent renewables. They can provide energy continuously and on demand. Displacing them therefore requires the B3 to focus political and economic capital on making local renewable generation and low-marginal-cost imports more dependable and accessible across time, through storage and deeper interconnection.

Over the longer term, emerging technologies such as SMRs could add local, low-carbon firm power, helping address the residual dependencies that renewables and electrification alone cannot readily remove.

The B3 must now apply the same resolve that powered the transformation of the past decade to the task of converting their remarkable recent progress into lasting economic advantage.

Data Sources

Energy Consumption, Generation and Prices

- Eurostat – Harmonised Index of Consumer Prices (HICP); final energy consumption by fuel; and gross derived-heat production by fuel.
- ENTSO-E Transparency Platform – Installed electricity-generation capacity; generation by source; day-ahead electricity prices and cross-border flows.
- Ember – European wholesale electricity price data (based on ENTSO-E data).
- National transmission-system operators (Elering, Litgrid) - Average daily electricity consumption 2023-2025.
- US Energy Information Administration – Daily Europe Brent Spot Price FOB.
- S&P Global Energy – LNG Northwest Europe delivered-ex-ship price assessment; Rotterdam-Klaipėda LNG freight assessments.
- European Commission, Weekly Oil Bulletin – tax-inclusive Euro-Super 95 petrol and automotive diesel price data.
- World Bank, Commodity Pink Sheets – European wholesale gas prices.

Gas Flows and Storage

- ENTSG Transparency Platform – Klaipėda LNG gas send-out data; pipeline gas flows.
- Gas Infrastructure Europe/Conexus Baltic Grid - Inčukalns storage inventories, injection and withdrawal data.

- National gas transmission-system operators and infrastructure operators (Amber Grid, Conexus Baltic Grid, Gasgrid Finland, GAZ-SYSTEM and KN Energies) – Gas-interconnector and terminal capacities, infrastructure specifications.

Electricity Infrastructure and Storage

- National transmission-system operators (Elering, AST, Litgrid, Fingrid, PSE, Svenska kraftnät and 50Hertz) – Existing and planned interconnector capacities and costs.
- Litgrid, AST, Elering – Existing and planned electricity-storage capacity and discharge metrics.

Electric Vehicles and Charging Infrastructure

- International Energy Agency, Global EV Data Explorer – Electric vehicles as a share of new car sales.
- European Alternative Fuels Observatory – Public charging infrastructure metrics and vehicle fleet data.

The **Baltic International Security Centre (BISC)** is a new thinktank, agile and authoritative, specializing in Estonian, Latvian and Lithuanian national security, and in its messaging to Nato/EU audiences. It is non-governmental, pan-Baltic and editorially independent.

Why is BISC needed?

Estonia, Latvia and Lithuania (the B3) are vigilant, resilient countries with stable economies, strong institutions and lively civil societies. They play host to cutting-edge start-ups and borrow at rates equivalent to G7-member France. Their innovative military-tech companies offer game-changing innovation. Their intelligence insights into Russia and Belarus are unmatched. They offer solutions, not problems.

Yet, too many influential voices in London, Berlin, Brussels and Washington depict the Baltic states as vulnerable, exposed, poor and dependent. In doing so, they wittingly or unwittingly echo Kremlin strategic narratives.

This is mostly not deliberate. It reflects ignorance and laziness in media, academia, thinktanks and government. But it still hurts. In the B3, such messages coming from respected 'western' sources corrode public morale. Abroad, they weaken Nato and EU solidarity. They stoke perceptions of risk and potentially damage trade, investment and tourism.

BISC exists to counter this. Through hard-hitting research and thought leadership, high-level convening across Nato and EU capitals and strategic communications — BISC provides clear, coherent messaging that promotes Baltic strengths and dismantles myths.

The 'Baltics' are not Europe's weak spot. They are, after Ukraine, its strongest and best prepared front line. **BISC explains their achievements — and the lessons for the rest of us.**

