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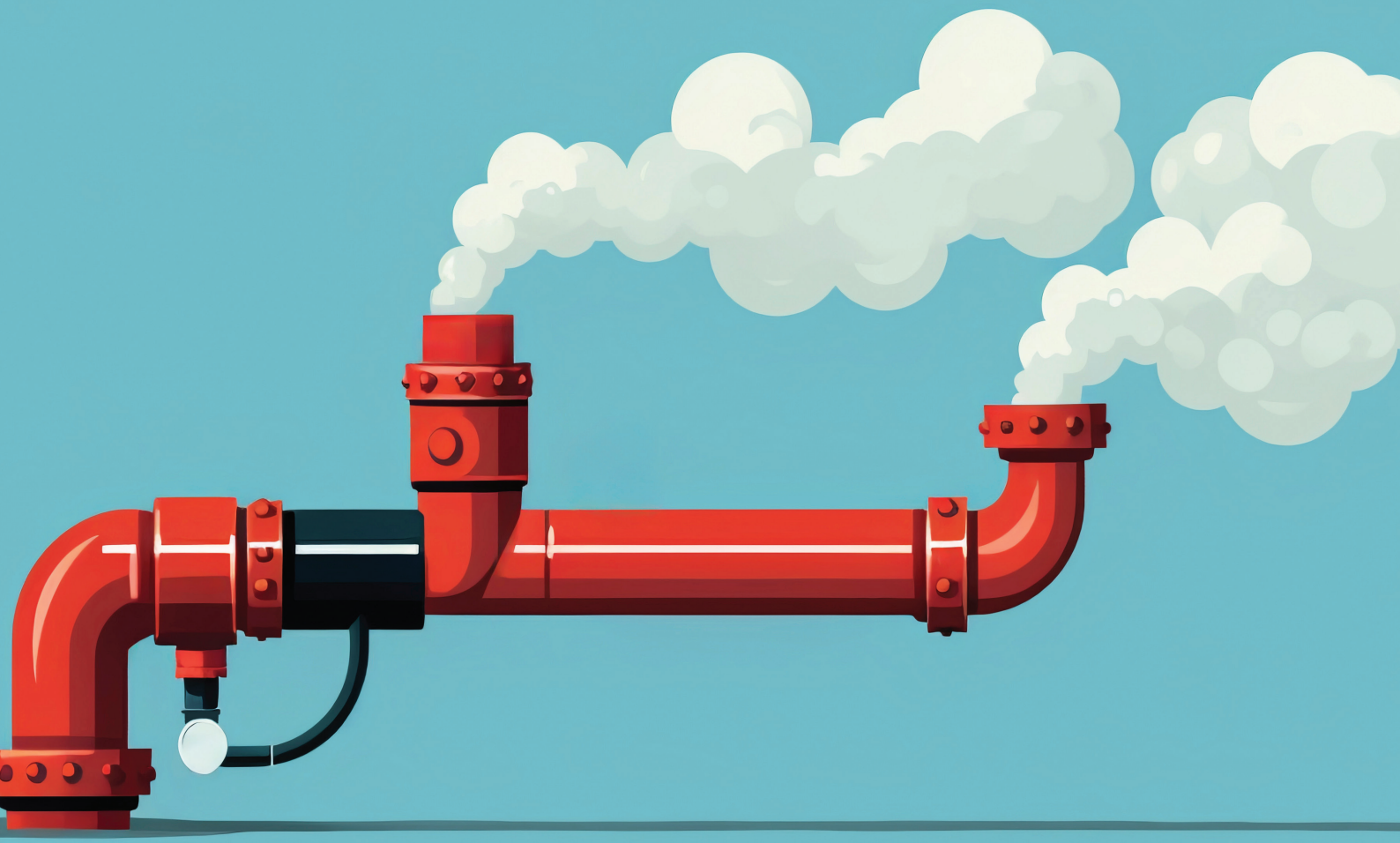
Energy Security in the Baltics

Perceptions in the Midst of the Russia-Ukraine War

Leon Hartwell & Agnė Rakštytė



RESEARCH REPORT

About the Authors

Dr. Leon Hartwell is a senior associate at LSE IDEAS, London School of Economics (LSE), a non-resident senior fellow at the Center for European Policy Analysis (CEPA) in Washington DC, and a visiting fellow at the European Leadership Network (ELN) in London.

Agnė Rakštytė is the Executive Director of Baltijos Lizdas (Nidus Balticus), leading regional energy resilience initiatives within the Our Common Home network. She has been a Digital Innovation Baltic Fellow (CEPA, 2021), a European Fellowship for International Strategy Forum Fellow (Schmidt Futures, 2022), and a member of the Young Generation Leadership Network.

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Design: **Indira Endaya**

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Abstract

Amidst the geopolitical complexities of Eurasia, the strategic employment of energy resources has emerged as a potent tool for projecting power. Since coming to power, Vladimir Putin has wielded energy security as a means to exert influence across the region, with the pinnacle of this influence underscored during the February 2022 escalation of the Russia-Ukraine war. This paper delves into perceptions on energy in Estonia, Latvia, and Lithuania amidst the Russia-Ukraine war, specifically focusing on attitudes towards energy security, renewable energy sources, and energy efficiency.

Drawing upon insights from a comprehensive mixed-methods study that involved eight focus groups and a survey of approximately 4,500 individuals (over 1,500 from each Baltic state), the research illuminates key similarities and differences in public perceptions across these nations. Key findings reveal a shared concern for energy security in all three countries, coupled with a desire for sustainable and self-sufficient energy solutions. While there is broad support for a transition to renewable energy sources, preferences for specific energy types vary. The research also identifies widespread public scepticism towards government energy strategies, and varying levels of willingness to pay higher prices for environmentally friendly energy.

This analysis informs nuanced policy recommendations for Baltic states and European policymakers geared towards enhancing energy security across the region. Recommendations include more effective communication of long-term energy strategies, tailored campaigns to address scepticism towards renewable energy, and economic incentives to promote affordability and adoption of sustainable solutions.

Key terms: Baltics, energy, security, Estonia, Latvia, Lithuania

Introduction

The full-scale invasion of Ukraine by Russia in February 2022 laid bare the extent of European nations' reliance on Russian energy, often wielded as a tool for coercion and intimidation (Hartwell and Guicherd, 2023). Among the most vocal critics of this dependency within the European Union (EU) have been the Baltic states, whose trajectory since regaining independence in the early 1990s has been marked by strategic efforts to mitigate their reliance on Russian influence (Hartwell et al., 2022).

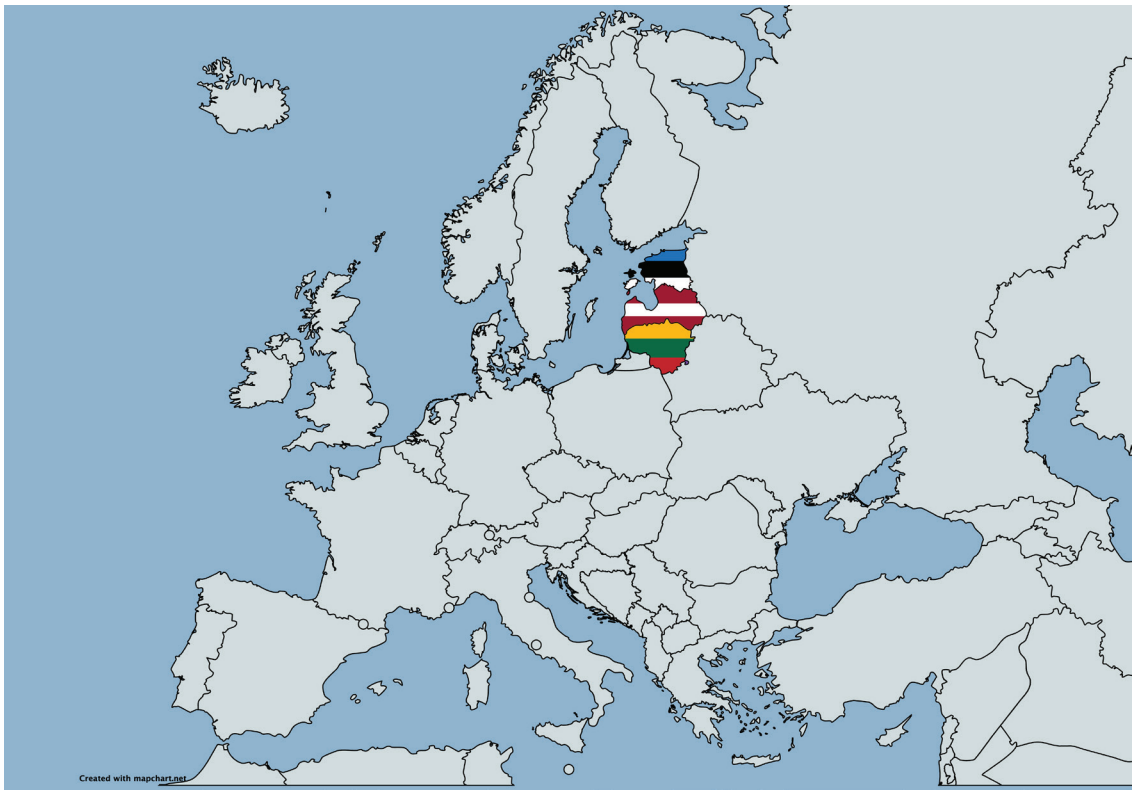
Despite significant strides in reducing this dependence over the years—such as Lithuania's investment in a liquefied natural gas (LNG) terminal, enabling self-sufficiency in gas supply and facilitating exports to neighbouring Latvia and Estonia—the full-scale invasion of Ukraine starkly illuminated lingering vulnerabilities to Russian gas and oil. In response to this energy crisis, all three Baltic nations swiftly took measures to diminish their reliance on Russian gas and electricity infrastructure. In February 2025, despite significant security risks, the Baltic states disconnected from the BRELL (Belarus, Russia, Estonia, Latvia, Lithuania) ring and synchronised their electricity networks with continental Europe, despite the economic costs (Bennett, 2025).

The Kremlin's escalation of the Russia-Ukraine war, coupled with its manipulation of gas supplies to Europe, has precipitated profound global ramifications for energy security. In this context, this research uses data from eight focus groups and a survey of over 4,500 individuals across the three Baltic states to examine how Estonians, Latvians, and Lithuanians view their energy systems, dependencies, and security challenges. It also looks at potential contributions to enhancing national energy independence, with a focus on renewable energy and efficiency measures, and offers evidence-based policy recommendations to Baltic states informed by these findings.

Key findings indicate a shared concern for energy security across all three nations, alongside a desire for more sustainable and self-sufficient energy solutions. However, preferences for specific renewable energy sources vary, and there is a notable level of public scepticism towards government energy strategies. For instance, 60% of Estonians, 64% of Latvians, and 45% of Lithuanians do not agree that their government has a clear, long-term energy strategy.

The analysis also explores how perceptions differ across segments of the population based on their worldview and values. Conservative segments tend to be more sceptical of renewable energy solutions compared to liberal segments, while younger individuals generally express stronger support for green initiatives. These insights inform targeted policy recommendations, including:

- More effective communication of long-term energy strategies;
- Tailored campaigns to address scepticism towards renewable energy; and
- Economic incentives to encourage the adoption of sustainable energy solutions.



Map 1. Europe, with the emphasis on the three Baltic states—Estonia, Latvia and Lithuania

Methodology

This research adopts a mixed-methods approach integrating both qualitative and quantitative methodologies. Eight focus groups were conducted on energy and security, each consisting of six to seven participants and lasting 90 minutes. These included three groups in Estonia, three in Latvia, and two in Lithuania, featuring participants from diverse socio-demographic backgrounds. Notably, discussions with ethnic Russian and/or Russian-speaking communities were also conducted in Estonia and Latvia.

Following the focus groups and the qualitative research findings, quantitative insights were gathered from over 4,500 individuals who responded to closed-ended questionnaires in July 2023, with more than 1,500 respondents from each Baltic state.

To facilitate nuanced analysis, each Baltic population was clustered based on worldview and value orientations, allowing for a comparative examination of attitudes toward energy and security across distinct value cohorts.[1] The process for identifying the segments presented in this research draws on the inspiration of the segmentation approaches pioneered in other countries by More in Common, which have constructed national population segmentations based on values since 2018. This research paper also draws on other value-based segmentations such as those led by the Pew Research Center and the Sinus Institute, and frameworks widely used across the climate sector, like those from the Yale Program on Climate Change Communication, have also influenced the approach.

The ensuing section provides a detailed exposition of the principal research findings pertaining to perceptions in each Baltic state, especially focusing on energy security.

1 Galileo data analysis tools using K-means algorithm.

Estonia

Estonia, located in Northern Europe, shares a border with Russia to the east and covers an area of around 45,000 square kilometres, which is slightly larger than The Netherlands (World Data, 2025b). The country, with a population of 1.3 million people, is ethnically diverse, with ethnic Estonians comprising around 70%; while nearly a quarter of the population consists of ethnic Russians (CIA, 2025a). Estonia's gross domestic product (GDP) is around $38 billion, with a GDP per capita of approximately $28,000; on average the wealthiest people in the Baltics (World Bank, 2025a).

In a short span of time, Estonia has undergone remarkable transitions in its energy sector. In a significant milestone reached in 2023, Estonia produced more electricity from renewable sources than from fossil fuels for the first time. Out of the almost 5 million megawatt-hours (MWh) of electricity generated in Estonia, renewables accounted for over 2.6 million MWh, surpassing the 2.3 million MWh generated from non-renewable sources. Notable renewable sources include biomass waste (over 1.2 million MWh), solar panels (around 700,000 MWh), wind energy (around 680,000 MWh), hydro power (around 25,000 MWh) and biogas, at less than 3,000 MWh (ERR, 2024).

Moreover, Estonia has significantly reduced its reliance on fossil fuels, generating only a quarter of its electricity from them in 2024 compared to 2017 (ERR, 2024). This significant shift underscores Estonia's commitment to sustainable energy production. The country has also intensified its efforts to promote green energy and aimed to reduce its greenhouse gas emissions by 70% by 2023, with a further goal of achieving carbon neutrality by 2050 (Invest in Estonia, 2024).

Despite these recent changes, Estonia is facing challenges, being unique as the only country globally where oil shale has historically been the main energy source. Despite its higher carbon intensity compared to coal, oil shale contributed to over half of the nation's electricity production in 2022 (Statistics Estonia, 2023). In 2021, the government pledged to phase out oil shale for electricity production by 2035 and completely eliminate it from the energy sector by 2040, aligning with the EU's Green Deal (Republic of Estonia, 2021). Unfortunately, the energy crisis caused by Russia's full-scale invasion of Ukraine led to a temporary setback in this process, as the government decided to use oil shale for electricity production and home heating instead of importing Russian gas and power (Jack, 2022).

In the long run, as per Estonia's National Energy and Climate Plan, the country intends to replace oil shale with wind (particularly offshore), solar, and biomass energy, while also considering hydrogen and small nuclear reactors as long-term solutions (European Commission, 2023a). Overall, the Baltic Sea could supply over a third of the EU's total wind energy need by 2030 (Council of the Baltic Sea States, 2023). The main challenges of this transition include addressing the economic impact on the Ida-Virumaa region, which relies heavily on the oil shale industry; activities related to oil shale account for 45% of Ida-Virumaa's GDP and 5% of Estonia's GDP. This reliance ensures energy security amid geopolitical tensions, integrating renewable energy sources into the power grid, and obtaining the necessary investments for new infrastructure and technology (European Commission, 2022).

Value Segments

Broadly speaking, seven distinct value segments within the Estonian population can be identified based on their overarching worldview and value orientations, encompassing areas such as traditions, business freedom, treatment of minorities, attitudes toward climate change, intergenerational contrasts, and the urban-rural divide.

Three segments—Frustrated Conservatives, Pro-Socialist Conservatives, and Patriotic Traditionalists—evince clear conservative leanings in terms of their general values. These segments exhibit a critical stance towards the incumbent government and display a diminished sense of pride in the Estonian state. Their perception of the climate crisis varies, with some dismissing it as a pseudo-problem. Notably, these conservative cohorts diverge in their attitudes towards economic freedom and societal inclusivity.

Conservative segments, as a whole, tend to downplay the significance of the climate crisis, voice dissatisfaction with current energy policies, and oppose the hastening of the green revolution. Variations among these segments manifest in their levels of climate denial, preferences for energy sources, perceptions of Russia as an energy security threat, and openness to trade with the country.

Conversely, three segments—Market Liberals, Liberal Socialists, and Liberal Well-to-Do Youth—espouse liberal stances concerning traditions, gender roles, and minority rights, expressing pride in Estonia's achievements. Their attitudes towards economic freedom and social inclusivity vary, as does their perception of key societal challenges.

Liberal segments prioritise addressing climate change and advancing local renewable energy production, advocating for the phasing out of fossil fuels and reducing dependency on Russian energy imports. They generally express moderate satisfaction with Estonia's energy policies. Nevertheless, disparities exist within these liberal segments regarding the intensity of their attitudes and their personal engagement with energy efficiency measures.

One segment, Pro-Tradition Caretakers, occupies a middle ground on the liberal-conservative spectrum, but displays a pronounced concern for climate change. At the same time, they are generally reluctant to pay for the cost of the energy transition whilst also opposing trade with Russia.

Within the local ethnic Russian community of Estonia, there is a notable overrepresentation of Pro-Socialist Conservatives and a correspondingly lower presence of Market Liberals. However, the distribution of other segments does not significantly deviate from the national average.

Summary of value segments

Figure 1. Summary of value-based segments identified through cluster analysis from a sample of 1517 respondents across Estonia in 2023. The table shows 7 identified segments (in columns) and identifies their main differentiating characteristics (in rows).

	Frustrated conservatives 17%	Pro-socialist conservatives 17%	Patriotic traditionalists 15%	Pro-tradition care takers 16%	Liberal well-to-do youth, 10%	Liberal socialists 13%	Market liberals 13%
Worldview	Value traditions, clear gender roles, oppose minority rights, least proud of country, most opposed to the current government.	Value traditions, economically socialists, less proud of the country. More skeptical than average about USA, EU/NATO.	Value traditions, national prosperity, oppose minority rights, support market economy, moderately proud of the country.	Value traditions, education, friends and family, proud of the country, moderate trust in government.	Tradition and preservation of nationality are not a priority, value friendship and personal hobbies. Prioritize environmental issues and minority rights, average pride in the country.	Liberal views on traditions and minority rights, economically socialists. Very proud of the country, trust the government.	Liberal views, support the free economy. Very proud of the country and the biggest supporters of the current government.
Political preferences	Estonian Conservative People's Party (EKRE) Centre Party	Centre Party Estonian Conservative People's Party (EKRE)	Estonian Conservative People's Party (EKRE) Fatherland Party (Isamaa)	Reform Party Centre Party	Reform Party Social Democrats Estonia 200	Reform Party Social Democrats	Reform Party Social Democrats Estonia 200
Energy view	Sceptics that deny climate change; favour fossil fuels, oppose green policies; open to Russian energy trade (economic motives).	Price-conscious who dismiss climate change, prefer fossil fuels, want state-led energy solutions and favour Russian energy.	Sceptical of climate change, support nuclear and oil energy, rather than oppose Russian trade.	Concerned about climate change, support green energy, but hesitant on costs, oppose Russian trade.	Prioritize climate issues, support green and nuclear energy, and oppose Russian trade.	Climate-conscious, support renewables, sceptical of nuclear energy, oppose Russian trade.	Climate-conscious, support green policies and local production, favour nuclear energy, oppose Russian trade.
Socio- demographic factors	Lower-educated Estonian males from rural South-Estonia.	Middle-aged and older non-Estonians from urban areas, mainly from Tallinn and Ida-Virumaa, retired and blue-collar workers.	Older Estonian males, predominantly retired.	Reflects Estonian population distribution; slightly fewer young people and males.	Under 35; white-collars and students, urban, mainly from Tallinn with higher income.	Younger and middle-aged females; mostly from Tallinn, less often from Ida-Virumaa.	Middle aged Estonians, highly-educated high-income professionals.

Overall security context

Estonian perceptions of security threats underscore the multifaceted challenges facing the nation, with a consensus emerging on the looming spectres of a potential Russian invasion, economic downturns eroding livelihoods, and the susceptibility of the populace to manipulation through populist rhetoric. Notably, each of these concerns were cited by at least one-third of respondents.

However, variations in the perception of security risks are discernible across value segments and socio-demographic strata. The prospect of a Russian invasion is more pronouncedly regarded as a threat by more liberal segments, as well as by younger individuals and ethnic Estonians. Additionally, residents of rural settlements, characterised by a higher proportion of ethnic Estonians, tend to highlight the Russian threat more frequently.

Liberal segments, individuals with higher educational attainment, and ethnic Estonians are all more likely to view the susceptibility of easily manipulable people—particularly those who believe populist promises—as a security risk compared to other segments of the population.

Concerns regarding the deterioration of economic livelihoods are nearly evenly distributed across value segments, with Market Liberals exhibiting comparatively lesser apprehension. However, socio-demographically, this threat resonates more strongly with women, non-ethnic Estonians such as ethnic Russians, blue-collar workers, and residents of Ida-Virumaa region.

At the time of the survey, conservative segments expressed distinct apprehension towards Estonia's then-liberal government perceiving it as a primary security threat. Conversely, for certain liberal segments—such as the Liberal Well-to-Do Youth and Market Liberals—the local pro-Russian community is identified as a significant security risk, ranking among the top three threats.

Energy security and stability are deemed significant concerns by a fifth of the Estonian population, with Market Liberals expressing the greatest unease and Frustrated Conservatives displaying the least concern. Delving into the key threats to energy security, liberal segments deem Estonia's energy system's dependency on Russia the main concern, echoing their worries over a potential invasion. Socio-demographically, this sentiment is most prevalent among younger individuals, ethnic Estonians, and residents of smaller settlements.

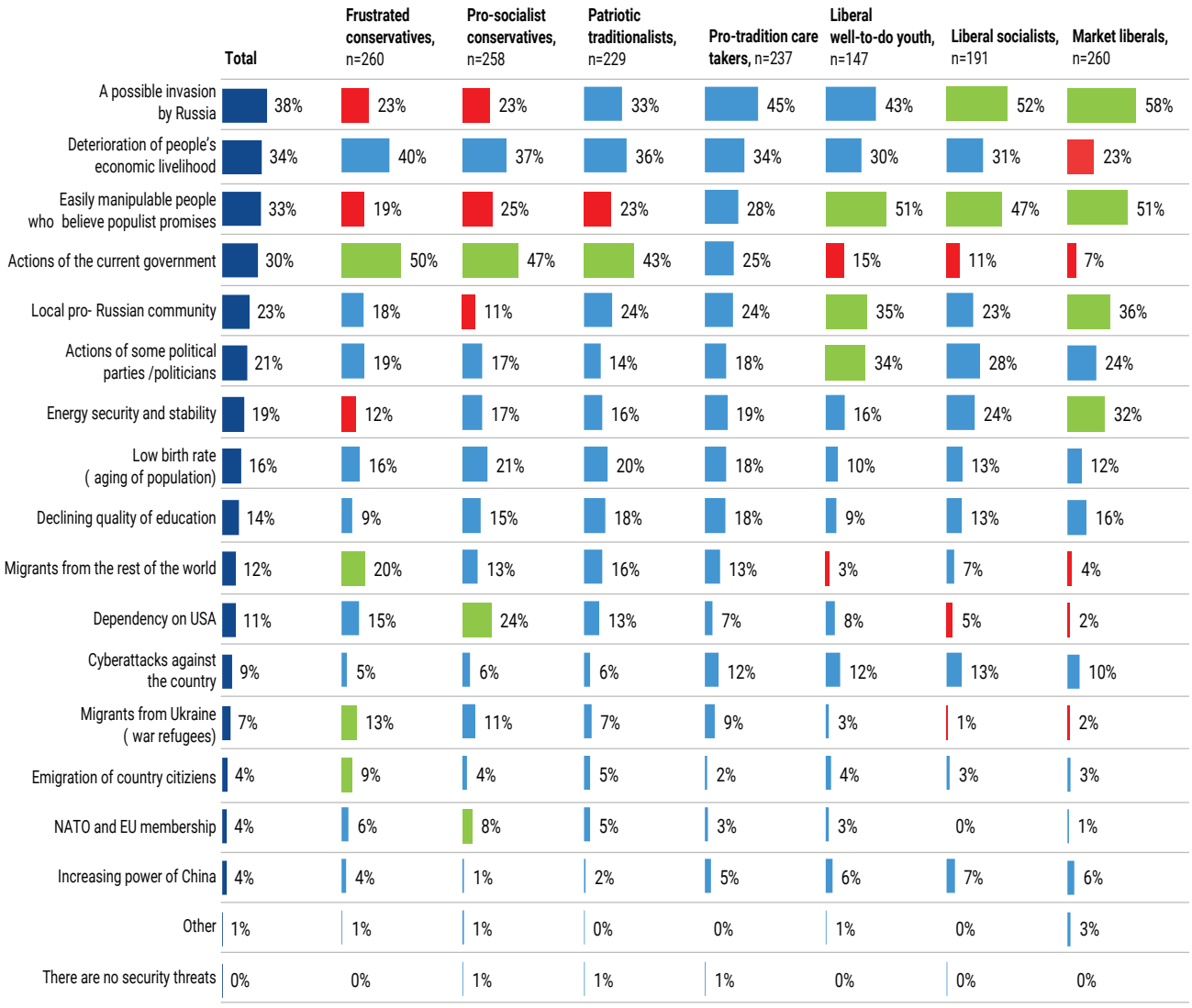
Conversely, individuals with a more conservative worldview identify energy system dependency on other countries and soaring energy prices stemming from international developments as the principal threats. Notably, non-ethnic Estonians (such as ethnic Russians) from Ida-Virumaa region and individuals with lower incomes are particularly attuned to the risks posed by energy prices.

Attitude towards energy supply and security

Estonians have mixed attitudes toward energy supply and security, marked by a blend of anxieties, scepticism, and a desire for greater self-reliance and sustainability. While a strong majority of Estonians (80%) recognise the crucial link between energy security and national independence, a sense of unease permeates the population's perception of the government's handling of the energy sector. This unease is most evident in the widespread scepticism towards the government's long-term energy strategy, with the majority (60%) of Estonians expressing doubt about its clarity and effectiveness. This scepticism is especially pronounced among conservative segments of society, with Market Liberals standing out as the only group showing confidence in the government's approach.

Figure 2. Public opinion on the main threats facing Estonia, based on the study conducted in 2023 across a sample of 1517 people.

What of the following do you believe to be the biggest security threats for Estonia? (Please choose up to three.)



A prevailing sentiment among Estonians (60%) do not agree that 'our government has a clear long-term energy strategy'. Market Liberals are the most likely to agree with the statement, with 23% expressing confidence in the government's strategy. In contrast, more conservative segments exhibit markedly lower levels of agreement, with support below 10%.

Attitudes concerning the organisation of energy supply in Estonia and the country's energy security exhibit polarisation. Asked whether they thought Estonia's energy supply is well-organised and whether energy security has improved over the past year, respondents displayed roughly equal rates of agreement and disagreement (around 35-40%).

The conviction that energy security is indispensable for national independence resonates strongly among Estonians, with an agreement rate of around 80%. Notably, agreement is somewhat lower among Pro-Socialist Conservatives and notably higher among Market Liberals. Demographically, significant disparities exist by ethnicity, with non-ethnic Estonians exhibiting lower agreement rates. Moreover, agreement tends to be higher among men and individuals over the age of 55.

Segments espousing conservative worldviews tend to advocate for state regulation of the energy market. Almost a third of Estonian residents support the notion that the state should offer a single solution rather than allowing individuals to choose an energy provider, with 45% of Conservative Pro-Socialists endorsing state intervention. Older individuals and those with below-average education levels exhibit greater support for state regulation. At the same time, the need to prioritise energy system innovations of local companies is supported by well over two-thirds of Estonians, with only nine percent of disagreement among the respondents.

Two-thirds of Estonian respondents acknowledge the significant impact of the war in Ukraine on the rise in energy prices. Nearly a quarter of Estonian residents think that Estonia should trade with Russia to lower energy prices. Here a very clear difference in attitudes between the value segments emerges: over 40% of the Pro-Socialist Conservatives consider trade with Russia reasonable, while less than 10% of the liberal segments agree with them.

The imperative of local renewable energy production for ensuring energy security garners overwhelming support from most Estonians (nearly 80% in agreement). Additionally, nearly half of the populace (47%) believes that the EU should enforce a swifter transition to renewables in light of the ongoing war. At the same time, a significant proportion of Estonians (45%) lack awareness or hold no opinion regarding EU support for the energy sector for countries under threat; less than a fifth of Estonians think that the EU provides adequate support.

Across these statements, support for transitioning to energy renewables is consistently highest among liberals, particularly Market Liberals, and remains below average among those with conservative worldviews. Women and younger individuals exhibit slightly greater support for transitioning to renewables, while Estonians display greater endorsement of EU activities in this domain compared to non-ethnic Estonians.

Preference of energy sources

When asked to select the three most relevant energy sources for electricity and heating in Estonia, wind energy emerges as the clear favourite (60% of respondents) followed by nuclear and solar energy, each chosen by almost half of participants. Oil shale energy also garners significant support, with over a third of respondents including it among their top choices.

While support for nuclear power in Estonia varies only slightly across value segments, a pronounced polarisation emerges regarding the use of renewable energy sources and oil shale energy, based on ideological inclinations. Conservative segments predominantly favour oil shale energy (approximately 50%), whereas among liberals it lags far behind renewable options, with between 10% and 20% considering it among the top three potential sources.

Gender differences among Estonians are evident in support for nuclear energy, with men significantly more supportive than women (almost 66% versus less than 33%), while women tend to favour different renewables. Non-ethnic Estonians exhibit greater support for fossil energy sources, such as oil shale and natural gas, compared to ethnic Estonians.

Offshore wind energy emerges as the most preferred renewable option for local production (over half), followed by solar energy (about a third) and onshore wind energy (less than a third). Liberal segments demonstrate stronger support for offshore wind energy, often selecting it alongside other preferred renewables, whereas conservative segments are more inclined to choose only one potential energy source.

Just over half of Estonians do not support the immediate cessation of electricity production from oil shale. However, support for ending oil shale production is higher among the Liberal Well-to-Do Youth and Market Liberals, with only a small fraction of conservative segments in agreement. Support for oil shale energy production is higher among men, older individuals, and ethnic Russians/Russian speakers compared to other Estonians.

Around four out of ten Estonians believe that the existing gas infrastructure should be utilised, while a similar proportion remain undecided. Conservative segments tend to support the use of natural gas, whereas liberal segments exhibit more opposition.

Approximately 60% of respondents would not object to the construction of a large solar park near their home, although agreement is lower for wind farms (48%). Moreover, there is room for improvement in awareness regarding the environmental friendliness, economic viability, and installation requirements of solar panels—with approximately 40% of the Estonian population lacking a clear stance. Conservative segments tend to exhibit a more negative attitude towards solar panels and renewable energy in general.

Attitude towards energy and environmental protection

Nearly two-thirds of Estonians express willingness to adjust their lifestyle to be more environmentally friendly. Among conservative segments, approximately half are ready to make such concessions, whereas in all liberal segments at least three-quarters of respondents express readiness.

Perceptions of climate change within Estonian society are polarised, with around 40% agreeing and a similar proportion disagreeing with the statement that environmentalists exaggerate the threats of climate change. At the same time, not all Estonians who acknowledge climate issues are prepared to contribute personally to develop environmentally friendly energy,

although there exists a correlation between attitudes and willingness to pay a higher price. Over half the population is unwilling to pay more for such energy.

A consensus of almost two-thirds of Estonians agree that they bear responsibility for climate change; on par with other European countries. Moreover, almost two-thirds express pride in living in environmentally friendly cities or settlements that invest in solar and wind energy. However, under half (48%) believe that renewable electricity sources can meet most of Estonia's electricity consumption, leaving room for awareness-raising efforts.

Significant disparities in attitudes towards energy and environmental protection are evident between conservative and liberal value segments. While liberal segments prioritise the transition to renewable energy and recognise its positive environmental impact, conservative segments tend to oppose such a green transition.

An intriguing perspective is presented by Pro-Tradition Caretakers, who, despite being emotionally invested in climate concerns and supportive of green initiatives, harbour doubts about Estonia's capacity to produce green energy and their own willingness to contribute to it.

In terms of socio-demographics, the strongest advocates of environmental protection and the use of renewable energy are young people; particularly those under 25. Additionally, women exhibit greater support for these initiatives, while ethnic Estonians are more inclined towards environmental advocacy compared to non-ethnic Estonians.

Latvia

Latvia is situated in Northern Europe, bordered by Estonia to the north, Lithuania to the south, Russia to the east, and Belarus to the southeast. It covers an area of approximately 65,000 square kilometres; slightly larger in size than West Viginia in the US (Investment and Development Agency of Latvia, 2025).

The country has a population of approximately 1.9 million people. The population is predominantly ethnic Latvian (62.7%), with significant Russian (approximately 25%) and smaller minority communities (CIA, 2025b).

Latvia's GDP is approximately $41 billion and the GDP per capita is around $22,000 (World Bank, 2025b). The country has achieved a remarkable share of renewables, supplying almost half of total energy demand and over three-quarters of domestic electricity production in 2022. Most notably, over the period from 2010 to 2022, Latvia experienced significant growth in the share of renewables in electricity generation, rising from over half to over three-quarters (International Energy Agency, 2024).

The lion’s share of renewable electricity generation in Latvia was generated by hydropower from the Daugava River, accounting for over half of total generation in 2022. While the use of solid biomass and biogas increased significantly from 2011 to 2017, it has stagnated since then. Conversely, wind generation steadily increased from 2010 to 2022—with fluctuations due to wind availability—reaching a record high of 190 MWh. Solar electricity generation experienced an impressive sevenfold increase from 2011 to 2022, although it still represented less than 1% of total electricity generation (International Energy Agency, 2024).

Latvia holds the third position within the EU for its reliance on renewable energy sources, which constitutes 42% of its gross final energy consumption (Eurostat, 2025). This strong foundation, especially based on hydropower plants, that represent more of a historical legacy than a recent progressive development, positions Latvia well for further emission reductions across its economy and supports its ambitious renewable energy goals.

Despite this impressive share, Latvia's recent advancements in energy transition have lagged behind those of its neighbours. Sectors such as transport and construction continue to consume

significant amounts of energy and depend on outdated infrastructure (International Energy Agency). As a result, there is an urgent need to develop substantial new renewable energy capacities, especially in wind and solar, to meet Latvia's revised targets—updated National energy and climate plans (NECP)—of over 70% renewable electricity consumption and 57% final energy consumption by 2030 (European Commission, 2023b).

Value segments

When categorising the Latvian population based on their general worldview and value attitudes—encompassing views on traditions, business freedom, minorities, climate change, generational contrasts, and differences between rural and urban inhabitants—seven distinct value segments emerge (see full description in the Table below).

Four segments—Frustrated Conservatives, Pragmatic Traditionalists, Pro-Socialist Contradiction Perceivers, and Dissatisfied Moderate Traditionalists—exhibit more conservative inclinations in their general values, displaying greater criticism towards the government and lesser pride in the country.

Except for the Pro-Socialist Contradiction Perceivers, members of these conservative segments perceive climate issues as insignificant and exaggerated. Variations among these conservative segments primarily revolve around their perspectives on the economic freedom of the nation and the dynamics between different social groups. Overall, these conservative segments tend to be critical of the active pursuit of renewable energy solutions and the existing energy policies within the country.

Differences among Latvian conservatives also exist in their attitudes towards cooperation with Russia in the energy sector, influenced by economic and security considerations, as well as perceptions of the benefits of various energy sources. Most conservative segments, excluding the Pro-Socialist Contradiction Perceivers, demonstrate openness to collaborating with Russia to secure lower energy prices.

Conversely, three segments—Dispassionate/ Moderate Youth, Climate Unconcerned Market Liberals, and Liberal-Socialist Youth—lean towards more liberal perspectives in their values and beliefs. They exhibit greater pride in the country compared to conservative segments and are relatively less critical of the Latvian government.

Within these liberal segments, variations arise concerning views on business freedom, treatment of minorities, and key issues facing Latvia. The Climate Unconcerned Market Liberals segment holds a more moderate stance on climate issues. Notably, the Liberal-Socialist Youth segment stands out for its positivity towards both the government and the quality of life in Latvia. They are particularly supportive of renewable energy development and strongly oppose cooperation with Russia, viewing energy security as vital for Latvia's independence.

Non-ethnic Latvians, such as ethnic Russians, are more prominent in two conservative segments: Pragmatic Traditionalists and Dissatisfied Moderate Traditionalists; whereas ethnic-Latvians are more represented in both liberal segments of young people: Dispassionate/ Moderate Youth and Liberal-Socialist Youth.

Summary of value segments

Figure 3. Summary of value-based segments identified through cluster analysis from a sample of 1500 respondents across Latvia in 2023. The table shows 7 identified segments (in columns) and identifies their main differentiating characteristics (in rows).

	Frustrated conservatives 20%	Pragmatic traditionalists, 14%	Pro-socialist contradiction perceivers 11%	Dispassionate/ moderate traditionalists 16%	Dispassionate/ moderate youth 18%	Climate unconcerned market liberals 11%	Liberal-socialist youth 13%
Worldview	Value traditions, oppose minority rights, proud of country, distrust government, see government actions, US dependency, and migrants as threats.	Value traditions, oppose minority rights, proud of country, most opposed to government, prioritize faith, see economic decline and government actions as threats.	Value traditions, liberal on minorities, socialist economically, proud of country, distrust government, oppose rural/ urban divide.	Oppose minority rights, socialist economically, see US dependency and NATO/EU membership as threats.	Liberal views, open-minded, support free economy, proud of country, distrust government.	Liberal views, open-minded, support free economy, proud of country, distrust government.	Liberal views, value education and hobbies, socialist economically, very proud of country, support government, see Russian invasion, manipulable people, and local pro-Russian community as threats.
Political preferences	Union of Greens and Farmers Latvia First National Alliance "All for Latvia!" For Stability!	Union of Greens and Farmers For Stability! National Alliance "All for Latvia!"	New Unity For Stability! Union of Greens and Farmers Latvia First	Latvia First New Unity For Stability!	New Unity National Alliance "All for Latvia!" United List The Progressives	New Unity Union of Greens and Farmers The Progressives Development/ For!	The Progressives New Unity Development/For!
Energy view	Don't believe in climate change. Support unified energy provider. Favor trade with Russia. Support nuclear and natural gas. Against solar panels.	Don't see climate change as a major issue. Support unified energy provider. Favor trade with Russia.	Worried about climate change. See high energy prices as a threat due to international developments.	Don't believe in climate change. Support trade with Russia.	Concerned about climate change. Oppose trade with Russia. Support solar energy	Don't believe in climate change. Don't support trade with Russia.	Concerned about climate change. See energy system dependency on Russia as a threat. Support local energy production. Oppose trade with Russia. Support wind energy and solar panels.
Socio- demographic factors	Middle-aged and older male, rural area (Kurzeme), retired / working pensioner, household size - 3	Older, other nationality (not Latvian), retired / working pensioner	Young and older, rural area	Middle-aged, other nationality (not Latvians)	Young, less often older Latvians, region—Zemgale, student / working student, household size—4+	No statistically significant difference from the Latvian population distribution	Female, young (less often middle-aged, older), Latvian, from Riga (less from Latgale), student / working student, professionals

Overall security context

Latvian society grapples with a tapestry of security concerns, with economic strains emerging as the foremost worry. The spectre of deteriorating economic livelihood looms large, echoing the anxieties of a third of respondents. Following closely, the shadow of a potential Russian invasion, compounded by demographic challenges such as low birth rates and an aging population, underscores the multifaceted nature of Latvia's security landscape.

Moreover, the susceptibility of individuals to populist rhetoric emerges as a disconcerting threat, particularly pronounced among certain demographic and value segments. Notably, Liberal-Socialist Youth express heightened concern over a potential Russian invasion, with almost a third highlighting this as a significant security threat.

Interestingly, perceptions of security risks diverge across value segments and socio-demographic lines. Economic downturns resonate more profoundly among Pragmatic Traditionalists, as well as women, Russian-speakers, residents from Latgale—a region with a higher proportion of ethnic Russians—and residents with lower incomes (that is, family income up to €500). Conversely, Liberal-Socialist Youth are notably more worried about the susceptibility of individuals to populist promises, with nearly half expressing concern.

The concern over low birth rates cuts across value segments, indicative of a pervasive societal apprehension. Meanwhile, the susceptibility to populist promises weighs heavily on the minds of Liberal-Socialist Youth and other select demographic groups, highlighting the resonance of this threat across various societal strata.

Strikingly, energy security and stability do not commandeer the spotlight among Latvia's security concerns. Despite its critical importance, those potential threats register a relatively muted presence in the security discourse, underscoring a broader societal focus on more immediate challenges.

Delving into energy security apprehensions, high energy prices due to international developments emerge as a primary concern across all value segments. This sentiment is particularly pronounced among Pro-Socialist Contradiction Perceivers, reflecting broader socio-economic anxieties.

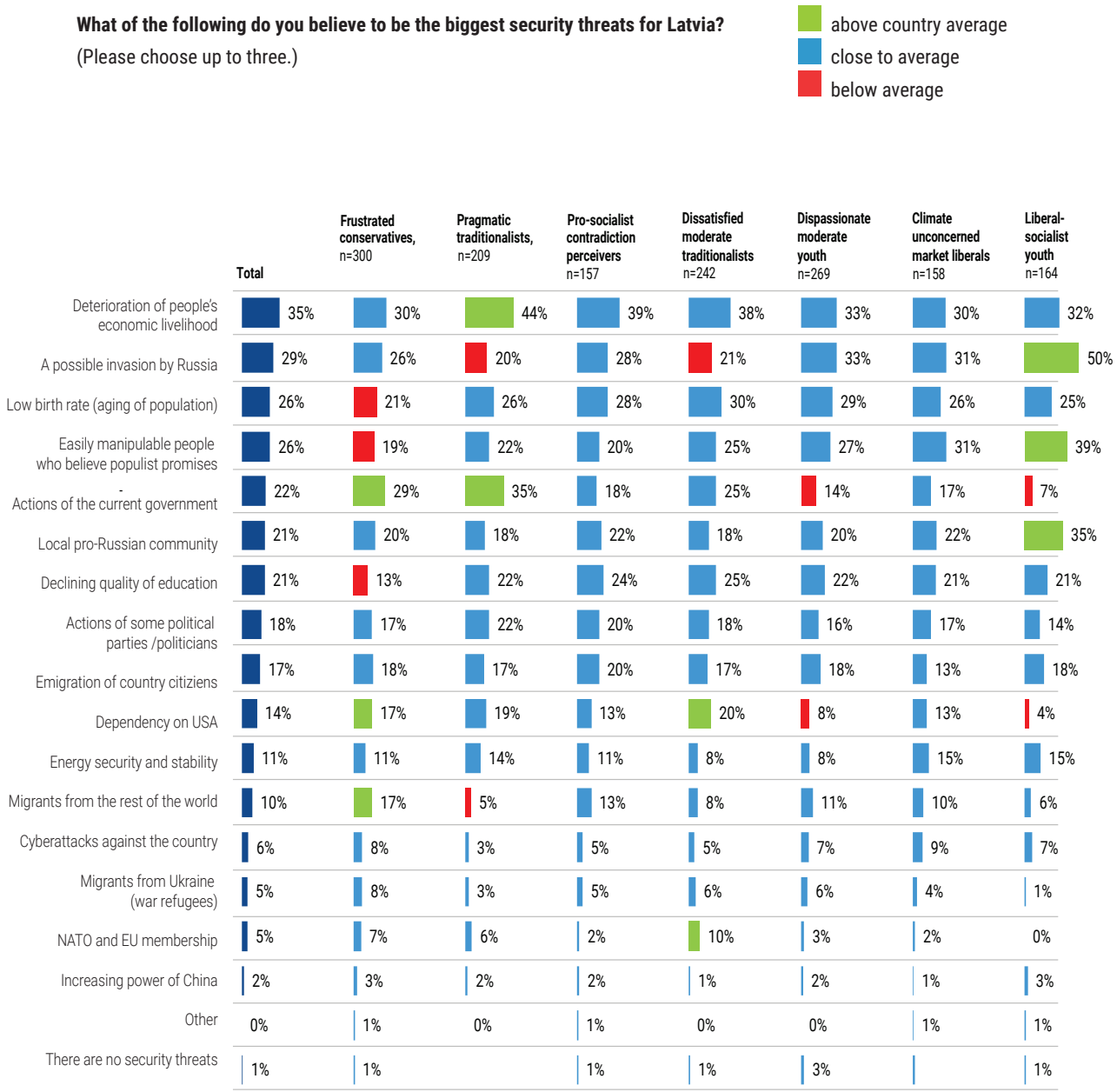
Furthermore, the dependency of the energy system on other countries emerges as the second most-cited threat to energy security across all value groups. Specifically, the reliance on Russia within the energy system is perceived as a greater threat by the Liberal-Socialist Youth cohort, while Dissatisfied Moderate Traditionalists express less concern regarding this issue. This threat is also notably more heightened among younger individuals (aged 18-34), ethnic-Latvians, and residents with higher incomes (family income exceeding €1000).

Attitude towards energy supply and security

In general, Latvians exhibit a penchant for critical assessment regarding the state's role in energy supply and security. Almost two-thirds express scepticism towards the government's long-term energy strategy, with non-ethnic Latvians (especially ethnic Russians) and those aged 35-45 more inclined to harbour such doubts.

Views on the effectiveness of Latvia’s energy supply and the perceived improvement in energy security over the past year tend to be more negative, with approximately 45% expressing scepticism compared to a quarter expressing optimism. Positivity is more common among men, ethnic-Latvians, individuals with higher family incomes, and working professionals. Among different value groups, Liberal-Socialist Youth are more likely than others to believe that the country's energy security has improved in the

Figure 4. Public opinion on the main threats facing Latvia, based on the study conducted in 2023 across a sample of 1500 people



past year. Recognising the pivotal role of energy security in national sovereignty, a majority of Latvians (around 60%), affirm its significance, with Liberal-Socialist Youth leading, registering an agreement rate of over 70%.

Segments with a conservative worldview, notably Frustrated Conservatives and Pragmatic Traditionalists, tend to lean towards advocating for state regulation of the energy market. Only about a third of respondents concur with the notion that the state should offer a single energy provider; a sentiment more prevalent among older individuals, Russian-speaking residents, and non-ethnic-Latvians.

The assertion that the Russia-Ukraine war significantly impacts energy price hikes garners substantial support, with approximately 70% of respondents in agreement. While Frustrated Conservatives exhibit relatively lower agreement rates compared to other segments, their endorsement still represents a significant proportion of respondents (63%).

A notable divide emerges regarding the proposition of trading with Russia to lower energy prices, with only about one-third of respondents supporting this idea. Conservative segments exhibit higher agreement rates (40%), whereas Liberal-Socialist Youth express considerably less support (9%). Moreover, this stance aligns with the preferences of Latvia's Russian-speaking community.

Emphasising the imperative of renewable energy for ensuring energy security, over three-quarters of Latvians advocate for local renewable energy production, with strong endorsement from the Liberal-Socialist Youth segment (90%). Furthermore, there is widespread agreement (61%) that supporting energy system innovations of local companies should be a national priority for Latvia. However, only a minority of Latvians (14%) are willing to pay more taxes to bolster local energy production, although willingness is higher among ethnic-Latvians, men, and younger age groups.

Roughly half of the Latvian population believes that the EU should expedite the transition to renewables in response to the Russia-Ukraine war and supports the necessity to reshape the energy landscape following the full-scale invasion. This sentiment is particularly prevalent among the Liberal-Socialist Youth segment. However, only a fifth of Latvians agree that the EU offers adequate support to countries facing threats to their energy sectors. This perception is more commonly shared among representatives of the Liberal-Socialist Youth segment, as well as among men and ethnic-Latvians in general.

Preferences of energy sources

When asked to choose the top three energy sources for electricity and heating in Latvia, respondents mainly preferred wind (47%), solar (47%), and water energy (44%). Notably, Liberal-Socialist Youth exhibited a higher preference for wind energy, while Dispassionate/Moderate Youth leaned towards solar energy. Among alternative energy sources, Latvia's Frustrated Conservatives were more inclined to favour nuclear energy and natural gas, diverging from the broader preference for renewables.

Water energy emerged as the most preferred renewable energy source for local production (39%), followed by solar (36%) and offshore wind energy (30%). While conservative segments of Latvia displayed a clearer preference for one energy source, liberal segments exhibited a more diverse energy mix.

Views on transitioning away from fossil fuels for electricity production were mixed, with around 40% of respondents finding it challenging to take a stance, and about a third opposing such abandonment. However, younger individuals and

Latvians showed greater readiness to phase out fossil fuel-based electricity production. Well over half of respondents expressed openness to the construction of large solar parks near their homes, support for wind farms was somewhat lower at around 40%. Similarly, about 40% of respondents indicated support for nuclear energy production in Latvia.

Regarding gas consumption, approximately 46% of respondents believed that existing gas infrastructure should be utilised, indicating a reluctance to reduce gas consumption, particularly among conservative segments. Meanwhile, a quarter favoured wood as a renewable energy source: mainly older individuals, men, rural residents, and Frustrated Conservatives.

However, there remains uncertainty and scepticism surrounding solar panel installations, with approximately half of respondents expressing concerns about environmental impact and bureaucratic processes. Moreover, opinions were divided regarding the economic viability of solar panels, with nearly a third of respondents expressing agreement with the statement that solar panels do not offer sufficient economic returns. Frustrated Conservatives exhibited a particularly critical stance towards solar panel solutions, reflecting broader uncertainty and scepticism among residents.

Attitudes towards energy and environmental protection

Over half of Latvian residents (58%) are unwilling to pay a higher price for environmentally friendly energy, with conservative segments exhibiting greater resistance to this idea. Conversely, over half (55%) of the population is willing to make lifestyle concessions to promote environmental friendliness, with Liberal-Socialist Youth showing the highest willingness (80%). Women and young people are more inclined to make such concessions, while Russian-speakers and Latvian citizens with lower incomes are more often unwilling to compromise on their lifestyle for environmentally-friendly energy.

Perceptions of climate change vary among Latvians, with approximately 44% agreeing and over a third disagreeing that environmentalists exaggerate its threats. Frustrated Conservatives, Dissatisfied Moderate Traditionalists, and Climate Unconcerned Market Liberals are more likely to agree with the idea of exaggerated threats.

While nearly two-thirds of Latvians believe their country is as responsible for climate change as other European nations, just over half would feel proud residing in an environmentally friendly city or settlement investing in solar and wind energy. Additionally, just over half of the population believe that renewable electricity sources can provide the majority of Latvia's electricity consumption, indicating room for raising awareness.

Latvia's Liberal-Socialist Youth exhibit a particularly supportive stance toward nature protection and renewable energy, with Pro-Socialist Contradiction Perceivers also showing higher agreement with the responsibility for climate change statement. Conversely, Frustrated Conservatives and Climate Unconcerned Market Liberals exhibit less agreement with these sentiments.

Lithuania

Lithuania is located in the Baltic region of Northern Europe, bordered by Latvia to the north, Belarus to the east and south, Poland to the south, and the Baltic Sea to the west. It covers an area of approximately 65,000 square kilometres, which is also somewhat larger than Latvia (World Data, 2025c).

Lithuania has a population of approximately 2.8 million people, with ethnic Lithuanians making up over 80%. Smaller communities include ethnic Poles at about 6% and ethnic Russians at around 5% (European Commission, 2024).

The country's GDP is approximately $71 billion, making it the largest economy in the Baltics, with a GDP per capita of around $25,000 (World Bank, 2025c). In 2022, amid Russia's escalation of the war, Lithuania ceased importing energy from Russia and significantly increased its renewable electricity generation from almost a third to three-quarters, positioning itself as a leader in renewable electricity production in Europe (Karčiauskas, 2023). Furthermore, Lithuania has set an ambitious goal to meet 80 to 90% of its domestic electricity needs by 2030, with 90% of that coming from renewable sources (Verslo Žinios, 2022).

Currently, Lithuania's electricity consumption stands at about 11 million MWh, with the country importing just over 60% of its electricity needs and producing nearly a third domestically (around 4 million MWh). Depending on the season, Lithuania generates between half and over two-thirds of its electricity from renewables. As a percentage of total domestic energy production, the most significant renewable sources are wind power (around 35%), biomass (around 17%), hydropower (around 7%), and solar energy at 3% (World Data, 2025a). Nonetheless, this demonstrates substantial potential for growth in expanding Lithuania's renewable energy capacity.

In June 2024, the Lithuanian government approved the National Energy Independence Strategy 2050. In essence, the strategy aims not only to achieve climate neutrality, but also to ensure full independence from energy imports and establish the country as a net exporter of renewable energy. During the strategy's presentation, the Minister of Energy highlighted the opportunities presented by the

'Green Deal,' predicting that by 2030-2035, Baltic and Scandinavian countries could generate a renewable energy surplus available for export to other European nations (Ministry of Energy of the Republic of Lithuania, 2024).

In accordance with the strategy, the potential for renewable energy generation in the Baltic countries has been identified as follows: 25.5 GW from offshore wind, 18 GW from onshore wind, 40 GW from solar power, and a hydrogen derivative products production capacity of 10 GW; with Lithuania, in particular, prioritising wind energy (with the 5.9GW potential until 2023 and 14.5GW until 2050).

Moreover, for the first time since the closure of the Ignalina nuclear power plant and the unapproved Visaginas project, nuclear energy has been included as an optional component in the strategy. A strategic decision regarding the construction of fourth-generation small nuclear reactors is expected by 2028, following a feasibility study and consideration of experiences from neighbouring countries, such as Estonia, that are already advanced in making the decision to implement these types of projects (Ministry of Energy of the Republic of Lithuania, 2024).

Value segments

When analysing the Lithuanian population's worldview and value attitudes, seven distinct segments emerge, each with its unique perspectives and priorities.

Two segments, Nostalgic Conservatives and Uncompromising Traditionalists, lean towards conservatism in their values and attitudes. They exhibit scepticism towards the current government, are less proud of Lithuania, and perceive climate change as a pseudo-problem. Additionally, these segments express reservations about energy management and are open to cooperation with Russia.

Open-Minded Traditionalists are conservative in some respects, valuing traditions and family. They are moderately critical of the government but maintain pride in Lithuania. Concerned about climate change, they support green energy initiatives and are cautious about cooperating with Russia due to security concerns.

Three liberal segments—Concerned City Youth, Liberal Socialists, and Market Liberals—embrace progressive views on traditions, gender roles, and minorities. They prioritise human rights and education, identifying a possible Russian invasion and susceptibility to populist promises as major security threats. However, these segments differ in their approaches to energy sector management and energy sources. Lastly, the Indifferent segment appears disengaged or ambivalent towards societal issues, often expressing uncertainty or disinterest. They tend to refrain from taking strong stands on values and societal matters, rating below the national average on most statements, including those related to energy.

Overall security context

Over half of Lithuanian respondents (57%) view a potential invasion by Russia as the most significant security threat. This concern is widely shared across all segments, reflecting the overarching apprehension regarding Russian aggression. However, conservative segments are less likely to perceive Russia as a threat compared to the national average.

Over a quarter of respondents identify easily manipulable people who believe in populist promises as a notable security threat. This concern is more prevalent among liberal segments, reflecting anxieties about social cohesion and the influence of populist ideologies.

The deterioration of people's economic livelihood is considered a significant threat by over a fifth of respondents. This concern is distributed evenly across value segments, indicating widespread apprehension about economic stability. Younger respondents and those with lower education levels are more likely to perceive this threat.

Conservative segments identify the actions of the current Lithuanian government as a notable security threat. This perception is more pronounced among respondents with lower income and education levels, reflecting concerns about governance and leadership.

Liberal segments express greater concern about Lithuania's energy system dependency on Russia, while conservative segments prioritise the threat of dependency on other countries. These divergent views reflect differing perspectives on national energy policy and geopolitical risks.

Attitude towards energy supply and security

The attitudes towards energy supply and security among Lithuanian respondents provide valuable insights into public perceptions and preferences.

One-third of Lithuanian respondents believe that the energy supply in Lithuania is well-organised, while another third disagrees. Market Liberals (49%) and Liberal Socialists (46%) exhibit the highest agreement with this statement. Agreement is also higher among those with higher family income and education levels.

Less than half (41%) of Lithuanian respondents agree that the energy security of the country has improved over the past year. Market Liberals and Liberal Socialists exhibit the highest agreement, while Uncompromising Traditionalists show the least. Agreement is higher than average among male respondents, ethnic Lithuanians, and those with higher family income and education levels.

Almost half of Lithuanian respondents (45%) doubt that the government has a clear long-term energy strategy. Market Liberals are most sceptical in this regard. Women and younger respondents appear less certain about their stance on this issue.

The vast majority (81%) of Lithuanian respondents strongly agree that energy security is crucial for upholding Lithuania's independence. However, the Indifferent segment shows lower agreement. Older respondents and those with higher education tend to agree more strongly. In addition, over half of Lithuanian respondents support state regulation of the energy market, advocating for a single energy provider. This preference is higher among older people and those residing outside major cities.

The impact of the Russia-Ukraine war on energy security is acknowledged by over two-thirds of Lithuanian respondents, with higher agreement among those with higher education levels. Half of Lithuanian respondents do not agree with the notion of trading with Russia to lower energy prices, with conservative segments showing slightly higher agreement. Conversely, support for energy trade with Russia is mainly found among non-ethnic Lithuanian respondents and those with lower education levels.

Only about a third of Lithuanian respondents are willing to pay higher taxes to support local energy production, with Liberals showing higher willingness compared to others. Additionally, respondents living in Vilnius, with higher education and income, also showed a greater willingness to pay higher taxes for this purpose. Still, nearly half (46%) of respondent were not willing to pay more taxes in support of local energy production.

The need to prioritise energy system innovations of local companies is supported by almost two-thirds of Lithuanian respondents, with higher agreement among older respondents and those

Summary of value segments

Figure 5. Summary of value-based segments identified through cluster analysis from a sample of 1504 respondents across Lithuania in 2023. The table shows 7 identified segments (in columns) and identifies their main differentiating characteristics (in rows).

	Nostalgic conservatives 8%	Uncompromising traditionalists 15%	Open-minded traditionalists 18%	Indifferent 21%	Concerned city youth 10%	Liberal socialists 14%	Market liberals 14%
Worldview	Value traditions, oppose minority rights. Concerned about corruption. Least proud and satisfied, skeptical of USA, EU/NATO. See Russia as a lower security risk.	Value traditions, oppose minority rights. Prioritize nationality and medical care. Strongly oppose government, less proud of country.	Value traditions, family, faith, nationality. Don't prioritize minority rights. Proud of country, moderately opposed to government, moderately satisfied.	Little interest in societal issues, often avoid taking a stand.	Moderate liberals on traditions, value education. Economically socialist, worried about inflation. See local Russian community as a risk. Distrust government, less proud of country.	Liberal views on traditions, family, minorities. Value education and national prosperity. Economically socialist. Proud of country, trust government, most satisfied.	Liberal views on traditions, family, minorities. Value homeland security. Support market economy. Proud of country, trust government, satisfied.
Political preferences	Social Democratic Party of Lithuania Lithuanian Farmers and Greens Union	Lithuanian Farmers and Greens Union Social Democratic Party of Lithuania	Social Democratic Party of Lithuania Homeland Union—Lithuanian Christian Democrats	The highest percentage of can´t say Social Democratic Party of Lithuania Homeland Union—Lithuanian Christian Democrats	Social Democratic Party of Lithuania Homeland Union—Lithuanian Christian Democrats Freedom Party	Homeland Union—Lithuanian Christian Democrats	Homeland Union—Lithuanian Christian Democrats Social Democratic Party of Lithuania
Energy view	Don't believe in climate change. Critical of energy management; open to Russia cooperation; support fossil fuels, nuclear, and wood. Unwilling to pay for green energy.	Don't believe in climate change. Most critical of current energy policy; worried about energy prices; open to Russia trade. Oppose green turn.	Worried about climate change. Moderately satisfied with energy policy; support green energy and saving measures. Oppose Russia trade.	High percentage of "can't say" on energy issues; least interested in household energy efficiency.	Worried about climate change. Energy attitudes align with national average; biggest supporters of water energy.	Concerned about climate change; satisfied with energy policy. Support green turn and local energy production. Oppose Russia trade.	Concerned about climate change; satisfied with energy policy. Support green turn and local energy production. Biggest supporters of solar and geothermal energy. Oppose Russia trade.
Socio-demographic factors	Older males, outside Vilnius/big cities, lower income, retired.	Middle-aged and older males, smaller towns, below average education, blue-collar, retired.	Middle-aged and older, outside Vilnius/big cities; otherwise representative of the general population.	More young people, one-person households, low income, below average education, non-working.	Younger people from big cities, in paid employment, students.	Younger and middle-aged females, cities, higher education, higher income, professionals.	Higher education, above average income; otherwise representative of the general population.

with higher education and income. Furthermore, local renewable energy production for energy security is deemed necessary by 80% of Lithuanian respondents, with higher agreement among Open-minded Traditionalists and Liberals.

The necessity to reshape the energy strategy due to Russia's full-scale invasion of Ukraine is acknowledged by over two-thirds of Lithuanian respondents, with higher agreement among liberal segments and Open-minded Traditionalists, as well as among older respondents and those with higher family income.

Nearly half of Lithuanian respondents have no opinion or awareness about EU support to the energy sector, particularly concerning whether the EU provides sufficient support to countries facing threats in this sector. Women appear to perceive themselves as less informed on the topic and are less likely to take a stance compared to men.

More than two thirds of Lithuanian respondents believe that the EU should enforce a faster transition to renewables due to the Russia-Ukraine war. Agreement is notably higher among liberal segments and Open-minded Traditionalists, as well as among ethnic Lithuanians and those with higher levels of education.

Preferences of energy sources

The top three energy sources preferred for electricity and heating in Lithuania, according to respondents, are solar (69%), wind (61%), and water (32%). Those energy sources are favoured across all segments, with biomass being rated higher than water by all except the Indifferent segment. However, Uncompromising Traditionalists rate nuclear energy higher than the national average.

Solar energy is considered the most preferred renewable energy source for local production (54%), followed by offshore wind energy (32%) and onshore wind energy (27%). Nostalgic Conservatives prefer water energy more than wind energy.

Regarding the construction of large energy installations, over half of Lithuanian respondents would not oppose a solar park near their homes, while nearly 40% support the construction of wind farms and nuclear energy production in the country. Notably, men show significantly stronger support than women, with over half versus around a quarter, respectively.

Among Lithuanian respondents, 76% agree that ancient and valuable forests should not be sacrificed for energy production. Instead, they advocate for the utilisation of wood waste and forest residues for biomass. This sentiment is particularly prevalent among older respondents.

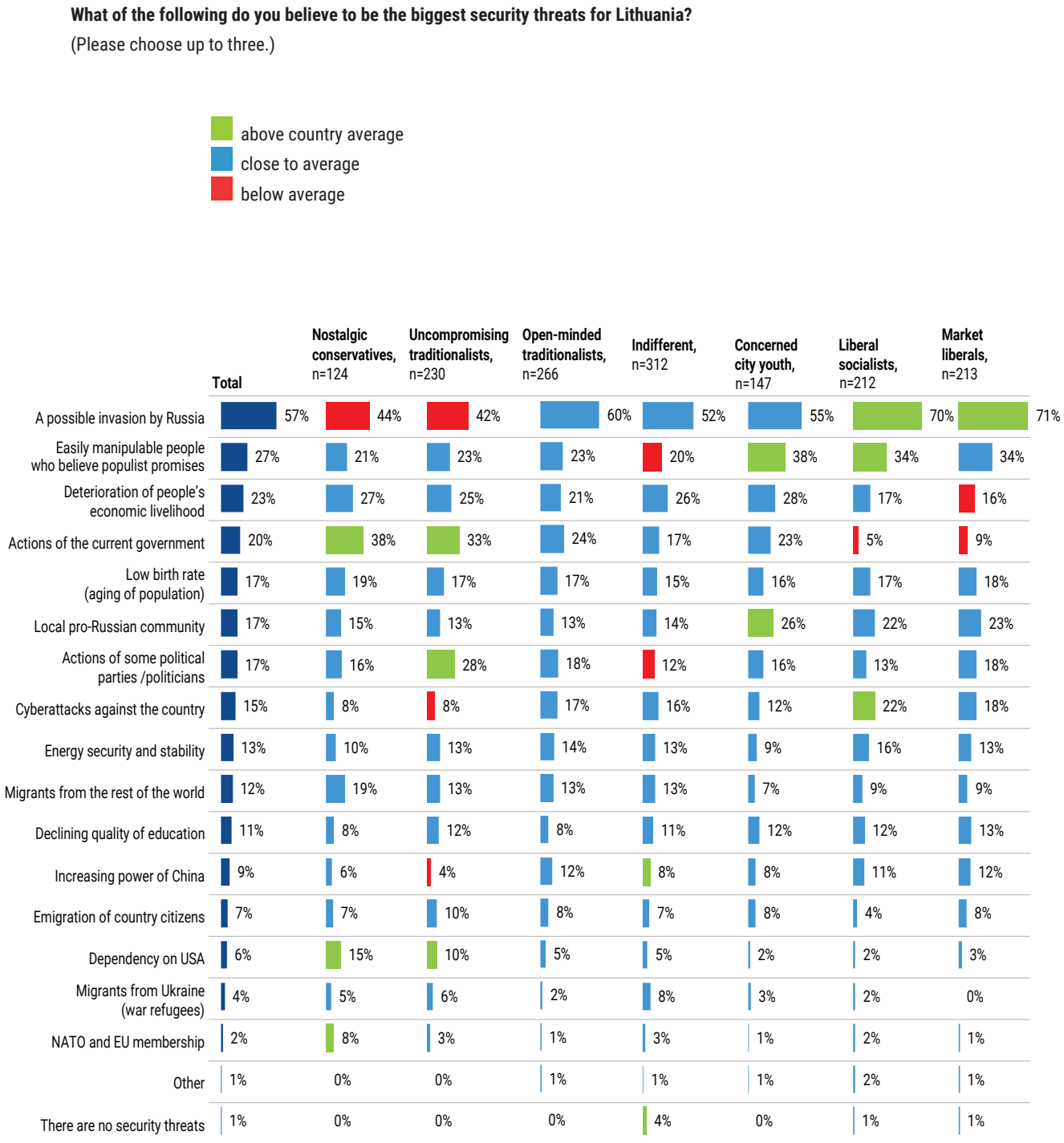
About four out of ten respondents have no opinion or awareness regarding the environmental friendliness, economic profitability, and installation requirements of solar panels, indicating a potential lack of information and education on the topic.

Attitudes towards energy and environmental protection

Nearly half (47%) of the respondents disagree with the assertion that environmentalists exaggerate the threats of climate change. The level of agreement with this statement increases among more conservative segments.

When it comes to willingness to adopt environmentally-friendly practices, over 60% of respondents express their readiness to make lifestyle changes. This figure rises to 80% among respondents in liberal segments. However, Uncompromising Traditionalists are the least inclined to make concessions in their lifestyle,

Figure 6. Public opinion on the main threats facing Lithuania, based on the study conducted in 2023 across a sample of 1504 people.



with only 45% expressing agreement. Female respondents, younger individuals, and those with higher education levels are more likely to agree to such changes.

Regarding the willingness to pay a higher price for environmentally-friendly energy, nearly half of respondents are not ready, while almost a third are prepared to do so. Younger respondents (aged 25-34), those with higher incomes, and higher education levels are more willing to pay a premium for eco-friendly energy.

A significant gap is observed between value segments concerning environmental protection and green energy. While liberal segments advocate for transitioning to renewable energy and acknowledge its positive environmental impact, conservative segments tend to attribute blame to external factors for climate change and are less supportive of green initiatives.

The majority (nearly 70%) of respondents agree that renewable electricity sources have the potential to meet most of Lithuania's electricity consumption.

Approximately two-thirds of respondents agree that they would feel proud to reside in an environment-friendly city or settlement that invests in solar and wind energy. This sentiment is more prevalent among female respondents, older individuals (aged 65 to 74), residents of Vilnius, and those with higher incomes.

Nearly three-quarters of respondents agree that Lithuania bears responsibility for climate change on par with other European countries. However, conservative segments largely disagree with this statement.

Main takeaways and policy recommendations

Based on the data, there are several major similarities in terms of perceptions between Estonians, Latvians, and Lithuanians:

- Broadly speaking, energy security is a shared concern across all three countries. While it may not be the top security concern, it is recognised as crucial for national sovereignty and independence.

- Across the Baltics, there are apprehensions about reliance on external energy sources, particularly dependency on Russia, and a strong desire for more sustainable and self-sufficient energy solutions.

- While concerns about Russia are present in all three countries, the extent of the perceived threat varies. Across the Baltics, there is a stronger emphasis on potential Russian aggression, reflecting historical tensions, while in Estonia and Latvia, attitudes towards cooperation with Russia in the energy sector differ among conservative and liberal segments, and among ethnic Russians and non-ethnic Russians.

- Generally, across Estonia, Latvia, and Lithuania, there is a fair amount of willingness among residents to make lifestyle changes to be more environmentally friendly. This includes efforts to reduce energy consumption, adopt sustainable practices, and support initiatives that promote environmental sustainability.

- There is also widespread support across the Baltics for transitioning towards renewable energy, but preferred sources vary.

- A significant portion of the populations in all three Baltic states express scepticism towards their respective governments' long-term energy strategies. There are doubts about the clarity and effectiveness of these strategies, perhaps indicative for a need for more transparency and coherent energy policies or simply underscoring the need for a more effective communication strategy to engage stakeholders about the plans.

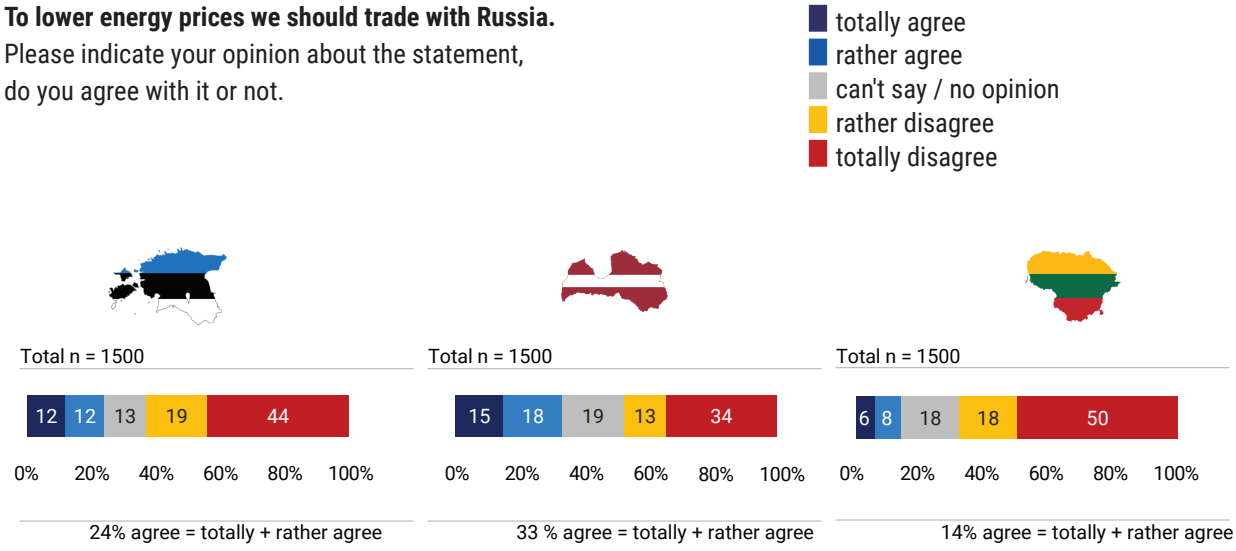
Overall, there are also notable differences regarding energy security and environmental issues shaped by historical, cultural, and geopolitical factors specific to each country:

- While economic concerns are present in all three Baltic countries, the specific worries vary. In Latvia, economic strains are the foremost concern, followed by potential Russian threats and aging of the population. In Lithuania, a possible Russian invasion is the most significant security threat, followed by concerns related to the government in office at the time of the survey. In Estonia, economic downturns and concerns about easily manipulable people swayed by populist promises are major concerns, alongside worries about Russian aggression.

- While there is strong support for renewable energy and environmental protection across all three Baltic states, the level of enthusiasm and willingness to make lifestyle changes differs. Estonians and Lithuanians (around 65%) express a high level of willingness to adopt environmentally-friendly practices, while enthusiasm is somewhat lower in Latvia, at just over half. Still, conservative segments in all three countries tend to be less supportive of green initiatives compared to liberal segments.

- Affordability remains a common concern across these Baltic states. Residents of Estonia, Latvia, and Lithuania show varying levels of unwillingness to pay higher prices for environmentally-friendly energy: over

Figure 7. Comparison of attitudes towards energy supply and security across Estonia, Latvia and Lithuania, based n the study conducted in 2023.



half in Estonia and Latvia, and nearly half in Lithuania. There are of course vast differences between conservative and liberal communities.

- The two Baltic states with the largest ethnic Russian and Russian-speaking populations—Estonia and Latvia—display a greater willingness to trade with Russia in pursuit of lower energy prices, potentially reflecting higher vulnerability to Kremlin influence. In Estonia, nearly a quarter of the population supports such trade, while in Latvia the figure approaches one-third, compared to only around 14% in Lithuania.

- The three Baltic countries split in terms of preferences for renewable energy: in Estonia, offshore wind energy is the most preferred renewable option for local production (56%), followed by solar energy (32%) and onshore wind energy (25%). In Latvia, water energy is the most favoured renewable source (39%), with solar energy (36%) and offshore wind energy (30%) trailing behind. In Lithuania, solar energy leads as the most preferred renewable energy source (54%), followed by offshore wind energy (32%) and onshore wind energy (27%).

- Lithuanians (nearly 70%) exhibit the highest level of confidence in the potential of renewable electricity sources to meet the majority of the country's electricity demand, followed by Latvians (just over half) and Estonians (almost half), who display the least acceptance of this proposition.

To ensure robust energy security, Estonia, Latvia, and Lithuania must remain committed to diversifying their energy sources, reducing reliance on Russia, and avoiding dependence on any single country. This entails substantial investments in local energy production, focusing on renewable sources like solar, wind, and hydroelectric power, while also considering nuclear energy, which enjoys significant support in Estonia.

The data on Estonia, Latvia, and Lithuania's energy landscapes, coupled with their shared and unique energy security challenges, lead to several strategic policy recommendations:

I. Long-term energy strategy communication: The responses—60% of Estonians, 64% of Latvians, and 41% of Lithuanians—reflect a widespread scepticism about the existence of a coherent long-term energy strategy. This highlights the urgent need for governments to not only prioritise the development of such strategies, but also actively promote them through town hall meetings, online forums, social media campaigns to engage the public. Governments should regularly communicate with the public, engage stakeholders, and transparently document energy policies and goals to build public trust and confidence.

II. Country-specific energy strategy focus: Governments seeking to garner societal support for their energy strategies should tailor their focus to the distinct drivers within each country: Estonia, emphasizing local innovations within the sector; Latvia, highlighting economic factors and price-oriented advantages; and Lithuania, emphasising the imperative of energy independence, both from a security perspective, and as a means to reduce reliance on energy imports. Governments can also prioritise investments in the types of renewable energy that enjoy the strongest public support, which includes wind energy in Estonia, hydro, solar and wind energy in Latvia, and solar energy in Lithuania.

III. Targeted renewable energy campaigns: To advance the renewable energy agenda, the Baltic states must launch targeted campaigns addressing specific societal segments, particularly conservative demographics sceptical of renewable energy. These campaigns should address the values and concerns of these groups (for example, ethnic Russians in Estonia and Latvia), promoting the benefits of renewable energy and energy efficiency and highlight the potential for job creation and economic development in local economies. It would also be helpful to develop educational programs that explain the basics of renewable energy in simple terms and dispel misinformation. Estonia and Latvia, both with relatively large Russian-speaking communities, could partner to engage these segments of society.

IV. Use public support for energy security and environmental action to drive policy: a substantial number of respondents across the Baltics support the idea that energy security is crucial for national independence. Moreover, they also express a willingness to make lifestyle changes for the sake of the environment. Policymakers can harness this support to advance energy efficiency initiatives and reduce consumption.

V. Promote understanding of affordability: Given widespread concerns about affordability, renewable campaigns need to highlight economic incentives, such as subsidies or tax breaks, to encourage both businesses and consumers to adopt renewable energy solutions. This could help address affordability concerns and increase willingness to invest in green energy.

VI. Partner with local influencers: Governments, and local non-governmental organisations should also partner with influencers with direct links to sceptic segments of the population, improve understanding of renewable energy within these communities, and support efforts to address local concerns — an approach that renewable energy and environmental funders should also consider supporting to enhance resilience across the Baltics.

Conclusion

Overall, while there may be some variations in attitudes and priorities among residents of Estonia, Latvia, and Lithuania, there are significant similarities in their perceptions and concerns regarding energy, the environment, and sustainability. These shared perspectives provide opportunities for collaboration and cooperation in addressing common challenges and advancing shared goals across the Baltic region. By adopting the strategic recommendations presented in this paper, Estonia, Latvia, and Lithuania can strengthen their energy security, foster public support for sustainable energy policies, and ensure a resilient, diversified energy future. ■

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