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Energy Security, Strategic Autonomy and Foreign Policy Resilience: Germany and Poland after Russia's Invasion of Ukraine

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Abstract

Russia's full-scale invasion of Ukraine in February 2022 transformed European energy policy from a largely economic and regulatory field into a central question of security, diplomacy, and strategic autonomy. This article examines how pre-war energy dependence and post-war diversification shaped foreign-policy resilience in Germany and Poland between 2021 and 2025. The two countries provide a revealing comparison because Germany entered the crisis with deep reliance on Russian pipeline gas, while Poland had spent years treating dependence on Russia as a security vulnerability and investing in alternative infrastructure. The study adopts a qualitative comparative case-study design based on structured document analysis of official European Union, German, and Polish energy statistics, policy documents, regulatory reports, and peer-reviewed scholarship. The findings show that the 2022 shock exposed the foreign-policy costs of concentrated energy dependence but also demonstrated that vulnerability can be reduced rapidly when national adaptation is reinforced by regional market integration. Germany moved from 52% of gas imports originating in Russia in 2021 to a system centred on Norway, the Netherlands, Belgium, and liquefied natural gas, while maintaining gas consumption well below its 2018–2021 average through 2025. Poland's earlier development of the Świnoujście LNG terminal, regional interconnectors, and the Baltic Pipe reduced the adjustment burden when Russian pipeline deliveries ceased in 2022. The comparison indicates that Poland possessed greater pre-crisis resilience, whereas Germany developed substantial resilience through accelerated diversification, demand reduction, storage policy, and European solidarity. The article concludes that strategic autonomy in energy does not require national self-sufficiency; rather, it depends on diversified supply, flexible infrastructure, credible regional institutions, and the political capacity to absorb short-term economic costs without abandoning foreign-policy commitments. It recommends that European governments treat diversification, clean-energy transition, storage, and cross-border connectivity as mutually reinforcing instruments of diplomacy and security rather than as separate energy-policy objectives.

Keywords: *Energy Security, Strategic Autonomy, Foreign Policy Resilience, Germany, Poland*

1.0 Introduction

Energy security has re-emerged as a central concern in international relations because contemporary states depend on cross-border networks for fuels, electricity, finance, technology, and infrastructure. Energy therefore cannot be treated simply as a commodity exchanged through neutral markets; it is also a strategic input whose disruption can constrain industrial production, household welfare, military preparedness, and diplomatic choice. Yergin (2006) argued that modern energy security requires diversification and resilience rather than a narrow focus on physical supply, while Cherp and Jewell (2014) conceptualized energy security as the low vulnerability of vital energy systems. The geopolitical importance of this insight became unmistakable after Russia's full-scale invasion of Ukraine in February 2022. The invasion occurred in a European system in which energy markets had been deeply integrated with Russia over several decades, especially through pipeline gas. The resulting crisis demonstrated that interdependence can produce prosperity during stable periods while simultaneously creating leverage when political relations deteriorate. Farrell and Newman's (2019) theory of weaponized interdependence is particularly relevant because it explains how asymmetric positions within networks can be converted into coercive power. In Europe, the interruption and manipulation of Russian gas supplies forced governments to confront the relationship between market efficiency and strategic exposure, making energy policy inseparable from sanctions, alliance politics, economic security, and the credibility of foreign-policy commitments.

The scale of Europe's pre-war exposure helps explain why the crisis became a test of strategic autonomy. Russian gas accounted for about 45% of European Union gas imports in 2021, a level of concentration that amplified the political and economic consequences of disruption (European Commission, 2024). In May 2022, the European Commission responded through the REPowerEU Plan, which explicitly linked energy diversification, demand reduction, renewable-energy expansion, and the phase-out of Russian fossil fuels to the security of the Union (European Commission, 2022). The subsequent shift was rapid: the Russian share of EU gas imports fell to about 15% in 2023, although it rose to 19% in 2024 before declining again as diversification continued; by 2025 the Commission reported reliance of about 12% (European Commission, 2024, 2025, 2026). These changes were achieved through higher Norwegian pipeline supplies, increased liquefied natural gas (LNG) imports, stronger storage obligations, demand reduction, accelerated renewable-energy deployment, and greater use of cross-border infrastructure. The episode therefore offers an unusually clear empirical setting for examining whether reduced energy dependence increases foreign-policy room for manoeuvre. It also raises a deeper question for diplomacy: whether strategic autonomy is best pursued through national self-sufficiency or through diversified interdependence supported by credible regional institutions and multiple external partners.

Germany represents the reactive side of this transformation. Before the invasion, German energy and foreign policy were shaped by a combination of the *Energiewende*, industrial demand for competitively priced gas, and a long political tradition of engagement with Russia. Russian gas accounted for 52% of German gas imports in 2021, making Germany especially vulnerable when pipeline deliveries were progressively reduced during 2022 and stopped through Nord Stream 1 in September (Bundesnetzagentur, 2023). The vulnerability was not purely technical. Wood (2024) shows that Nord Stream 2 had become a focal point of political contestation because Germany tended to interpret the project through commercial and bilateral lenses while Poland, the Baltic states, Ukraine, and parts of the transatlantic alliance emphasized geopolitical risk. Similarly, Siddi (2020) argues that national identities and contrasting conceptions of Russia shaped the conflict surrounding Nord Stream 2. The invasion

therefore challenged more than a supply model; it undermined the assumption that dense economic relations could remain insulated from security competition. Germany had to construct LNG capacity at exceptional speed, diversify pipeline imports, reduce demand, protect vulnerable consumers and industry, and simultaneously support increasingly costly sanctions against Russia. The German case is thus useful for understanding whether a highly exposed state can regain strategic flexibility after a geopolitical shock rather than before it.

Poland provides a contrasting case because energy diversification had been securitized well before 2022. Polish governments repeatedly framed dependence on Russian gas as a sovereignty and national-security concern, a pattern consistent with Szulecki's (2020) analysis of securitization in Polish energy governance. The Energy Policy of Poland until 2040 identified diversification of gas supply and network infrastructure as a strategic priority, including the Baltic Pipe, expansion of the Świnoujście LNG terminal, and stronger regional interconnections (Ministry of Climate and Environment of the Republic of Poland, 2021). When Russia halted gas deliveries to Poland in April 2022, the country was therefore closer than Germany to possessing alternative infrastructure. The Baltic Pipe began transmitting gas in October 2022 and reached its target capacity of up to 10 billion cubic metres per year by the end of November, while Poland also benefited from LNG and interconnectors with Lithuania and Slovakia (GAZ-SYSTEM, 2022a, 2022b). This prior investment did not eliminate all energy-security challenges, because Poland remained heavily reliant on fossil fuels and exposed to European price shocks, but it reduced the physical vulnerability associated with losing a dominant eastern supplier. The Polish experience therefore allows the study to distinguish anticipatory resilience from crisis-induced resilience and to assess how threat perception before a crisis affects diplomatic flexibility during one.

The comparison is also significant for the wider debate on European strategic autonomy and foreign-policy resilience. Strategic autonomy is sometimes discussed as the ability to act independently of the United States, China, or other major powers, but the concept is more useful when understood as the capacity to preserve political choice in situations of external pressure. Energy is foundational to that capacity because diplomatic commitments are difficult to sustain when they impose severe domestic shortages or politically destabilizing costs. Goldthau and Sitter (2020) showed before the invasion that EU energy policy toward Russian gas was divided between market-oriented and geopolitical approaches, while Goldthau and Youngs (2023) argue that the 2022 crisis moved energy and climate policy closer to the realm of hard security. Foreign-policy resilience, as used in this article, refers to a state's ability to maintain core external commitments despite economic pressure generated through energy dependence. This does not mean that energy structure mechanically determines diplomacy. Domestic institutions, public expectations, alliances, infrastructure, and policy sequencing mediate the relationship. Nevertheless, the material structure of dependence changes the price of political action, and those costs can influence the speed, credibility, and sustainability of foreign-policy decisions.

Against this background, the article examines how energy dependence and diversification shaped foreign-policy resilience in Germany and Poland from 2021 to 2025. The period begins with the last full pre-invasion year and follows the emergency response through a phase in which new supply patterns became more institutionalized. The article asks how different pre-war understandings of Russian energy risk affected the two countries' vulnerability, how diversification changed after the invasion, and what these trajectories reveal about European strategic autonomy. Rather than presenting energy independence as an attainable or necessarily desirable goal, the analysis focuses on the quality of interdependence: concentration versus diversification, rigid pipelines versus flexible infrastructure, bilateral exposure versus regional

connectivity, and short-term affordability versus long-term strategic resilience. The central argument is that Poland entered the crisis with stronger anticipatory resilience because diversification had been pursued as security policy, whereas Germany converted severe initial vulnerability into substantial post-crisis resilience through accelerated infrastructure, conservation, and EU market integration. The comparison further suggests that regional solidarity is not the opposite of strategic autonomy. In an integrated Europe, autonomy can be strengthened through deliberately diversified dependence when states retain multiple supply routes, storage options, and institutional mechanisms for collective action.

2.0 Literature Review

The energy-security literature provides the broad conceptual foundation for analysing these cases. Early approaches emphasized reliable and affordable supply, but later scholarship widened the concept to incorporate infrastructure, environmental sustainability, resilience, and political risk. Yergin (2006) emphasized diversification as a long-standing principle of energy security because dependence on a single supplier magnifies the consequences of disruption. Cherp and Jewell (2014) advanced this debate by defining energy security in terms of the vulnerability of vital energy systems and by distinguishing exposure to risk from the capacity to respond. This distinction is especially useful for Germany and Poland because the two countries faced the same geopolitical shock but entered it with different combinations of exposure and adaptive capacity. High import dependence is not automatically equivalent to high insecurity if supply sources, routes, contracts, storage, and substitution possibilities are sufficiently diverse. Conversely, apparently efficient energy trade can create latent insecurity when it depends on infrastructure that cannot be replaced quickly. The literature therefore suggests that resilience should be examined dynamically: what matters is not only the quantity of imported energy but also the concentration of suppliers, substitutability of routes, institutional capacity for crisis management, and the domestic costs of adjustment.

Weaponized interdependence adds an international-political explanation for why such vulnerabilities matter. Farrell and Newman (2019) argue that global networks can be exploited when some actors occupy central positions or control important nodes through which others must pass. Their framework was developed primarily around financial and information networks, but its logic travels well to energy infrastructure. Pipeline gas creates path dependence because the supplier, transmission route, storage system, and consuming infrastructure are connected through large sunk investments. When alternatives are limited, a supplier may possess disproportionate leverage even when exchange appears mutually beneficial. The implication is not that all interdependence is coercive but that asymmetric network positions can become politically consequential during conflict. Applied to Europe, this approach helps explain why the 2022 gas crisis was more than a price shock. It represented a shift in the political meaning of infrastructure that had previously been valued for efficiency and connectivity. Germany's exposure illustrates the costs of concentrated network dependence, while Poland's investment in LNG, interconnectors, and Baltic Pipe illustrates how alternative nodes can reduce the coercive potential of a dominant route. The framework therefore connects energy infrastructure directly to strategic autonomy.

Securitization theory provides a complementary lens because material vulnerability becomes politically consequential only when actors interpret it as a security problem and mobilize extraordinary policy responses. Buzan, Wæver, and de Wilde (1998) distinguish ordinary politicization from securitization, in which an issue is framed as threatening a valued referent object and thereby legitimizes urgent measures. Energy is particularly suited to this approach because the same commercial relationship can be framed either as mutually beneficial interdependence or as strategic dependence. Szulecki (2020) shows that Polish energy

governance has repeatedly used security language to justify strong state involvement and exceptional policy choices. The German trajectory was different. Wiertz, Kuhn, and Mattissek (2023) find that Russia's invasion transformed the discourse surrounding the *Energiewende* by adding security, sovereignty, and freedom to debates previously dominated by economic and environmental considerations. The contrast suggests that the timing of securitization matters. Poland spent years translating threat perception into infrastructure before the crisis, whereas Germany's most consequential securitization occurred when the geopolitical shock had already materialized. This difference provides a plausible explanation for variation in initial adjustment costs and speed of policy response.

The pre-2022 literature on EU-Russia energy relations anticipated many of the tensions that later became visible. Schmidt-Felzmann (2011) documented persistent differences among EU member states over how to secure natural-gas supplies from Russia, showing that national interests and threat perceptions complicated common policy. Goldthau and Sitter (2020) later described the EU's Russian gas dilemma as a contest between regulatory-market approaches and strategies that use market power for geopolitical purposes. Siddi (2018) similarly demonstrated that EU-Russia energy relations combined market exchange with geopolitical power, while Siddi (2020) showed how ideas and national identities shaped the dispute over Nord Stream 2, especially between Germany and Poland. This scholarship is important because it demonstrates that the 2022 crisis did not create European divisions over Russian energy; it exposed and intensified disagreements that had existed for years. Germany's preference for commercial engagement reflected confidence in market interdependence and a broader tradition of *Ostpolitik*, whereas Poland's position reflected historical experience, geographic exposure, and a stronger expectation that Russia might use energy politically. The invasion therefore provides a rare opportunity to assess retrospectively which assumptions produced greater resilience when the relationship moved from contested cooperation to open confrontation.

Research on Germany after the invasion emphasizes the scale of both the policy reversal and the underlying structural constraints. Blumenau (2022) interprets Chancellor Olaf Scholz's *Zeitenwende* as a major departure from aspects of *Ostpolitik* and *Wandel durch Handel* while also maintaining Germany's commitment to European integration and the transatlantic alliance. Wood (2024) argues that the end of Nord Stream 2 exposed the contradictions of a policy that treated a deeply geopolitical infrastructure project as substantially commercial. Halser and Paraschiv (2022), writing at the beginning of the crisis, demonstrated that replacing Russian gas would require a combination of alternative imports and demand-side adjustments because Germany lacked sufficient short-term substitutability. Wiertz et al. (2023) further show that the war altered the domestic meaning of the *Energiewende*, with LNG, coal, renewables, and even nuclear power re-evaluated through a security lens. Together, these studies suggest that Germany's adaptation involved more than switching suppliers. It required a reordering of policy priorities in which security considerations became integrated with climate and industrial policy. Yet the literature is less explicit on how successful energy adaptation affected Germany's subsequent capacity to sustain a more confrontational foreign policy toward Russia, which is the linkage emphasized in the present study.

The literature on Poland highlights a contrasting pattern of anticipatory diversification. Polish energy policy had long treated eastern dependence as a strategic vulnerability, and the government's Energy Policy of Poland until 2040 placed diversification of gas supply, Baltic Pipe, LNG expansion, and new interconnectors at the centre of security planning (Ministry of Climate and Environment of the Republic of Poland, 2021). Szulecki (2020) explains how securitization has shaped Polish energy governance, although he also cautions that

securitization can empower the state in ways not reducible to geopolitical threat. The material dimension of the strategy became especially significant in 2022, when Baltic Pipe linked Poland to Norwegian gas through Denmark and regional interconnectors expanded access to other European markets (GAZ-SYSTEM, 2022a, 2022b). Poland's case nonetheless illustrates an important tension between geopolitical resilience and decarbonization. Reduced reliance on Russian gas did not remove dependence on fossil energy, and coal remained politically and economically important. This means that strategic resilience can improve even while climate-policy challenges persist. The distinction is important because energy security and decarbonization overlap but are not identical policy objectives.

Post-2022 scholarship increasingly emphasizes the importance of the European rather than purely national response. Gritz and Wolff (2024) find that Germany and Central and Eastern Europe withstood Russia's gas weaponization through a combination of alternative supplies, LNG infrastructure, market-based allocation, energy savings, and cross-border flows. Their analysis underscores that no single national policy explains the outcome; resilience emerged from the interaction between supply diversification and demand reduction within an integrated market. Goldthau and Youngs (2023) similarly argue that the crisis created a new geopolitics of climate transition in which decarbonization became linked to energy security and external relations. The European Commission's REPowerEU framework institutionalized this connection by combining faster renewable deployment, efficiency, infrastructure diversification, and reduced Russian imports (European Commission, 2022). By 2024 and 2025, the Union had substantially reduced Russian fossil-fuel exposure while maintaining storage and supply security, although residual dependence and occasional rebounds in Russian gas imports demonstrated that the transition was incomplete (European Commission, 2025, 2026). These studies suggest that strategic autonomy is increasingly collective: national resilience depends on the quality of European networks as much as on domestic production.

A clear research gap remains at the intersection of energy adaptation and foreign-policy resilience. Existing studies provide rich accounts of energy security, Nord Stream politics, Polish securitization, German *Zeitenwende*, and the EU's post-war market adjustment, but they often treat energy-system outcomes and diplomatic outcomes separately. The present study therefore combines the vulnerability approach of Cherp and Jewell (2014), weaponized interdependence from Farrell and Newman (2019), and securitization theory from Buzan et al. (1998) to compare how material exposure and political threat recognition shaped the capacity to sustain foreign-policy choices after 2022. Germany and Poland are analytically valuable because both are EU and NATO members exposed to the same war, sanctions environment, and regional energy market, yet they differed sharply in pre-war dependence and policy framing. The expectation derived from the literature is that anticipatory diversification should reduce the immediate political cost of confrontation, while reactive diversification can restore resilience if infrastructure, demand management, and regional institutions are strong enough. This formulation shifts attention away from the binary question of dependence versus independence and toward the political quality of interdependence, which is more consistent with the realities of contemporary European energy diplomacy.

3.0 Methodology

The study employed a qualitative comparative case-study design using structured-focused comparison and documentary analysis to examine Germany and Poland between 2021 and 2025. The cases were purposively selected because they are comparable EU and NATO members operating within the same regional market and security environment, but they entered the 2022 crisis with sharply different levels of Russian gas exposure and different traditions of energy securitization. The unit of analysis was the national energy-security response as it

affected foreign-policy resilience. Evidence was drawn from official European Commission communications and REPowerEU progress assessments; annual gas-supply statistics of Germany's Bundesnetzagentur; Poland's Energy Regulatory Office market reports; Polish energy-policy documents; GAZ-SYSTEM documentation on Baltic Pipe, LNG, and interconnectors; and peer-reviewed research on EU-Russia energy relations, strategic autonomy, securitization, and German and Polish foreign policy. The analysis proceeded in four stages: establishing the 2021 baseline of dependence; tracing the 2022 disruption and emergency measures; assessing diversification, demand reduction, storage, and infrastructure consolidation through 2025; and interpreting how these material changes affected the political costs of sustaining sanctions, alliance commitments, and diplomatic positions toward Russia. Evidence was coded under exposure, substitutability, adaptive capacity, and foreign-policy implications, while cross-source triangulation was used to avoid reliance on a single government narrative. Numerical claims were retained only where they could be verified from official regulatory or Commission sources, and scholarly literature was used to interpret rather than replace the primary documentary record. Because the study relied exclusively on publicly available documents and aggregate market data, it involved no human participants and required no collection of personal data.

4.0 Findings

The first finding is that the 2022 energy shock altered the meaning of strategic autonomy across the European Union by demonstrating that foreign-policy independence can be constrained by concentrated supply relationships. The EU's pre-war dependence on Russia was sufficiently large that an immediate and complete break would have imposed severe economic costs on several member states. This helps explain why energy sanctions and import restrictions developed in stages rather than through a single comprehensive embargo. The Commission's response was therefore designed around a portfolio of measures rather than substitution alone: energy saving, diversification, accelerated renewables, storage requirements, joint action, and infrastructure adaptation were combined under REPowerEU (European Commission, 2022). The results were significant. The Russian share of EU gas imports fell from about 45% in 2021 to 15% in 2023, while EU gas consumption declined by 18% between August 2022 and March 2024 compared with the reference period used by the Commission (European Commission, 2024). Russian gas still accounted for about 19% of EU imports in 2024, illustrating that progress was uneven, but the broader direction remained toward reduced exposure; the Commission subsequently reported reliance of about 12% in 2025 (European Commission, 2025, 2026). These figures support Goldthau and Youngs' (2023) argument that the crisis repositioned energy transition within geopolitics. They also support Gritz and Wolff's (2024) conclusion that resilience depended on combining supply and demand measures. Strategic autonomy, in practice, emerged not as autarky but as the capacity to prevent any single supplier from becoming indispensable.

The second finding concerns the depth of Germany's pre-war vulnerability. In 2021, 52% of German gas imports came from Russia, a concentration that reflected both the economic attractiveness of pipeline gas and policy confidence in long-term commercial relations (Bundesnetzagentur, 2023). This dependence interacted with the architecture of Nord Stream and other pipeline routes, making rapid substitution difficult. Wood (2024) demonstrates that Nord Stream 2 was controversial precisely because its supporters emphasized commercial rationality while its opponents, including Poland and Ukraine, emphasized strategic consequences. The 2022 disruption validated the argument that the political risk of infrastructure cannot be assessed solely through market reliability. Russian deliveries through Nord Stream 1 were progressively reduced and fell to zero in early September 2022; Germany's

total gas imports also declined from 1,652 TWh in 2021 to 1,449 TWh in 2022 (Bundesnetzagentur, 2023). The immediate policy problem was therefore not simply to replace a supplier but to manage an abrupt loss of volume while protecting industrial production and households. Halser and Paraschiv (2022) had anticipated this combination of supply and demand pressures, arguing that Germany would need both diversification and conservation. In foreign-policy terms, the initial exposure raised the domestic economic price of confrontation and made the transition from Ostpolitik to a harder Russia policy politically more demanding. Blumenau (2022) consequently treats the Zeitenwende as significant because it subordinated some established commercial assumptions to security considerations.

The third finding is that Germany reduced this vulnerability with exceptional speed by changing the geography and flexibility of its gas system. The country's first floating LNG terminal began operating at Wilhelmshaven in December 2022, followed by additional floating terminals in 2023, while pipeline imports shifted toward Norway, the Netherlands, and Belgium (Bundesnetzagentur, 2024). In 2023, Germany imported 968 TWh of gas, of which Norway supplied 43%, the Netherlands 26%, and Belgium 22%; LNG entering through German terminals accounted for roughly 7% of imports (Bundesnetzagentur, 2024). By 2024, around 91% of German gas imports came from Norway, the Netherlands, and Belgium, with the balance largely arriving through floating LNG terminals (Bundesnetzagentur, 2025). The 2025 data show further consolidation rather than a return to the previous model: Norway supplied 44% of imports, the Netherlands 24%, Belgium 21%, and German LNG terminals delivered 106 TWh, equal to 10.3% of total imports (Bundesnetzagentur, 2026). This transition is consistent with Gritz and Wolff's (2024) emphasis on the increasing role of Germany as both an importer and a regional transit hub. It also demonstrates the practical value of substitutability in Cherp and Jewell's (2014) vulnerability framework. Germany remained import dependent, but its exposure to a single politically antagonistic supplier was drastically reduced and its ability to source gas through different routes increased.

The fourth finding is that demand reduction was as important as new infrastructure in restoring German foreign-policy resilience. Germany consumed 844 TWh of gas in 2024, which was 14% below the average for 2018–2021; household and commercial users consumed 17% less than that earlier average, while industrial consumption was 12% lower (Bundesnetzagentur, 2025). In 2025, consumption rose modestly to 864 TWh but remained about 13.5% below the 2018–2021 average (Bundesnetzagentur, 2026). These figures indicate that adaptation was not merely a supply-side substitution from Russian pipeline gas to imported LNG. Efficiency measures, behavioural changes, industrial adjustment, high prices, and policy incentives lowered the volume that had to be replaced. This matters for diplomacy because the political cost of sanctions depends partly on the size of the domestic adjustment required. Wiertz et al. (2023) show that the war altered German energy discourse by linking conservation and renewables to sovereignty and security, not only climate protection. That discursive shift helped make demand reduction politically legible as a strategic contribution rather than simply an economic sacrifice. The evidence therefore suggests that Germany's foreign-policy resilience strengthened as the energy system became less vulnerable to supply coercion. The process did not make confrontation with Russia costless, but it reduced the probability that energy scarcity alone would force a reversal of Germany's broader commitments within the EU and NATO.

The fifth finding is that Poland's pre-war diversification substantially reduced the shock created by the loss of Russian gas. The difference was not that Poland had eliminated imports, but that it had invested in alternatives before the crisis reached its most acute stage. The Energy Policy of Poland until 2040 explicitly identified diversification and infrastructure expansion as

strategic priorities, including Baltic Pipe, LNG, storage, and network development (Ministry of Climate and Environment of the Republic of Poland, 2021). This policy orientation is consistent with Szulecki's (2020) argument that energy security had been deeply securitized in Poland. The Baltic Pipe project was especially significant because it physically connected Poland to Norwegian gas through Denmark. GAZ-SYSTEM completed the project in 2022, began transmission in October, and reported that the pipeline reached a capacity of up to 10 billion cubic metres per year toward Poland by 30 November 2022 (GAZ-SYSTEM, 2022a, 2022b). In parallel, LNG infrastructure at Świnoujście and interconnectors with Lithuania and Slovakia provided additional flexibility. These investments did not occur because Polish policymakers predicted the precise timing of the 2022 invasion; rather, they reflected a long-standing belief that excessive reliance on Russia created strategic risk. The result was anticipatory resilience: when Russian deliveries were interrupted, Poland faced price and market pressures but possessed more immediate route diversity than a state whose diversification had to begin under emergency conditions.

The sixth finding is that Poland's post-2022 gas market shows continued dependence on external energy but much lower dependence on the eastern route. By 2024, Poland purchased 168.5 TWh of gas from abroad and supplemented this with 37.8 TWh from domestic sources, illustrating that national energy security remained based on imports rather than self-sufficiency (Energy Regulatory Office, 2025). The significance lies in the plurality of access points and the ability to obtain gas through Baltic Pipe, LNG, and the integrated European network. The Polish regulator also reported that 234.1 TWh of natural gas flowed through the national transmission system in 2024, while the structure of the market continued to reflect strategic investments intended to diversify supply directions (Energy Regulatory Office, 2025). This finding refines the meaning of sovereignty in Polish energy policy. Political rhetoric often presents diversification as independence, but in material terms Poland exchanged a concentrated bilateral dependence for a more distributed form of interdependence. That outcome is compatible with Farrell and Newman's (2019) framework because reducing exposure to a single chokepoint weakens the capacity of one actor to impose costs. It also supports the broader European insight that autonomy can rest on networks when those networks are sufficiently diverse. Poland's stronger starting position therefore did not result from isolation from international energy markets; it resulted from having more than one viable pathway into them.

The seventh finding is that the Germany-Poland comparison reveals a major difference between anticipatory and reactive resilience. Poland accepted the cost of diversification before a supply crisis because Russian dependence was already framed as a security threat. Germany, by contrast, optimized for affordability and transition objectives under an assumption that Russian gas would remain commercially available even amid political disagreement. Siddi (2020) helps explain this divergence by showing that ideas and national understandings of Russia were central to the Nord Stream 2 dispute, while Schmidt-Felzmann (2011) had earlier identified persistent member-state differences over how Russian gas should be treated. When the invasion converted a disputed risk into an actual disruption, Poland's earlier threat perception generated practical advantages. Germany nevertheless demonstrates that late adaptation can be effective when a state possesses financial resources, administrative capacity, access to neighbouring markets, and supportive regional institutions. By 2025, the German supply structure was radically different from 2021, and the country had maintained consumption below its earlier baseline while expanding LNG access (Bundesnetzagentur, 2026). The lesson is therefore not simply that Poland was correct and Germany was wrong. Rather, the comparison shows that threat recognition affects the timing and cost of resilience.

Anticipatory diversification spreads adjustment costs over time; reactive diversification concentrates them into a crisis period and requires exceptional political and fiscal mobilization.

The eighth finding is that European market integration was a decisive enabling condition for both countries, which complicates national narratives of energy sovereignty. Germany's post-2022 imports from the Netherlands and Belgium partly reflect gas that entered the wider European system through coastal infrastructure, while Poland's interconnectors allow access to regional flows beyond its own LNG and pipeline assets. Gritz and Wolff (2024) argue that maintaining the integrity of the EU gas market was crucial because cross-border flows helped allocate scarce supply and reduced the danger of national shortages. The Commission's storage rules and REPowerEU measures reinforced this collective logic, with storage targets, demand reduction, and coordinated diversification reducing the incentive for competitive hoarding (European Commission, 2022, 2024). This demonstrates that energy solidarity can strengthen rather than weaken national strategic autonomy. A state that can draw on multiple neighbours and shared market infrastructure is less vulnerable to coercion by any single external supplier. Goldthau and Sitter's (2020) pre-war account of the tension between market and geopolitical approaches therefore requires some revision in light of the crisis: the internal market itself became a geopolitical asset when supported by security-oriented rules. For diplomacy, this is important because it links the credibility of external action to the quality of internal European integration. Sanctions and political commitments are easier to sustain when member states believe that the costs of disruption can be distributed through common infrastructure and rules.

The ninth finding is that the successful exit from concentrated Russian dependence generated new strategic trade-offs rather than eliminating vulnerability. Germany's increased access to LNG connected it more strongly to globally traded gas, where prices and availability are influenced by Asian demand, shipping conditions, and geopolitical developments far beyond Europe. Poland's diversified system similarly depends on Norwegian production, LNG cargoes, regional interconnectors, and continued investment in transmission capacity. This is why strategic autonomy should not be understood as the disappearance of dependence. The key shift is from a concentrated dependence that can be exploited bilaterally toward a portfolio of dependencies that are more difficult for any single actor to weaponize. At the same time, the climate implications are complex. Goldthau and Youngs (2023) emphasize that the crisis accelerated some dimensions of the clean-energy transition but also encouraged temporary reliance on coal, LNG, and other bridging measures. Wiertz et al. (2023) similarly show that German security discourse created political support for both renewables and short-term fossil alternatives. Poland faces an even sharper tension because coal has historically played a major role in its energy system. Long-term resilience therefore requires reducing not only Russian dependence but fossil-fuel dependence more generally, while avoiding new concentrations in critical minerals, clean technologies, or single LNG suppliers.

The tenth finding is theoretical and diplomatic: foreign-policy resilience is best explained by the interaction of material networks and political interpretation. Weaponized interdependence explains why concentrated routes created potential leverage, while securitization explains why Poland acted earlier and why Germany's policy accelerated only after the invasion fundamentally changed the political meaning of dependence (Buzan et al., 1998; Farrell & Newman, 2019). The empirical record shows that neither theory is sufficient alone. Poland's threat perception would have had limited value without infrastructure, and Germany's infrastructure investments required a political transformation that legitimized exceptional speed and expenditure. The two cases also show that strategic autonomy is relational rather than absolute. By 2025, both countries remained deeply embedded in international markets, but their exposure to Russia had been transformed. This has broader implications for

international relations beyond Europe. For states in Africa and the wider Global South, the European experience illustrates both the risks of supplier concentration and the diplomatic opportunities created by energy diversification. Europe's search for new suppliers has expanded the strategic significance of Norway, the United States, North Africa, the Eastern Mediterranean, and other producers, while the clean-energy transition is reshaping competition over critical minerals and green technologies. The core lesson is therefore transferable: resilience depends less on eliminating interdependence than on designing it so that political choice survives when economic relations are disrupted.

5.0 Conclusion

The comparison of Germany and Poland demonstrates that energy structure can significantly shape the costs, timing, and credibility of foreign-policy action without mechanically determining state behaviour. Poland entered the 2022 crisis with stronger anticipatory resilience because dependence on Russia had long been framed as a security vulnerability and translated into investment in LNG, interconnectors, and Baltic Pipe. Germany entered with much greater exposure and therefore faced a more acute adjustment problem when Russian pipeline deliveries collapsed. Yet the German case also shows that vulnerability is not fixed. Rapid LNG deployment, alternative pipeline imports, storage policy, demand reduction, and access to the integrated European market transformed the country's gas system within a short period. The contrast supports Cherp and Jewell's (2014) argument that energy security depends on both exposure and adaptive capacity and confirms Farrell and Newman's (2019) insight that the political consequences of interdependence arise from asymmetric network structures. It also validates the securitization perspective: states that perceive an issue as strategically threatening are more willing to incur preventive costs before a crisis, while dramatic shocks can trigger rapid policy change where earlier threat recognition was weaker.

The broader implication is that European strategic autonomy should not be equated with energy autarky. Germany and Poland remained import-dependent after 2022, but their dependence became more diversified, flexible, and regionally embedded. This change reduced the ability of a single supplier to create a decisive constraint on foreign policy and helped the EU sustain a more confrontational position toward Russia than would have been politically feasible under the pre-war structure. The crisis also demonstrated that clean-energy transition, infrastructure security, diplomacy, and market integration are increasingly inseparable. Diversified fossil-fuel supplies can provide short-term resilience, but long-term autonomy will depend on reducing aggregate fossil exposure, expanding domestic low-carbon generation, protecting infrastructure, and avoiding new strategic concentrations in clean-energy supply chains. The German and Polish experiences therefore point toward a model of resilient interdependence: states preserve strategic choice not by withdrawing from international networks, but by ensuring that those networks contain alternative suppliers, routes, technologies, and institutions capable of absorbing disruption.

6.0 Recommendation

European governments should institutionalize the lessons of the German and Polish cases by treating energy diversification as a permanent component of foreign and security policy rather than as an emergency response. This requires maintaining multiple supply routes, adequate storage, cross-border interconnectors, and transparent crisis-sharing rules while accelerating renewable energy, electrification, efficiency, and grid investment so that dependence on imported fossil fuels declines over time. Germany should preserve the flexibility created after 2022 without locking itself into excessive long-term LNG dependence, while Poland should use its improved gas security to accelerate diversification of its wider energy mix and reduce

the strategic and environmental costs of coal dependence. At EU level, strategic autonomy should be pursued through deeper market integration, common infrastructure planning, and coordinated external energy diplomacy with suppliers whose relationships do not recreate the concentrated vulnerabilities previously associated with Russia. Future partnerships with LNG exporters, hydrogen producers, critical-mineral suppliers, and clean-technology manufacturers should therefore be assessed not only by price but also by concentration risk, political reliability, substitutability, and sustainability. In practical terms, resilience should become an explicit criterion in energy procurement and infrastructure decisions, ensuring that short-term affordability does not again obscure long-term foreign-policy vulnerability.

References

- Blumenau, B. (2022). Breaking with convention? *Zeitenwende* and the traditional pillars of German foreign policy. *International Affairs*, 98(6), 1895–1913. <https://doi.org/10.1093/ia/iiacl66>
- Bundesnetzagentur. (2023, January 6). *Bundesnetzagentur publishes gas supply figures for 2022*. https://www.bundesnetzagentur.de/SharedDocs/Pressemitteilungen/EN/2023/20230105_RueckblickGas2022.html
- Bundesnetzagentur. (2024, January 4). *Bundesnetzagentur publishes gas supply figures for 2023*. <https://www.bundesnetzagentur.de>
- Bundesnetzagentur. (2025, January 8). *Bundesnetzagentur publishes gas supply figures for 2024*. https://www.bundesnetzagentur.de/SharedDocs/Pressemitteilungen/EN/2025/20250108_GAS.html
- Bundesnetzagentur. (2026, January 12). *Bundesnetzagentur publishes gas supply figures for 2025*. https://www.bundesnetzagentur.de/SharedDocs/Pressemitteilungen/EN/2026/20260112_GAS.html
- Buzan, B., Wæver, O., & de Wilde, J. (1998). *Security: A new framework for analysis*. Lynne Rienner Publishers.
- Cherp, A., & Jewell, J. (2014). The concept of energy security: Beyond the four As. *Energy Policy*, 75, 415–421. <https://doi.org/10.1016/j.enpol.2014.09.005>
- Energy Regulatory Office. (2025). *Gas market characteristics: 2024*. <https://www.ure.gov.pl/en/markets/gas/characteristics/322,Gas-Market-Characteristics.html>
- European Commission. (2022). *REPowerEU plan* (COM(2022) 230 final). <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM:2022:230:FIN>
- European Commission. (2024, May 17). *Two years of REPowerEU: Strengthening Europe's energy resilience*. https://commission.europa.eu/news-and-media/news/two-years-repowereu-strengthening-europes-energy-resilience-2024-05-17_en
- European Commission. (2025, May 16). *REPowerEU 3 years on: Commission takes stock of progress to phase out Russian fossil fuels*. https://energy.ec.europa.eu/news/repowereu-3-years-commission-takes-stock-progress-phase-out-russian-fossil-fuels-2025-05-16_en

- European Commission. (2026). A more secure and stable energy system. https://commission.europa.eu/topics/energy/eu-action-address-energy-crisis/more-secure-and-stable-energy-system_en
- Farrell, H., & Newman, A. L. (2019). Weaponized interdependence: How global economic networks shape state coercion. *International Security*, 44(1), 42–79. https://doi.org/10.1162/isec_a_00351
- GAZ-SYSTEM. (2022a, September 27). GAZ-SYSTEM completed Baltic Pipe construction. <https://www.gaz-system.pl/en/for-media/press-releases/2022/september/27-09-2022-gaz-system-completed-baltic-pipe-construction.html>
- GAZ-SYSTEM. (2022b, November 30). Baltic Pipe has reached its maximum capacity. <https://www.gaz-system.pl/en/for-media/press-releases/2022/november/31-11-2022-baltic-pipe-has-reached-its-maximum-capacity.html>
- Goldthau, A. C., & Youngs, R. (2023). The EU energy crisis and a new geopolitics of climate transition. *Journal of Common Market Studies*, 61(S1), 115–124. <https://doi.org/10.1111/jcms.13539>
- Goldthau, A., & Sitter, N. (2020). Power, authority and security: The EU's Russian gas dilemma. *Journal of European Integration*, 42(1), 111–127. <https://doi.org/10.1080/07036337.2019.1708341>
- Gritz, A., & Wolff, G. (2024). Gas and energy security in Germany and Central and Eastern Europe. *Energy Policy*, 184, 113885. <https://doi.org/10.1016/j.enpol.2023.113885>
- Halser, C., & Paraschiv, F. (2022). Pathways to overcoming natural gas dependency on Russia—The German case. *Energies*, 15(14), 4939. <https://doi.org/10.3390/en15144939>
- Ministry of Climate and Environment of the Republic of Poland. (2021). *Energy policy of Poland until 2040*. <https://www.gov.pl/web/klimat/polityka-energetyczna-polski-do-2040-r>
- Schmidt-Felzmann, A. (2011). EU member states' energy relations with Russia: Conflicting approaches to securing natural gas supplies. *Geopolitics*, 16(3), 574–599. <https://doi.org/10.1080/14650045.2011.520864>
- Siddi, M. (2018). The role of power in EU–Russia energy relations: The interplay between markets and geopolitics. *Europe-Asia Studies*, 70(10), 1552–1571. <https://doi.org/10.1080/09668136.2018.1536925>
- Siddi, M. (2020). Theorising conflict and cooperation in EU–Russia energy relations: Ideas, identities and material factors in the Nord Stream 2 debate. *East European Politics*, 36(4), 544–563. <https://doi.org/10.1080/21599165.2019.1700955>
- Szulecki, K. (2020). Securitization and state encroachment on the energy sector: Politics of exception in Poland's energy governance. *Energy Policy*, 136, 111066. <https://doi.org/10.1016/j.enpol.2019.111066>
- Wiertz, T., Kuhn, L., & Mattissek, A. (2023). A turn to geopolitics: Shifts in the German energy transition discourse in light of Russia's war against Ukraine. *Energy Research & Social Science*, 98, 103036. <https://doi.org/10.1016/j.erss.2023.103036>
- Wood, S. (2024). Germany and Nord Stream 2: Evolution and end of an incongruous policy. *International Politics*, 61(4), 718–741. <https://doi.org/10.1057/s41311-023-00453-9>

<https://doi.org/10.53819/81018102t3186>

Yergin, D. (2006). Ensuring energy security. *Foreign Affairs*, 85(2), 69–82.
<https://doi.org/10.2307/20031912>