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EVOLVING PATTERNS OF ENERGY SECURITY IN EUROPE AND ITS IMPACT ON REGIONAL POWER STRUCTURE

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Abstract

European energy security has emerged as one of the most consequential policy domains of the twenty-first century, intensified dramatically by Russia's full-scale invasion of Ukraine in February 2022. This article examines how the resultant energy crisis constitutes a systemic risk capable of transmitting asymmetric economic shocks across European Union (EU) member states, thereby reshaping the region's power structure. Drawing on the Regional Security Complex Theory (RSCT) as its analytical framework, the study argues that the established patterns of energy dependence in the EU, particularly the overreliance on Russian natural gas, have not only jeopardized economic stability but have also undermined the EU's capacity to function as the principal ordering agent in its neighborhood. The article traces the evolution of EU energy policy from its foundational treaty commitments through successive legislative milestones to the post-invasion REPowerEU initiative, evaluating both achievements and persistent vulnerabilities. Central and Eastern European member states are found to face disproportionate exposure to supply disruptions, compounding pre-existing structural weaknesses within the Eurozone. The analysis concludes that unless robust energy diversification and accelerated renewable transition are achieved, the European region risks drifting towards non-polarity, a condition characterized by the absence of any great power capable, willing, and able to act as a stabilizing regional ordering agent.

Keywords

European Energy Security, Regional Security Complex Theory, Systemic Risk, Non-Polarity, Russia-Ukraine War, EU Energy Policy, Asymmetric Shocks, Energy Diversification

1. Introduction

The global energy market has historically been characterized by cyclical volatility, with fluctuations in supply and demand generating significant economic pressure on state actors whose growth objectives are contingent on reliable and affordable energy access. Yet the structural significance of energy has transcended mere commodity economics: the "energy-growth nexus" has become firmly embedded in the foreign policy calculations of major powers, most visibly in the militarization of the Persian Gulf under the Carter Doctrine and the weaponization of oil supplies during the 1973 Arab embargo. In the contemporary European context, the strategic use of energy as an instrument of coercion has acquired renewed urgency, most dramatically through Russia's manipulation of natural gas flows preceding and following its invasion of Ukraine in February 2022.

Russia's aggression fundamentally disrupted the EU's established energy relationships. Within weeks of the invasion, European Commission President Ursula von der Leyen declared the intent to eliminate all fossil fuel imports from Russia before 2030. The EU imposed restrictions on coal and petroleum products and sought alternative gas suppliers through emergency bilateral diplomacy with OPEC members, Venezuela, and LNG exporters in the United States and Qatar. This abrupt reorientation exposed a structural contradiction at the heart of EU energy governance: for decades, the Union had pursued market liberalization and climate transition while simultaneously deepening its dependence on a single external supplier that had already demonstrated the willingness to weaponize energy flows, as during the Russia-Ukraine gas disputes of 2006 and 2009 and following the annexation of Crimea in 2014.

The COVID-19 pandemic further complicated this picture. By disrupting global supply chains and revealing the fragility of interdependence, the pandemic prefigured the "asymmetric shocks" that would subsequently cascade through European economies in the wake of the energy crisis. It also demonstrated that in the

absence of a coherent crisis-management framework, member states default to the protection of national interests, potentially at the expense of Union-level cohesion. The energy crisis that erupted in 2021-22 reproduced this dynamic at scale, with energy-intensive industries shuttering operations, governments deploying emergency fiscal packages, and Central and Eastern European member states facing vulnerability due to their disproportionate reliance on Russian pipeline gas.

This article investigates whether the European energy crisis constitutes a systemic risk — one with the potential to alter the EU's structural power and, ultimately, the polarity of the European regional order. The central hypothesis advanced is that the energy crisis post-Russian invasion of Ukraine represents a systemic risk likely to push the European region towards non-polarity, defined by Richard Haass as a condition in which no single state or coalition of states possesses the capacity, willingness, and capability to function as an ordering agent within the regional system. The article proceeds as follows: Section 2 establishes the theoretical framework; Section 3 reviews the relevant literature; Section 4 analyses the energy crisis as systemic risk; Section 5 examines asymmetric shocks in the Eurozone; Section 6 addresses the geopolitics of European energy security; Section 7 analyses EU energy dependency; Section 8 traces the evolution of EU energy policy; and Section 9 presents the findings and conclusions.

2. Theoretical Framework: Regional Security Complex Theory

This article deploys the Regional Security Complex Theory (RSCT) developed by Barry Buzan and Ole Wæver as its primary analytical lens. RSCT contends that security dynamics are not reducible to the systemic level of great-power competition, nor are they purely state-specific: rather, they are concentrated within geographically bounded clusters of states whose security concerns are so deeply interlinked that their security problems cannot meaningfully be analyzed in isolation from one another. A Regional Security Complex (RSC) is thus defined as a set of states whose primary security concerns are sufficiently enmeshed that their individual security trajectories cannot be separated from those of their neighbors (Palonkorpi 2018).

Applied to European energy security, RSCT offers several analytical advantages. First, it directs attention to the regional level at which energy interdependence actually operates; natural gas pipeline networks, cross-border electricity interconnectors, and shared infrastructure create security linkages that are fundamentally regional rather than global or purely bilateral. Second, RSCT foregrounds the role of power asymmetries within a regional complex, which is crucial for understanding how Russia has been able to exploit the differential energy dependencies of EU member states, rewarding strategic partners while penalizing adversaries through selective supply manipulation. Third, RSCT accommodates the multi-sectoral nature of energy security, which spans the economic, political, military, environmental, and societal domains identified by the Copenhagen School.

The concept of systemic risk, as employed in this study, operates across both economic and political dimensions. Economically, systemic risk refers to the potential for a severe disruption to propagate through interconnected markets and institutions in ways that cannot be contained within a single sector or state. Politically, systemic risk refers to the destabilization of governance frameworks and the erosion of institutional authority under the combined pressures of economic crisis and geopolitical competition. The convergence of these two forms of systemic risk in the European energy context provides the empirical basis for the article's central argument that the EU's status as the region's dominant ordering agent, indeed, the very polarity of the European regional order, is at stake.

3. Literature Review

The scholarship on European energy security is both voluminous and multidisciplinary. Elbassoussy (2019) establishes the baseline problem: energy security has become one of the most decisive variables in European foreign policy, compelling the EU to commit to supply diversification and renewable expansion in response to an unsustainable reliance on a small number of dominant suppliers, particularly Russia. He underscores that European actors have historically been reluctant to confront Russia politically for fear of jeopardizing energy supplies, a dynamic that the 2022 invasion has forced into the open. The European Commission's own assessments corroborate this diagnosis: by 2030, without remedial action, the EU would have been approximately 70 percent dependent on imported energy, with natural gas dependence approaching 90 percent (Commission 2016).

On the supply-side politics of LNG, British Petroleum's (2018) data documenting Europe's emergence as the top destination for US LNG exports illustrates how the United States has leveraged its shale revolution to reshape European energy geopolitics, with President Trump's July 2018 announcement signaling the explicitly transactional dimension of US-EU energy diplomacy. Raines and Tomlinson (2017) analyze the foreign policy implications of new Mediterranean and American LNG supplies, cautioning that while diversification is essential, the EU must manage its relationship with Russia carefully during the transitional period to avoid supply shocks that would undermine the very diversification agenda it is pursuing.

Palonkorpi (2018) offers a theoretically sophisticated account of energy securitization, tracing how the analytical vocabulary of security studies has been applied to energy since the 2000s. He argues that energy security encompasses both short-term physical availability concerns and longer-term infrastructural and market adequacy considerations, a distinction that is critical for evaluating EU energy policy, which has often prioritized long-term decarbonization targets over near-term supply resilience. Pala (2021) extends this argument, contending that energy security cannot be disaggregated from the question of power: ensuring energy security is both a means and an end in the contest over structural power within and between states.

The literature on EU structural power provides the political science context for these energy analyses. Diez (2021) interrogates the concept of Normative Power Europe (NPE), arguing that the EU's self-presentation as a transformative normative actor has been progressively undermined by the return of Realpolitik dynamics in its neighborhood. Schmidt and Carstensen (2017) contend that the EU's institutional design, optimized for technocratic multilateral governance in a post-Cold War liberal moment, is ill-equipped for the era of great-power competition inaugurated by Russia's revisionism and China's strategic economic penetration of European markets. Schimmelfennig (2015) similarly argues that the EU must acquire the strategic instruments to defend its interests and push back against encroachments on European sovereignty, a prescription that has acquired urgent salience in the energy domain.

Umbach (2019) provides a critical assessment of EU energy diversification efforts prior to 2022, concluding that despite successive policy frameworks, the EU's actual dependence on Russian energy supplies had not substantially diminished. This finding is central to the present article's argument: the repeated failure to implement energy security objectives despite clearly identified vulnerabilities, in 2006, 2009, 2014, and again in 2022, reflects not only institutional inertia but also the structural constraints that interdependence imposes on the capacity to act. Mileva (2022) analyses Russia's hybrid threat posture towards NATO energy infrastructure, contextualizing the energy crisis within a broader pattern of coercive statecraft that the West has been slow to recognize and counter.

4. The Energy Crisis as Systemic Risk

The European energy crisis of 2021-22 emerged from the convergence of three overlapping shocks that, in combination, produced what this article characterizes as the most severe systemic risk facing the European Union since the 2008 global financial crisis. The first shock was pandemic-induced: the collapse of oil and gas investment during 2020-21 created a supply-demand imbalance that, as global energy consumption recovered sharply, drove prices across all fuel markets to extraordinary levels. The second shock was geopolitical: from the summer of 2021, Russia systematically manipulated European natural gas markets by curtailing exports and declining to replenish Gazprom-controlled storage facilities within EU territory, thereby entering the winter of 2021-22 with deliberately depleted reserves designed to maximize European vulnerability (Eurostat 2021). The third shock was structural: a series of adverse coincidences, French nuclear plant closures due to corrosion, severe drought reducing hydropower capacity, and the unprecedented disruption of the Nord Stream 1 pipeline, compounded the supply constraint at precisely the moment of greatest demand (Bloomberg 2022).

Figure 1: Natural gas prices surge worldwide, 2020-2022 (Source: Refinitiv Datastream/Reuters)

The financial systemic risk that emerged from these shocks was explicitly compared by Finnish Economy Minister Mika Lintilä to the 2008 Lehman Brothers collapse. European energy corporations faced margin calls of at least $1.5 trillion, according to Norway's Equinor, as collateral requirements for energy market transactions escalated with price volatility. Wien Energie, Austria's largest energy utility, requested a €6 billion government

lifeline; German utility Uniper required a €15 billion state bailout. Finland and Sweden announced emergency financial guarantee programs worth billions of euros for power providers facing liquidity crises (Bloomberg 2022). Germany unveiled a €65 billion rescue package financed by a windfall tax on energy companies, a mechanism that rapidly gained traction across multiple member states and was subsequently incorporated into European Commission proposals for an emergency market intervention.

The systemic character of the crisis extended beyond the financial sector into Europe's industrial base. The manufacturing slowdown was stark: the Eurozone's Manufacturing Purchasing Managers' Index (PMI) fell to 46.6 by October 2022, firmly in contractionary territory, while the US PMI remained near neutral at 49.9, reflecting the competitive advantage conferred on American manufacturers by natural gas prices that remained roughly one-sixth of European levels (Macfarlane 2022). Energy-intensive sectors including aluminum, fertilizers, chemicals, and zinc smelting faced acute crises: all nine of the EU's zinc smelters reduced or discontinued output, while imports from China, Kazakhstan, Turkey, and Russia filled the gap. For the first time in recorded data, Europe became a net importer of chemicals in 2022. Ammonia production, essential for European agriculture — declined by more than half.

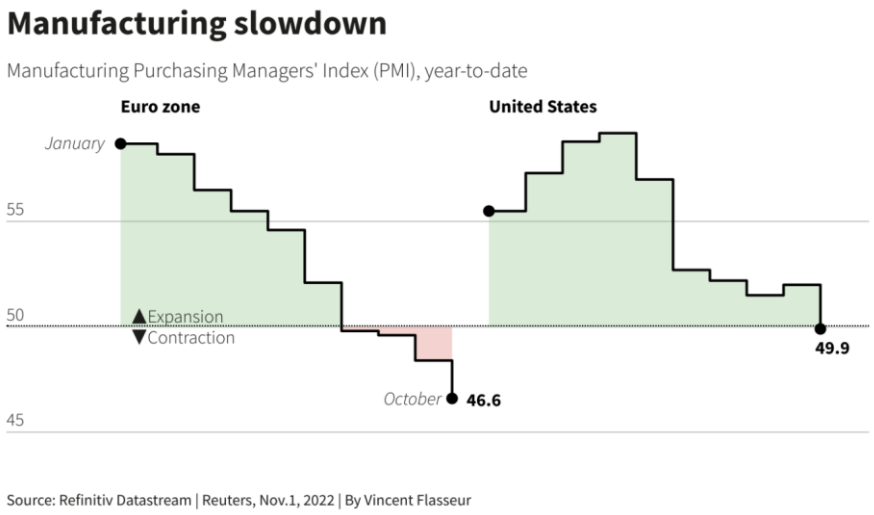

Figure 2: Manufacturing slowdown — Eurozone PMI vs. United States PMI, 2022 (Source: Refinitiv Datastream/Reuters)

The German case is particularly instructive. A December 2022 survey of 24,000 firms by the German Chamber of Commerce and Industry (DIHK) found that more than one in four enterprises in the chemicals sector had been compelled to reduce output, while 17 percent of automotive sector firms stated their intention to relocate manufacturing operations overseas (Macfarlane 2022). This threat of industrial deindustrialization, the permanent relocation of energy-intensive production to the United States, where the Inflation Reduction Act was simultaneously offering substantial incentives for green manufacturing, represents a structural challenge to European economic cohesion that transcends the immediate energy crisis and carries long-term implications for the EU's capacity to sustain the industrial base upon which its structural power rests.

5. Asymmetric Shocks and Eurozone Fragmentation

The concept of asymmetric shocks, economic disturbances that affect member states differently due to structural differences in their economies, is central to understanding the political economy of the European energy crisis. The analytical framework for this concept derives from Robert Mundell's theory of optimal currency areas (OCA), which identifies three conditions for a successful monetary union: symmetry of shocks affecting member economies; wage and labor flexibility allowing competitive adjustment; and coordinated fiscal transfers from surplus to deficit economies. As the Eurozone crisis of 2009-15 demonstrated, and as the energy crisis of 2021-22 has confirmed, the Eurozone persistently fails to meet these criteria (Schmidt 2019).

The Maastricht Treaty's convergence criteria, capping inflation, deficit, debt, and interest rate differentials, were designed to ensure nominal convergence before euro adoption but made no provision for the structural divergences in energy endowment, industrial composition, and external supplier dependence that would shape the transmission of energy shocks across member states. Peripheral economies with high energy import dependence, concentrated exposure to energy-intensive sectors, and limited fiscal space are structurally more vulnerable to energy price shocks than Germany or France, which possess greater diversification and fiscal capacity (Amati and Patterson 2019). Yet within the single currency area, peripheral states cannot depreciate to restore competitiveness, while the absence of centralized fiscal stabilization means that adjustment costs fall disproportionately on the most

vulnerable.

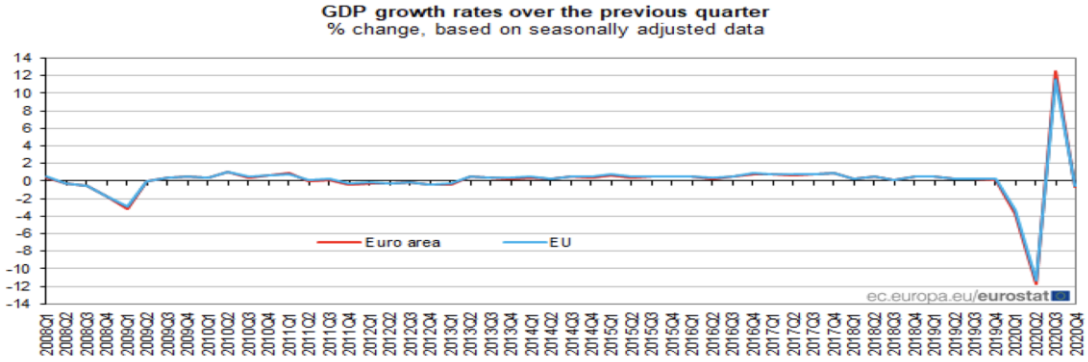

Figure 3: GDP growth rates over the previous quarter, Eurozone and EU, 2008Q1-2020Q4 (Source: Eurostat)

Published growth rates of GDP in volume up to 2020Q4*
(based on seasonally adjusted** data)

	Percentage change compared with the previous quarter				Percentage change compared with the same quarter of the previous year			
	2020Q1	2020Q2	2020Q3	2020Q4	2020Q1	2020Q2	2020Q3	2020Q4
Euro area	-3.7	-11.7	12.4	**-0.7**	-3.2	-14.7	-4.3	**-5.1**
EU	-3.3	-11.4	11.5	**-0.5**	-2.6	-13.9	-4.2	**-4.8**
Belgium	-3.4	-11.8	11.6	**0.2**	-2.0	-13.9	-4.3	**-4.8**
Czechia	-3.3	-8.5	6.9	**0.3**	-1.9	-10.8	-5.0	**-5.0**
Germany	-2.0	-9.7	8.5	**0.1**	-2.2	-11.3	-4.0	**-3.9**
Spain	-5.3	-17.9	16.4	**0.4**	-4.2	-21.6	-9.0	**-9.1**
France	-5.9	-13.7	18.5	**-1.3**	-5.7	-18.8	-3.9	**-5.0**
Italy	-5.5	-13.0	16.0	**-2.0**	-5.6	-18.1	-5.1	**-6.6**
Latvia	-2.3	-7.1	7.1	**1.1**	-1.0	-8.6	-2.6	**-1.7**
Lithuania	0.0	-5.9	3.8	**1.2**	2.2	-4.6	-1.6	**-1.3**
Austria	-2.8	-11.6	12.0	**-4.3**	-3.3	-14.2	-4.2	**-7.8**
Portugal	-4.0	-13.9	13.3	**0.4**	-2.4	-16.4	-5.7	**-5.9**
Sweden	0.3	-8.0	4.9	**0.5**	0.7	-7.4	-2.7	**-2.6**

Table 1: Published growth rates of GDP in volume up to 2020Q4, selected member states (Source: Eurostat)

The COVID-19 pandemic served as a dress rehearsal for the asymmetric dynamics that the energy crisis would amplify at greater intensity. As Table 1 demonstrates, the pandemic generated sharply differentiated GDP contractions across member states, with Spain registering a year-on-year decline of 21.6 percent in Q2 2020 compared to Germany's 11.3 percent and Lithuania's 4.6 percent. These differentials reflect pre-existing structural vulnerabilities, sectoral composition, debt levels, institutional quality, that the energy crisis has compounded and, in some cases, entrenched. The European Commission's (2021) analysis of COVID-19 adjustment mechanisms documented the limits of EU-level solidarity instruments and the dominant role of nationally funded stabilization, a pattern that the energy crisis has reproduced and intensified.

For Central and Eastern European member states, the asymmetric exposure to the energy crisis has been particularly acute. In 2021, over a fifth of EU natural gas demand was met by Russian imports; but for countries like Bulgaria, Serbia, and Moldova, dependence approached total reliance. Following Russia's supply restrictions, the proportion of Russian gas in EU demand fell from 39 percent in 2021 to approximately 9 percent by late 2022, a dramatic adjustment that, while ultimately achieved, was accomplished at enormous economic cost and required emergency LNG import infrastructure investments that smaller, landlocked member states could not readily pursue independently (IEA 2022). The Baltic States and Finland managed to halt Russian gas imports entirely and accelerate interconnection with Poland and the wider EU grid, illustrating that diversification is achievable, but also that it requires substantial upfront investment in infrastructure and political willingness to accept short-term economic pain.

6. The Geopolitics of European Energy Security

Russia's strategic exploitation of European energy dependence did not begin with the 2022 invasion. Since the 2006 Ukraine gas cutoff, Moscow has consistently demonstrated the willingness to use gas supply as a coercive instrument, and the 2009 crisis, which left Southeastern Europe without heating for weeks, established beyond reasonable doubt that supply security was a regional rather than merely bilateral phenomenon. The 2022 invasion, however, represented the fullest activation of this strategy: Russia cancelled long-term supply contracts, demanded ruble payment in violation of sanctions, shut down Nord Stream 1 citing maintenance pretexts, and deployed energy coercion explicitly to fracture EU unity in support of Ukraine (Ralf Dickel et al. 2022).

The EU's immediate response centered on the REPowerEU initiative, launched in May 2022, which rested on two principal pillars: diversifying gas supply by increasing LNG imports from non-Russian suppliers, and accelerating the deployment of renewable energy, biomethane, and green hydrogen to reduce long-term fossil fuel dependency. The Commission set a mandatory gas storage requirement of 90 percent of capacity by October of each year, a measure designed to prevent Russia from exploiting pre-winter vulnerability. These policy measures were supported by emergency EU-level diplomatic engagement with OPEC (through Energy Commissioner Kadri Simson's meeting with OPEC Secretary General Mohammed Barkindo in April 2022), as well as bilateral energy discussions with Venezuela and Colombia for oil and coal supplies respectively, illustrating the geopolitical reshaping of EU energy relationships that the crisis necessitated.

The geopolitical implications of the US LNG surge into European markets deserve particular attention. Following almost a fivefold increase in US LNG supplies to Europe in 2021-22, Europe surpassed South Korea and Mexico as the largest buyer of American LNG (Petroleum 2018). While this diversification reduced exposure to Russian supply cutoffs, it introduced a different form of dependency, one subject to US domestic politics, export licensing constraints, and the strategic calculations of an administration that has not always prioritized European energy security over American commercial interests. The Trump Administration's explicit linkage of LNG exports to trade concessions exemplified the transactional dimension of this new dependency. The EU must navigate a geopolitical energy landscape in which diversification away from Russia risks creating new, if differently structured, vulnerabilities.

The broader geopolitical reconfiguration has also extended to Central Asia and the Caspian region. The Nabucco pipeline proposal, designed to bring Azerbaijani, Turkmen, and Kazakh gas to European markets via Turkey, bypassing Russia, has acquired renewed urgency, though its realization faces formidable obstacles including the reliability of upstream suppliers and the political complexity of transit arrangements across multiple sovereign jurisdictions (Oral 2022; Sannikov and Ibrayeva 2018). Azerbaijan has expressed the greatest commitment to supplying the European market via the Southern Gas Corridor, but its available volumes remain insufficient to displace Russian imports at scale, and the extension of the corridor to incorporate Caspian sources faces both geological and diplomatic uncertainties. Iran, despite its vast reserves, remains effectively excluded from European market access by sanctions and domestic political constraints that have prevented it from honoring long-term export contracts. Qatar, conversely, has established itself as a reliable LNG supplier, but its proximity to Iran and dependence on the Strait of Hormuz introduces transit risks of its own (Chevalier 2021).

7. EU Energy Dependency: Structural Patterns and Vulnerabilities

In %	2000	2005	2010	2015	2019	2020
Dependency rate (all energies)	56.3	57.8	55.7	56	60.7	57.5
Dependency rate on natural gas	65.7	69	67.8	74.5	89.7	83.6

Source : EU energy in figures

Table 2: EU energy dependency rates (all energies and natural gas), 2000-2020 (Source: EU Energy in Figures)

In %	Global energy dependency in 2020	As regards Russian gas (2020 estimates)
Italy	77.5	43
Germany	67.6	66
France	47.6	16
Poland	46.8	54
Sweden	30.2	13

Table 3: Global energy dependency and Russian gas dependence by selected member state, 2020 (Source: EU Energy in Figures)

The structural depth of EU energy dependency is illustrated by Tables 2 and 3. The overall EU energy dependency rate has remained persistently above 55 percent since 2000, reaching 60.7 percent in 2019 before declining modestly to 57.5 percent in 2020, a decline that, as noted, reflects the economic slowdown induced by COVID-19 rather than any structural improvement (EuroStat 2023). The dependency rate for natural gas rose from

65.7 percent in 2000 to 83.6 percent by 2020, reflecting the progressive depletion of North Sea gas reserves and the increasing substitution of gas for coal in power generation as member states pursued decarbonization targets. Table 3 reveals the heterogeneity of national energy dependencies: Germany's 66 percent reliance on Russian gas stands alongside Italy's 43 percent and Poland's 54 percent — while France's nuclear-based energy strategy kept its Russian gas dependency at a comparatively modest 16 percent.

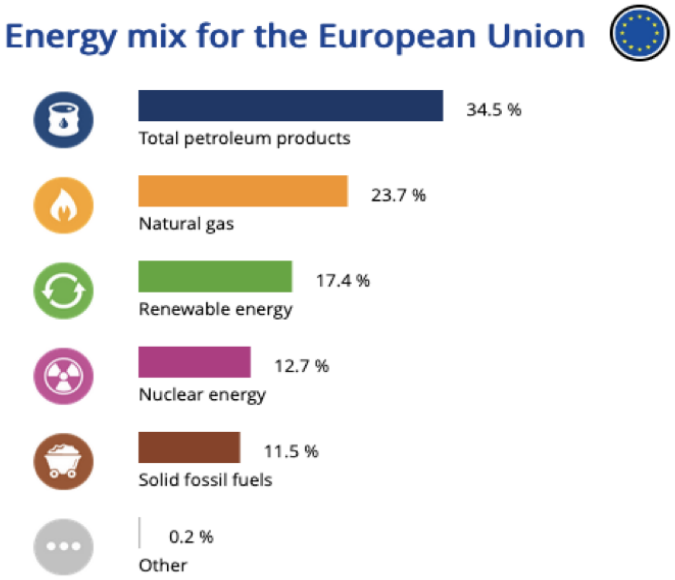

Figure 4: Energy mix for the European Union (Source: Eurostat)

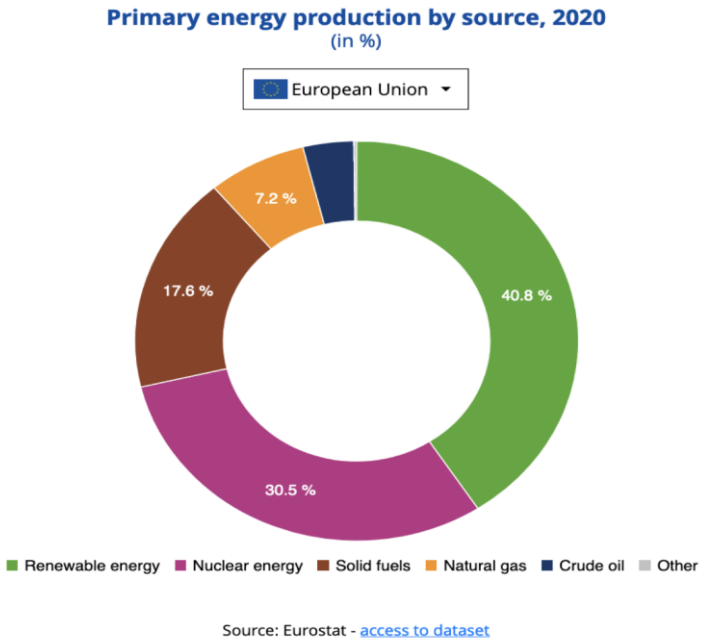

Figure 5: Primary energy production by source, European Union, 2020 (Source: Eurostat)

Figures 4 and 5 explain the structural composition of EU energy consumption and production respectively. On the consumption side, petroleum products dominate at 34.5 percent, followed by natural gas at 23.7 percent, renewable energy at 17.4 percent, nuclear at 12.7 percent, and solid fossil fuels at 11.5 percent. On the production side, the picture is markedly different: renewables account for 40.8 percent of primary production, followed by nuclear at 30.5 percent, solid fuels at 17.6 percent, and natural gas at a mere 7.2 percent. This discrepancy, the EU produces relatively little of the gas it consumes, is the fundamental structural driver of import dependence and encapsulates the core energy security dilemma. The COVID-19 decline in the overall dependency rate to 57.5 percent conceals the continued upward trajectory of gas-specific dependency, which has grown most rapidly precisely because gas has been positioned as the "transition fuel" bridging coal-phase-out and full renewable deployment (IEA 2022).

Domestic gas production has been declining across the EU since the mid-2000s. The North Sea fields that supplied the United Kingdom and the Netherlands are in progressive depletion, with UK import dependence having

risen sharply and Dutch production constrained by earthquake risks associated with the Groningen field. Beyond Norway, which remains the only European producer with significant reserve expansion potential, there are no domestic sources capable of offsetting the withdrawal of Russian supply at scale (Wettengel 2022). This production decline, combined with the expansion of gas-fired power generation, created the structural conditions for Russian coercion long before the 2022 crisis made its consequences undeniable. The EU's 2022 target of reducing Russian gas dependence by two-thirds within a year, achieved through emergency LNG procurement, demand reduction, and fuel switching, demonstrated that rapid adjustment is possible, but at severe economic cost that less well-resourced member states cannot easily absorb.

8. EU Energy Policy: Evolution and Strategic Response

8.1 Treaty Foundations and Historical Evolution

The EU's energy policy architecture has evolved over seven decades from the sectoral arrangements of the 1951 European Coal and Steel Community (ECSC) and the 1957 EURATOM Treaty, which established the cooperative framework for civilian nuclear energy, through successive rounds of market liberalization and climate legislation. The 1973 Arab oil embargo was formative in establishing the political case for energy security as a collective European concern, prompting the first coordinated efforts at supply diversification and demand management. The Single European Act (1986) and the Maastricht Treaty (1992) incorporated environmental protection and sustainable development as EU objectives, providing the legal basis for subsequent climate-energy linkage in EU policy. The Treaty of Lisbon (2009) was transformative in explicitly establishing energy security, market integration, energy efficiency, and renewable promotion as EU treaty objectives, creating the institutional architecture for the Energy Union concept (European Parliament 2023).

8.2 Key Policy Milestones

The key legislative milestones in EU energy policy reflect an intensifying ambition over the past two decades. The 2007 European Energy Policy established the original "20-20-20" framework: 20 percent renewable energy share, 20 percent reduction in greenhouse gas emissions, and 20 percent improvement in energy efficiency, all by 2020. The 2009 Renewable Energy Directive (RED) and the 2012 Energy Efficiency Directive provided the legislative instruments to pursue these targets, while the 2009 Third Energy Package accelerated market unbundling and the separation of generation from transmission to promote competition and cross-border trade. The 2014 Climate and Energy Framework for 2030 raised ambitions substantially, mandating at least 40 percent emission reductions, a 27 percent renewable share, and 27 percent energy efficiency improvement by 2030 (European Parliament 2018). The 2018 Clean Energy Package updated these frameworks, strengthening the governance architecture through national energy and climate plans and introducing consumer-empowerment provisions for the emerging distributed energy landscape (Skjaerseth 2021).

The European Green Deal of 2019 represented the most ambitious reorientation of EU energy-climate policy to date, enshrining carbon neutrality by 2050 as an EU treaty obligation through the 2021 European Climate Law, which also mandated a net 55 percent emission reduction by 2030 (Hafner 2020). These long-term decarbonization commitments provided the strategic direction for EU energy policy in the pre-invasion period, but they were premised on an orderly energy transition in which Russian gas would continue to serve as the bridging fuel between coal phase-out and full renewable deployment. The 2022 invasion destroyed this premise and demanded an immediate policy pivot that the REPowerEU package has attempted to deliver: accelerating renewable deployment, mandating minimum gas storage levels, and pursuing emergency LNG procurement from alternative suppliers at global scale.

8.3 Governance Framework and Institutional Architecture

The institutional architecture for EU energy governance is complex and multi-layered. The European Commission's Directorate-General for Energy leads policy development and enforcement, operating under mandates from the European Council (which sets strategic direction at the level of heads of state and government) and subject to co-decision with the European Parliament. The Agency for the Cooperation of Energy Regulators (ACER) coordinates national regulatory authorities and provides technical recommendations on cross-border energy infrastructure and market design. The European Network of Transmission System Operators for Electricity and Gas (ENTSO-E and ENTSO-G) coordinate the technical operation of cross-border networks and facilitate the integration of renewable energy into the grid. The Connecting Europe Facility (CEF) provides financing for priority energy infrastructure projects, including cross-border interconnectors and LNG terminals (European Commission 2019).

Despite this elaborate governance architecture, the EU faces persistent challenges of policy coordination and consistency. The diversity of member states' energy endowments, historical energy mixes, and economic structures creates powerful centrifugal forces that resist harmonization. Germany's long-standing advocacy for maintaining Russian gas imports, driven by the combination of industrial dependence, transit revenues, and the political economy of Ostpolitik, exemplified how national interests have constrained EU-level energy solidarity.

The bilateral nature of gas trade, in which Russia systematically exploited its ability to reward cooperative customers and penalize adversaries, reinforced the fragmentation of European bargaining power and created a collective action problem that only the shock of a full-scale military invasion was ultimately sufficient to overcome (Egenhofer et al. 2009).

9. Discussion: The European Region and the Specter of Non-Polarity

The convergence of evidence presented in this article supports the central hypothesis: the European energy crisis constitutes a systemic risk that has materially undermined the EU's capacity to serve as the region's principal ordering agent and that, if unaddressed, risks propelling the European regional order towards non-polarity. This concept, as articulated by Haass, denotes not the emergence of a competing hegemon or coalition of powers, but the more disquieting absence of any actor, including the EU itself, possessed of the capability, willingness, and legitimacy to perform the ordering function within the regional system.

The evidence for this trajectory is multi-dimensional. Economically, the energy crisis has exposed and exacerbated the structural divergences within the Eurozone that prevent it from functioning as an optimal currency area: peripheral and Central-Eastern European member states face supply shocks of a kind and scale that core economies, with greater energy diversification and fiscal resources, are better positioned to absorb. The industrial erosion documented in Section 4, deindustrialization in energy-intensive sectors, competitive disadvantage relative to the United States, and the specter of permanent factory closures, threatens the economic base of German and EU-wide leadership. Germany's relative weight within the EU has historically derived substantially from its industrial capacity and export surpluses; erosion of that base weakens the economic foundation of EU structural power.

Geopolitically, the Russian intervention has demonstrated that the EU's normative power instruments, sanctions, diplomatic engagement, institutional leverage, are insufficient, in isolation, to deter or reverse the kind of coercive statecraft that Russia has deployed. The EU's inability to prevent the invasion despite two decades of engagement policy, and its subsequent inability to rapidly translate energy cutoffs into Russian strategic concession, illustrates the limits of soft power in the face of hard-power coercion backed by resource leverage. As Diez (2021) argues, the "normative power Europe" model was a product of the post-Cold War liberal moment: in an era of renewed great-power competition, the EU faces the choice between acquiring strategic instruments commensurate with its interests or accepting a diminished ordering role in its own neighborhood.

The regional disaggregation of EU energy responses further illustrates the non-polarity dynamic. Central and Eastern European states, Baltic countries, Poland, Romania, Bulgaria, have pursued differentiated diversification strategies at varying speeds and with varying success. The Baltic States have effectively decoupled from Russian gas and are accelerating grid synchronization with the EU's continental network; Poland has built LNG import capacity and diversified through Norwegian pipeline gas; Romania is expanding domestic offshore production. But Serbia remains almost entirely dependent on Russian gas imports and renewed its Gazprom contract through 2022; Moldova possesses neither the storage capacity nor the interconnection to function independently; and several Southeastern European states remain structurally exposed to supply disruptions that a failure of LNG infrastructure development would leave unmitigated. This variegation of outcomes, some member states achieving effective energy independence, others remaining deeply vulnerable, reflects a structural fragmentation of the EU's collective energy security posture that undermines the Union's capacity to present and project regional leadership.

The implications for EU structural power are significant. If the EU cannot secure its own energy supply with sufficient reliability and equity across all member states, its capacity to act as an ordering agent, to enforce norms, resolve disputes, provide collective goods, and sustain the institutional architecture of regional governance, is necessarily constrained. Russia has demonstrated the ability to exploit bilateral asymmetries in energy dependence to divide EU member states, undermining solidarity on sanctions and other security measures. China has leveraged its strategic economic presence in European markets to acquire political influence disproportionate to its formal status. The United States has used its energy leverage and security provision to extract commercial and strategic concessions. In this environment, the EU risks not facing a rival ordering hegemon but inhabiting a structural vacuum in which no actor, including itself, capable of performing the ordering function: the defining condition of non-polarity.

10. Conclusion

This article argues that the European energy crisis precipitated by Russia's 2022 invasion of Ukraine constitutes a systemic risk, economically, through the transmission of asymmetric shocks across a structurally divergent Eurozone; geopolitically, through the forced disruption of established supply relationships and the activation of new, complex dependencies; and politically, through the exposure of the EU's limitations as an ordering agent in conditions of hard-power coercion. Analyzed through the lens of Regional Security Complex Theory, the crisis

reveals a European regional security complex in which energy interdependence has become a primary axis of vulnerability, with Russia's strategic manipulation of gas flows functioning as both a geopolitical instrument and a test of EU cohesion and resilience.

The trajectory towards non-polarity is not inevitable. The REPowerEU initiative, the accelerated deployment of renewable energy, the emergency expansion of LNG import infrastructure, and the unprecedented, if imperfect, solidarity displayed in sanctions implementation and financial support for Ukraine all demonstrate that the EU retains the institutional capacity for collective response when the stakes are sufficiently clear. The 2021 European Climate Law's codification of carbon neutrality by 2050 provides a legally binding framework that, if implemented with the urgency the energy crisis demands, could transform Europe's energy dependence from a structural vulnerability into a source of strategic autonomy. But the window for this transformation is finite: industrial deindustrialization, if allowed to accelerate, will erode the economic base from which EU structural power derives; differentiated national energy strategies, if allowed to harden, will fragment the collective bargaining capacity upon which EU energy diplomacy depends.

The central recommendation from this analysis is that natural gas supply diversification, particularly for Central, Eastern, and Southeastern Europe, must be treated as a regional security imperative rather than a commercial matter. Storage access should be regulated and subject to transparent secondary markets. Investment in LNG regasification capacity, cross-border interconnectors, and clean energy deployment must be accelerated, with emergency EU recovery financing directed specifically at the most vulnerable member states. The EU should refrain from excessive interventionism in the commercial choices of gas importers while maintaining a strategic framework that prevents the reconcentration of dependence on any single external supplier. Most fundamentally, the EU must resist the temptation to treat the crisis as an exceptional disruption to be managed through emergency instruments and recognize it instead as the catalyst for a structural transformation of the European energy system that its security, and its regional ordering role, requires.

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