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Geopolitical sequencing in Europe's energy transition: infrastructure, legitimacy and finance

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ABSTRACT

Europe's energy transition is increasingly shaped by geopolitical competition, strategic dependence and investment uncertainty. This conceptual paper develops the concept of *geopolitical sequencing* to explain how geopolitical pressures interact with strategic infrastructure, political legitimacy and transition finance. The central argument is temporal: political commitments, infrastructure development and financing arrangements evolve at different speeds, generating misalignment between strategic ambitions and implementation capacity. *Institutional risk compression* is introduced as the governance mechanism through which socio-political durability, regulatory credibility and financial arrangements interact to contain or amplify uncertainty. The framework is explored through a case study of Sicily, a strategic Mediterranean energy node connecting North African gas corridors, renewable development, grid interconnections and prospective EU–Africa energy partnerships. Evidence on infrastructure investment, renewable permitting and cross-border financing illustrates how geopolitical priorities interact with territorial distributional tensions, regulatory constraints and investment conditions. The analysis highlights three interconnected challenges: aligning commitments across different time horizons, reconciling system-wide infrastructure benefits with local legitimacy and distinguishing genuine risk reduction from the redistribution of financial exposure. The paper contributes a framework for understanding how geopolitical pressures are transmitted through regional energy transitions and identifies implications for EU energy security, infrastructure governance and transition finance.

1. Introduction

The European Union (EU) energy transition is no longer solely a decarbonization undertaking; it is also reshaping strategic dependence. Infrastructure networks, supply chains, technological capabilities and financial flows increasingly determine both the pace of emissions reduction and the distribution of geopolitical influence (Goldthau and Sovacool, 2012; Escribano, 2021; Youngs, 2022; Sivonen and Kivimaa, 2024). Russia's invasion of Ukraine exposed the vulnerability associated with concentrated fossil-fuel imports. Competition over clean-technology manufacturing and critical minerals has meanwhile sharpened concerns about dependence on China, while changes in US trade and industrial policy have added uncertainty to European investment decisions (Executive Order 14257, 2025; Public Law 119-21, 2025). EU responses—including REPowerEU, the Critical Raw Materials Act and the Net-Zero Industry Act—reflect a growing recognition that reducing one form of dependence can create another (European Commission, 2023a; Paleari, 2024). More recent measures, including Regulation (EU) 2026/261 on Russian gas imports, the Action Plan for Affordable Energy, the European Grids Package and the selection of strategic raw-materials projects, connect supply security more directly to infrastructure delivery and affordability (European Commission, 2025a, 2025b, 2025c, 2025d, 2026). The challenge is therefore not simply to accelerate the transition, but to reconcile decarbonization with strategic resilience, political acceptability and investment viability.

Research offers important but fragmented explanations of these tensions. Socio-technical transition studies examine regime change and the interaction between innovation and incumbent systems (Geels and Schot, 2007; Geels, 2011; Markard et al., 2012). Political-economy and energy-security scholarship addresses lock-in, contestation and strategic dependence (Unruh, 2000; Meadowcroft, 2009; Goldthau and Sovacool, 2012). Studies of renewable geopolitics and strategic

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autonomy show how dependence shifts towards technologies, materials and cross-border networks (Sattich et al., 2021; Scholten et al., 2020; Van de Graaf and Sovacool, 2020; Paleari, 2024). Transition-finance research, in turn, highlights regulatory credibility, public de-risking and the cost of capital (Demertzis et al., 2024; Nuta et al., 2025). These literatures identify the main pressures affecting the transition, but provide a less integrated account of how geopolitical constraints travel through infrastructure decisions, territorial legitimacy and financing arrangements—and how the resulting choices reshape strategic exposure.

This paper develops the concept of geopolitical sequencing to address this transmission problem. Geopolitical sequencing refers to the dynamic alignment of strategic infrastructure, political legitimacy and geopolitical finance under changing geopolitical constraints (Lattanzi, 2021). Its distinctive concern is temporal: diplomatic and political commitments can advance faster than infrastructure, consent and financing arrangements, producing gaps between strategic ambition and feasible delivery. These gaps are neither purely technical nor purely financial. Infrastructure choices allocate costs and benefits, which influence political support and regulatory durability; these conditions shape investment risk and, ultimately, which strategic assets are built. The paper further introduces institutional risk compression as the mechanism through which governance arrangements can contain uncertainty across socio-political, regulatory and geopolitical-financial domains. While geopolitical sequencing identifies the alignment problem, institutional risk compression explains how that alignment may be sustained—or undermined. A related distinction is crucial: public intervention may genuinely reduce underlying risk, or merely redistribute it among investors, taxpayers, consumers and host communities.

The framework is explored through a single case study of Sicily, where North African gas corridors, renewable development, grid interconnection and prospective electricity and hydrogen trade intersect with territorial and institutional tensions. Documentary sources and secondary quantitative evidence on permitting and investment are used to explore the interactions among the framework's dimensions, rather than to test individual propositions or establish causal effects.

The contribution is threefold: it specifies the regional and project-level channels through which geopolitical pressures affect transition implementation; it clarifies the different roles of institutional risk reduction and redistribution; and it illustrates why strategically important peripheral regions can become sites of both transition opportunity and coordination failure.

Section 2 reviews the relevant literatures and identifies the analytical gap. Section 3 develops the framework and its propositions. Section 4 explores the interactions among infrastructure, legitimacy and finance in Sicily. Section 5 discusses the theoretical and policy implications, the relevance beyond Sicily and the limits of the analysis. Section 6 concludes.

2. Prior literature

Socio-technical transition research provides a starting point for understanding system change. Transition management emphasizes experimentation, learning and coordination across successive phases (Rotmans et al., 2001; Loorbach, 2010). The multi-level perspective (MLP) locates change within interactions among niches, incumbent regimes and broader landscape pressures (Geels, 2002; Geels and Schot, 2007). These approaches illuminate path dependence, resistance and opportunities for regime reconfiguration (Turnheim and Geels, 2012; Roberts et al., 2018). Yet geopolitical relations tend to enter as contextual pressures rather than as dependencies that are themselves reconfigured by infrastructure choice. Their implications for financing and territorial legitimacy consequently remain less explicitly connected within a common account of transition implementation (Markard et al., 2012; Sivonen and Kivimaa, 2024).

Institutional and transition-finance perspectives foreground the credibility of commitments. Institutional economics explains why stable rules, enforceable agreements and predictable expectations matter for long-lived investments (North, 1990). Energy-finance studies examine how policy uncertainty, public guarantees and other forms of de-risking affect capital mobilization (Demertzis et al., 2024; Nuta et al., 2025). A related policy-sequencing literature shows how earlier interventions can lower costs and build coalitions for more demanding reforms (Meckling et al., 2017; Pahle et al., 2018). This work establishes that the order of policy measures matters, but its principal focus is domestic instruments. It offers less guidance on situations in which external strategic commitments advance ahead of the infrastructure, territorial consent and cross-border financing required to implement them.

Energy-security and renewable-geopolitics scholarship addresses the external dimension more directly. Decarbonization changes rather than ends strategic dependence: exposure may migrate from fossil-fuel suppliers to clean-technology manufacturers, critical minerals, infrastructure corridors and technical standards (Goldthau and Sovacool, 2012; Escribano, 2021; Sattich et al., 2021; Paleari, 2024). Energy security can therefore shape transition choices, while those choices alter future vulnerabilities and bargaining positions. What remains less developed is how these reciprocal pressures move through specific permitting decisions, local political bargains, regulatory expectations and financing structures.

Energy-statecraft and geoeconomic approaches help explain why these dependencies matter politically. States use energy supplies, infrastructure and market rules to pursue strategic objectives (Van de Graaf and Colgan, 2016), while the transition redistributes influence among producers, consumers and technology holders (Scholten et al., 2020; Goldthau et al., 2019). Work on weaponized interdependence highlights power arising from network chokepoints (Farrell and Newman, 2019), and infrastructure-geopolitics research examines the strategic role of connectivity corridors (Kavalski and Fisher-Onar, 2026). These approaches are essential to understanding leverage and statecraft. The present framework complements them by examining the intermediate processes through which strategic priorities become—or fail to become—authorized, politically durable and financeable projects.

The remaining gap has three connected dimensions. First, geopolitical constraints are not merely external conditions against which domestic instruments are sequenced. Sanctions, supply-chain concentration, alliance politics and competition over investment can reshape the technologies, partners and corridors available to governments. A framework concerned with timing must therefore consider how geopolitical shocks change both the urgency and the feasibility of commitments.

Second, infrastructure, legitimacy and finance are mutually conditioning rather than parallel policy fields. Financing affects project selection and timing; infrastructure allocates territorial costs and benefits; these distributions influence acceptance and the credibility of regulation; and regulatory expectations feed back into execution risk and capital requirements. The challenge is to explain how misalignment emerges across these processes, particularly when they operate at different speeds.

Third, the relationship runs in both directions and across levels of governance. Geopolitical pressures influence local and national transition choices, but completed or delayed projects also alter future dependence, network position and bargaining power. The central analytical task is thus to trace a recursive transmission process from geopolitical pressure to infrastructure, legitimacy and finance—and back to strategic exposure. Section 3 develops geopolitical sequencing and institutional risk compression to make these connections explicit.

3. Geopolitical sequencing and institutional risk compression: a conceptual framework

Section 2 identified a transmission problem across socio-technical change, regulatory credibility, geopolitical dependence and

investment conditions. This section develops a conceptual framework to address that problem. It defines geopolitical sequencing, specifies its three constituent dimensions and introduces institutional risk compression as the mechanism linking political durability, regulatory credibility and financing conditions.

3.1. Geopolitical sequencing

Geopolitical sequencing denotes the dynamic alignment of strategic infrastructure, political legitimacy and geopolitical finance under shifting strategic constraints. It does not prescribe a fixed policy order. Diplomatic commitments may arise within months, financing takes longer and infrastructure delivery and local consent can take years. Misalignment occurs when fast commitments outrun their slower prerequisites. Sequencing therefore concerns the pace and compatibility of commitments; institutional risk compression (Section 3.3) explains how their alignment may be sustained.

The concept has four properties. First, it is recursive because infrastructure choices affect distributional outcomes and financing conditions, which feed back into political support and subsequent infrastructure choices. Second, it is bidirectional because geopolitical shocks reshape transition strategies while those strategies alter future dependencies, bargaining positions and strategic capabilities. Third, it is multi-scalar because these effects operate across local, national, EU and international institutions. Fourth, it is contested because alignment reflects conflicts among actors with unequal resources, exposure and authority rather than a technocratic optimum.

The framework therefore shifts attention from the design of individual policies to the compatibility of interdependent commitments. Security-driven gas investment may improve short-run resilience while increasing long-run lock-in; accelerated renewable deployment may advance decarbonization while generating local opposition or grid bottlenecks; and public guarantees may reduce financing risk without resolving political or regulatory uncertainty. Geopolitical sequencing thus concerns compatibility across policy domains and time horizons.

Unlike domestic policy sequencing, which orders instruments to build support (Meckling et al., 2017; Pahle et al., 2018), geopolitical sequencing also captures constraints imposed by external shocks. Supply-diversification commitments can advance without equivalent progress in grids, finance or consent. In Sicily, SoutH2 declarations preceded settled financing, while renewable connection requests far exceed authorization and network capacity. These examples illustrate the temporal argument without testing Proposition 1.

The framework takes interdependence as its analytical baseline (Keohane and Nye, 1977): external dependencies cannot disappear but can be governed. Dependency and green-colonialism research identifies asymmetric value capture in energy relations (Bringel and Svampa, 2024; Cardinale, 2023). Such asymmetries may undermine legitimacy and increase reversal or contractual risk. Interdependence describes the structure; asymmetry shapes durability. Geopolitical finance, defined in Section 3.2.3, includes finance used as an instrument of statecraft (Gabor, 2021), but the framework does not adopt the neo-mercantilist view that state-directed finance is desirable or necessarily reduces risk.

The framework is most relevant where long-lived infrastructure, substantial cross-border or supply-chain exposure and politically salient distributional effects coincide. Table 1 compares it with transition governance and geoeconomics. Whereas energy-statecraft approaches examine strategic leverage among states, geopolitical sequencing traces how pressure reaches projects, regions and institutions, and feeds back into strategic exposure.

3.2. Constituent dimensions

The framework distinguishes strategic infrastructure, political legitimacy and geopolitical finance as analytically distinct but causally interdependent dimensions. Each represents a channel through which geopolitical pressure enters the transition and through which transition choices reshape strategic exposure.

3.2.1. Strategic infrastructure

Strategic infrastructure constitutes the material layer of geopolitical sequencing. Pipelines, grids, interconnectors, storage, hydrogen systems, processing capacity and clean-technology supply chains deliver energy services while embedding dependence, optionality and leverage over long time horizons. Infrastructure choices therefore shape both technical performance and the future geography of strategic vulnerability.

Three characteristics are central. First, asset specificity and long lifetimes create path dependence: investments made for short-run security can constrain subsequent decarbonization choices. Second, network position matters because interconnectors and corridors can diversify exposure and improve flexibility while also transmitting disruption across borders. Third, technology and supply-chain choices relocate dependence towards particular suppliers, materials, standards and manufacturing ecosystems (International Energy Agency, 2023).

The relevant policy question is therefore not only which infrastructure is least-cost, but how a portfolio changes strategic exposure and how that exposure affects political and financial conditions.

Table 1
Geopolitical sequencing compared with transition-governance and geoeconomic frameworks.

Dimension	Transition management/ MLP	Institutional/regulatory sequencing	Energy statecraft/geoeconomics	Geopolitical sequencing
Primary object	Socio-technical transition pathways	Institutional conditions for investment	Use of energy, infrastructure and finance as instruments of state power	Alignment of infrastructure, legitimacy and finance under geopolitical constraints
Level of analysis	Socio-technical system (niche, regime, landscape)	Policy and investment environment	Interstate relations and global networks	Project, regional and cross-border (meso) level, linked to national, EU and interstate levels
Role of geopolitics	Usually a landscape or contextual pressure	Typically external to the core investment logic	Central; the main explanatory focus	Constitutive, bidirectional and endogenous
Role of finance	Usually secondary	Central to investment viability	An instrument of statecraft, leverage and coercion	Central and geopolitically structured
Role of legitimacy	Important through actors, coalitions and acceptance	Indirectly reflected in policy credibility	Mostly implicit, at the interstate level	Central, dynamic and multi-scalar
View of sequencing	Pathway-based and temporally contingent	Ordering of domestic policy instruments to build support and credibility (Meckling et al., 2017; Pahle et al., 2018)	Largely absent; focus on strategy and leverage	Pacing of commitments across domains that move at different speeds; recursive and cross-domain
Key analytical gap	Limited specification of geopolitical-financial transmission	Limited treatment of strategic dependence and political feedback	Limited treatment of domestic transmission and of feedback from project outcomes	Transmission among geopolitical pressure, infrastructure, legitimacy, regulation and finance

Source: Authors' elaboration.

Infrastructure converts geopolitical choices into durable material commitments and therefore constitutes a primary transmission channel.

3.2.2. Political legitimacy

Political legitimacy is defined here as the extent to which transition commitments remain politically supportable across affected constituencies and levels of governance. It is treated as a variable rather than a fixed precondition. Infrastructure decisions distribute costs, benefits, risks and voice unevenly, and these distributions shape acceptance, coalition durability and the credibility of future policy commitments. Two asymmetries are particularly important. Temporal asymmetry arises when adjustment costs are immediate while benefits are delayed or diffuse. Spatial asymmetry arises when host regions bear land-use, employment, price or environmental costs while wider systems capture a larger share of the benefits (Bouzarovski and Simcock, 2017). Compensation, participation and visible local value creation can mitigate these asymmetries, but only when commitments are credible and sustained.

Geopolitical shocks can also reframe legitimacy. Energy-security concerns may temporarily broaden support for infrastructure that would otherwise face resistance, whereas affordability shocks or perceived strategic dependence may weaken support for decarbonization. Industrial-policy competition adds a further dimension by linking transition legitimacy to employment, manufacturing capacity and strategic autonomy. Legitimacy is therefore shaped by competing claims around climate protection, security, competitiveness and fairness.

Legitimacy also has an external dimension. Internal legitimacy concerns host regions and constituencies within the EU; external legitimacy concerns the partner countries on which EU projects depend. EU projects that depend on partner-country territory, resources or infrastructure require political durability beyond EU borders. Where partnership narratives diverge from local perceptions of value capture, sovereignty or environmental burden, political-reversal and contractual risks may increase (Bringel and Svampa, 2024; Schuetze and Woertz, 2026). External legitimacy therefore involves more than the distribution of costs and benefits. It includes energy sovereignty, understood as the priority partner countries give to domestic energy needs over export; the share of value captured locally; technology transfer; and historical asymmetries in resource relations (Cardinale, 2023). Legitimacy is consequently multi-scalar and directly relevant to investment risk.

3.2.3. Geopolitical finance

Geopolitical finance refers to the allocation and pricing of capital when investment risk is shaped by strategic competition, cross-border dependence and public policy. Conventional transition-finance research emphasizes revenue certainty, public de-risking and private capital mobilization (Polzin et al., 2019; Demertzis et al., 2024; Nuta et al., 2025). The present framework adds that the sources of risk may themselves be geopolitical. Recent shifts in US trade and industrial policy, including tariffs and the curtailment of clean-energy tax credits (Executive Order 14257, 2025; Public Law 119-21, 2025), show how decisions taken abroad can alter the expected returns and supply-chain costs of European projects.

Three mechanisms are relevant. Sovereign, supply-chain, contractual and cross-border uncertainty can increase required returns, guarantee requirements or delays in final investment decisions. Public financial institutions can absorb or reallocate selected risks through guarantees, concessional finance, blended structures and long-horizon lending. Industrial policy can also redirect capital towards strategically preferred technologies or domestic capacity, making finance an instrument of both decarbonization and strategic competition (Gabor, 2021). Firm-level strategy is part of this picture: how quickly companies convert clean-technology research and development, such as green hydrogen patents, into commercial capacity shapes which industrial ecosystems and supply chains ultimately absorb this capital (Baglieri, 2024).

Finance therefore transmits geopolitical pressure into project selection and timing and, in turn, shapes geopolitics by determining which infrastructures, suppliers and technology ecosystems become entrenched. The policy question is not whether public finance can eliminate uncertainty, but which risks institutions can credibly absorb and which remain with investors, communities, firms or partner states.

3.3. Institutional risk compression

Institutional risk compression denotes the process through which governance arrangements reduce the probability or expected cost of disruption by stabilizing expectations across socio-political, policy-regulatory and geopolitical-financial domains. It does not imply the elimination of uncertainty. Rather, it identifies the conditions under which uncertainty becomes sufficiently bounded for long-horizon commitments to remain politically durable and financially viable (North, 1990; Polzin et al., 2019). The mechanism is recursive. Weak legitimacy can increase the probability of delay, protest or policy reversal; this uncertainty can weaken regulatory credibility and raise execution or financing risk; higher financing requirements can delay investment or reduce the resources available for local benefits; and weak benefit delivery can further erode legitimacy. The reverse sequence is also possible, as risk compression at one level can reinforce stability at others. This leads to the first proposition:

Proposition 1. *The greater the geopolitical exposure of a strategic energy infrastructure project, the more its viability depends on alignment across socio-political, regulatory and geopolitical-financial domains, relative to projects with comparable technical and market fundamentals but lower exposure.*

At the socio-political level, risk compression reduces the likelihood that distributional conflict translates into project delay or policy reversal. Targeted compensation, community benefits and meaningful participation can therefore serve not only normative objectives but also risk-reduction functions by making the distribution of transition costs and benefits more politically sustainable and reducing execution uncertainty. Accordingly:

Proposition 2. *Among infrastructure projects that impose concentrated local costs but generate spatially diffuse benefits, those with weaker socio-political risk compression face greater execution and regulatory risk than those with stronger benefit-sharing and participation.*

At the policy-regulatory level, risk compression operates through credible and predictable rules governing revenue support, permitting, grid access, taxation and market design. Credibility does not require policy immobility; rather, it requires adaptation through processes that investors and affected actors can anticipate. Abrupt or inconsistent intervention can therefore transmit geopolitical shocks into regulatory risk.

At the geopolitical-financial level, risk compression operates through arrangements that allocate risks no domestic actor can manage alone, including sovereign guarantees, multilateral lending, cross-border contracts and strategic investment frameworks. These instruments are particularly relevant to infrastructure corridors, supply chains and projects whose viability depends on multiple jurisdictions or politically exposed counterparties.

Risk compression must also be distinguished from risk redistribution. Risk reduction lowers the probability or expected cost of disruption, for instance when credible participation reduces the likelihood of opposition or stable rules reduce revenue volatility. Risk redistribution shifts the burden of an unchanged risk to another actor: guarantees move it to public balance sheets, regulated tariffs to consumers and siting decisions to host communities. Both can lower project-level financing costs, but only reduction narrows the underlying uncertainty. Institutional risk compression therefore requires risk reduction in at least one domain. Pure redistribution may make a project bankable while leaving its

political or regulatory risks unresolved, which is the situation captured by Proposition 3.

To operationalize the mechanism, the framework distinguishes the source of risk, the transmission channel, the expected consequence and the residual risk bearer at each level. Table 2 summarizes these relationships and provides the basis for the empirical application.

Financial de-risking alone may therefore be insufficient where regulatory credibility and socio-political legitimacy remain weak. This yields the third proposition:

Proposition 3. *For a given level of public financial de-risking, projects in settings with weak regulatory credibility and socio-political legitimacy mobilize less private capital, and more slowly, than projects in settings where both are strong.*

Institutional risk compression can generate two stylized feedback patterns. A *legitimacy–finance trap* arises when concentrated costs or weak participation erode political support, increase policy and execution uncertainty and raise financing requirements or delay investment. Slower investment then limits the delivery of visible benefits, reinforcing the initial legitimacy deficit.

A *virtuous risk-compression cycle* arises when infrastructure delivers credible local and strategic benefits, regulatory commitments remain durable and financing conditions improve as uncertainty declines. Lower risk can accelerate investment and expand the resources available for compensation, community benefits and additional infrastructure, thereby strengthening support for transition policy. These are stylized feedback mechanisms rather than deterministic equilibria. Accordingly:

Proposition 4. *Under comparable geopolitical exposure, strategic infrastructure projects that combine visible local benefit-sharing with credible regulatory commitments experience shorter delays and lower financing requirements than projects relying on financial de-risking alone.*

The propositions describe contingent relationships, not deterministic predictions. Their effects may weaken where technical risks dominate, exposures are hedged or communities have little influence over authorization. Proposition 4 would not hold if projects combining benefit-sharing with stable regulation experienced delays and financing requirements no shorter than comparable projects relying on de-risking alone, for instance because opposition rests on landscape or heritage values that compensation cannot address, or because delay originates in administrative capacity rather than in local conflict. Guarantees may improve bankability without reducing political or contractual uncertainty. These are theoretical possibilities, not findings from Sicily. Comparative research could examine whether otherwise similar projects with contrasting geopolitical exposure, participation and regulatory stability experience different delays and financing outcomes.

Fig. 1 summarizes the conceptual framework by distinguishing geopolitical sequencing, understood as the challenge of aligning strategic infrastructure, political legitimacy and geopolitical finance, from institutional risk compression, which captures the governance mechanisms shaping this alignment. The framework emphasizes the temporal mismatch among commitments operating at different speeds and distinguishes the reduction of underlying uncertainty from its redistribution among actors. Depending on the interaction of socio-political, regulatory and financial conditions, these processes may generate a legitimacy–finance trap or support a virtuous risk-compression cycle. Both represent stylized configurations rather than deterministic outcomes, while feedback effects allow transition choices to reshape future geopolitical exposure.

4. Sicily as a geostrategic infrastructure node

Sicily brings together several pressures that are often examined separately in European energy-transition research. Long-established gas links with North Africa coexist with expanding renewable generation, major grid investments and proposals for cross-border electricity and hydrogen trade. These developments connect decisions taken at local, regional, national and EU levels, making the island a useful setting in which to explore how infrastructure, legitimacy and finance evolve together. The analysis adopts an exploratory case-study approach to examine the interactions among the framework's dimensions and inform theoretical development (George and Bennett, 2005). Sicily was selected as an information-rich case (Flyvbjerg, 2006) because it combines three conditions under which the proposed framework is expected to be particularly relevant: long-lived strategic infrastructure, substantial cross-border exposure and politically salient distributional effects. Drawing on documentary sources and secondary quantitative evidence (no interviews were conducted), the analysis explores the plausibility of the proposed relationships without seeking to formally test the theoretical propositions or establish causal effects.[1]

The discussion follows the framework's three interdependent dimensions: strategic infrastructure (Section 4.1), political legitimacy (Section 4.2) and geopolitical finance (Section 4.3). Evidence on the Tyrrhenian Link, renewable permitting, ELMED, the Mattei Plan and SoutH2 is used to illuminate different aspects of a single regional transition, rather than to construct separate project tests. The evidence is then synthesized to identify its principal implications and limitations.

4.1. Strategic infrastructure: from gas gateway to multi-energy node

Sicily's infrastructure combines assets inherited from the fossil-fuel system with investments intended to enable decarbonization. Gas pipelines, renewable generation, transmission links and prospective hydrogen corridors differ in their investment horizons and strategic functions, yet decisions about each can constrain or enable the others. This coexistence makes the timing of infrastructure commitments central to the island's transition.

The legacy gas network remains important. TransMed carries Algerian gas through Tunisia and Sicily into the Italian and wider European system, while Greenstream connects Libya to Sicily. Both acquired renewed strategic significance after Russia's invasion of Ukraine as Europe sought alternatives to Russian supplies. Their significance, however, lies not only in import capacity but also in the long-term relationships they embed among suppliers, transit countries and European consumers.

This salience has since been codified. Regulation (EU) 2026/261, adopted in January 2026 following the REPowerEU Roadmap of May 2025, makes the phase-out of Russian pipeline gas and LNG imports legally binding, with imports under short-term contracts prohibited during 2026, under long-term LNG contracts from 1 January 2027 and under long-term pipeline contracts from 30 September 2027 (1 November 2027 where storage targets are at risk). The phase-out raises the strategic value of southern entry points such as Sicily for North African pipeline gas and, with it, the risk that security-driven commitments extend the life of gas infrastructure.

Other gas-sector commitments, including Argo-Cassiopea and the proposed Sicily–Malta interconnection, reinforce this tension. Investments justified by immediate supply-security needs may shape infrastructure use and policy choices for decades. Their contribution to resilience thus depends partly on whether they preserve future flexibility or deepen lock-in and stranded-asset exposure (Colgan et al., 2021).

At the same time, Sicily's solar and wind resources have generated a substantial pipeline of proposed projects. Deployment nevertheless

[1] Daniela Baglieri, a co-author of this article, previously served as Regional Minister (Assessore) for Energy of the Sicilian Region (2021–2022). Her institutional experience informed the contextual understanding of regional energy governance and the interpretation of documentary evidence. All empirical claims are based on the cited sources; this experience is disclosed for transparency and does not constitute an independent source of primary data.

Table 2
Operationalization of institutional risk compression.

Level	Principal risk	Transmission mechanism	Observable implication	Residual risk bearer
Socio-political	Opposition, protest, distributional conflict, electoral reversal	Legitimacy deficits increase delay, cancellation or policy-reversal probability	Longer project timelines; higher execution uncertainty; weaker policy durability	Host communities (unmitigated local costs) and developers (delay or cancellation)
Policy-regulatory	Rule instability; revenue, permitting, grid-access or market-design uncertainty	Uncertain commitments increase expected cash-flow and timing volatility	Higher hurdle rates; delayed investment decisions; larger risk premia	Investors (cash-flow volatility) and consumers (costs recovered through tariffs)
Geopolitical-financial	Sovereign, cross-border, supply-chain, contractual and strategic risk	External disruption affects contracts, inputs, market access or guarantees	Higher financing requirements; stronger guarantee requirements; lower investor appetite	Public and multilateral balance sheets (guarantees, concessional lending) and partner states

Source: Authors' elaboration.

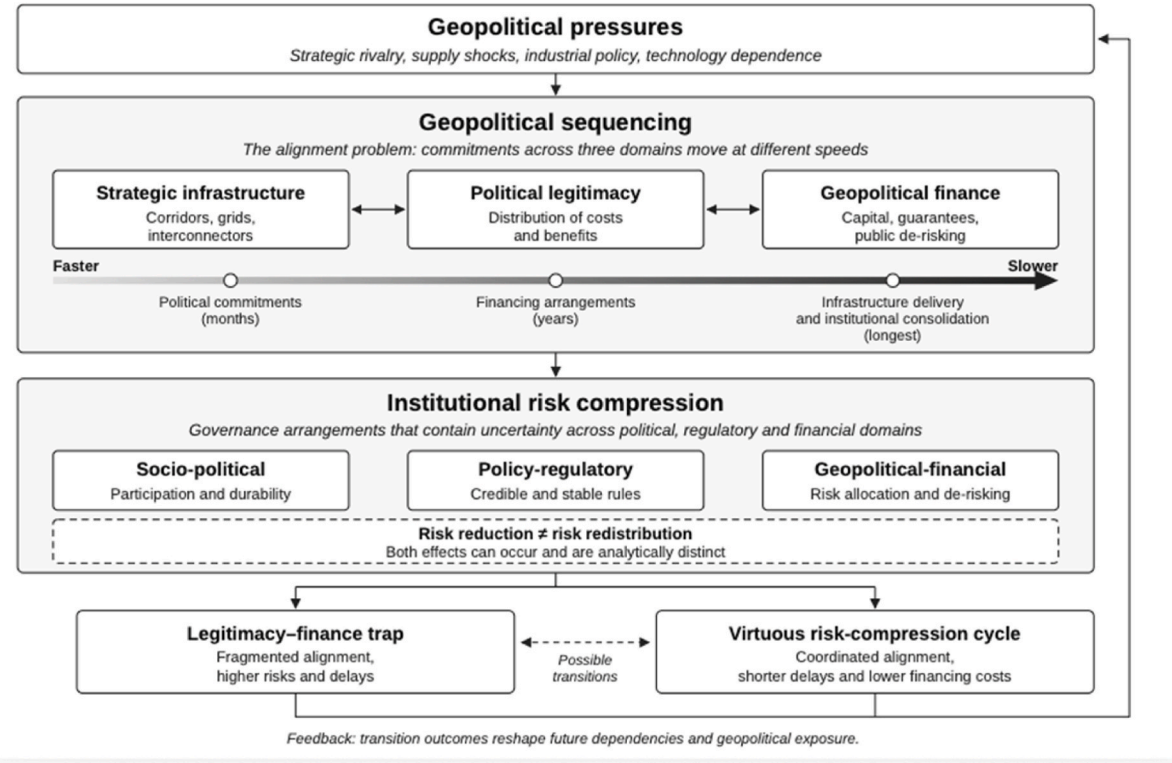


Fig. 1. Geopolitical sequencing and institutional risk compression: conceptual framework.
Source: Authors' elaboration.

depends on more than resource availability: permits, grid connections, network upgrades and viable revenue arrangements must advance together. A growing queue of generation proposals can therefore signal investment interest while also exposing a mismatch between planned capacity and the institutions needed to deliver it.

Terna's transmission programme highlights this interdependence. The Tyrrhenian Link and related upgrades are designed to strengthen connections among Sicily, Sardinia and mainland Italy and facilitate the integration of renewable electricity (Terna, 2023a). The EU Grid Action Plan (European Commission, 2023b) and European Grids Package (European Commission, 2025b) address comparable bottlenecks; the Commission reports average permitting periods of about five years for transmission grids and up to nine years for renewable projects. New connections may improve system flexibility, but their delivery also depends on siting decisions and the distribution of local costs and wider benefits.

The Tyrrhenian Link provides an infrastructure example of how nationally distributed benefits coexist with locally concentrated siting burdens. It is regulated, system-wide infrastructure: its benefits—greater transfer capacity and the integration of southern renewables—accrue to the national system, while siting and construction costs are concentrated around the landing and converter sites. Its investment cost is about €3.7 billion, around half of it financed by the European Investment Bank, and the eastern branch received a further €500 million under REPowerEU (European Investment Bank [EIB], 2022; Terna, 2025a). Its schedule is itself an indicator of execution risk: in 2022 the first cable of the eastern branch was expected to operate by the end of 2025, whereas by 2025 its first pole was expected in 2026, with the whole link in 2028 (EIB, 2022; Terna, 2025a). Siting experience diverged between the two branches. The eastern branch was authorized in eleven months, which Terna attributes to participatory design with local authorities and residents before the formal procedure (Terna, 2022). The converter station of the western branch at Selargius, in Sardinia, instead met organized opposition to land expropriation, and a protest camp on the site was cleared by police in November 2024 (Lucisano, 2024). The contrast is consistent with Proposition 2, although the two branches also differ in landing context and route. Because the investment is recovered through regulated network tariffs, its financial risk is largely redistributed to electricity consumers rather than borne by investors. Regulated cost recovery can support financing while leaving siting-related

socio-political risks to be addressed through local arrangements.

Sicily is also positioned within plans to expand Mediterranean clean-energy trade. Italian and EU initiatives envisage closer electricity and hydrogen links with North Africa, building partly on the relationships and corridors established by the gas system. The Mattei Plan frames these ambitions as a broader partnership, against a longer history of Euro-Mediterranean cooperation (Bosse, 2011; Kavalski and Fisher-Onar, 2026). The strategic question is whether such links diversify Europe's energy relationships or reproduce older dependencies in new technological forms.

That question also concerns legitimacy beyond EU borders. Research on North Africa–Europe energy relations cautions that export-oriented renewable and hydrogen projects may generate unequal value capture where local benefits, technology transfer and environmental safeguards are limited (Bringel and Svampa, 2024; Cardinale, 2023). The durability of new corridors therefore depends not only on engineering and finance but also on whether partner-country interests are credibly accommodated.

4.2. Political legitimacy: distribution, participation and policy durability

The distribution of transition costs and benefits is particularly consequential in Sicily, where persistent socio-economic vulnerabilities heighten sensitivity to energy prices, land use and employment opportunities (Banca d'Italia, 2023; International Labour Office [ILO], 2018). Infrastructure can generate benefits well beyond the region while imposing immediate costs on particular communities. This disparity makes political legitimacy part of the practical conditions for project delivery.

The underlying tension is both spatial and temporal. Renewable projects and transmission infrastructure promise wider decarbonization and security benefits, whereas construction impacts and land-use changes are experienced locally and immediately. Where participation, compensation or visible local gains are limited, this imbalance may contribute to contestation and delay. The framework interprets such tensions as potential sources of execution and regulatory risk, rather than as obstacles external to energy policy.

Accelerating administrative procedures does not, by itself, resolve these tensions. Disputes may instead shift to project siting, land rents, landscape protection and procedural fairness. Sicilian stakeholder evidence from related Green Deal policy areas suggests that acceptance is heterogeneous. The relevant governance challenge is therefore to combine timely authorization with arrangements that affected constituencies regard as credible.

Renewable permitting and grid connection reveal the institutional dimension of territorial legitimacy, but delays alone cannot establish that opposition caused financing risk. The gap between connection requests for Sicily on Terna's Econnextion platform (about 81 GW of high-voltage requests for renewable plants at 30 June 2025, plus about 53 GW for storage; Terna, 2025b) and installed renewable capacity (6.4 GW at the end of 2025 in Terna's official statistics, of which 3.7 GW solar and 2.5 GW wind; an increase of about 10.5 GW over 2021 levels is required by 2030; Terna, 2025b, 2026) indicates the size of the connection queue: more than 12 GW requested for every gigawatt installed.

Sicily-specific authorization times can be reconstructed from the national environmental-assessment registry (Ministero dell'Ambiente e della Sicurezza Energetica [MASE], 2026). We extracted from the registry all solar, agrivoltaic and wind projects whose territory includes Sicily and whose environmental impact assessment (VIA) or single environmental measure (PUA) was filed between January 2021 and the extraction date (28 October 2026), and coded each project's filing date, current status and, where issued, the date and outcome of the environmental decree. Where the registry's status label conflicts with a recorded decree, the decree date is used; procedures archived without a decree are reported separately, because the registry does not record when they were archived. Of the 430 projects included, 166 had received an environmental decree by 28 October 2026 (149 positive, 12 negative and 5 whose outcome the registry does not record), 28 had been archived and 236 were still pending (Table 3). Decided projects took a median of 35 months from filing to decree. Of the pending projects, 210 had been waiting more than two years and 113 more than three. Because decided projects are a selected and faster subset, we also estimate time to decree with the Kaplan–Meier estimator, treating pending procedures as right-censored at the extraction date, so that their waiting time to date enters the estimate without assuming when, or whether, they will be decided. The estimated median is 44 months (95% confidence interval 42–47), and about two in five projects remain undecided after four years. Appendix A (supplementary material) reports the inclusion rules, codebook, data-cleaning decisions and sensitivity analyses, which give medians between 43 and 46 months; the extraction script, coded dataset and analysis code are provided for replication. These figures cover environmental assessment only; regional authorization and grid connection follow.

Onshore wind, whose landscape impacts are the most visible, has an estimated median of 50 months to decree against 42 for solar and agrivoltaic projects (a log-rank test rejects equality of the two time-to-decree curves: $\chi^2 = 4.52$, 1 degree of freedom, $p = 0.034$); 60% of wind projects remain undecided after four years against 38%, and 5 of the 22 wind decrees with a recorded outcome were negative against 7 of 138. A further 19 projects are held up at the stage of the cultural-heritage authority's concurring opinion, which in Sicily is exercised by the Region under its special statute, or of recourse to the substitute powers of the Council of Ministers. The contrast is consistent with Proposition 2, but it is descriptive. The log-rank result provides evidence against identical unadjusted time-to-decree distributions; it does not identify the causes of delay. Wind and solar projects also differ in size, siting and the scope of technical review, and the registry data do not allow us to separate landscape contestation from these factors.

At the national level, 69.3% of the 1781 renewable projects under assessment in January 2026 remained in technical review (Legambiente, 2026). This descriptive measure is not directly comparable with the permitting-duration benchmarks cited in Section 4.1. The contested definition of suitable areas (aree idonee), split between national and regional rules (the national suitable-areas decree of 21 June 2024, partly annulled by Tribunale Amministrativo Regionale (TAR) Lazio judgment no. 9155/2025 and revised by Decree-Law no. 175/2025, and a 2026 Sicilian regional bill that caps eligible agricultural land at 0.8%; MASE, 2024; Tribunale Amministrativo Regionale per il Lazio, 2025; Assemblea Regionale Siciliana, 2026), adds siting uncertainty to permitting delay. A large queue, which may include speculative or stalled requests, can complicate grid planning and project scheduling; connection requests alone do not establish the number of viable projects. Affordability adds a further layer. The Action Plan for Affordable Energy (European Commission, 2025a) ties support for the transition to lower energy bills, a link that is weak where generation is exported to the mainland and local bills do not fall.

These pressures are reinforced by competing narratives about the transition. Gas infrastructure is commonly defended in terms of security and affordability, renewable investment in terms of decarbonization and economic opportunity and transmission expansion in terms of system integration. Where the future roles of these assets remain unclear, uncertainty over policy priorities may spill into expectations about regulation and investment.

Coordination across levels of government is therefore consequential. Regional authorization interacts with national support schemes and grid rules, as well as EU market and investment frameworks. Alignment among these processes can make project development more predictable; divergence can leave investors and communities facing uncertainty even after a project has cleared an individual administrative stage.

Table 3
Environmental assessment of solar, agrivoltaic and wind projects in Sicily, 2021–2026.

Technology	Projects filed	Decided	Archived	Pending	Median months to decree (decided only)	KM median months (95% CI)	Undecided after 48 months (95% CI)
Solar and agrivoltaic	313	140	19	154	35.6	42.3 (40.3–44.6)	38% (31–45%)
Onshore wind	105	25	9	71	30.7	49.8 (43.0–57.8)	60% (41–75%)
Offshore wind	12	1	0	11	26.0	n.e.	n.e.
All	430	166	28	236	35.3	43.7 (41.8–47.4)	42% (35–49%)

Source: Authors' elaboration from the national environmental-assessment registry (MASE, 2026), extracted on 28 October 2026. Decided projects include five with outcomes not recorded (149 positive and 12 negative decrees); archived cases are reported separately. Kaplan–Meier estimates treat pending procedures as right-censored at the extraction date and exclude archived cases; 95% confidence intervals in parentheses; n.e. = not estimated (one decision). See Appendix A for inclusion rules, coding and sensitivity analyses.

4.3. Geopolitical finance: from strategic potential to bankable investment

The infrastructure and legitimacy pressures described above converge in financing decisions. Sicily has considerable renewable and interconnection potential, but a promising project pipeline does not necessarily translate into bankable investment. Investors must assess the timing of permits and grid access, the credibility of revenues, the likelihood of local conflict and, for Mediterranean corridors, the risks of operating across jurisdictions.

Public instruments can address parts of this uncertainty through grants, guarantees, concessional loans and regulated network financing. They cannot, however, ensure that politically contested or grid-constrained projects proceed on schedule. This distinction matters for Proposition 3: lower financial exposure does not necessarily mean that the underlying regulatory or socio-political risks have been reduced.

Cross-border initiatives make the problem more pronounced because financing depends on decisions by several governments, utilities, lenders and potential buyers. EU cohesion resources, EIB lending, the Innovation Fund and external-investment instruments can support these ventures, but contractual, sovereign, offtake and regulatory uncertainties may remain. The relevant issue is therefore how financial commitments are coordinated with infrastructure readiness and durable cross-border arrangements.

Cross-border financial arrangements reveal distinct configurations of public risk allocation and commitment timing. ELMED, a 600 MW, roughly 200 km HVDC interconnector between Partanna, in western Sicily, and Tunisia, is developed by Terna and the Tunisian utility STEG. In 2023 it received a €307 million grant from the Connecting Europe Facility, the first CEF allocation to a project involving an EU Member State and a third country (Terna & STEG, 2023). The Tunisian side is financed by the World Bank, the European Investment Bank, the European Bank for Reconstruction and Development (EBRD) and KfW Development Bank (EBRD, 2024). Its estimated total cost has risen from €920 million in 2024 (EBRD, 2024) to about €1.42 billion in June 2026, when the €770 million contract for the converter stations was awarded (Terna et al., 2026), an increase of about 54%. The participation of EU and multilateral lenders indicates substantial public involvement in financing and risk allocation, although the available information does not establish how sovereign and counterparty risks are ultimately distributed.

The Mattei Plan, within which Italy has placed ELMED and other African energy projects, shows the gap between political commitment and financial delivery. Its initial endowment of about €5.5 billion in credits, grants and guarantees was drawn from the Italian Climate Fund (about €3 billion) and development cooperation resources (about €2.5 billion), that is, from two existing funds rather than from new appropriations (Presidenza del Consiglio dei Ministri, 2024). The Plan's third annual report to Parliament lists 76 main projects in 18 partner countries and reports Climate Fund deliberations of €1–1.2 billion (the report gives both figures) and more than €4 billion mobilized through SACE guarantees (Presidenza del Consiglio dei Ministri, 2026). In the terms of the framework, guarantees and other public instruments can redistribute financial exposure to public balance sheets. The information reported does not establish whether, or to what extent, these arrangements also reduce underlying project risks. The Plan's external legitimacy has also been questioned, including over the limited consultation that preceded the Plan, a point raised by the Chairperson of the African Union Commission at the Plan's launch summit (Simonelli et al., 2024). Research on hydrogen export strategies also warns that weak local value capture can reproduce asymmetric dependence (Cardinale, 2023; Bringel and Svampa, 2024).

The SoutH2 Corridor shows the same gap in the hydrogen domain. The roughly 3300 km corridor would link North Africa to Italy, Austria and Germany, largely through repurposed gas pipelines, with a potential import capacity of about 4 million tonnes of hydrogen per year (Snam, 2024). Political commitments have accumulated: Italy, Germany and Austria expressed support in May 2023 (Snam, 2023); Algeria, Austria, Germany, Italy and Tunisia signed a joint declaration of intent in Rome on 21 January 2025 (Italian Ministry of Foreign Affairs and International Cooperation, 2025); and a further joint declaration was adopted in Algiers on 1 October 2026 at the corridor's second ministerial meeting, which reinforced cooperation through a UNIDO-hosted technical secretariat (United Nations Industrial Development Organization [UNIDO], 2026). Feasibility studies, partly supported by EU funding, are still under way. Yet the Tunisian route, the investment estimate, the financing arrangements and hydrogen production capacity in supplier countries remain undefined, even though its Italian, Austrian and German sections have held Project of Common Interest status since the first Union list under the revised TEN-E Regulation (Commission Delegated Regulation (EU) 2024/1041) and were confirmed in the second list of December 2025, which added the Tunisia–Italy offshore section as a Project of Mutual Interest (European Commission, 2025e). The corridor therefore remains at a pre-investment stage. Political alignment has advanced faster than the financial and physical alignment on which bankability depends, which is the cross-border misalignment that Proposition 1 anticipates.

Financing conditions would provide the most direct evidence of the transmission from legitimacy and regulation to finance. Project-level spreads and times to financial close for renewable projects in Southern Italy are not publicly available, but national benchmarks show the starting point. In the International Renewable Energy Agency's (IRENA) expert survey for 2019–2021, the nominal weighted average cost of capital for utility-scale solar PV was 4.3% in Italy against 2.2% in Germany and the Netherlands; IRENA's real after-tax assumptions for 2021 are 3.1% for Italian solar PV and 3.3% for onshore wind, against 1.3% for both technologies in Germany (International Renewable Energy Agency, 2023). Estimates for Italian solar PV ranged from 43% below to 44% above the national average, depending on the developer, the offtake arrangement and other project-specific factors. These figures predate the 2022–2023 rise in interest rates and are not specific to Sicily, so they cannot isolate a regional legitimacy or permitting premium. They show, however, that delay and regulatory uncertainty fall on projects whose financing costs are already about twice the German level, and they leave the regional transmission from legitimacy to finance as

the least documented link in the mechanism.

Together, these observations point to a possible legitimacy–finance trap, although the evidence does not establish the full causal sequence. Local burdens and uncertain permitting or connection schedules may contribute to delays and higher execution risk; slower delivery can then postpone the employment, community revenues or affordability gains that might strengthen support. The Sicilian evidence makes these links analytically plausible while leaving their financial magnitude unresolved.

A more favorable dynamic is also conceivable. Timely grid access, predictable rules, meaningful participation and visible local benefits may reduce implementation uncertainty while reinforcing political support. This is the reciprocal process envisaged in Proposition 4, but establishing it would require project-level evidence on benefits, delays and financing outcomes.

Sicily thus highlights a single coordination problem across several kinds of energy investment. Infrastructure decisions reshape strategic exposure; the location of their costs and benefits affects political durability; and institutional arrangements influence when capital can be committed. The case makes these intersections visible without treating each initiative as an independent confirmation of the framework.

Table 4 draws together the evidence from these interconnected dimensions. It distinguishes documented developments from the mechanisms they may illuminate and identifies what remains unknown. The table is intended as a map of evidence within one exploratory case, not as a set of independent proposition tests.

5. Discussion

The Sicilian evidence highlights a coordination problem that is difficult to capture when infrastructure, legitimacy and finance are treated separately. Strategic commitments shape which assets are pursued and on what timetable, but delivery depends on regulatory decisions, territorial acceptance and financing arrangements that evolve at different speeds. The resulting gaps matter not only for project implementation; they can also alter the dependencies and risks that transition policy was intended to manage.

5.1. Theoretical implications

The framework adds to existing approaches by treating the temporal alignment of strategic commitments as an analytical problem in its own right. Whereas policy-sequencing research primarily examines the ordering of domestic instruments (Meckling et al., 2017; Pahle et al., 2018), and energy-statecraft approaches focus on the strategic use of energy relations (Van de Graaf and Colgan, 2016), geopolitical sequencing connects external pressures to the institutional conditions governing project implementation. Its contribution is to identify how commitments made at different political and economic scales become mutually reinforcing or incompatible over time, while project outcomes reshape subsequent strategic exposure. Sicily illustrates this dynamic: the strategic rationale for interconnection and export corridors can become credible well before the regulatory, physical and commercial conditions required for delivery.

Institutional risk compression specifies the complementary governance mechanism. Predictable rules and meaningful participation may reduce the likelihood or expected cost of disruption, whereas guarantees and regulated tariffs can make investment financeable by shifting exposure to public institutions or consumers. These effects should not be conflated: lower financing costs do not by themselves establish a reduction in underlying uncertainty. In Sicily, permitting backlogs make implementation uncertainty visible, while the financing of large interconnectors illustrates the need to identify residual risk bearers. Together, the concepts explain how geopolitical priorities are translated into infrastructure commitments without implying that the exploratory evidence establishes the causal strength of these relationships.

5.2. Policy implications

For EU policymakers, the central implication is to assess strategic energy investments against the readiness of the complementary commitments required for delivery. Infrastructure schedules need to be consistent with permitting capacity, credible grid-access timelines, financing arrangements and mechanisms for addressing territorial costs. Cross-border corridors also require plausible demand, contractual durability, partner-country commitments and transparent allocation of residual risks. These checks should precede or accompany political announcements, while security-driven assets should retain options consistent with longer-term decarbonization objectives (Feindt et al., 2026). Such an approach cannot eliminate uncertainty, but it can reveal consequential mismatches before commitments become difficult to reverse.

The design of financial support should follow the same logic. Guarantees, concessional loans, Contracts for Difference and regulated

Table 4
Evidence streams, analytical implications and evidentiary limits in Sicily.

Evidence stream	Analytical link	Observable implication (from Table 2)	Evidence available	Evidence missing
Grid reinforcement and siting (Tyrrhenian Link)	Territorial distribution and execution risk	Longer timelines and siting conflict where local costs are concentrated; financial risk shifted to consumers through tariffs	Terna development plans; regulated tariff recovery; cost (€3.7 billion) and EIB financing; schedule revisions (first cable 2025, then 2026; full link 2028); eleven-month authorization of the eastern branch; Selargius dispute	Latest commissioning guidance; local benefit agreements
Renewable authorization and grid access	Regulatory timing and investment uncertainty	Long authorization times; connection queue large relative to installed capacity; higher hurdle rates or delayed investment decisions	EU permitting benchmarks (European Grids Package); national and regional siting rules; Sicilian connection requests (81 GW) against installed capacity (6.4 GW at the end of 2025); time to environmental decree for 430 Sicilian projects (Table 3); national cost-of-capital benchmarks (International Renewable Energy Agency, 2023)	Sicily-specific project-finance spreads and time to financial close; project-level benefit-sharing arrangements
Cross-border public finance and commitments	Sovereign risk allocation and temporal alignment	Greater reliance on guarantees, multilateral lending and public co-financing where partner-country risk is high; gap between political commitment and financial delivery	ELMED financing structure; ELMED cost increase (€0.92 billion to €1.42 billion); Mattei Plan resource composition; SoutH2 political declarations	SoutH2 investment estimate and financing; partner-country views on value capture
Legacy gas corridors and diversification	Security priorities and long-lived assets	Security framing supports investment; long asset lives create lock-in and repurposing risk	Regulation (EU) 2026/261; corridor roles in post-2022 diversification	Utilization and contract data; repurposing provisions for new gas assets

Source: Authors' elaboration.

network investment address different risks, but none can substitute for stable rules or an implementable project. Appraisal should distinguish whether an instrument lowers underlying uncertainty or transfers it, and disclose the residual exposure of investors, taxpayers, consumers and host communities.

For Mediterranean partnerships, credibility also depends on conditions outside the EU. Electricity and hydrogen corridors are more likely to remain politically durable when partner-country priorities, local value creation and environmental burdens are negotiated alongside infrastructure and financing. Such reciprocal governance is part of resilient interdependence, not an additional consideration once investment has been arranged (Bringel and Svampa, 2024; Schuetze and Woertz, 2026).

Sicily points to practical priorities within this broader approach: coordinate renewable permitting with grid expansion; establish participation and benefit-sharing arrangements early enough to shape siting decisions; make public risk-sharing in cross-border projects transparent and attentive to partner-country interests; and assess repurposing or exit options for new gas commitments. The European Grids Package's proposed community benefit-sharing measures are relevant to this agenda (European Commission, 2025b).

The broader relevance of Sicily lies less in the island's particular projects than in the tensions they reveal when strategic ambition meets territorial and institutional delivery. The Tyrrhenian Link and the renewable pipeline show how infrastructure with wider system benefits can encounter locally concentrated costs and authorization constraints. ELMED illustrates the role of public and multilateral finance in sustaining a cross-border commitment, while the Mattei Plan and SoutH2 expose the distance that may separate political declarations from fully specified investment arrangements. Read together, these developments suggest that transition governance needs to address not only what is built, but also the pace of commitments, the distribution of benefits and the location of residual risk.

These relationships could be relevant to other regions hosting cross-border corridors, large grid investments or renewable expansion, including parts of the Iberian Peninsula, the Baltic region and South-Eastern Europe. Their expression, however, will depend on institutional powers, infrastructure legacies and the capacity of affected actors to influence decisions. Sicily's special-statute permitting arrangements, established links with North Africa and exceptionally large connection queue shape the intensity of the pressures observed here. The transferable insight is therefore an analytical one: the alignment of infrastructure, legitimacy and finance should be examined jointly, rather than assuming that Sicilian outcomes will recur elsewhere.

5.3. Limitations and research agenda

The analysis has clear limits. Sicily was selected as an exploratory case study where the framework's proposed relationships are salient, not as a critical-case test. The evidence is drawn from secondary sources: environmental-assessment records document delays but not their causes or the presence of benefit-sharing arrangements (Table 3), while project-specific financing terms and stakeholder perspectives remain incomplete (Table 4). Alternative explanations—including technical complexity, market conditions and project design—cannot be ruled out. Comparative research could examine technically similar projects with different geopolitical exposures, regulatory settings and participation arrangements, combining administrative records, financing terms and interviews to assess when the proposed mechanisms hold and when they do not.

6. Conclusions

Europe's energy transition is reshaping strategic dependence as well as energy systems. This paper has developed geopolitical sequencing to explain how external pressures interact with strategic infrastructure, political legitimacy and geopolitical finance. Its central argument is that commitments across these domains evolve at different speeds, creating potential misalignment between geopolitical ambition and implementation capacity. Institutional risk compression identifies the complementary governance conditions through which uncertainty may be contained, while distinguishing genuine risk reduction from the redistribution of exposure among actors.

The exploratory analysis of Sicily illustrates the relevance of these relationships at a strategic Mediterranean energy node. The coexistence of gas corridors, renewable expansion, grid interconnections and prospective cross-border partnerships reveals difficulties in aligning infrastructure development with authorization processes, territorial interests and financial commitments. The evidence documents substantial permitting delays and public-financing arrangements but does not establish the causal relationships proposed by the framework.

The policy implication is that strategic resilience cannot be secured through infrastructure investment or financial de-risking alone. It also depends on the compatibility of long-lived assets with decarbonization objectives, the political durability of their territorial consequences and governance arrangements capable of reducing underlying uncertainty. Future comparative research can examine when these conditions reinforce one another and when their misalignment undermines transition implementation.

CRediT authorship contribution statement

Nicola Lattanzi: Writing – original draft, Validation, Resources, Project administration, Investigation, Conceptualization. **Daniela Baglieri:** Writing – original draft, Validation, Conceptualization, Data curation, Investigation, Methodology.

Declaration of generative AI and AI-assisted technologies in the manuscript preparation process

During the preparation of this work, the authors used Claude to check the grammar and improve the manuscript's readability. After using this tool, the authors reviewed and edited the content as needed and take full responsibility for the publication's content.

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The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper. Daniela Baglieri previously served as Regional Minister (Assessore) for Energy of the Sicilian Region (2021–2022); see footnote 1.

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Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.enpol.2026.115723.

Data availability

The registry extract used in Table 3, its codebook, the extraction script and the analysis code are provided as supplementary material (Appendix A). The registry itself is public. All other data are taken from the published sources cited in the text.

References

Assemblea Regionale Siciliana, 2026. Disegno di legge n. 1030/A Stralcio IV/A bis: disposizioni in materia di transizione energetica; di sistemi di accumulo; di governo del territorio; di tutela ambientale e di interpretazione autentica. Modifiche a leggi regionali varie [Regional bill and committee. report]. https://www.qualenergia.it/wp-content/uploads/2026/07/ddl-aree-idonee-sicilia-luglio-2026.pdf.

Baglieri, D., 2024. Turning green hydrogen into firms' decarbonization strategies: opportunities, challenges, and implications for China. Asian Bus. Manag. 23 (5), 660–682. https://doi.org/10.1057/s41291-024-00285-2.

Banca d'Italia, 2023. L'Economia Della Sicilia. Economie regionali, n. 19, giugno. https://www.bancaditalia.it/pubblicazioni/economie-regionali/2023/2023-0019/index.html.

Bosse, G., 2011. The EU's geopolitical vision of a European energy space: when 'Gulliver' meets 'White Elephants' and Verdi's Babylonian King. Geopolitics 16 (3), 512–535. https://doi.org/10.1080/14650045.2011.520859.

Bouzarovski, S., Simcock, N., 2017. Spatializing energy justice. Energy Policy 107, 640–648. https://doi.org/10.1016/j.enpol.2017.03.064.

Bringel, B., Svampa, M., 2024. Energy transition and the new shape of green colonialism: the emergence of the decarbonisation consensus. In: Magnelli, A., Maia, F., Martins, P.H. (Eds.), Dependency Theories in Latin America: an Intellectual Reconstruction. Routledge, pp. 242–258. https://doi.org/10.4324/9781003424291-14.

Cardinale, R., 2023. From natural gas to green hydrogen: developing and repurposing transnational energy infrastructure connecting North Africa to Europe. Energy Policy 181, 113623. https://doi.org/10.1016/j.enpol.2023.113623.

Colgan, J.D., Green, J.F., Hale, T.N., 2021. Asset revaluation and the existential politics of climate change. Int. Organ. 75 (2), 586–610. https://doi.org/10.1017/S0020818320000296.

Commission Delegated Regulation (EU), 2024. 2024/1041 of 28 November 2023 amending Regulation (EU) 2022/869 of the European Parliament and of the Council as regards the Union list of projects of common interest and projects of mutual interest. Off. J. Eur. Union L 1. https://eur-lex.europa.eu/eli/reg_del/2024/1041/oj.

Demertzis, M., Pinkus, D., Ruer, N., 2024. *Accelerating Strategic Investment in the European Union Beyond 2026* (Report 01/2024). Bruegel. https://www.bruegel.org/report/accelerating-strategic-investment-european-union-beyond-2026.

Escribano, G., 2021. Beyond energy independence: the geopolitical externalities of renewables. In: Rubino, A., Sapio, A., La Scala, M. (Eds.), Handbook of Energy Economics and Policy: Fundamentals and Applications for Engineers and Energy Planners. Elsevier, pp. 549–576. https://www.sciencedirect.com/science/chapter/edited-volume/pii/B9780128147122000130.

European Bank for Reconstruction and Development, 2024. EBRD finances Tunisia–Italy 600 MW ELMED electricity interconnector [Press release]. https://www.ebrd.com/home/news-and-events/news/2024/ebrd-finances-tunisiaitaly-600-mw-elmed-electricity-interconnector.html.

European Commission, 2023a. Proposal for a regulation of the European Parliament and of the Council establishing a framework for ensuring a secure and sustainable supply of critical raw materials and amending Regulations (EU) 168/2013, (EU) 2018/858, (EU) 2018/1724 and (EU) 2019/1020 *(COM(2023) 160 final, 16 March*). https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52023PC0160.

European Commission, 2023b. *Grids, the missing link – an EU action plan for grids* (COM (2023) 757 final, 28 November). https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52023DC0757.

European Commission, 2025a. *Action plan for affordable energy: unlocking the true value of our Energy Union to secure affordable, efficient and clean energy for all Europeans* (COM (2025) 79 final, 26 February). https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52025DC0079.

European Commission, 2025b. *European grids package* (COM(2025) 1005 final, 10 December). https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52025DC1005.

European Commission, 2025c. Commission selects 47 Strategic Projects to secure and diversify access to raw materials in the EU [Press release IP/25/864]. https://ec.europa.eu/commission/presscorner/detail/en/ip_25_864.

European Commission, 2025d. Commission selects 13 Strategic Projects in third countries to secure access to raw materials and to support local value creation [Press release IP/25/1419]. https://ec.europa.eu/commission/presscorner/detail/en/ip_25_1419.

European Commission, 2025e. *Commission delegated regulation amending Regulation (EU) 2022/869 of the European Parliament and of the Council as regards the Union list of projects of common interest and projects of mutual interest* (C(2025) 8144 final, 1 December). https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=PI_COM:C(2025)8144.

European Commission, 2026. *Commission decision recognising certain critical raw material projects as Strategic Projects under Regulation (EU) 2024/1252 of the European Parliament and of the Council* (C(2026) 8051 final). https://single-market-economy.ec.europa.eu/document/download/56f5457c-2ed0-4c10-8c76-d66a79cb00b6_en?filename=C_2026_8051_F1_COMMISSION_DECISION_EN_V2_P1_5091203.PDF.

European Investment Bank, 2022. Italy: terna – EIB provides €1.9 billion in financing for Tyrrhenian link [Press release]. https://www.eib.org/en/press/all/2022-469-terna-eib-provides-eur1-9-billion-in-financing-for-tyrrhenian-link.

Executive Order 14257, 2025. *Regulating imports with a reciprocal tariff to rectify trade practices that contribute to large and persistent annual United States goods trade deficits* (2 April 2025). Fed. Regist. 90 (65), 15041–15109, 7 April 2025. https://www.govinfo.gov/app/details/FR-2025-04-07/2025-06063.

Farrell, H., Newman, A.L., 2019. Weaponized interdependence: how global economic networks shape state coercion. Int. Secur. 44 (1), 42–79. https://doi.org/10.1162/isec_a_00351.

Feindt, S., Duwe, M., Messerschmidt, N., Pahle, M., Sultani, D., Ehrmann, M., Osorio, S., Brehm, J., Busch, R., Gillich, A., Gruhl, H., Nysten, J., Plate, C., Schlacke, S., Thierjung, E.-M., Best, F., Blesl, M., Bruch, N., Dicke, F., Zhang, P., 2026. *Advancing EU Competitiveness Through a More Effective Climate Transition* (Ariadne-Background). Potsdam Institute for Climate Impact Research. https://doi.org/10.48485/pik.2026.22.

Flyvbjerg, B., 2006. Five misunderstandings about case-study research. Qual. Inq. 12 (2), 219–245. https://doi.org/10.1177/1077800405284363.

Gabor, D., 2021. The Wall Street consensus. Dev. Change 52 (3), 429–459. https://doi.org/10.1111/dech.12645.

Geels, F.W., 2002. Technological transitions as evolutionary reconfiguration processes: a multi-level perspective and a case-study. Res. Pol. 31 (8–9), 1257–1274. https://doi.org/10.1016/S0048-7333(02)00062-8.

Geels, F.W., 2011. The multi-level perspective on sustainability transitions: responses to seven criticisms. Environ. Innov. Soc. Transit. 1 (1), 24–40. https://doi.org/10.1016/j.eist.2011.02.002.

Geels, F.W., Schot, J., 2007. Typology of sociotechnical transition pathways. Res. Pol. 36 (3), 399–417. https://doi.org/10.1016/j.respol.2007.01.003.

George, A.L., Bennett, A., 2005. Case Studies and Theory Development in the Social Sciences. MIT Press.

Goldthau, A., Sovacool, B.K., 2012. The uniqueness of the energy security, justice, and governance problem. Energy Policy 41, 232–240. https://doi.org/10.1016/j.enpol.2011.10.042.

Goldthau, A., Westphal, K., Bazilian, M., Bradshaw, M., 2019. How the energy transition will reshape geopolitics. Nature 569, 29–31. https://doi.org/10.1038/d41586-019-01312-5.

International Energy Agency, 2023. World energy outlook 2023. https://www.iea.org/reports/world-energy-outlook-2023.

International Labour Office, 2018. World employment and social outlook 2018: greening with jobs. https://www.ilo.org/sites/default/files/wcmsp5/groups/public/@dgreports/@dcomm/@publ/documents/publication/wcms_628654.pdf.

International Renewable Energy Agency, 2023. The cost of financing for renewable power. https://www.irena.org/Publications/2023/May/The-cost-of-financing-for-renewable-power.

Italian Ministry of Foreign Affairs and International Cooperation, 2025. Hydrogen: Five states signed a declaration to continue work on the Southern Hydrogen Corridor [Press release]. https://www.esteri.it/en/sala_stampa/archivionotizie/comunicati/2025/01/idrogeno-cinque-stati-firmano-dichiarazione-per-proseguire-lavori-corridoio-meridionale/.

Kavalski, E., Fisher-Onar, N., 2026. Flat Maps, Fluid Worlds: the Eu's Geopolitical Connectivity and the Interlocking Worlds of afro-eur-asia. European Politics and Society. https://www.tandfonline.com/doi/abs/10.1080/23745118.2026.2706763.

Keohane, R.O., Nye, J.S., 1977. Power and Interdependence: World Politics in Transition. Little, Brown.

Lattanzi, N., 2021. Lo stato strategico richiede capacità dinamiche. Nuova Antol. 626 (2298), 61–71.

Legambiente, 2026. Scacco matto alle rinnovabili 2026. Rinnovabili, Territori E Comunità: Dalle Opposizioni Alle Opportunità. Legambiente, Rome. https://www.legambiente.it/wp-content/uploads/2026/03/ScaccoMatto-alle-Rinnovabili-2026.pdf.

Loorbach, D., 2010. Transition management for sustainable development: a prescriptive, complexity-based governance framework. Governance 23 (1), 161–183. https://doi.org/10.1111/j.1468-0491.2009.01471.x.

Lucisano, D., 2024. Selargius: Sotto Sgombero Il Presidio "Rivolta Degli Ulivi" Contro La Speculazione Energetica. L'Indipendente. https://www.lindipendente.online/2024/11/20/selargius-sotto-sgombero-il-presidio-rivolta-degli-ulivi-contro-la-speculazione-energetica/.

Markard, J., Raven, R., Truffer, B., 2012. Sustainability transitions: an emerging field of research and its prospects. Res. Pol. 41 (6), 955–967. https://doi.org/10.1016/j.respol.2012.02.013.

Meadowcroft, J., 2009. What about the politics? Sustainable development, transition management, and long term energy transitions. Policy Sci. 42 (4), 323–340. https://doi.org/10.1007/s11077-009-9097-z.

Meckling, J., Sterner, T., Wagner, G., 2017. Policy sequencing toward decarbonization. Nat. Energy 2 (12), 918–922. https://doi.org/10.1038/s41560-017-0025-8.

Ministero dell'Ambiente e della Sicurezza Energetica, 2024. Decreto 21 giugno 2024: disciplina per l'individuazione di superfici e aree idonee per l'installazione di impianti a fonti rinnovabili. Gazzetta Ufficiale della Repubblica Italiana, Serie generale 153, 2 luglio 2024.

Ministero dell'Ambiente e della Sicurezza Energetica, 2026. *Valutazioni E Autorizzazioni Ambientali: Progetti – VIA: Ricerca* [Database] from. https://va.mite.gov.it/it-IT/Ricerca/Via. (Accessed 28 October 2026).

North, D.C., 1990. Institutions, Institutional Change and Economic Performance. Cambridge University Press. https://doi.org/10.1017/CBO9780511808678.

Nuta, A.C., Huseynova, R., Tanasa, F.E., Nuta, F.M., 2025. The role of economic and public finance tools in achieving energy transition in Europe. Economies 13 (11), 329. https://doi.org/10.3390/economies13110329.

Pahle, M., Burtraw, D., Flachsland, C., Kelsey, N., Biber, E., Meckling, J., Edenhofer, O., Zysman, J., 2018. Sequencing to ratchet up climate policy stringency. Nat. Clim. Change 8, 861–867. https://doi.org/10.1038/s41558-018-0287-6.

Paleari, S., 2024. The role of strategic autonomy in the EU green transition. Sustainability 16 (6), 2597. https://doi.org/10.3390/su16062597.

Polzin, F., Egli, F., Steffen, B., Schmidt, T.S., 2019. How do policies mobilize private finance for renewable energy? A systematic review with an investor perspective. Energy Res. Social Sci. 50, 218–228. https://doi.org/10.1016/j.erss.2018.12.010.

Presidenza del Consiglio dei Ministri, 2024. Vertice Italia-Africa, L'Intervento Di Apertura Del Presidente Meloni. https://www.governo.it/it/articolo/vertice-italia-africa-linterventi-di-apertura-del-presidente-meloni/24857.

Presidenza del Consiglio dei Ministri, 2026. Relazione Sullo Stato Di Attuazione Del Piano Mattei, Aggiornata Al 30 Giugno 2026 (Doc. CCXXXIII, N. 3, XIX Legislatura; Transmitted to Parliament on 2 July 2026). Camera dei deputati, Rome. https://documenti.camera.it/_dati/leg19/lavori/documentiparlamentari/indiceetesti/233/003_RS/INTERO_COM.pdf.

Public Law 119-21, 2025. An act to provide for reconciliation pursuant to title II of H. Con. Res. 14, 139 Stat. 72 (4 July 2025). https://www.govinfo.gov/app/details/PLAW-119publ21.

Regulation (EU), 2026. 2026/261 of the European Parliament and of the Council of 26 January 2026 on phasing out Russian natural gas imports and preparing the phase-out of Russian oil imports, improving monitoring of potential energy dependencies and amending Regulation (EU) 2017/1938. Off. J. Eur. Union L 2026/261. https://eur-lex.europa.eu/eli/reg/2026/261/oj.

Roberts, C., Geels, F.W., Lockwood, M., Newell, P., Schmitz, H., Turnheim, B., Jordan, A., 2018. The politics of accelerating low-carbon transitions: towards a new research agenda. Energy Res. Social Sci. 44, 304–311. https://doi.org/10.1016/j.erss.2018.06.001.

Rotmans, J., Kemp, R., van Asselt, M., 2001. More evolution than revolution: transition management in public policy. Foresight 3 (1), 15–31. https://doi.org/10.1108/14636680110803003.

Sattich, T., Freeman, D., Scholten, D., Yan, S., 2021. Renewable energy in EU–China relations: policy interdependence and its geopolitical implications. Energy Policy 156, 112456. https://doi.org/10.1016/j.enpol.2021.112456.

Scholten, D., Bazilian, M., Overland, I., Westphal, K., 2020. The geopolitics of renewables: new board, new game. Energy Policy 138, 111059. https://doi.org/10.1016/j.enpol.2019.111059.

Schuetze, B., Woertz, E., 2026. Unlikely companions of energy transitions? Opportunities and challenges of triangular cooperation between the EU, the GCC, and hydrocarbon-poor countries from the Middle East and North Africa (MENA). Digest of Middle East Studies 35 (2), e70019. https://doi.org/10.1111/dome.70019.

Simonelli, F., Fantappiè, M.L., Goretti, L., 2024. *The Italy–Africa Summit 2024 and the Mattei Plan: towards Cooperation Between Equals?* (IAI Commentaries No. 24|11). Istituto Affari Internazionali. https://www.iai.it/en/node/18220.

Sivonen, M.H., Kivimaa, P., 2024. Politics in the energy-security nexus: an epistemic governance approach to the zero-carbon energy transition in Finland, Estonia, and Norway. Environ. Sociol. 10 (1), 55–72. https://doi.org/10.1080/23251042.2023.2251873.

Snam, 2023. Energy ministries of Italy, Germany and Austria sign letter of support for SoutH2 Corridor [Press release]. https://www.snam.it/en/media/news-and-press-releases/news/2023/energy-ministries-of-italy-germany-and-austria-sign-letter-of-support-for-south-corridor.html.

Snam, 2024. Snam: South2 Corridor and Callisto Mediterranean CO2 Network Confirmed as Projects of Common Interest by the European Commission [Press release]. https://www.snam.it/content/dam/snam/news-assets/comunicati-stampa/en/2024/Snam%20projects%20confirmed%20PCI%20by%20EC%20(Press%20Release).pdf.

Terna, S.p.A., 2022. Tyrrhenian Link: authorisation of the eastern section [Press release]. https://www.terna.it/en/projects/tyrrhenian-link.

a Terna S.p.A. (2023a). National electricity grid development plan 2023–2032. https://www.terna.it/en/electric-system/grid-development-plan.

b Terna S.p.A. & Société Tunisienne de l'Électricité et du Gaz. (2023b, August 8). Signature of the grant agreement (€307m) signed with the European Commission for the Tunisia-Italy electric interconnection (ELMED Project) [Press release]. https://elmedproject.com/wp-content/uploads/2023/09/PR_signature_grant_agreement.pdf.

Terna, S.p.A., 2025a. Tyrrhenian Link: start of submarine cable laying for the eastern branch [Press release]. https://www.terna.it/en/projects/tyrrhenian-link.

Terna, S.p.A., 2025b. Terna E Regione Siciliana: Presentato Il Piano Di Sviluppo 2025–2034 Della Rete Elettrica Nazionale [Press release]. https://www.terna.it/it/media/comunicati-stampa/dettaglio/terna-regione-siciliana-presentazione-piano-sviluppo-2025-2034.

Terna, S.p.A., 2026. Dati Statistici Sull'Energia Elettrica in Italia 2025: Impianti Di Generazione (Table 22: Gross Efficient Capacity of Renewable Plants at 31 December 2025, by region and source). https://download.terna.it/terna/03_IMPIANTI%20DI%20GENERAZIONE_new_8def475d1d0fd18.pdf.

Terna, S.p.A., 2026. Terna, Steg and Hitachi Energy: €770 million contract for Elmed converter stations, the first direct-current interconnection between Europe and North Africa. https://download.terna.it/terna/Terna_Steg_Hitachi_contract_converter_station_Elmed_8ded1ed5af5c180.pdf.

Tribunale Amministrativo Regionale per il Lazio, 2025. Sentenza n. 9155/2025. Sezione III. https://www.ambientediritto.it/giurisprudenza/tar-lazio-roma-sez-3-13-maggio-2025-n-9155/.

Turnheim, B., Geels, F.W., 2012. Regime destabilisation as the flipside of energy transitions: lessons from the history of the British coal industry (1913–1997). Energy Policy 50, 35–49. https://doi.org/10.1016/j.enpol.2012.04.060.

United Nations Industrial Development Organization, 2026. The Launch of the UNIDO-hosted Secretariat for the Southern Hydrogen Corridor. https://hydrogen.unido.org/news/launch-unido-hosted-secretariat-southern-hydrogen-corridor.

Unruh, G.C., 2000. Understanding carbon lock-in. Energy Policy 28 (12), 817–830. https://doi.org/10.1016/S0301-4215(00)00070-7.

Van de Graaf, T., Colgan, J.D., 2016. Global energy governance: a review and research agenda. Palgrave Communications 2, 15047. https://doi.org/10.1057/palcomms.2015.47.

Van de Graaf, T., Sovacool, B.K., 2020. Global Energy Politics. Polity.

Youngs, R., 2022. Europe's coming energy dependencies. J. Eur. Publ. Pol. 29 (12), 2023–2040. https://doi.org/10.1080/13501763.2022.2115203.