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Competitiveness: EU State Aid Law as a Toolbox for the Energy
Transition

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Abstrakt

Diese Masterarbeit untersucht, ob das EU-Beihilfenrecht ein angemessenes rechtliches Instrumentarium zur Unterstützung der Energiewende und der grünen industriellen Wettbewerbsfähigkeit bietet, ohne die Integrität des Binnenmarkts zu gefährden. Grundlage ist eine rechtsdogmatische Analyse der Artikel 107 Absatz 1 und 107 Absatz 3 Buchstabe c AEUV, der einschlägigen Rechtsprechung sowie der Entwicklung von den CEEAG über den TCTF bis zum CISAF. Grüner Stahl dient dabei als sektorales Beispiel.

Die Arbeit zeigt eine Entwicklung von einer primär auf den Schutz des Binnenmarkts ausgerichteten Beihilfenkontrolle hin zu einem Rahmen, der zugleich grüne Industriepolitik ermöglicht. Diese Flexibilität bleibt jedoch an Anreizeffekt, Erforderlichkeit, Verhältnismäßigkeit, Vereinbarkeit mit dem Unionsrecht und die Abwägung negativer Wettbewerbswirkungen gebunden.

Im Ergebnis ist das EU-Beihilfenrecht ein wirkungsvolles, aber nur bedingt ausreichendes Instrumentarium. Unterschiede in der nationalen Finanzkraft und kumulative Subventionswirkungen erfordern daher mehr Transparenz, nachträgliche Evaluierung, Koordinierung auf EU-Ebene und ergänzende politische Instrumente.

Abstract

This thesis examines whether EU State aid law provides an adequate legal toolbox for supporting the energy transition and green industrial competitiveness while preserving the integrity of the Single Market. It applies a doctrinal analysis of Articles 107(1) and 107(3)(c) TFEU, relevant case law, and the development from the CEEAG through the TCTF to CISAF, using green steel as a sectoral illustration.

The thesis identifies a shift from State aid control primarily focused on market protection towards a framework that also enables green industrial policy. Nevertheless, this flexibility remains subject to incentive effect, necessity, proportionality, compliance with Union law and the balancing of negative effects on competition.

It concludes that EU State aid law is a powerful but only conditionally adequate toolbox. Although it enables essential transition investments, disparities in national fiscal capacity and the cumulative effects of national subsidies may fragment the Single Market. Stronger transparency, ex post evaluation, EU-level coordination and complementary policy instruments are therefore required.

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List of Abbreviations

Abbreviation	Meaning
CBAM	Carbon Border Adjustment Mechanism
CEEAG	Guidelines on State aid for climate, environmental protection and energy 2022
CISAF	Clean Industrial Deal State Aid Framework
EAF	Electric Arc Furnace
EESC	European Economic and Social Committee
EEA	European Economic Area
ETS	Emissions Trading System
EU	European Union
FSR	Foreign Subsidies Regulation
GBER	General Block Exemption Regulation
GHG	Greenhouse gas
IAA	Industrial Accelerator Act
IPCEI	Important Project of Common European Interest
METSAF	Middle East Crisis Temporary State Aid Framework
NZIA	Net-Zero Industry Act
PPA	Power Purchase Agreement
RAG	Regional Aid Guidelines
RDI	Research, development and innovation
REPowerEU	EU plan to reduce dependence on Russian fossil fuels and accelerate the clean transition
RRF	Recovery and Resilience Facility
TCTF	Temporary Crisis and Transition Framework
TFEU	Treaty on the Functioning of the European Union
WTO	World Trade Organization

Chapter 1 — Introduction

1.1 Background: from climate transition to green industrial competitiveness

The European Union's climate transition is no longer framed only as a project of environmental regulation. It has become a question of industrial capacity, security of supply and economic resilience. The European Green Deal initially described climate neutrality as a new growth strategy for a modern, resource-efficient and competitive economy, in which there would be no net greenhouse gas emissions by 2050 and economic growth would be decoupled from resource use.¹ That policy ambition has since been transformed into a binding legal framework. The European Climate Law requires Union-wide greenhouse gas emissions and removals regulated in Union law to be balanced by 2050, sets a binding Union target of at least 55% net domestic greenhouse gas reductions by 2030 compared with 1990 levels, and now also includes a binding 2040 target of a 90% net reduction compared with 1990 levels.²

These targets are legally clear, but their economic implementation is not straightforward. Decarbonization requires large-scale investment in electricity generation, grids, hydrogen, energy efficiency, industrial process transformation, clean technology manufacturing and new demand-side markets for low-carbon products. It also requires investment decisions to be taken before all market conditions are fully mature. In energy-intensive sectors, the challenge is especially acute. Steel, chemicals, cement, aluminum and other basic industries need to reduce emissions while facing high energy prices, international competition, supply-chain vulnerabilities and the cost of replacing long-lived industrial assets.

The Union's policy vocabulary has changed accordingly. The European Green Deal presented the transition as a growth strategy. REPowerEU, launched in May 2022, added an energy security dimension after Russia's aggression against Ukraine by promoting energy savings, supply diversification and clean energy production to phase out Russian

¹ Commission, 'The European Green Deal' COM(2019) 640 final, 2.

² Regulation (EU) 2021/1119 of the European Parliament and of the Council of 30 June 2021 establishing the framework for achieving climate neutrality [2021] OJ L243/1, arts 1, 2 and 4, as amended by Regulation (EU) 2026/667 of the European Parliament and of the Council of 11 March 2026 amending Regulation (EU) 2021/1119 as regards the setting of a Union intermediate climate target for 2040, OJ L, 2026/667, 18.3.2026.

fossil fuel imports.³ The Green Deal Industrial Plan for the Net-Zero Age subsequently placed the EU's clean transition in a more explicit global industrial policy context. It identified the global race for clean technologies, the United States' Inflation Reduction Act, China's large-scale subsidies and the need to avoid strategic dependencies as central elements of the new policy environment.⁴ The Clean Industrial Deal then brought these strands together: decarbonization and competitiveness are now treated as mutually dependent objectives rather than separate policy tracks.⁵

This evolution matters for State aid law. Article 107(1) TFEU continues to prohibit State aid that distorts or threatens to distort competition and affects trade between Member States. At the same time, Article 107(3)(c) TFEU permits aid that facilitates the development of certain economic activities or areas, provided that such aid does not adversely affect trading conditions to an extent contrary to the common interest.⁶ The legal tension is therefore built into the Treaty itself. State aid control is a discipline designed to protect the internal market from subsidy-driven distortions, yet the Treaty also allows public support where it is necessary to facilitate development.

The energy transition has made that tension more visible. Public support may be necessary to overcome market failures, funding gaps, coordination problems and first-mover disadvantages. However, when public support is financed nationally and authorized through increasingly flexible frameworks, it may also favor undertakings located in Member States with greater fiscal capacity. The same instrument that enables the green transition may therefore also create risks for the integrity of the Single Market.

This thesis examines that tension across a sequence of increasingly interventionist State aid instruments. It argues that the CEEAG, the TCTF and CISAF do not represent a break with the internal market logic of Article 107 TFEU, but a progressive recalibration of that logic: State aid control now authorizes green industrial support on more structured and sometimes simplified terms, while its legitimacy continues to depend on proportionality, transparency, Union-law compliance and control of cumulative distortions.

³ Commission, 'REPowerEU Plan' COM(2022) 230 final, 1-3; Commission, 'REPowerEU' <https://commission.europa.eu/topics/energy/repowereu_en> accessed 11 August 2026.

⁴ Commission, 'A Green Deal Industrial Plan for the Net-Zero Age' COM(2023) 62 final, 1-4.

⁵ Commission, 'The Clean Industrial Deal: A joint roadmap for competitiveness and decarbonisation' COM(2025) 85 final.

⁶ Consolidated Version of the Treaty on the Functioning of the European Union [2012] OJ C326/47, art 107(1) and 107(3)(c).

1.2 Research question and central argument

The central research question is: to what extent does EU State aid law provide an adequate legal toolbox to support the energy transition and enhance EU industrial competitiveness while preserving the integrity of the Single Market?

For the purposes of this thesis, “adequacy” is assessed against four cumulative criteria: whether the toolbox (i) can authorize transition-oriented aid at the speed and scale required; (ii) preserves the disciplines of incentive effect, necessity and proportionality; (iii) contains credible safeguards against intra-Union competition and investment-location distortions; and (iv) can identify and coordinate the aggregate effects of nationally financed support. The toolbox is treated as fully adequate only if it performs all four functions; where it enables investment but leaves systemic coordination to other instruments, its adequacy is conditional rather than complete.

The answer proposed in this thesis is deliberately balanced. EU State aid law has become indispensable for the energy transition. It enables Member States to support renewable energy, industrial decarbonization, clean technology manufacturing, electricity-cost relief for energy-intensive users and strategic investments that might otherwise be delayed, diverted outside the Union or not realized at the required pace. In this sense, State aid law is no longer merely a constraint on industrial policy. It is one of the legal forms through which EU industrial policy is now being organized.

At the same time, the adequacy of this toolbox cannot be assessed only by asking whether it enables more public support. It must also be assessed by asking whether that support remains legally disciplined. Article 107(3)(c) TFEU requires a positive contribution to the development of an economic activity, but also requires that negative effects on trading conditions do not outweigh that contribution. The second condition is not a formality. It is the legal expression of the Single Market discipline that distinguishes EU State aid control from an unconstrained subsidy policy.

The thesis therefore advances three claims.

First, EU State aid law has progressively broadened the type of public objectives that may be pursued through compatibility frameworks. Environmental protection and climate objectives were already present in earlier State aid practice, but the recent frameworks go further. They increasingly link climate policy to competitiveness, resilience, supply-chain security and industrial location.

Secondly, Article 107(3)(c) TFEU has become the central legal basis for this transformation. The Court of Justice's judgment in *Hinkley Point C* is particularly important because it confirms that the compatibility assessment under Article 107(3)(c) does not depend on a free-standing requirement that the aid pursue a separate objective of common interest, nor on the existence of a market failure as an autonomous legal condition.⁷ This gives the Commission considerable room to design compatibility criteria for transition-related and industrial policy measures. However, that room is not unlimited. The aid must still facilitate the development of an economic activity and must not affect trading conditions to an extent contrary to the common interest.

Thirdly, the shift towards green industrial State aid creates a structural Single Market problem. The more State aid law is used as an industrial competitiveness tool, the more important it becomes to address uneven national fiscal capacity, subsidy races and cumulative distortions. *Hinkley Point C* makes this problem sharper: an individual compatibility decision cannot be based on speculation about the precedent effect of the decision or the cumulative impact of future aid plans. The Foreign Subsidies Regulation addresses distortions in the internal market caused by subsidies granted by third countries. It is used here only as an external comparator; within the Union, a distinct concern arises from uneven national fiscal capacity: when Member States use national budgets to compete for strategic investments, internal market cohesion may be weakened unless the framework-level safeguards, transparency and coordination mechanisms are credible enough to address aggregate risks.⁸

Against that background, the specific contribution of this thesis is a narrower doctrinal inference from *Hinkley Point C*. Because the Court confines the individual compatibility assessment to the planned aid and rejects reliance on speculative precedent effects or the cumulative impact of future aid plans, systemic distortion cannot reliably be controlled through speculative balancing in that individual decision. The thesis therefore argues, without suggesting that the Court created a formal legal burden shift, that effective control of such risks must be located principally in framework design, transparency, ex post evaluation and EU-level coordination.

⁷ Case C-594/18 P *Republic of Austria v European Commission (Hinkley Point C)* EU:C:2020:742, paras 19-20 and 26 (objective of common interest), paras 66-68 (market failure), para 85 (precedent and future cumulative effects) and para 119 (operating aid).

⁸ *Hinkley Point C*, para 85; Regulation (EU) 2022/2560 of the European Parliament and of the Council of 14 December 2022 on foreign subsidies distorting the internal market [2022] OJ L330/1, arts 1, 3 and 4.

1.3 Scope and methodology

The thesis uses a doctrinal legal methodology combined with an analytical assessment of the State aid toolbox against the four adequacy criteria set out above. It examines Treaty provisions, Commission guidelines and frameworks, selected judgments of the Court of Justice and General Court, Commission State aid decisions, and EU policy documents relating to the energy transition and industrial competitiveness. The case-law sample is purposive rather than exhaustive: Hinkley Point C is selected for the structure and limits of Article 107(3)(c), Paks II for the relationship between compatibility review and other Union law, and Est Wind Power for incentive effect and the start-of-works requirement. The green-steel decisions are selected as a coherent group of recent, large-scale industrial decarbonization approvals applying Article 107(3)(c) and the CEEAG to comparable investment pathways. The focus is on the legal structure of the toolbox rather than on economic modelling of subsidy effects.

The analysis is centered on Article 107(3)(c) TFEU. Article 107(1) TFEU is considered because it defines the gateway question of whether a measure constitutes State aid; the principal concern, however, is compatibility once that gateway is crossed. The thesis therefore pays particular attention to the CEEAG, the TCTF and CISAF, which are Commission soft-law instruments that structure the Commission's assessment of notified aid. The GBER operates through a legally distinct mechanism: as a directly applicable Commission Regulation, it exempts qualifying categories of aid from prior notification under Article 108(3) TFEU. Both mechanisms provide predictability, but soft-law compatibility frameworks guide the Commission's exercise of discretion, whereas the GBER authorizes national implementation without prior notification when all of its conditions are satisfied.⁹

The thesis also situates State aid law within a wider regulatory landscape. The Net-Zero Industry Act, the Electricity Market Design reform, the Carbon Border Adjustment Mechanism, the Foreign Subsidies Regulation and the proposed Industrial Accelerator Act are not analyzed as State aid instruments in the strict sense. They are used to show that State aid law operates alongside other tools. This is especially important for energy-

⁹ Leigh Hancher and Phedon Nicolaides, 'Compatibility of State Aid with the Internal Market' in Philipp Werner and Vincent Verouden (eds), *EU State Aid Control: Law and Economics* (2nd edn, Kluwer Law International 2025) 269-302. See also *Commission Regulation (EU) No 651/2014 of 17 June 2014 declaring certain categories of aid compatible with the internal market in application of Articles 107 and 108 of the Treaty [2014] OJ L187/1, art 3.*

intensive industries. Public aid can help finance decarbonization investment, but it cannot alone create affordable electricity, sufficient hydrogen infrastructure, demand for low-carbon products or resilience in strategic supply chains.

Green steel is used as a sectoral illustration. It is not treated as the thesis topic as such. Rather, it provides a concrete example of the interaction between State aid, industrial decarbonization, energy costs, hydrogen deployment and demand-side policy. Commission decisions approving aid to Salzgitter, ThyssenKrupp Steel Europe and ArcelorMittal show how Article 107(3)(c) TFEU and the CEEAG have already been applied to large green steel projects.¹⁰ The proposed Industrial Accelerator Act then demonstrates why supply-side support may need to be complemented by measures creating demand for low-carbon products.

1.4 Structure of the thesis

The thesis proceeds in nine chapters.

Chapter 2 explains the traditional function of EU State aid law and the energy transition dilemma. It introduces Article 107(1) TFEU, the logic of State aid control and the reasons why the energy transition challenges the ordinary distinction between market-preserving subsidy control and market-shaping public intervention.

Chapter 3 analyses Article 107(3)(c) TFEU and the compatibility assessment. It examines the positive and negative conditions of the provision, the Commission's margin of discretion, the role of guidelines and frameworks, and the importance of *Hinkley Point C* and *Paks II* for the current legal analysis.

Chapter 4 examines the CEEAG as the controlled green transition framework. It shows how the CEEAG enable environmental and energy aid while retaining relatively classical compatibility safeguards such as necessity, appropriateness, proportionality, incentive effect and avoidance of undue distortions.

¹⁰ Commission Decision C(2022) 7166 final, State Aid SA.104276 (2022/N) - Germany - Aid to Salzgitter for project SALCOS stage I (public version), recitals 18-19, 31-42, 105, 114, 121 and 127-134; Commission Decision C(2023) 5013 final, State Aid SA.104903 (2023/N) - France - Aid to ArcelorMittal France (public version), recitals 14, 22-32, 44-49, 116, 126, 136 and 142-147; Commission Decision C(2023) 5015 final, State Aid SA.105244 (2023/N) - Germany - Aid to ThyssenKrupp for project tkH2Steel (public version), recitals 18-20, 30-43, 127, 141, 151 and 159-170; Commission Decision C(2024) 1306 final, State Aid SA.104898 (2024/N) - Germany - RRF - Aid to ArcelorMittal Bremen and ArcelorMittal Eisenhüttenstadt for project DRIBE2 (public version), recitals 19, 28-43, 120, 129, 136 and 142-149.

Chapter 5 analyses the TCTF as a crisis-driven stage in the transformation of State aid law. The TCTF is not treated as the current framework, since its transition-related provisions have been replaced by CISAF. It is instead analyzed as the moment in which EU State aid law moved more explicitly towards strategic flexibility in response to the energy crisis and global subsidy competition.

Chapter 6 examines CISAF and the Clean Industrial Deal. It treats CISAF as the current State aid framework for clean industrial competitiveness and analyses electricity price relief, industrial decarbonization, clean technology manufacturing, resilience criteria and the unresolved problem of aggregate effects inside the Single Market.

Chapter 7 turns to the proposed Industrial Accelerator Act and green steel. It argues that the proposed Act is best understood as a demand-side complement to State aid. Whereas State aid supports investment and production, the proposed Act seeks to create markets for European low-carbon products and technologies through public procurement, public support schemes, low-carbon requirements and Union-origin criteria.

Chapter 8 evaluates the Single Market implications of the current toolbox. It brings together the doctrinal and policy analysis to assess whether State aid law can remain both an enabling framework for the transition and a credible discipline against internal fragmentation.

The conclusion answers the research question by arguing that EU State aid law provides a powerful but incomplete toolbox. Its adequacy depends not simply on legal flexibility, but on the quality of the safeguards that accompany that flexibility.

Chapter 2 — The Traditional Function of EU State Aid Law and the Energy Transition Dilemma

2.1 State aid control as an internal market discipline

EU State aid control is one of the legal mechanisms through which the Union protects the internal market from distortive national intervention. The basic rule is contained in Article 107(1) TFEU. Save as otherwise provided in the Treaties, aid granted by a Member State or through State resources in any form whatsoever is incompatible with the internal market where it distorts or threatens to distort competition by favoring certain undertakings or the production of certain goods and affects trade between Member States.¹¹

The provision is drafted broadly. It does not prohibit only classical subsidies. It covers any measure that satisfies the four cumulative elements of Article 107(1): State resources and imputability to the State; an economic advantage; selectivity; and distortion or threat of distortion of competition with an effect on trade. This breadth is essential to the function of the rule. Member States can support undertakings through grants, loans, guarantees, tax measures, regulated charges, compensation mechanisms, public procurement structures or sector-specific support schemes. A narrow concept of aid would make the discipline ineffective.

Yet State aid control is not a general prohibition of economic policy. It is a structured system of control. A measure may fall within Article 107(1) and still be authorized under Article 107(2) or Article 107(3). The law therefore distinguishes between the existence of aid and its compatibility. The first question is whether the measure falls within the Treaty prohibition. The second question is whether the measure can nevertheless be justified because its positive contribution outweighs its negative effects on competition and trade.

That distinction is particularly important in the energy transition context. Renewable energy support schemes, industrial decarbonization grants, hydrogen aid, electricity price relief and clean technology manufacturing support may all confer advantages on selected undertakings or sectors. The fact that they pursue climate objectives does not automatically remove them from Article 107(1). Instead, climate and energy objectives generally become relevant at the compatibility stage.

¹¹ TFEU, art 107(1).

The traditional rationale of State aid control is therefore not hostility to public intervention as such. It is the prevention of uncoordinated national subsidies that undermine the level playing field. As Verouden and Werner explain, State aid may sometimes be justified by public policy reasons, including market failures or equity considerations, but it may also affect undertakings' decisions on output, investment, location, entry and exit.¹² State aid control exists because these decisions have cross-border consequences in an integrated market.

This explains why the energy transition creates a dilemma rather than a simple exception. The transition requires large-scale public support, but that support is granted primarily by Member States with unequal fiscal capacities. A flexible State aid regime may accelerate decarbonization. It may also increase the ability of wealthier Member States to support their industries more aggressively than others. The legal challenge is to allow the former without normalizing the latter.

2.2 The Article 107(1) gateway: State resources, advantage, selectivity and effects on competition and trade

The first element of Article 107(1) is that the measure must be granted by a Member State or through State resources. The concepts of imputability and State resources are closely connected, but distinct. A measure must be attributable to the State, and it must involve resources remaining under public control or causing a burden on public resources.

Renewable energy case law shows the importance of this distinction. In *PreussenElektra*, the Court held that a statutory obligation imposed on private electricity supply undertakings to purchase electricity from renewable energy sources at minimum prices did not involve State resources where there was no direct or indirect transfer of State resources.¹³ The case remains important because it shows that regulation alone is not necessarily State aid, even where it imposes economic burdens and advantages. By contrast, where a support mechanism is financed or controlled through public resources, the State resources condition may be satisfied.

The Court's judgment in the EEG 2012 case confirms the same caution. The Commission had found that the German renewable electricity support mechanism involved State

¹² Vincent Verouden and Philipp Werner, 'Introduction: The Law and Economics of EU State Aid Control' in Vincent Verouden and Philipp Werner (eds), *EU State Aid Control: Law and Economics* (2nd edn, Kluwer Law International 2025) 9-86.

¹³ Case C-379/98 *PreussenElektra AG v Schleswig AG* EU:C:2001:160.

resources because it was financed through the EEG surcharge. The Court of Justice rejected that approach and held that the Commission had not established that the funds were constantly under public control.¹⁴ The judgment is significant for energy policy because many renewable support mechanisms sit at the boundary between regulation, charges, para-fiscal mechanisms and public control.

The second element is advantage. A measure confers an advantage where it relieves an undertaking of charges that it would normally have had to bear under normal market conditions. In the energy transition context, this may include direct investment grants, operating support, tax advantages, guarantees, subsidized loans or compensation for additional decarbonization costs. The assessment is functional rather than formal. The legal form of the measure is less important than its economic effect.

The third element is selectivity. Article 107(1) is concerned with measures favoring certain undertakings or the production of certain goods. General measures applicable without distinction to all economic operators are not normally selective. However, environmental and energy measures are frequently targeted at specific technologies, sectors, undertakings, regions or categories of energy users. Their selectivity is often clear. In other cases, the classification is more complex, especially where the measure forms part of a broader regulatory system.

Environmental schemes provide useful examples. In *Commission v Netherlands*, concerning a nitrogen oxides emission trading scheme, the Court emphasized that selectivity requires an examination of whether the measure creates differences between undertakings that are in a comparable factual and legal situation in light of the objective pursued.¹⁵ In *British Aggregates*, the Court likewise addressed the selectivity of an environmental levy and the relationship between environmental logic and State aid classification.¹⁶ These cases show that environmental purpose does not prevent a measure from being selective, although the regulatory context may be relevant to the analysis.

The fourth element is distortion of competition and effect on trade. In practice, this threshold is usually not difficult to meet where the beneficiary operates in a liberalized or cross-border market. Energy markets, industrial manufacturing, steel production, clean

¹⁴ Case C-405/16 P *Federal Republic of Germany v European Commission* EU:C:2019:268.

¹⁵ Case C-279/08 P *European Commission v Kingdom of the Netherlands* EU:C:2011:551, paras 62-68.

¹⁶ Case C-487/06 P *British Aggregates Association v Commission* EU:C:2008:757.

technologies and electricity-intensive sectors are all areas in which trade between Member States may be affected. The threshold does not require proof of actual trade diversion. It is sufficient that the measure is liable to affect trade and distort or threaten to distort competition.

The Article 107(1) gateway therefore captures many of the measures required for the energy transition. That is not a defect in the system. It is the point of the system. State aid law does not ignore climate policy, but it channels it through compatibility analysis. The crucial question becomes whether the Commission can design compatibility rules that are both enabling and disciplining.

2.3 Compatibility as the legal space for the energy transition

Once a measure is classified as State aid, compatibility becomes the central legal question. Article 107(3)(c) TFEU permits aid to facilitate the development of certain economic activities or certain economic areas, provided that such aid does not adversely affect trading conditions to an extent contrary to the common interest. This provision is the main legal basis for the modern State aid toolbox in climate, energy and industrial decarbonization.

The importance of Article 107(3)(c) lies in its balance. It does not allow aid simply because the supported objective is desirable. Nor does it prohibit aid merely because it distorts competition. It requires a structured assessment of positive and negative effects. The measure must facilitate development, and the distortion must remain limited enough not to outweigh that development.

Commission guidelines and frameworks translate this open Treaty language into workable criteria. The CEEAG, for example, establish compatibility conditions for climate, environmental protection and energy aid. They structure the assessment through concepts such as incentive effect, necessity, appropriateness, proportionality and avoidance of undue negative effects on competition and trade.¹⁷ The GBER performs a different function by exempting certain categories of aid from prior notification where they meet

¹⁷ Commission, ‘Guidelines on State aid for climate, environmental protection and energy 2022’ [2022] OJ C80/1.

predefined conditions.¹⁸ IPCEI rules provide another route for large, cross-border projects that make an important contribution to common European objectives.¹⁹

These instruments show that State aid control has always been more than case-by-case adjudication. It is also a framework-based system. The Commission uses soft law to create categories, thresholds and presumptions that Member States can rely on when designing support measures. This gives the system predictability. It also gives the Commission a powerful role in shaping the kinds of public intervention that are considered compatible with the internal market.

The energy transition has intensified that role. The Commission must now assess not only whether a measure corrects a market failure, but whether it accelerates investments needed to meet legally binding climate targets, avoid carbon leakage, maintain security of supply and preserve industrial capacity in Europe. These are not purely environmental questions. They are questions of economic structure.

2.4 The energy transition dilemma: necessary aid and internal market risk

The energy transition creates a legal and policy dilemma because the same features that make State aid necessary also make it risky.

On the necessity side, the transition involves high upfront costs, uncertain returns and infrastructure interdependencies. Industrial undertakings may hesitate to invest in decarbonization if clean electricity, hydrogen infrastructure, carbon capture networks or demand for low-carbon products are not yet available at scale. Renewable energy and clean technology manufacturing may generate positive spillovers that private investors cannot fully capture. Energy efficiency and process transformation may face long payback periods. In these circumstances, public support can have a genuine incentive effect.

The European Green Deal already recognized that achieving the transition would require massive public investment and increased efforts to direct private capital towards climate and environmental action.²⁰ REPowerEU later made the investment problem more urgent by linking clean energy deployment to security of supply and the reduction of dependence

¹⁸ Commission Regulation (EU) No 651/2014 of 17 June 2014 declaring certain categories of aid compatible with the internal market in application of arts 107 and 108 of the Treaty [2014] OJ L187/1, consolidated version of 1 July 2023.

¹⁹ Commission, 'Criteria for the analysis of the compatibility with the internal market of State aid to promote the execution of important projects of common European interest' [2021] OJ C528/10.

²⁰ Commission, 'The European Green Deal' COM(2019) 640 final, 2.

on Russian fossil fuels.²¹ The Green Deal Industrial Plan added the global competitiveness dimension, noting that those who invest first and faster in the net-zero economy will secure industrial advantages, while unfair subsidies and strategic dependencies may distort global markets.²²

On the risk side, State aid is granted by Member States, not by a central EU industrial budget. This matters because Member States do not have equal fiscal capacity. In a purely national subsidy race, undertakings located in wealthier Member States may receive more generous support. Strategic investments may be attracted to jurisdictions with deeper public budgets rather than to locations where they would generate the greatest Union-wide benefits. The internal market can then become fragmented, not because Member States close their borders, but because public money changes the conditions of competition.

The EESC Opinion on CISAF captures this concern directly. It welcomes CISAF as a key tool for supporting the decarbonization of European industry and maintaining strategic investments in the EU, but stresses that State aid must not undermine the integrity of the Single Market. It is particularly concerned about disparities in aid-granting capacity across Member States and encourages mechanisms that reward cross-border coordination and projects generating positive spill-over effects.²³

This concern is not limited to CISAF. It applies to the broader evolution of State aid law since the pandemic and the energy crisis. Temporary frameworks made State aid faster and more flexible. That flexibility helped Member States respond to extraordinary shocks. However, it also made the distribution of support more uneven. The central question for this thesis is whether the current State aid toolbox can retain enough discipline to prevent temporary flexibility from becoming a permanent source of internal divergence.

2.5 From market failure to strategic industrial transformation

Classical State aid analysis often explains compatibility by reference to market failures. Environmental aid is a clear example. Pollution is a negative externality because the social cost of emissions is not fully reflected in market prices. Innovation may generate positive spillovers. Network infrastructure may suffer from coordination failures. Information

²¹ Commission, 'REPowerEU Plan' COM(2022) 230 final, 1-4.

²² Commission, 'A Green Deal Industrial Plan for the Net-Zero Age' COM(2023) 62 final, 1-4.

²³ European Economic and Social Committee, 'Opinion: Framework for State aid measures to support the Clean Industrial Deal' OJ C/2026/68, points 1.1-1.3 and 3.3-3.7.

asymmetries and first-mover risks may discourage investment. These justifications remain important and should not be dismissed.

However, the recent evolution of State aid law suggests that market failure no longer fully captures the function of the toolbox. The current frameworks are not concerned only with correcting inefficient market outcomes. They are also concerned with steering structural transformation. Aid is used to accelerate the deployment of technologies, retain manufacturing capacity, prevent investment diversion, support energy-intensive industries and respond to third-country subsidy competition.

The Court's judgment in Hinkley Point C is central to this development. The Court confirmed that Article 107(3)(c) requires aid to facilitate the development of certain economic activities or areas, but does not impose a separate requirement that the aid pursue an objective of common interest beyond the conditions stated in the Treaty. Nor is the existence of a market failure an autonomous legal condition for compatibility. This does not mean that market failures are irrelevant. It means that the Treaty does not reduce compatibility to market failure correction.²⁴

That clarification allows the Commission to authorize aid for broader industrial transformation, provided that the Treaty conditions remain satisfied. Green steel illustrates the point. Aid to replace coal-based blast furnaces with direct reduction plants and electric arc furnaces may be justified by emissions reductions, but it also supports the development of a transformed steelmaking activity in Europe. Commission approvals for Salzgitter, ThyssenKrupp Steel Europe and ArcelorMittal show the same structure: the aid facilitates the development of lower-emission steel production, has an incentive effect, is assessed as necessary and proportionate, and includes safeguards such as claw-back, monitoring and dissemination of know-how.²⁵

The move from market failure correction to strategic industrial transformation is not legally problematic in itself. Article 107(3)(c) is broad enough to accommodate it. The problem is maintaining the negative condition. As State aid becomes more strategic, it becomes more politically attractive. The more it is used to retain industries, compete with foreign subsidies or attract investment, the greater the risk that the internal market discipline becomes secondary. The law must therefore preserve a meaningful distinction

²⁴ Hinkley Point C, paras 19-20 and 26 (objective of common interest) and paras 66-68 (market failure).

²⁵ Commission green steel approvals cited in n 10.

between aid that enables transition and aid that merely shields national incumbents from competition.

2.6 Interim conclusion

The traditional function of EU State aid law is to protect the internal market from distortive national subsidies while allowing justified public intervention under defined conditions. That function has not disappeared. It remains the legal baseline for the entire thesis.

What has changed is the context in which that function operates. The energy transition requires investment at a scale and speed that markets alone are unlikely to deliver. It is also taking place in a geopolitical environment marked by high energy prices, supply-chain vulnerabilities, carbon leakage risks and global subsidy competition. As a result, State aid law is increasingly asked to do two things at once: enable public support for decarbonization and industrial competitiveness, and preserve the level playing field within the Union.

This dual role creates the central dilemma of the thesis. Too little flexibility may delay the transition and weaken the EU's industrial base. Too much flexibility may fragment the Single Market and trigger subsidy competition between Member States. The following chapter therefore turns to Article 107(3)(c) TFEU, the provision through which this balance is legally constructed.

Chapter 3 — Article 107(3)(c) TFEU and the Compatibility Assessment

3.1 Article 107(3)(c) TFEU as the legal gateway for transition-oriented aid

Article 107(3)(c) TFEU is the principal legal gateway through which the Commission assesses most notified non-crisis aid measures designed to support specific economic activities, including environmental protection, energy transition and industrial decarbonization. The provision allows aid to facilitate the development of certain economic activities or certain economic areas, provided that such aid does not adversely affect trading conditions to an extent contrary to the common interest. It therefore operates as a derogation from the general prohibition of State aid in Article 107(1) TFEU, but not as an unrestricted authorization for Member States to pursue industrial policy through subsidies.²⁶

The importance of Article 107(3)(c) lies in its open wording. It does not prescribe a closed list of legitimate policy objectives. Instead, it gives the Commission a margin of discretion to determine whether a notified measure can be reconciled with the internal market. Hancher and Nicolaidis describe Article 107(3)(c) as the most important discretionary exemption outside crisis frameworks and note that it is the main legal basis both for the General Block Exemption Regulation and for most Commission soft law guidelines on compatibility. This is particularly relevant for the present thesis because the EU's contemporary climate and industrial policy agenda has increasingly been channelled through instruments based on Article 107(3)(c), including the CEEAG and CISAF.²⁷

This chapter therefore functions as the doctrinal hinge of the thesis. The following chapters apply the same Article 107(3)(c) logic to the CEEAG, the TCTF and CISAF: each instrument is assessed by asking how far it enables transition-oriented aid, and how far it keeps the negative condition of Article 107(3)(c) operational.

3.2 The two conditions after Hinkley Point C

The current structure of Article 107(3)(c) compatibility assessment is shaped by the Court of Justice's judgment in Hinkley Point C. In that case, the Court confirmed that Article

²⁶ Consolidated Version of the Treaty on the Functioning of the European Union [2012] OJ C326/47, art 107(3)(c).

²⁷ Leigh Hancher and Phedon Nicolaidis, 'Compatibility of State Aid with the Internal Market' in Philipp Werner and Vincent Verouden (eds), *EU State Aid Control: Law and Economics* (2nd edn, Kluwer Law International 2025) 269-271.

107(3)(c) contains two conditions. First, the aid must be intended to facilitate the development of certain economic activities or certain economic areas. Secondly, the aid must not adversely affect trading conditions to an extent contrary to the common interest. The first condition is usually referred to as the positive condition; the second as the negative condition.²⁸

The most important clarification in Hinkley Point C concerns the former requirement, familiar from Commission practice and earlier guidelines, that aid must pursue a well-defined objective of common interest. The Court held that, unlike Article 107(3)(b) TFEU, Article 107(3)(c) does not make compatibility dependent on the aid pursuing an objective of common interest. This does not mean that any national objective is acceptable. It means that the Treaty condition is framed in terms of the development of an economic activity, rather than a separate and autonomous “common interest objective” test. The Commission must still assess the measure in an EU context, ensure compliance with EU law, and weigh the positive and negative effects of the aid.²⁹

This clarification matters for climate and industrial policy. The Commission cannot treat its own list of preferred policy objectives as an additional Treaty-level precondition for compatibility. Hancher and Nicolaides interpret the post-Hinkley structure as leaving Member States to identify the economic activities they seek to support while the Commission controls the aid’s effects on other Member States. That proposition is analytical, not absolute: the chosen activity and the modalities of support remain constrained by the Treaties, secondary Union law and the Commission’s assessment of both conditions in Article 107(3)(c). Objectives embedded in Union law and policy, such as climate neutrality, energy security, clean-technology deployment and industrial decarbonization, therefore remain relevant to the balancing exercise, but they do not displace those legal constraints.³⁰

The CEEAG reflect this post-Hinkley structure expressly. They provide that, under Article 107(3)(c), an aid measure may be declared compatible only where one positive and one negative condition are fulfilled. The positive condition is that the aid facilitates the

²⁸ Hinkley Point C, paras 18-21; see also Case 730/79 Philip Morris Holland BV v Commission EU:C:1980:209, paras 24-26, and Case C-431/14 P Greece v Commission EU:C:2016:145, para 68.

²⁹ Hinkley Point C, paras 20 and 26; see also Joined Cases C-75/05 P and C-80/05 P Germany and Others v Kronofrance EU:C:2008:482, para 65, cited in Hinkley Point C, para 24.

³⁰ Hancher and Nicolaides, 'Compatibility of State Aid with the Internal Market' in Philipp Werner and Vincent Verouden (eds), *EU State Aid Control: Law and Economics* (2nd edn, Kluwer Law International 2025) 275-277.

development of an economic activity; the negative condition is that the aid does not adversely affect trading conditions to an extent contrary to the common interest. This wording is important because it shows that the Commission's more recent guidance has adapted to the Court's approach while preserving the familiar analytical tools of necessity, appropriateness, proportionality, transparency and balancing.³¹

3.3 The positive condition: development of an economic activity, incentive effect and legality

The positive condition first requires the Member State to identify the economic activity that will be facilitated by the aid. Under the CEEAG, Member States must identify the economic activities supported by the measure and explain how the aid contributes to their development. In the environmental and energy context, the development of an economic activity may consist not only in creating a new activity, but also in transforming an existing activity so that it becomes sustainable and can continue without disproportionate environmental harm. This is doctrinally significant for industrial decarbonization. A measure supporting the conversion of a steel plant from a coal-based blast furnace route to a direct-reduction/electric-arc-furnace route may not create a new sector, but it can still facilitate the development of the economic activity of steel production by changing the conditions under which that activity is carried out.³²

The second component of the positive condition is incentive effect. Aid facilitates an economic activity only if it induces the beneficiary to change its behavior by engaging in additional activity, or in a more environmentally friendly activity, that it would not have carried out without the aid, or would have carried out only in a restricted or different manner. This is why the counterfactual is central. The Commission must understand what the beneficiary would credibly have done in the absence of the aid. Without such a comparison, it is difficult to distinguish genuinely enabling aid from a mere transfer of public resources to an undertaking for conduct it would have undertaken in any event.³³

The CEEAG link incentive effect to the timing of the aid application. As a rule, the Commission considers that aid does not have an incentive effect where the beneficiary started work on the project or activity before submitting a written aid application. The

³¹ Commission, 'Guidelines on State aid for climate, environmental protection and energy 2022' [2022] OJ C80/1 ('CEEAG'), pts 8 and 21-22.

³² CEEAG, pts 24-25; CEEAG, pt 23.

³³ CEEAG, pt 26.

rationale is straightforward: if the project was already being implemented before the aid request, the aid is less likely to have caused the investment decision. The rule is not merely formal, however. Its purpose is evidential. It helps to establish whether the aid changed the beneficiary's behavior.³⁴

The Court's judgment in *Est Wind Power* confirms the practical importance of the "start of works" concept. Although that case concerned the 2014 environmental and energy aid guidelines and a specific Estonian renewable energy support scheme, the Court's reasoning is useful for the general logic of incentive effect. The Court held that the concept of "start of works" must be assessed by reference to whether the project had reached a state of development such that it appeared very likely to be completed, and that the relevant authority may need to conduct a case-by-case assessment rather than rely on a purely formal test. This underlines that incentive effect is not a box-ticking exercise. It concerns the economic reality of the investment decision.³⁵

A further constraint on compatibility is compliance with relevant Union law. The aid measure, the conditions attached to it, its financing method where integral to the measure, and the supported activity must not breach relevant Union law. The CEEAG state this principle expressly: if the supported activity, the aid measure or its conditions entail a violation of relevant Union law, the aid cannot be declared compatible. This principle is especially important for green industrial policy because Member States may be tempted to attach localization, origin or procurement preferences to aid schemes. Such conditions may serve resilience objectives, but they must remain within the limits of EU law.³⁶

3.4 Paks II and the boundary between State aid control and other EU law

The relationship between State aid compatibility and other EU law has been further clarified by Paks II. In that judgment, the Court of Justice reaffirmed that the Article 108 TFEU procedure must not produce a result contrary to specific provisions of the Treaty. State aid which, as such or by reason of its modalities, contravenes provisions or general principles of EU law cannot be declared compatible with the internal market. The Commission must therefore take account of infringements of EU law other than State aid

³⁴ CEEAG, pts 28-31.

³⁵ Case C-11/22 *Est Wind Power OÜ v AS Elering* EU:C:2023:765, paras 45-57 and 63.

³⁶ CEEAG, pt 33.

law where the infringement arises from the economic activity financed, from the aid or from its object as such, or from aspects inextricably linked to the object of the aid.³⁷

At the same time, Paks II does not turn State aid control into a general enforcement mechanism for all areas of EU law. The Court preserved the distinction between aspects that are inextricably linked to the object of the aid and aspects that are merely connected to the factual background of the measure. Only the former must be examined in the State aid compatibility procedure. This is an important limitation. Otherwise, the Commission would risk collapsing State aid review into a broad Treaty infringement procedure, bypassing the institutional guarantees of Article 258 TFEU.³⁸

On the facts of Paks II, the direct award of the contract for the construction of the nuclear reactors was held to be inextricably linked to the object of the aid. The aid measure was aimed at developing and providing the new reactors, and the construction contract was indispensable to that object. The Court therefore held that the Commission had erred in treating the lawfulness of the direct award under EU public procurement law as outside the compatibility assessment. The result was annulment of the Commission decision.³⁹

For this thesis, Paks II is important for two reasons. First, it confirms that legality is a real constraint on the Commission's discretion under Article 107(3)(c). Secondly, it frames the later discussion of CISAF, resilience criteria and the proposed Industrial Accelerator Act. Conditions attached to aid allocation, including social, environmental, resilience or origin-related criteria, must be examined within the State aid procedure where they form part of the object of the aid or are inextricably linked to it. By contrast, procurement, trade or free-movement issues that merely surround the supported project remain outside that procedure and must be addressed through the appropriate Union-law mechanisms. The judgment therefore requires a close nexus, not a general review of every regulatory issue associated with the project.

3.5 The negative condition: necessity, appropriateness and proportionality

The negative condition is where the internal market discipline of State aid control becomes most visible. Even where aid facilitates the development of an economic activity and

³⁷ Case C-59/23 P Republic of Austria v European Commission (Paks II) EU:C:2025:686, paras 52-54; see also Case C-390/06 Nuova Agricast Srl v Ministero delle Attività Produttive EU:C:2008:224, paras 50-51.

³⁸ Paks II, paras 55 and 69-71; Case C-284/21 P European Commission v Anthony Braesch and Others EU:C:2023:58, paras 96-99.

³⁹ Paks II, paras 119-124; Paks II, paras 72 and 78-80.

satisfies the positive condition, it must not adversely affect trading conditions to an extent contrary to the common interest. Under the CEEAG, the Commission operationalizes this requirement through several safeguards: necessity, appropriateness, proportionality, transparency, avoidance of undue negative effects, and final balancing.

Necessity asks whether State aid is needed to bring about a material development that the market alone would not deliver. Under the CEEAG, Member States should identify the relevant market failures that prevent an efficient level of environmental protection or an efficient internal energy market. The Guidelines refer to negative externalities, positive externalities, asymmetric information and coordination failures as key examples. This does not mean, after Hinkley Point C, that a market failure is a Treaty precondition. The Court held that the absence of market failure does not necessarily prevent compatibility under Article 107(3)(c). Nevertheless, market failure remains one of the most persuasive ways to demonstrate that aid is necessary. It is particularly important in climate and energy aid, where carbon externalities, technology spillovers, infrastructure dependencies and first-mover disadvantages are structurally present.⁴⁰

Appropriateness requires the aid measure to be a suitable policy instrument. The CEEAG expressly recognize that State aid is not always the most appropriate tool. Market-based instruments, regulation, public procurement, standardization, energy-efficiency-first measures, infrastructure funding, fiscal measures and voluntary labels may sometimes achieve the objective with fewer distortions. This is a useful reminder for the thesis as a whole. The question is not whether State aid can contribute to the energy transition; clearly it can. The question is whether State aid is being used in a way that complements, rather than substitutes for, structural regulation and EU-level industrial policy.⁴¹

Proportionality requires that aid be limited to the minimum necessary. In the CEEAG, the general principle is that the aid amount per beneficiary should be limited to what is needed to carry out the aided project or activity. The Commission may accept proportionality where aid is determined through a genuinely competitive bidding process, because such a process can reveal the minimum support required by potential beneficiaries. Where competitive bidding is not used, proportionality is usually assessed by reference to the funding gap, meaning the difference between the aided project and the credible

⁴⁰ Hinkley Point C, paras 66-68; CEEAG, pts 34-38.

⁴¹ CEEAG, pts 39-46.

counterfactual scenario. This funding-gap logic is central to the Commission's assessment of large industrial decarbonization projects, including green steel projects approved under the CEEAG.⁴²

These criteria have a common function. They ensure that the aid remains targeted, avoids overcompensation and preserves incentives for efficient behavior. The more open-ended the policy objective, the more important these safeguards become. Green industrial competitiveness is a broad and politically attractive objective; without necessity and proportionality constraints, it could easily become a justification for ordinary industrial support. Article 107(3)(c) allows the Commission to accommodate new policy needs, but only if the aid remains legally disciplined.

3.6 Balancing, undue negative effects and the internal market

The final step is balancing. The Commission must weigh the positive effects of the aid on the supported economic activity against its negative effects on competition and trade. The CEEAG state that any aid measure, by its nature, generates or threatens to generate distortions of competition and affects trade between Member States because it strengthens the competitive position of the beneficiary. The point of the assessment is therefore not to eliminate distortion entirely. That would be impossible. The question is whether the distortion remains acceptable in light of the positive effects of the aid.⁴³

The CEEAG are particularly explicit about the specific distortions that may arise in environmental and energy aid. Aid may undermine market rewards for efficient or innovative producers, preserve less efficient incumbents, create barriers to entry, strengthen market power, or influence location decisions within the internal market. Aid that merely shifts activity between Member States without producing an environmental improvement will not be considered compatible. These concerns are directly relevant to the energy transition. Decarbonization aid may be necessary, but if it is granted asymmetrically by fiscally stronger Member States, it may also affect investment location and competitive structure within the Single Market.⁴⁴

The Commission must also consider long-term lock-in effects. The CEEAG warn that aid supporting activities using fossil fuels may provide a short-term emissions benefit while

⁴² CEEAG, pts 51-55; CEEAG, pts 49-50; CEEAG, pts 47-48.

⁴³ CEEAG, pts 63-64.

⁴⁴ CEEAG, pt 69; CEEAG, pts 67-69.

delaying deeper decarbonization and locking out cleaner technologies. This is important for transition technologies such as natural gas-based hydrogen or transitional industrial processes. Such aid may be defensible where it genuinely enables a pathway towards lower emissions, but it becomes problematic where it preserves carbon-intensive assets or delays the adoption of cleaner alternatives.⁴⁵

In the final weighing exercise, the Commission considers aid compatible only where the positive effects outweigh the negative effects on competition and trade. In environmental aid, the contribution to legally binding climate targets under the European Climate Law is relevant to that balance. This brings the analysis back to the core tension of this thesis. State aid control is increasingly expected to support the EU's climate and industrial objectives. Yet the same compatibility test must still prevent subsidy races, overcompensation, protectionist design and internal market fragmentation. Hinkley Point C adds an important boundary to this analysis: the individual compatibility assessment concerns the effects of the planned aid in light of the information available at the time of the decision, and cannot be based on speculation about the precedent effect of that decision or the cumulative impact of that aid together with future aid plans. On the analysis advanced in this thesis, that limitation makes framework design, transparency and evidence-based ex post evaluation the principal mechanisms through which cumulative fragmentation risks can be addressed, rather than matters for speculative balancing in an individual decision.⁴⁶

3.7 The role of the GBER and soft law in structuring discretion

The Commission's discretion under Article 107(3)(c) is not exercised only through individual decisions. It is structured through soft law frameworks, guidelines and the GBER. The GBER is especially significant because it exempts categories of aid from the prior notification requirement where all general and category-specific conditions are

⁴⁵ CEEAG, pts 67 and 74.

⁴⁶ Regulation (EU) 2021/1119 establishing the framework for achieving climate neutrality (European Climate Law) [2021] OJ L243/1, arts 2 and 4, as amended by Regulation (EU) 2026/667 of the European Parliament and of the Council of 11 March 2026 amending Regulation (EU) 2021/1119 as regards the setting of a Union intermediate climate target for 2040, OJ L, 2026/667, 18.3.2026; CEEAG, pt 71; CEEAG, pts 71 and 73; Hinkley Point C, paras 85-86.

satisfied. It therefore shifts a large part of compatibility control from ex ante Commission authorization to rule-based national implementation.⁴⁷

This rule-based approach has clear advantages. It provides legal certainty, reduces administrative burden and allows Member States to implement standardized aid measures more quickly. It also shows that Article 107(3)(c) has become a framework for governance, not merely a case-by-case derogation. At the same time, the GBER depends heavily on strict compliance with its conditions. Aid must be transparent, must have an incentive effect, and must respect aid intensity and eligible cost rules. If these conditions are interpreted too loosely, the exemption logic may weaken State aid discipline.⁴⁸

Soft law instruments such as the CEEAG and CISAF perform a related but distinct function. They bind the Commission's own assessment practice and translate Treaty standards into more operational criteria. They do not amend Article 107(3)(c) TFEU, and they do not remove the Commission's responsibility to ensure that compatibility decisions comply with the Treaty and general principles of EU law. However, they strongly influence how Member States design aid schemes and how undertakings structure investment decisions. In practice, they define the legal terrain on which climate and industrial aid is negotiated.

This has consequences for the chapters that follow. The CEEAG, TCTF and CISAF should not be treated as isolated technical documents. They are successive stages in the legal construction of a State aid toolbox for the energy transition. The CEEAG retain the traditional compatibility architecture; the TCTF temporarily expanded flexibility in response to crisis conditions; CISAF now provides the current medium-term framework for clean industrial competitiveness. Each instrument uses Article 107(3)(c) differently, but each remains dependent on the same underlying Treaty logic: development of an economic activity, limited distortion of competition and trade, legality, proportionality and balancing.

3.8 Interim conclusion

Article 107(3)(c) TFEU provides the legal flexibility that allows EU State aid law to adapt to the energy transition and the competitiveness agenda. It is broad enough to

⁴⁷ Commission Regulation (EU) No 651/2014 declaring certain categories of aid compatible with the internal market in application of Articles 107 and 108 of the Treaty [2014] OJ L187/1 ('GBER'), art 3.

⁴⁸ GBER, arts 5-7.

accommodate aid for renewable energy, industrial decarbonization, clean technology manufacturing, electricity price relief and strategic investment. Its breadth, however, is also the source of its legal risk. If compatibility is reduced to a policy preference for decarbonization or competitiveness, the internal market function of State aid control becomes fragile.

The post-Hinkley framework should therefore be understood as a disciplined flexibility. The aid need not pursue an autonomous objective of common interest as a separate Treaty condition, but it must facilitate the development of an economic activity, produce an incentive effect, comply with EU law, be necessary and appropriate, remain proportionate, and survive a balancing exercise against its negative effects on competition and trade. Paks II reinforces that the legality of aspects inextricably linked to the aid cannot be ignored. Est Wind Power shows that incentive effect and start of works require attention to the real economic state of the investment, not only formal criteria.

This doctrinal structure will guide the remainder of the thesis. The key question is not whether Article 107(3)(c) can support green industrial policy. It can. The harder question is whether the Commission's current frameworks preserve enough legal discipline to prevent transition-oriented State aid from becoming a source of intra-EU fragmentation. That question becomes concrete in the CEEAG, transitional in the TCTF, and most urgent in CISAF.

Chapter 4 — CEEAG as the Controlled Green Transition Framework

4.1 The place of the CEEAG in the State aid toolbox

The Guidelines on State aid for climate, environmental protection and energy 2022 (“CEEAG”) remain the central current framework for notified environmental, climate and energy aid under Article 107(3)(c) TFEU. They were adopted as part of the Commission’s revision of State aid rules following the European Green Deal, and they are expressly designed to guide the Commission’s compatibility assessment of environmental protection, including climate protection, and energy aid measures that must be notified under Article 108(3) TFEU.⁴⁹

For the purposes of this thesis, the CEEAG are best understood as the “controlled” green transition framework. They allow Member States to support renewable energy, energy efficiency, industrial decarbonization, energy infrastructure, reductions in certain electricity levies and other transition-related measures, but they do so through a relatively disciplined compatibility architecture. Unlike the TCTF, which was developed in response to the energy crisis and later global subsidy competition, and unlike CISAF, which now operates as a medium-term clean industrial policy framework, the CEEAG preserve the traditional structure of State aid control: identification of the supported economic activity, incentive effect, necessity, appropriateness, proportionality and balancing against negative effects on competition and trade.

The Green Deal background is important. The European Green Deal described the transition as a new growth strategy for a modern, resource-efficient and competitive economy with no net greenhouse gas emissions by 2050.⁵⁰ The European Climate Law later made climate neutrality legally binding and set an intermediate 2030 target. In its current consolidated form, it also includes a binding Union 2040 target of a 90% net greenhouse gas emissions reduction compared with 1990 levels.⁵¹ The CEEAG text itself predates the 2040 amendment, and should therefore not be read as containing that later

⁴⁹ Commission, ‘Guidelines on State aid for climate, environmental protection and energy 2022’ [2022] OJ C80/1 (‘CEEAG’), pts 4, 7 and 8.

⁵⁰ Commission, ‘The European Green Deal’ COM(2019) 640 final, 2.

⁵¹ Regulation (EU) 2021/1119 establishing the framework for achieving climate neutrality (European Climate Law) [2021] OJ L243/1, arts 1, 2 and 4, as amended by Regulation (EU) 2026/667 of the European Parliament and of the Council of 11 March 2026 amending Regulation (EU) 2021/1119 as regards the setting of a Union intermediate climate target for 2040, OJ L, 2026/667, 18.3.2026.

target. However, when the CEEAG are applied today, they operate within a climate-law environment that now includes the 2030, 2040 and 2050 targets.

The CEEAG also respond to the scale of the investment challenge. The Commission noted that achieving the increased 2030 climate, energy and transport targets would require EUR 390 billion of additional annual investment compared with 2011-2020 levels, with a further EUR 130 billion per year previously estimated for other environmental objectives.⁵² This explains why State aid rules cannot be treated only as a constraint. They are also an enabling framework for public support. At the same time, the CEEAG emphasize that the revision must support a cost-effective and just transition while ensuring a level playing field in the internal market.⁵³ That dual function is the core of this chapter.

4.2 Scope: broad climate and energy coverage, but not a general industrial policy framework

The CEEAG apply to State aid granted to facilitate the development of economic activities in a manner that improves environmental protection, as well as to activities in the energy sector governed by the Treaty, subject to the categories covered by the Guidelines.⁵⁴ The scope is broad, but it is not unlimited. The Guidelines expressly do not apply to certain areas, including aid for research, development and innovation governed by the RDI Framework, aid in the agriculture, forestry, fishery or aquaculture sectors governed by sectoral rules, and aid for nuclear energy.⁵⁵

The categories of aid covered by the CEEAG are extensive. They include aid for the reduction and removal of greenhouse gas emissions, including through renewable energy and energy efficiency; aid for the energy and environmental performance of buildings; clean vehicles and related infrastructure; circular economy measures; pollution reduction; biodiversity and nature-based solutions; reductions in taxes or parafiscal levies; security of electricity supply; energy infrastructure; district heating and cooling; reductions from electricity levies for energy-intensive users; coal, peat and oil shale closure measures; and studies or consultancy services on climate, environmental and energy matters.⁵⁶

⁵² CEEAG, pt 3.

⁵³ CEEAG, pt 4.

⁵⁴ CEEAG, pt 12.

⁵⁵ CEEAG, pt 13.

⁵⁶ CEEAG, pt 16.

This breadth is one of the CEEAG's strengths. Sauri-Romero and Struckmann describe climate, environmental protection and energy aid as a complex area because it interacts with other Union policies and Member State competences, and because it must reconcile climate action, secure and affordable energy supply and industrial competitiveness during the transition.⁵⁷ The CEEAG try to organize that complexity through a general compatibility chapter and more specific rules for each category of aid. In that sense, they are not merely a list of eligible measures. They are a governance instrument for structuring national support in a highly integrated internal market.

However, the CEEAG should not be overstated. They remain an environmental and energy aid framework. They can accommodate industrial decarbonization and energy-intensive user support, but they do not create a complete European industrial policy. They do not, for example, provide a general matching-aid mechanism against third-country subsidies, nor do they directly create demand for low-carbon European products. Those functions are addressed more explicitly in later instruments and proposals, especially the TCTF, CISAF and the proposed Industrial Accelerator Act. This is why the CEEAG form the baseline of the State aid toolbox rather than its current outer limit.

4.3 The compatibility logic: environmental ambition through legal discipline

The CEEAG expressly adopt the two-condition structure of Article 107(3)(c) TFEU. Aid may be declared compatible only where a positive and a negative condition are fulfilled: the aid must facilitate the development of an economic activity, and it must not adversely affect trading conditions to an extent contrary to the common interest.⁵⁸ This formulation reflects the post-Hinkley Point C understanding discussed in Chapter 3. The Guidelines therefore provide the clearest example of how the Commission translates the Treaty test into operational criteria for climate and energy aid.

The positive condition requires Member States to identify the economic activity facilitated by the measure and explain its positive effects for society at large and, where relevant, its connection with specific Union policies.⁵⁹ The Guidelines also require the aid to have an incentive effect. In principle, aid will not be considered to have an incentive effect where

⁵⁷ Lluís Sauri-Romero and Kai Struckmann, 'Climate, Environmental Protection and Energy Aid' in Vincent Verouden and Philipp Werner (eds), *EU State Aid Control: Law and Economics* (2nd edn, Kluwer Law International 2025) 949-951.

⁵⁸ CEEAG, pt 8.

⁵⁹ CEEAG, pts 23-25.

work on the project has already started before the beneficiary submitted a written aid application.⁶⁰ This preserves the causal link between aid and the behavioral change expected from the beneficiary.

The legality constraint is also explicit. Member States must ensure that the aid measure, the conditions attached to it, the procedures for adopting it and the supported activity do not contravene Union environmental law.⁶¹ This point is particularly important after Paks II, even though the CEEAG predate that judgment. The compatibility assessment cannot be isolated from other Union law obligations where those obligations are linked to the supported activity or to an aspect of the aid measure. For climate and energy aid, the interaction with environmental law, public participation and judicial review is therefore not peripheral. It forms part of the credibility of the compatibility exercise.

The negative condition is developed through necessity, appropriateness, proportionality, avoidance of undue negative effects and balancing. The general chapter requires the aid to be necessary to facilitate the development of the economic activity, appropriate as a policy instrument, proportionate to the minimum necessary and compatible with the internal market in light of its positive and negative effects.⁶² The CEEAG thereby preserve the traditional discipline of State aid control even as they significantly expand the range of climate-related measures that may be supported.

4.4 Aid for greenhouse gas reduction and industrial decarbonization

The most important part of the CEEAG for this thesis is Section 4.1, which concerns aid for the reduction and removal of greenhouse gas emissions, including through support for renewable energy and energy efficiency. Its rationale is directly linked to the Union's climate and energy targets. The Commission states that State aid may be necessary to contribute to those targets.⁶³ This is the provision through which the CEEAG most clearly connect Article 107(3)(c) TFEU to the energy transition.

Section 4.1 is deliberately broad. It covers aid for renewable energy, including the production of renewable energy and synthetic fuels produced using renewable energy.⁶⁴ It also covers other technologies primarily aimed at reducing greenhouse gas emissions,

⁶⁰ CEEAG, pts 26-31; Case C-11/22 Est Wind Power OÜ v AS Elering EU:C:2023:765, paras 45-57 and 63.

⁶¹ CEEAG, pt 11.

⁶² CEEAG, pts 34-73.

⁶³ CEEAG, pt 77.

⁶⁴ CEEAG, pts 78-82.

including low-carbon energy or fuels, energy efficiency, high-efficiency cogeneration, carbon capture and storage or use, demand response, energy storage where it reduces emissions, reduction or avoidance of emissions from industrial processes, and greenhouse gas removals.⁶⁵ Renewable hydrogen and low-carbon hydrogen may also be assessed under this section.⁶⁶ Aid supporting electrification using renewable and/or low-carbon electricity, including for industrial processes, may likewise fall within Section 4.1.⁶⁷

This breadth is crucial for hard-to-abate industry. Industrial decarbonization rarely relies on one technology. It may require electrification, hydrogen, CCS/CCU, energy efficiency, dedicated infrastructure and process redesign. The CEEAG allow these technologies to be assessed within a common framework, which is why the Commission later used the CEEAG to approve several large green steel projects. Those decisions will be discussed in Chapter 7. The point here is that the CEEAG already contain a legal route for industrial transformation before CISAF was adopted.

At the same time, the CEEAG do not grant unlimited technology neutrality. Measures that exclude certain technologies or beneficiaries must be justified by objective reasons. The Member State should give reasons for measures that do not include all technologies and projects that compete and are technically capable of contributing efficiently to greenhouse gas emissions reductions.⁶⁸ The Commission may accept narrower eligibility where the measure targets a specific Union-law sectoral or technology objective, supports demonstration projects, addresses other pollution objectives, promotes innovative technologies with long-term decarbonization potential, contributes to network stability, reduces system-integration costs, or forms part of a large integrated cross-border project.⁶⁹ This is a controlled version of technological openness: broad eligibility is the starting point, but justified selectivity remains possible.

4.5 Necessity, proportionality and the preference for competitive allocation

For greenhouse gas reduction aid, the CEEAG modify the general necessity assessment. Member States must identify the policy measures already in place to reduce emissions, including the EU ETS and related policies, and demonstrate that aid is needed in light of

⁶⁵ CEEAG, pt 83.

⁶⁶ CEEAG, pts 82 and 87.

⁶⁷ CEEAG, pt 88.

⁶⁸ CEEAG, pt 95.

⁶⁹ CEEAG, pt 96.

the counterfactual and relevant costs and revenues.⁷⁰ Where the Member State demonstrates that need, the Commission presumes that a residual market failure remains that can be addressed through decarbonization aid, unless it has evidence to the contrary.⁷¹ This is important because the ETS internalizes some but not necessarily all of the relevant costs and risks of decarbonization.

The CEEAG also presume that State aid can, in principle, be an appropriate measure for achieving decarbonization goals, provided the other compatibility conditions are fulfilled. The Commission justifies this by reference to the scale and urgency of the decarbonization challenge, which may require a variety of instruments, including direct grants.⁷² This presumption is more generous than a classical market-failure analysis, but it remains narrower than the crisis-based flexibility of the TCTF or the simplified presumptions later used in CISAF.

Proportionality is where the CEEAG are most disciplined. As a general rule, aid for reducing greenhouse gas emissions should be granted through a competitive bidding process, because competitive allocation can reveal the minimum support needed by beneficiaries and minimize distortions of competition and trade.⁷³ The bidding process should in principle be open to all eligible beneficiaries, although separate or more limited tenders may be justified where a single process would produce suboptimal results, where bid levels differ significantly between categories of beneficiaries, or where other objective reasons support differentiated treatment.⁷⁴

Where competitive bidding is not used, aid must generally be limited by the funding gap. The aid amount should correspond to the net extra cost of the environmentally preferable project compared with the credible counterfactual scenario.⁷⁵ The CEEAG also allow compensation models combining ex ante and ex post elements, including monitoring and claw-back, where future costs and revenues are uncertain and information asymmetry is significant.⁷⁶ This is particularly relevant for industrial decarbonization projects, where future electricity prices, hydrogen prices, carbon prices and demand for low-carbon products may be uncertain.

⁷⁰ CEEAG, pts 89-90.

⁷¹ CEEAG, pt 91.

⁷² CEEAG, pt 93.

⁷³ CEEAG, pt 103.

⁷⁴ CEEAG, pts 104-107.

⁷⁵ CEEAG, pts 47-55 and 109-110.

⁷⁶ CEEAG, pt 55.

The CEEAG are also careful about operating aid. Aid for decarbonization may take different forms, including upfront grants and ongoing payments such as contracts for difference.⁷⁷ However, aid covering costs mainly linked to operation rather than investment should only be used where the Member State demonstrates that this leads to more environmentally friendly operating decisions.⁷⁸ Beneficiaries should generally remain exposed to price variation and market risk, unless such exposure would undermine the objective of the aid, and they should not be incentivized to offer output below marginal cost or receive aid during negative-price periods.⁷⁹ This preserves market signals while allowing public support where necessary for the transition.

4.6 Fossil fuel safeguards and the anti-lock-in function

The CEEAG's most important environmental safeguard is their treatment of fossil fuel lock-in. The Guidelines require aid for decarbonization to deliver overall greenhouse gas reductions and not merely displace emissions from one sector to another.⁸⁰ For industrial activities, aid must reduce emissions directly resulting from the aided industrial activity, or improve the energy efficiency of the beneficiary's activities.⁸¹ This prevents Member States from presenting a measure as decarbonization aid where it merely shifts the emissions burden elsewhere.

The Guidelines also require estimation of the subsidy per ton of CO₂ equivalent emissions avoided and, where possible, net emissions reductions taking into account lifecycle emissions.⁸² This does not transform State aid control into a climate-accounting exercise, but it pushes the compatibility assessment towards a more evidence-based evaluation of environmental benefit. The measure must produce a real contribution to climate objectives, not only a plausible policy narrative.

Aid that supports the most polluting fossil fuels is treated severely. Measures incentivizing new investment in energy or industrial production based on coal, diesel, lignite, oil, peat or oil shale are considered to increase negative environmental externalities and will not be considered to have positive environmental effects because of their incompatibility with the

⁷⁷ CEEAG, pt 121.

⁷⁸ CEEAG, pts 121-122.

⁷⁹ CEEAG, pt 123.

⁸⁰ CEEAG, pt 116.

⁸¹ CEEAG, pt 117.

⁸² CEEAG, pt 115.

Union's climate targets.⁸³ Natural gas receives a more nuanced treatment. It may reduce emissions in the short term, but it may also aggravate negative environmental externalities in the longer term compared with cleaner alternatives. Member States must therefore explain how natural-gas-based investments contribute to the 2030 climate target and the 2050 climate-neutrality target, and how lock-in will be avoided, for example through CCS/CCU, replacement with renewable or low-carbon gas, or closure on a timeline consistent with Union climate targets.⁸⁴

This anti-lock-in logic is especially important for transitional industrial decarbonization projects. Several green steel projects begin with natural gas and move gradually towards renewable or low-carbon hydrogen. The CEEAG do not exclude such transitional structures. They require them to be credible, bounded and aligned with long-term climate targets. This is one reason why the Commission's approval decisions for steel decarbonization frequently emphasize monitoring, claw-back, capacity safeguards, the phasing out of natural gas and the phasing in of hydrogen.

The balancing presumption in Section 4.1 is also notable. Provided all other conditions are met, the Commission will typically find that the balance for decarbonization measures is positive in light of their contribution to climate change mitigation and Union energy and climate objectives, as long as there are no obvious indications of non-compliance with the "do no significant harm" principle.⁸⁵ This is an enabling presumption, but not a blank cheque. The Commission may still impose conditions where risks of additional competition distortions arise, and for individual aid measures or schemes benefitting a limited number of beneficiaries it will consider market power, overcapacity and subsidy-race risks.⁸⁶

4.7 Energy-intensive users: levy reductions, electrification and competitiveness

The CEEAG also address energy-intensive users, but in a narrower way than CISAF. Section 4.11 concerns reductions from electricity levies that finance energy and environmental policy objectives. Its rationale is that the Green Deal may be partly financed through levies on electricity consumption. For sectors exposed to international trade and heavily dependent on electricity, paying the full amount of such levies may increase

⁸³ CEEAG, pt 128.

⁸⁴ CEEAG, pt 129.

⁸⁵ CEEAG, pt 134.

⁸⁶ CEEAG, pts 131-133.

relocation risk and may discourage electrification of production processes, which is central to decarbonization.⁸⁷

The eligibility criteria are relatively strict. Aid may be granted only to undertakings in sectors at significant risk or at risk, measured by trade intensity and electro-intensity at Union level, with eligible sectors listed in Annex I. Sectors not listed may qualify only where Member States demonstrate, with representative and independently verified Union-level data, that the criteria are met.⁸⁸ This is a good example of the CEEAG's controlled approach: competitiveness concerns are acknowledged, but support is limited to sectors where the risk is objectively defined.

The proportionality rules are also restrictive. Beneficiaries in sectors at significant risk and at risk must generally pay at least 15% and 25% respectively of the costs generated by the relevant electricity levies, subject to alternative GVA-based ceilings and a minimum levy of EUR 0.5/MWh.⁸⁹ More favorable treatment for certain sectors is linked to reducing the carbon footprint of electricity consumption, including through carbon-free electricity, forward instruments such as power purchase agreements, or on-site or near-site generation.⁹⁰

The CEEAG further require monitoring of energy audits and management systems. Beneficiaries may be required to implement audit recommendations with a sufficiently short payback period, reduce the carbon footprint of electricity consumption, or invest a significant share of at least 50% of the aid amount in projects leading to substantial greenhouse gas emission reductions.⁹¹ This conditionality is important. Levy reductions are not simply treated as competitiveness relief. They are tied to electrification, carbon-free electricity and energy-efficiency behavior.

This section also shows why CISAF later matters. CEEAG Section 4.11 concerns reductions from electricity levies, not general relief from high wholesale electricity prices. It mitigates transition-financing costs that appear on electricity bills; it does not directly address the structural electricity price gap between EU industry and foreign competitors. CISAF Section 4.5, discussed in Chapter 6, goes further by allowing temporary electricity

⁸⁷ CEEAG, pts 399-401.

⁸⁸ CEEAG, pts 405-407 and Annex I.

⁸⁹ CEEAG, pts 408-412.

⁹⁰ CEEAG, pt 410.

⁹¹ CEEAG, pts 414-415.

price relief for energy-intensive users. That later development is more ambitious from an industrial competitiveness perspective, but also more legally sensitive because it comes closer to operating aid.

4.8 Energy infrastructure and the limits of national subsidy support

The CEEAG also contain rules for energy infrastructure. This matters because industrial decarbonization depends not only on support for individual plants, but also on electricity grids, hydrogen infrastructure, CO₂ transport and storage, and other enabling networks. The CEEAG recognize that energy infrastructure is typically financed through user tariffs and that, for many infrastructure categories, those tariffs are regulated to ensure investment while preserving user rights and cost-reflectiveness.⁹²

State aid may nevertheless be necessary where market failures cannot be fully addressed through compulsory user tariffs. For projects of common interest subject to internal energy market legislation, the Commission considers that coordination problems may be such that tariff financing is insufficient and State aid may be granted. For other infrastructure, the Commission carries out a case-by-case assessment, considering the market failure, third-party access, tariff regulation, security of supply and contribution to climate neutrality.⁹³

The infrastructure section again shows the CEEAG's controlled logic. Aid is not automatically justified by the importance of infrastructure. Proportionality is assessed through the funding gap, and claw-back may be required where there is a risk of windfall profits.⁹⁴ Where infrastructure is fully subject to internal energy market regulation, aid is generally less likely to have undue distortive effects. For exempted infrastructure, however, the Commission considers third-party access, crowding out of private investment and the competitive position of the beneficiary.⁹⁵

Natural gas infrastructure is subject to special scrutiny. Member States must demonstrate positive effects capable of offsetting negative effects on competition, including whether the infrastructure is ready for hydrogen and leads to greater use of renewable gases, or why hydrogen-readiness is not possible and how lock-in will be avoided.⁹⁶ This confirms the

⁹² CEEAG, pts 376 and 379.

⁹³ CEEAG, pt 380.

⁹⁴ CEEAG, pt 381.

⁹⁵ CEEAG, pt 382(a)-(b).

⁹⁶ CEEAG, pt 382(c).

broader anti-lock-in logic of the Guidelines. Transitional infrastructure may be compatible, but only where it does not undermine the path towards climate neutrality.

4.9 The CEEAG as baseline, and why they were not enough

The CEEAG provide a sophisticated legal framework for climate, environmental and energy aid. They enable substantial public support for the energy transition, but they also retain the internal market logic of State aid control. They require an identified economic activity, incentive effect, legality, necessity, appropriateness, proportionality, transparency, public consultation for major decarbonization schemes, anti-lock-in safeguards and balancing. This makes them the most legally disciplined part of the green industrial State aid toolbox.

Yet the CEEAG were not designed to answer every question that emerged after 2022. They were adopted before the full effects of Russia's war against Ukraine on energy prices, before the most intense phase of the EU's response to the Inflation Reduction Act, and before the Clean Industrial Deal and CISAF. They can support decarbonization investments and mitigate certain levy-related competitiveness risks, but they do not directly resolve temporary crisis price shocks, global subsidy matching, rapid clean-tech manufacturing relocation risks or demand creation for low-carbon European products.

This limitation does not make the CEEAG obsolete. They remain in force and continue to be legally central. Their significance is that they provide the baseline against which later flexibility can be evaluated. The TCTF, examined in the next chapter, did not emerge in a vacuum. It stretched the State aid toolbox against a background already shaped by the CEEAG. CISAF later incorporated and generalized some of that flexibility. Understanding the CEEAG is therefore necessary to understand both the continuity and the rupture in EU State aid law's movement from environmental support towards green industrial competitiveness.

4.10 Interim conclusion

The CEEAG demonstrate that EU State aid law can support the energy transition without abandoning its internal market discipline. They create broad possibilities for aid to renewables, energy efficiency, industrial decarbonization, hydrogen, electrification, energy infrastructure and energy-intensive users. At the same time, they preserve safeguards designed to prevent overcompensation, fossil fuel lock-in, inefficient subsidy design and distortions of competition and trade.

For this thesis, the CEEAG play three roles. First, they are the current general framework for climate, environmental and energy aid under Article 107(3)(c) TFEU. Secondly, they show how State aid law can be used as an enabling instrument for climate policy while remaining tied to necessity, proportionality and balancing. Thirdly, they reveal the limits of a purely environmental-energy framework in a context increasingly defined by energy price shocks, global subsidy competition and industrial competitiveness.

The CEEAG therefore represent controlled flexibility. They are not a crisis framework, and they are not a full industrial strategy. They are the doctrinal bridge between traditional State aid control and the later, more strategic use of State aid in the TCTF and CISAF. The next chapter turns to that transitional moment.

The TCTF is considered next as the transitional framework in which crisis conditions, investment acceleration and strategic relocation risks tested the limits of the CEEAG model.

Chapter 5 — The TCTF and the Emergence of Strategic State Aid

5.1 The TCTF as a transitional moment in the State aid toolbox

The Temporary Crisis and Transition Framework (“TCTF”) occupies a particular place in the evolution examined in this thesis. It is no longer the current State aid framework for clean industrial support: since 25 June 2025, it has been replaced by the Clean Industrial Deal State Aid Framework (“CISAF”), which applies to measures notified from that date, and also to measures notified earlier, including under the TCTF.⁹⁷ The TCTF must therefore be treated in this thesis as a historical and transitional framework, not as the applicable legal framework today.

That temporal qualification is important. The TCTF is nevertheless indispensable to the argument because it marks the point at which EU State aid law moved most visibly from emergency support towards strategic industrial policy. The CEEAG, examined in the previous chapter, provided a disciplined environmental and energy aid framework under Article 107(3)(c) TFEU. The TCTF combined two legal logics rather than operating uniformly under a single Treaty basis. Its crisis sections, most notably limited amounts of aid, guarantees, subsidized loans, compensation for high energy prices and electricity-demand reduction, were assessed principally under Article 107(3)(b) TFEU, whereas Sections 2.5, 2.6 and 2.8 used Article 107(3)(c) TFEU for renewable deployment, industrial decarbonization and strategic net-zero manufacturing. It therefore made State aid available not only to cushion the effects of high energy prices and supply disruption, but also to accelerate the investments required for the transition.⁹⁸

For this reason, the TCTF is best understood as a bridge. It linked three legal and policy developments that had previously been distinct. First, it responded to a serious disturbance in the economy caused by war, sanctions, energy-price increases and uncertainty in energy markets. Secondly, it was linked to REPowerEU, which aimed to reduce dependence on Russian fossil fuels by saving energy, diversifying supplies, accelerating clean energy and

⁹⁷ Commission, ‘Framework for State Aid measures to support the Clean Industrial Deal (Clean Industrial Deal State Aid Framework)’ (Communication) OJ C/2025/3602 (‘CISAF’), pts 216-218.

⁹⁸ Commission, ‘Temporary Crisis and Transition Framework for State Aid measures to support the economy following the aggression against Ukraine by Russia’ (Communication) [2023] OJ C101/3, as amended by Commission Communications C/2023/1188 and C/2024/3113 (‘TCTF’), pts 54-57 and sections 2.1-2.4 and 2.7 (crisis measures principally under art 107(3)(b) TFEU), and sections 2.5, 2.6 and 2.8, especially pts 77-81 and 85-86 (transition measures under art 107(3)(c) TFEU).

combining investments and reforms.⁹⁹ Thirdly, it responded to global subsidy competition and the risk that clean-technology investments could be diverted outside the EEA. The TCTF therefore shifted the State aid debate from the question of whether Member States may temporarily support undertakings in crisis to the question of whether national aid may be used to keep strategic green investments in Europe.

The analytical importance of this shift is considerable. It shows that the Commission's compatibility practice can adapt quickly when legal, economic and geopolitical pressures converge. Yet it also exposes the core risk that runs through the rest of this thesis: the more State aid becomes a tool of industrial competitiveness, the more its distribution depends on national fiscal capacity. The TCTF was designed to preserve the internal market through common conditions and safeguards, but it also allowed Member States to deploy national budgets in a race to retain energy-intensive and clean-tech investment. That tension is the starting point for the analysis below.

5.2 From crisis response to transition support

The TCTF developed out of the Temporary Crisis Framework adopted in 2022. The original crisis framework addressed the immediate economic effects of Russia's aggression against Ukraine, including liquidity problems, high energy prices and the need to reduce electricity demand. Sauri-Romero and Struckmann describe this sequence as a rapid State aid response to events that were not foreseeable when the CEEAG were adopted: Russia's aggression against Ukraine, interruptions in gas supply and an unprecedented escalation of energy prices.¹⁰⁰

The TCTF, adopted on 9 March 2023, replaced the earlier Temporary Crisis Framework and broadened the temporary State aid response. The consolidated TCTF text records that Russia's aggression, sanctions and countermeasures had repercussions across the entire internal market, including shrinking demand, interrupted projects, disrupted supply chains, higher electricity and gas prices and concerns about liquidity and market volatility.¹⁰¹ It also expressly linked the crisis to the urgency of reducing fossil-fuel dependence,

⁹⁹ Commission, 'REPowerEU Plan' COM(2022) 230 final, 1-3.

¹⁰⁰ Lluís Sauri-Romero and Kai Struckmann, 'Climate, Environmental Protection and Energy Aid' in Vincent Verouden and Philipp Werner (eds), *EU State Aid Control: Law and Economics* (2nd edn, Kluwer Law International 2025) 1035-1037.

¹⁰¹ TCTF, pts 1-8.

accelerating renewable energy deployment, decarbonizing industry and deploying capacities in sectors strategic to a net-zero economy.¹⁰²

This is where the “transition” part of the TCTF becomes legally important. The framework did not merely prolong crisis aid. It introduced a new orientation towards the productive capacity required for the green transition. The Green Deal Industrial Plan had already framed the net-zero industrial transformation as a question of competitiveness, clean-tech manufacturing and fair global competition.¹⁰³ The TCTF operationalized that policy concern within State aid law by permitting support for renewable energy and storage, industrial decarbonization and strategic net-zero manufacturing.

The TCTF also shows how crisis instruments can become structurally relevant. Temporary frameworks are normally justified by exceptional circumstances and strict time limits. However, the TCTF embedded longer-term transition objectives into a crisis framework. Werner and Verouden note that the Commission has used the flexibility inherent in State aid rules both to respond to crises and to enable longer-term adjustments, such as the green and digital transitions, while preserving, as far as possible, competition and the level playing field in the Single Market.¹⁰⁴ That description captures the legal character of the TCTF: temporary in form, but structurally significant in effect.

5.3 Renewable energy and storage: acceleration under crisis conditions

Section 2.5 of the TCTF concerned aid for accelerating the rollout of renewable energy and energy storage relevant for REPowerEU. The rationale was expressly linked to the crisis and the need to reduce dependency on fossil-fuel imports, accelerate the energy transition and achieve lower and less volatile energy prices.¹⁰⁵ The framework therefore treated renewable deployment not only as a climate objective, but also as an energy-security and price-stability measure.

The TCTF authorized investment aid for renewable energy and storage under Article 107(3)(c) TFEU, subject to detailed conditions. The eligible investments included the production of energy from renewable sources, including renewable hydrogen and

¹⁰² TCTF, pt 7.

¹⁰³ Commission, ‘A Green Deal Industrial Plan for the Net-Zero Age’ COM(2023) 62 final, 1-4.

¹⁰⁴ Vincent Verouden and Philipp Werner, ‘Introduction: The Law and Economics of EU State Aid Control’ in Vincent Verouden and Philipp Werner (eds), *EU State Aid Control: Law and Economics* (2nd edn, Kluwer Law International 2025) 78-80.

¹⁰⁵ TCTF, pt 75.

renewable hydrogen-derived fuels, electricity and thermal storage, and certain storage for renewable hydrogen, biofuels, bioliquids, biogas and biomass fuels.¹⁰⁶ Aid had to be granted under a scheme with an estimated capacity volume and budget, and the support scheme could be limited to one or several technologies only if it avoided artificial limitation or discrimination.¹⁰⁷

The acceleration logic was visible in the deadlines and forms of aid. Aid had to be granted by 31 December 2025, and installations generally had to be completed and operational within 36 months after the date of granting, subject to an effective penalty system.¹⁰⁸ Aid could be granted as direct grants, repayable advances, loans, guarantees or tax advantages, including tax credits.¹⁰⁹ The aid amount was to be determined either through a competitive bidding process or administratively by reference to investment costs.¹¹⁰

From a legal perspective, Section 2.5 is significant because it simplified the CEEAG logic without discarding it. Competitive bidding, technology neutrality, proportionality, sustainability requirements and the do-no-significant-harm principle remained relevant. Yet the TCTF allowed a more rapid route. It presumed, in substance, that given the exceptional economic challenges caused by the crisis, beneficiaries would continue their activities without change in the absence of the aid, provided that doing so would not entail a breach of Union law.¹¹¹ This is one of the earliest signs of the shift later developed more fully in CISAF: the counterfactual and necessity analysis became more standardized because the Commission considered the crisis context itself to justify acceleration.

The framework also permitted operating aid for renewable energy and storage.¹¹² This was particularly important for projects requiring revenue support rather than only capital support. However, the inclusion of operating aid further demonstrates why the TCTF required careful safeguards. Operating support may be necessary to accelerate deployment, but it also risks overcompensation and distortion if it is not tied to transparent allocation, objective criteria and the actual costs of the supported activity. The TCTF therefore kept competitive bidding and cumulation rules as central disciplines.

¹⁰⁶ TCTF, pt 77(a).

¹⁰⁷ TCTF, pt 77(b)-(c).

¹⁰⁸ TCTF, pt 77(d).

¹⁰⁹ TCTF, pt 77(e).

¹¹⁰ TCTF, pt 77(f)-(i).

¹¹¹ TCTF, pt 77(p).

¹¹² TCTF, pt 78.

5.4 Industrial decarbonization: moving beyond renewable deployment

Section 2.6 of the TCTF addressed aid for the decarbonization of industrial production processes through electrification, renewable and electricity-based hydrogen, renewable hydrogen-derived fuels and energy-efficiency measures. This section is especially relevant for the thesis because it brought the energy transition directly into industrial production. The framework stated that, in the context of the crisis and REPowerEU, it was essential to facilitate investments in industrial decarbonization with a view to quickly reducing dependency on fossil-fuel imports.¹¹³

The Commission declared that aid under this section could be compatible under Article 107(3)(c) TFEU where investments led either to a substantial reduction of greenhouse gas emissions from industrial activities relying on fossil fuels, or to a substantial reduction of energy consumption in industrial activities and processes.¹¹⁴ This wording is significant because it placed industrial decarbonization within the ‘development of economic activities’ limb of Article 107(3)(c). The supported economic activity was not simply the existing activity maintained by aid; it was the transformation of the industrial process itself.

The section was, however, narrower than CISAF would later become. It required significant emission or energy-consumption reductions. Investments had to reduce direct greenhouse gas emissions by at least 40% compared with the pre-aid situation where fossil fuels were substituted through electrification, renewable hydrogen or certain hydrogen-derived fuels, or reduce energy consumption in industrial installations by at least 20% in relation to the aided activities.¹¹⁵ The aid could not finance an increase in overall production capacity, apart from limited increases resulting from technical necessity, presumed where the increase did not exceed 2%.¹¹⁶

The aid was also subject to strict timing, incentive and proportionality conditions. It had to be granted by 31 December 2025, and the financed installation or equipment had to be completed and operational within 36 months after the date of granting.¹¹⁷ The aid could not be granted merely for compliance with applicable Union standards, and it had to induce an investment that the beneficiary would not undertake, or would undertake only in a

¹¹³ TCTF, pt 80.

¹¹⁴ TCTF, pt 81.

¹¹⁵ TCTF, pt 81(d).

¹¹⁶ TCTF, pt 81(f).

¹¹⁷ TCTF, pt 81(j).

restricted or different manner, without the aid.¹¹⁸ Aid amounts were limited by eligible costs, competitive bidding or specified aid intensities, with claw-back mechanisms required to address windfall profits in appropriate cases.¹¹⁹

These conditions show that the TCTF did not simply relax State aid law in an uncontrolled manner. It preserved the core compatibility safeguards of Article 107(3)(c): incentive effect, necessity, proportionality and avoidance of excessive distortion. At the same time, it changed the policy center of gravity. Industrial decarbonization was no longer treated only as an environmental improvement justified by market failure. It was treated as a strategic response to energy dependence, crisis conditions and global industrial competition.

5.5 Strategic net-zero sectors and the introduction of matching aid

The most distinctive part of the TCTF was Section 2.8, which authorized aid for accelerated investments in sectors strategic for the transition towards a net-zero economy. The provision was justified by the need to address a productive investment gap in strategic sectors and by the risk that new investments could be diverted to third countries outside the EEA.¹²⁰ This was the clearest indication that the TCTF had moved beyond environmental State aid in the narrow sense.

The strategic goods covered by Section 2.8 included the production of equipment for the transition towards a net-zero economy: batteries, solar panels, wind turbines, heat pumps, electrolyzers and equipment for carbon capture, usage and storage. It also covered the production of key components designed and primarily used as direct inputs for that equipment, and the production or recovery of related critical raw materials.¹²¹ This list corresponds closely to the clean-tech manufacturing logic later embedded in the Net-Zero Industry Act and CISAF.

Under the scheme-based route, aid was subject to maximum aid intensities and ceilings. The basic intensity was 15% of eligible costs, with a ceiling of EUR 150 million per undertaking per Member State. Higher intensities and ceilings were available in assisted areas under Article 107(3)(c) and Article 107(3)(a) TFEU: 20% and EUR 200 million in

¹¹⁸ TCTF, pt 81(l)-(m).

¹¹⁹ TCTF, pt 81(n)-(p).

¹²⁰ TCTF, pt 84.

¹²¹ TCTF, pt 85(a).

“c” areas, and 35% and EUR 350 million in “a” areas.¹²² These regional differentiations were intended to connect strategic industrial support with cohesion objectives.

More innovative was the individual-aid route. Exceptionally, the Commission could approve aid up to the amount of subsidy the beneficiary could demonstrably receive for an equivalent investment in a third country outside the EEA, provided that the conditions of Section 2.8 were satisfied.¹²³ The aid also could not exceed the minimum amount needed to incentivize the beneficiary to locate the investment in the EEA, namely the funding gap.¹²⁴ In practical terms, this allowed the Commission to take account of foreign subsidies and investment diversion risk when assessing necessity.

This is the matching-aid moment. Traditional State aid control asks whether national aid distorts competition within the internal market. Section 2.8 asked a different question as well: whether aid was needed to prevent a strategically important investment from leaving Europe because of subsidy offers elsewhere. The doctrinal move is compatible with Hinkley Point C, because market failure is not an autonomous requirement for compatibility under Article 107(3)(c) TFEU. But the policy logic is different. Necessity is no longer only about correcting underinvestment within the EU market; it is also about responding to subsidy competition outside it.

The TCTF did include safeguards. Aid could not facilitate relocation of production activities between Member States. Under the scheme route, beneficiaries had to confirm that they had not relocated to the aided establishment during the previous two years and commit not to relocate for two years after completion.¹²⁵ Under the individual route, the Commission would request the information necessary to assess whether the aid was likely to result in a substantial loss of jobs in existing EEA locations, and if the aid caused relocation, that would constitute a negative effect unlikely to be compensated by positive effects.¹²⁶

Those safeguards mattered, but they did not remove the broader concern. The TCTF could prevent aid being expressly used to pull production from one Member State to another. It could not equalize Member States’ fiscal capacity to offer aid in the first place. In a global

¹²² TCTF, pt 85(g)-(h).

¹²³ TCTF, pt 86.

¹²⁴ TCTF, pt 86(e).

¹²⁵ TCTF, pt 85(j)-(k).

¹²⁶ TCTF, pt 86(f).

subsidy race, the Member State best able to match third-country subsidies will often be the one with the deepest fiscal resources. That is why the TCTF's matching-aid mechanism is central to the thesis: it shows how the external competitiveness rationale can intensify internal level-playing-field concerns.

5.6 Internal market safeguards and the problem of uneven fiscal capacity

The TCTF was drafted with internal market safeguards. It contained general anti-relocation language, transparency requirements, reporting obligations and record-keeping duties.¹²⁷ Member States also had to publish information on individual aid above specified thresholds, with a shorter publication deadline for aid granted under Section 2.8.¹²⁸ These requirements allowed the Commission and the public to track the use of crisis and transition aid.

The framework also invited Member States to consider, in a non-discriminatory way, environmental protection or security-of-supply requirements when granting aid under certain sections, including Section 2.8. Examples included renewable electricity procurement, energy-efficiency investments, measures to reduce or diversify natural gas consumption and flexibility investments to adapt business processes to electricity price signals.¹²⁹ These conditions sought to prevent crisis aid from merely preserving existing fossil-fuel-intensive production patterns.

Still, transparency and conditionality are not the same as coordination. The TCTF relied on national budgets. Secondary literature therefore treats the TCTF as part of a wider flexibilization of State aid rules that may have fragmented the EU's response. Di Carlo, Eisl and Zurstrassen argue that the TCTF shifted the focus from immediate energy-crisis response towards the green transition, but they also show significant variation in Member States' use of crisis and transition aid. Their figures are based on preliminary Commission survey data on nominal amounts of aid granted, rather than on the much larger budgets notified or approved. For March 2022 to June 2023, the reported ratios were 1.35% of GDP for Hungary, 1.32% for Italy and 1.23% for Germany, compared with an EU27 average of 0.58%. These figures cover aid granted under the TCTF and comparable Article

¹²⁷ TCTF, pts 51 and 87-92.

¹²⁸ TCTF, pt 87.

¹²⁹ TCTF, pt 38.

107(3)(b) treaty-based measures and should not be treated as equivalent to either approved scheme envelopes or cash disbursements.¹³⁰

Werner and Verouden make a similar point in more general terms. They note that the implementation of temporary frameworks during the COVID-19 crisis and Russia's invasion of Ukraine involved swift action and record volumes of approved aid; in the energy-crisis period, Germany was by far the largest grantor of aid actually provided under TCF/TCTF or treaty-based principles, followed by Italy and Spain.¹³¹ This does not mean that those measures were legally incompatible. It does show, however, that common State aid rules do not themselves produce equal subsidy capacity.

This is the central ambivalence of the TCTF. It provided a common legal framework to avoid purely unilateral crisis responses. In that sense, it supported the internal market by ensuring that Member State measures were assessed against common conditions. But the volume, timing and practical availability of aid remained dependent on national resources and administrative capacity. The TCTF therefore reduced one form of fragmentation--uncoordinated legal standards--while leaving another form largely intact: unequal ability to subsidize.

5.7 From TCTF to CISAF

The TCTF's importance is confirmed by what followed. CISAF expressly states that its compatibility conditions are based on case practice and experience gathered by the Commission, including from the application of the TCTF.¹³² The Commission's staff working document on CISAF is even more explicit: CISAF builds on the experience gained with the TCTF, which it replaced, and provides a longer planning horizon and more stable investment conditions until 2030.¹³³

The continuity is substantive. CISAF retains several TCTF themes: accelerated renewable energy and low-carbon fuels, industrial decarbonization, clean-tech manufacturing

¹³⁰ Donato Di Carlo, Andreas Eisl and Dimitri Zurstrassen, 'Together We Trade, Divided We Aid: Mapping the Flexibilization of the EU State Aid Regime across GBER, IPCEIs and Temporary Frameworks' (Jacques Delors Institute Policy Paper No 307, November 2024) 24-25 (using preliminary Commission survey data on nominal aid amounts granted, including guarantees and other instruments, rather than notified or approved scheme budgets).

¹³¹ Verouden and Werner, 'Introduction: The Law and Economics of EU State Aid Control' in Vincent Verouden and Philipp Werner (eds), *EU State Aid Control: Law and Economics* (2nd edn, Kluwer Law International 2025) 79-80.

¹³² CISAF, pt 12.

¹³³ Commission Staff Working Document accompanying CISAF, C(2025) 850 final, 3-4 and 16-17.

capacity, and measures to prevent the diversion of strategic investments away from Europe. At the same time, CISAF changes the legal form of the policy. What was temporary and crisis-related under the TCTF becomes a medium-term clean industrial framework under Article 107(3)(c) TFEU. The transition from TCTF to CISAF therefore confirms that the TCTF was not a closed crisis episode. It was a testing ground for a more structural use of State aid in green industrial policy.

The EESC's Opinion on CISAF confirms this reading. It describes CISAF as a key tool for supporting the decarbonization of European industry and maintaining strategic investments in the EU, while also warning that State aid must not undermine the integrity of the Single Market and that disparities in aid-granting capacity across Member States remain a concern.¹³⁴ The same concern already appeared in the TCTF. CISAF inherits not only the TCTF's policy techniques, but also its structural risks.

For the purposes of this thesis, the TCTF should therefore be described neither as a mere emergency instrument nor as a current legal framework. It was the transitional stage in which the Commission first normalized the use of State aid to respond to three simultaneous pressures: energy-price crisis, decarbonization needs and global subsidy competition. CISAF now provides the current framework for many of the same objectives, but the legal and conceptual movement began earlier, in the TCTF.

5.8 Interim conclusion

The TCTF marked the emergence of strategic State aid in the EU's green industrial policy architecture. It was adopted in response to Russia's aggression against Ukraine and the resulting energy crisis, but it went beyond short-term crisis relief. It allowed Member States to accelerate renewable energy deployment, support industrial decarbonization and retain or attract investments in strategic net-zero sectors.

Three conclusions follow. First, the TCTF shows that Article 107(3)(c) TFEU is capable of accommodating broader policy objectives when the supported economic activity is defined in terms of transition, decarbonization and strategic manufacturing capacity. Secondly, the TCTF introduced a more explicit competitiveness rationale into State aid law, especially through Section 2.8 and matching aid. Thirdly, the TCTF also exposed the unresolved tension between flexibility and Single Market discipline. A common framework can

¹³⁴ European Economic and Social Committee, Opinion on the Framework for State aid measures to support the Clean Industrial Deal (COM(2025) 7600 final) OJ C/2026/68, pts 1.1-1.3 and 3.3-3.7.

discipline national aid, but it cannot by itself eliminate differences in Member States' fiscal capacity.

This is why the TCTF is central to the overall thesis. It demonstrates the functional transformation of EU State aid law from internal market protection towards a green industrial policy toolbox. At the same time, it shows why that transformation cannot be judged only by whether it enables investment. It must also be assessed by whether it preserves equal competitive conditions within the Single Market. The next chapter examines CISAF as the current framework that consolidates this shift.

CISAF is significant because it carries several of those temporary transition techniques into a more stable Clean Industrial Deal framework.

Chapter 6 — CISAF and the Clean Industrial Deal: State Aid as a Green Industrial Policy Tool

6.1 CISAF in the Architecture of the State Aid Toolbox

The Clean Industrial Deal State Aid Framework (“**CISAF**”) marks the most recent and, at present, the most structured stage in the evolution of EU State aid law towards a green industrial policy instrument. Adopted on 25 June 2025 and applicable until 31 December 2030, it replaces the transition-related provisions of the Temporary Crisis and Transition Framework (“**TCTF**”) and is intended to accompany the Clean Industrial Deal as a legal framework for accelerating decarbonization, clean technology manufacturing and industrial transformation within the Union.¹³⁵

The significance of CISAF lies not only in the categories of aid it covers, but also in its position within the wider State aid architecture. It does not displace the existing State aid instruments. Rather, it operates as an additional and simplified framework alongside the Climate, Energy and Environmental Aid Guidelines (“**CEEAG**”), the General Block Exemption Regulation (“**GBER**”), the Regional Aid Guidelines and other applicable State aid rules. Measures which fall outside CISAF, or which do not satisfy its conditions, may still be assessed under those other instruments. The Framework therefore creates an additional pathway for Member States: where the measure satisfies CISAF’s conditions, the Commission’s compatibility assessment is streamlined; where it does not, the ordinary compatibility frameworks remain available.¹³⁶

This is important for the argument of this thesis. The development from the CEEAG to the TCTF and then to CISAF is not a simple replacement of one instrument by another. It is better understood as a gradual layering of legal tools. The CEEAG remain the general framework for climate, environmental protection and energy aid. The TCTF introduced exceptional and crisis-driven flexibility in response to Russia’s aggression against Ukraine, the energy crisis and the global subsidy environment. CISAF then consolidates part of that flexibility into a more medium-term framework linked to the EU’s industrial competitiveness agenda.¹³⁷

¹³⁵ CISAF, OJ C/2025/3602, pts 216-218; Clean Industrial Deal, COM(2025) 85 final.

¹³⁶ CISAF, pts 9 and 11; CEEAG [2022] OJ C 80/1; GBER [2014] OJ L 187/1.

¹³⁷ Communication from the Commission, ‘Temporary Crisis and Transition Framework for State Aid measures to support the economy following the aggression against Ukraine by Russia’ [2023] OJ C 101/3, as

In this sense, CISAF is not merely a technical State aid instrument. It reflects the broader policy shift underlying the Clean Industrial Deal: decarbonization is treated not only as an environmental obligation, but also as a condition for industrial resilience and competitiveness. That shift had already been foreshadowed by the European Green Deal, REPowerEU and the Green Deal Industrial Plan, but the Clean Industrial Deal and CISAF give it a more explicit industrial policy form.¹³⁸

This also explains why CISAF should be analyzed carefully from the perspective of Single Market integrity. State aid control has always had a dual character. On the one hand, it allows Member States to pursue legitimate public policy objectives, including environmental protection and industrial transformation. On the other hand, it exists precisely because national subsidies may distort competition and fragment the internal market. State aid may influence undertakings' decisions concerning investment, entry, exit, output, R&D, location and input choices; when investments are mobile, it may also trigger location distortions and subsidy races among Member States.¹³⁹

Two preliminary qualifications are necessary. First, CISAF is a Commission Communication and therefore forms part of the Commission's soft law framework. It is not legislation in the same sense as a Regulation or Directive. Its legal relevance derives from the Commission's self-binding practice and from the need for consistency in the application of Article 107(3)(c) TFEU. Secondly, CISAF does not cover all technologies or all possible forms of decarbonization aid. Nuclear energy, for example, is not included in the substantive aid categories of CISAF. The Framework only states that the Commission will conduct a timely assessment of State aid cases for nuclear generation, including small and advanced modular reactors, in accordance with the Treaty or any applicable guidelines. This is relevant because the case law discussed in Chapter 3, particularly Hinkley Point C and Paks II, developed important principles under Article

subsequently amended; CISAF, pt 12; Commission Staff Working Document accompanying CISAF, C(2025) 850, section 3.2.

¹³⁸ Commission, 'The European Green Deal' COM(2019) 640 final; Commission, 'REPowerEU Plan' COM(2022) 230 final; Commission, 'A Green Deal Industrial Plan for the Net-Zero Age' COM(2023) 62 final; Clean Industrial Deal.

¹³⁹ Vincent Verouden and Philipp Werner, 'Introduction: The Law and Economics of EU State Aid Control' in Vincent Verouden and Philipp Werner (eds), *EU State Aid Control: Law and Economics* (2nd edn, Kluwer Law International 2025) 9-86.

107(3)(c) TFEU in the nuclear context. For nuclear aid, those principles continue to matter directly; for CISAF-covered aid, they operate through the structure of the Framework.¹⁴⁰

6.2 The General Compatibility Method: Front-Loading the Article 107(3)(c) Assessment

CISAF is formally anchored in Article 107(3)(c) TFEU. The provision permits aid to facilitate the development of certain economic activities or certain economic areas, provided that such aid does not adversely affect trading conditions to an extent contrary to the common interest. As explained in Chapter 3, this creates a positive condition and a negative condition. The positive condition concerns the development of an economic activity. The negative condition concerns the preservation of the internal market against undue distortions of competition and trade.¹⁴¹

CISAF follows this structure, but it modifies the method by which compatibility is established. It does not abandon the Article 107(3)(c) test. For the purposes of this thesis, this method can be described as “front-loading” much of the analysis into the design of the Framework itself; “front-loading” is an analytical label used here, not CISAF’s own terminology. The Framework distributes the work of compatibility review across several layers. Points 18 and 19 structure incentive effect and the counterfactual; points 25 to 30 establish presumptions of necessity and appropriateness and operationalize proportionality through competitive bidding, aid intensities, caps, funding-gap calculations and individual-notification thresholds; points 35 to 37 address manifest negative effects and the final balance; and points 212 to 215 add publication, annual reporting, ten-year record-keeping and Commission information requests. These conditions do not displace Article 107(3)(c), but they perform much of the work that a more individualized necessity, proportionality and balancing analysis would otherwise undertake.¹⁴²

This method is not unusual in State aid law. Commission guidelines frequently transform open-textured Treaty standards into more concrete compatibility conditions. The Court has accepted that, in exercising its wide discretion under Article 107(3) TFEU, the Commission may adopt guidelines establishing the criteria by reference to which it proposes to assess compatibility; once it adopts such rules of conduct, it is in principle

¹⁴⁰ CISAF, pt 13.

¹⁴¹ Case C-594/18 P Republic of Austria v Commission EU:C:2020:742 (Hinkley Point C), paras 62-67; CISAF, pt 16.

¹⁴² CISAF, pts 18-19, 25-30, 35-37 and 212-215.

bound by them through general principles such as equal treatment and legitimate expectations. The legal issue is therefore not whether the Commission may use presumptions. It may. The more difficult question is whether the presumptions are sufficiently calibrated to preserve the protective function of the second condition of Article 107(3)(c).¹⁴³

The legality constraint is particularly important in this respect. CISAF provides that aid cannot be declared compatible where the supported project or activity, the aid measure itself, or the conditions attached to it involve a violation of relevant Union law, including where the method of financing forms an integral part of the measure. This language reflects and operationalizes the principle confirmed in Paks II. In that case, the Court of Justice clarified that the Commission must assess, in the procedure prescribed by Article 108 TFEU, aspects that are so indissociably linked to the object of the aid that their effect on compatibility must necessarily be determined within the State aid procedure. It would therefore be too strong to say that CISAF “codifies” Paks II, since CISAF is a soft law framework rather than legislation. It is more accurate to say that CISAF incorporates that principle into the Commission’s compatibility methodology.¹⁴⁴

The same front-loading logic appears in the treatment of the counterfactual, incentive effect, necessity, appropriateness, proportionality and balancing exercise. For the types of investments covered by the Framework, the Commission generally starts from the assumption that, absent the aid, the beneficiary would continue its activities without the relevant change, unless a specific section requires a more detailed counterfactual. The incentive effect is presumed where work starts only after a written aid application, subject to certain exceptions. Necessity is also presumed because the Commission considers that, given the speed and scale of investment needed for the energy transition and clean industrial transformation, the market alone would not deliver the required level of investment within the necessary timeframe.¹⁴⁵

This presumption is economically plausible. Climate and energy transition investments are frequently affected by market failures, including negative externalities, positive spillovers, information asymmetries and coordination failures. The CEEAG were themselves built

¹⁴³ Case C-11/22 *Est Wind Power OÜ v AS Elering* EU:C:2023:765, paras 30-32.

¹⁴⁴ Case C-59/23 P *Republic of Austria v Commission* EU:C:2025:686 (Paks II), paras 54 and 70-71; CISAF, pt 20.

¹⁴⁵ CISAF, pt 26; CISAF, pts 18 and 19.

around the idea that environmental and climate-related aid may be necessary where markets do not internalize environmental costs or where coordination problems and investment risks prevent timely decarbonization. CISAF responds to a real investment problem: industrial decarbonization requires large and risky investments, often without a sufficiently strong private business case.¹⁴⁶

The point, however, is that CISAF changes the level at which the balancing exercise occurs. In an individual State aid decision, the Commission would normally examine the positive and negative effects of the measure in some detail. Under CISAF, much of that assessment is embedded in the Framework's ex ante conditions. The cumulative effect is that the protective function of the second condition of Article 107(3)(c) TFEU is largely front-loaded into the design of CISAF and the calibration of its thresholds, rather than being carried out through a fully individualized balancing exercise in each case.

This is legally defensible, but it has consequences. If the Framework's thresholds are appropriately designed, CISAF can provide both legal certainty and speed. If they are too permissive, however, simplification may weaken the very function State aid control is supposed to perform. This is why the remainder of this chapter focuses not only on what CISAF enables, but also on what it leaves unresolved.

6.3 Electricity Price Relief for Energy-Intensive Users

Section 4.5 of CISAF is one of the most sensitive parts of the Framework. It allows Member States to grant temporary electricity price relief to undertakings in energy-intensive sectors exposed to international competition. The rationale is straightforward. Until the decarbonization of the EU electricity system translates into lower and more stable prices, European industry may continue to face higher electricity costs than competitors in jurisdictions with less ambitious climate policies. High electricity prices may also discourage electrification and increase the risk that industrial production relocates to jurisdictions with lower environmental standards.¹⁴⁷

This part of the Framework must be read against the broader energy crisis background. REPowerEU framed the crisis as requiring action on both the demand side, by reducing consumption and transforming industrial processes away from gas, oil and coal, and the

¹⁴⁶ CEEAG, in particular pts 16-20 and 48-49; Lluís Sauri-Romero and Kai Struckmann, 'Climate, Environmental Protection and Energy Aid' in Verouden and Werner (eds), *EU State Aid Control: Law and Economics* (2nd edn, Kluwer Law International 2025) 949-1046.

¹⁴⁷ CISAF, pts 112-114.

supply side, by creating the capacity and framework to roll out and produce renewable energy. The 2024 electricity market design reform similarly records the impact of high gas prices, the Russian war of aggression against Ukraine and volatility in electricity markets as part of the background to structural reform. The crisis showed that electricity prices are not merely a consumer protection issue. For energy-intensive industries, they may determine whether decarbonization investments remain viable in Europe.¹⁴⁸

CISAF permits electricity price relief only within defined limits. Eligibility is tied to sectors listed in Annex 1 to the CEEAG, or to sectors that meet equivalent trade intensity and electro-intensity criteria based on representative and independently verified data. Aid is considered proportionate where it covers no more than a reduction of 50% of the yearly average wholesale market price in the relevant bidding zone, for no more than 50% of the beneficiary's annual electricity consumption, and provided that the resulting price does not fall below EUR 50/MWh. The aid may be granted for a maximum period of three years and payments must not take place after 31 December 2030.¹⁴⁹

The most important legal feature is the investment conditionality. Beneficiaries must allocate at least 50% of the aid amount to investments in new or modernized assets that measurably contribute to reducing electricity system costs without increasing fossil fuel consumption. Eligible investments include renewable generation, storage, demand-side flexibility, energy efficiency and electrolyzers. Additional support may be available where a higher share of the aid is allocated to such investments and where the beneficiary demonstrates substantial spending on demand-side flexibility.¹⁵⁰

This conditionality is essential because electricity price relief is, in substance, close to operating aid. It reduces an ongoing input cost that the undertaking would otherwise bear in the ordinary course of business. In Hinkley Point C, the Court of Justice confirmed that aid which merely maintains an existing situation or lowers normal operating expenditure cannot, in principle, be regarded as facilitating the development of an economic activity under Article 107(3)(c) TFEU. The judgment does not, however, establish investment conditionality as a universal legal requirement for every form of operating aid. The narrower argument advanced in this thesis is that temporary electricity-cost relief must

¹⁴⁸ Regulation (EU) 2024/1747 of the European Parliament and of the Council of 13 June 2024 amending Regulations (EU) 2019/942 and (EU) 2019/943 as regards improving the Union's electricity market design, OJ L, 2024/1747, 26.6.2024, recitals 1-4; REPowerEU Plan, 2-4.

¹⁴⁹ CISAF, pt 126; CISAF, pt 120; CISAF, pts 116-117; CEEAG, Annex 1.

¹⁵⁰ CISAF, pt 123; CISAF, pt 121.

retain a credible connection to the development of an economic activity rather than operate only as a subsidy to ordinary expenditure. Under CISAF Section 4.5, the obligation to allocate at least 50% of the aid amount to qualifying investments is the principal mechanism supplying that connection, alongside the sectoral eligibility, duration, consumption and price-floor limits.¹⁵¹

CISAF is clearly drafted with that doctrinal problem in mind. The investment obligation is what allows electricity price relief to be characterized as a measure facilitating decarbonization, rather than merely subsidizing current production. The Commission's accompanying staff working document expressly presents the measure as addressing a risk of economic activity relocating away from Europe while requiring beneficiary investments to contribute to decarbonization and lower electricity prices.¹⁵²

Nevertheless, the provision remains legally delicate. First, the obligation concerns 50% of the aid amount, not 50% of the beneficiary's total decarbonization investment need. The remaining part of the aid may therefore function as relatively unconditional cost relief. Secondly, some eligible investments, such as energy efficiency improvements, on-site renewable generation or demand-side flexibility, may be commercially rational for energy-intensive undertakings even without aid, particularly in a high-price environment. This does not eliminate the incentive effect, but it makes it more difficult to assess. Thirdly, monitoring is largely entrusted to Member States, including annual reporting on investment measures implemented by beneficiaries. The effectiveness of this safeguard therefore depends on national administrative capacity, which is not uniform across the Union.¹⁵³

A later development reinforces the sensitivity of this section. On 29 April 2026, the Commission adopted the Middle East Crisis Temporary State Aid Framework (METSAF), a targeted temporary framework applicable until 31 December 2026. METSAF allows Member States to increase the aid intensity of electricity price relief schemes approved under Section 4.5 of CISAF from 50% to up to 70%, without requiring additional investments under point 121 CISAF for the additional aid provided. METSAF does not state that this relaxation alters the legal test under Article 107(3)(c), and its adoption is not a judicial determination of that issue. The significance identified here is therefore

¹⁵¹ Hinkley Point C, para 119; CISAF, pts 116-124.

¹⁵² Commission Staff Working Document accompanying CISAF, C(2025) 850, section 4.3.2.

¹⁵³ CISAF, pt 124.

evaluative rather than descriptive of a Commission or Court holding. Because the additional relief may rise to 70% without a corresponding increase in the investment obligation under point 121 CISAF, the marginal support is less closely tied to investment conditionality than under the standard Section 4.5 design. That does not establish incompatibility; it increases the importance of the remaining limits and of ex post evidence that the relief supports continued industrial transformation rather than simply subsidizing normal operating costs.¹⁵⁴

For this reason, Section 4.5 should be treated as the most vulnerable part of CISAF from a legal-theoretical perspective. It is also the part most directly connected to industrial competitiveness. Energy-intensive industries cannot decarbonize without access to affordable electricity. Yet State aid control cannot simply absorb electricity cost differentials without undermining its own logic. CISAF attempts to resolve this tension through conditionality. Whether that conditionality is sufficiently robust remains open to criticism.

6.4 Aid for the Decarbonization of Industry

Section 5 of CISAF concerns aid for investments that significantly reduce greenhouse gas emissions from industrial activities or substantially reduce energy consumption through improved energy efficiency. This section is more clearly aligned with the traditional logic of Article 107(3)(c) TFEU than electricity price relief. It supports investment rather than merely reducing ongoing costs, and it is directed at a clearly identifiable development of an economic activity: the transformation of industrial production processes.¹⁵⁵

The eligibility conditions reflect this investment logic. Aid may support a wide range of technologies, provided that the investment delivers a significant reduction in direct emissions that would not occur without the aid, or a substantial reduction in energy consumption per unit of output with a sufficiently long payback period. CISAF also provides safe harbors for certain investments in existing installations, including where the investment reduces emissions by at least 40% and brings the installation below the average

¹⁵⁴ Commission, ‘Middle East Crisis Temporary State Aid Framework’ (Communication) OJ C/2026/2593 (METSAF), pt 74.

¹⁵⁵ CISAF, section 5, in particular pts 127-159.

of the 10% most efficient installations, or where it reduces emissions of a technical unit by at least 90% without locking in fossil fuels.¹⁵⁶

The section is technology-neutral in form but industrial-policy oriented in effect. It allows support for electrification, renewable hydrogen, low-carbon fuels, carbon capture and storage or use, energy efficiency and other technologies capable of reducing industrial emissions. This is consistent with the CEEAG's broader approach to climate, environmental and energy aid. CISAF builds on that logic, but does so in a more targeted and accelerated manner.

The aid intensities under Section 5 vary according to the type of investment. Higher intensities are available for investments enabling the use of renewable hydrogen or hydrogen-derived fuels, while other technologies are subject to lower intensities. For larger projects, aid must be determined by reference to the funding gap, and significant aid amounts are subject to separate notification and claw-back mechanisms. These features are important because they show that CISAF does not simply authorize unlimited subsidy support. It still seeks to preserve proportionality by linking aid to eligible costs, funding gaps and ex post recovery mechanisms.¹⁵⁷

The section also contains safeguards against capacity expansion and emissions displacement. Member States must demonstrate that the aid does not finance an increase in the beneficiary's overall production capacity, subject only to limited exceptions. Projects must deliver overall emission reductions and must not merely shift emissions from the industrial sector to the energy sector or from one site to another. Installations must become operational within a defined period and deliver a substantial share of projected emission reductions, with penalties where they fail to do so.¹⁵⁸

This section is particularly relevant for hard-to-abate sectors. Steel, cement, chemicals and other energy-intensive industries require capital-intensive transformations that markets are unlikely to finance at the necessary pace without public intervention. The European Steel and Metals Action Plan identifies high energy costs, exposure to an unlevel playing field in international competition, decarbonization investment needs and regulatory burdens as

¹⁵⁶ CISAF, pt 140; CISAF, pts 139-140.

¹⁵⁷ CISAF, pts 153 and 156-158; see also pts 197-199 on funding gap methodology and claw-back mechanisms; CISAF, pts 154-155; Commission Staff Working Document accompanying CISAF, C(2025) 850, section 4.3.3.

¹⁵⁸ CISAF, pts 136-137; CISAF, pts 138 and 141-142.

shared competitiveness challenges for the sector. It also notes that the lack of customer willingness to pay a clean premium and insufficient incentives through regulatory intervention weaken the business case for decarbonization investments.¹⁵⁹

Green steel therefore fits naturally within the industrial decarbonization logic of CISAF. Recent Commission decisions concerning Salzgitter, ArcelorMittal and ThyssenKrupp Steel Europe show that the Commission has already assessed major steel decarbonization projects under Article 107(3)(c) TFEU and the CEEAG, focusing on incentive effect, necessity, proportionality, claw-back mechanisms, monitoring and dissemination of know-how. Chapter 7 will treat green steel as an illustration rather than as the central object of the thesis. For present purposes, the point is narrower: CISAF can address the capital cost of industrial transformation, but it cannot by itself solve all economic conditions required for green industrial competitiveness.¹⁶⁰

Capital aid may support the construction of cleaner production assets, but it does not automatically ensure the availability of affordable renewable electricity, sufficient renewable or low-carbon hydrogen, or demand for low-carbon products at a green premium. This is why the proposed Industrial Accelerator Act, discussed in Chapter 7, matters as a possible demand-side complement to State aid.¹⁶¹

6.5 Clean Technology Manufacturing and the Survival of Matching Aid

Section 6 of CISAF authorizes aid for investment projects that add manufacturing capacity for clean technologies, net-zero products and relevant components. This part of the Framework is the clearest expression of the EU's shift towards green industrial competitiveness. It is not limited to reducing emissions from existing industrial processes.

¹⁵⁹ Commission, 'A European Steel and Metals Action Plan' COM(2025) 125 final, 2-3.

¹⁶⁰ Commission Decision C(2022) 7166 final, State Aid SA.104276 (2022/N) - Germany - Aid to Salzgitter for project SALCOS stage I (public version), recitals 18-19, 31-42, 105, 114, 121 and 127-134; Commission Decision C(2023) 5013 final, State Aid SA.104903 (2023/N) - France - Aid to ArcelorMittal France (public version), recitals 14, 22-32, 44-49, 116, 126, 136 and 142-147; Commission Decision C(2023) 5015 final, State Aid SA.105244 (2023/N) - Germany - Aid to ThyssenKrupp for project tkH2Steel (public version), recitals 18-20, 30-43, 127, 141, 151 and 159-170; Commission Decision C(2024) 1306 final, State Aid SA.104898 (2024/N) - Germany - RRF - Aid to ArcelorMittal Bremen and ArcelorMittal Eisenhüttenstadt for project DRIBE2 (public version), recitals 19, 28-43, 120, 129, 136 and 142-149.

¹⁶¹ Commission, Proposal for a Regulation establishing a framework of measures for the acceleration of industrial capacity and decarbonisation in strategic sectors and amending Regulations (EU) 2018/1724, (EU) 2024/1735 and (EU) 2024/3110, COM(2026) 100 final; Commission Staff Working Document, Executive Summary of the Impact Assessment accompanying the Industrial Accelerator Act, SWD(2026) 72 final, 1-3.

It aims to strengthen manufacturing capacity in sectors regarded as strategically important for the energy transition.¹⁶²

The structure of this section reflects the lessons of the TCTF. The TCTF allowed Member States to support renewable energy, storage, renewable heat, industrial decarbonization and investments in key sectors for the transition towards a net-zero economy. Section 2.8 of the TCTF was particularly important because it allowed aid for strategic investments, subject to limits and safeguards, including evidence of subsidies available in third countries and commitments against relocation within the Union.¹⁶³

CISAF carries this logic forward. Under its scheme-based route, aid intensities and ceilings vary depending on whether the investment is located outside assisted areas, in areas eligible under Article 107(3)(c) TFEU, or in areas eligible under Article 107(3)(a) TFEU. The beneficiary must make a minimum own contribution and maintain the investment in the relevant area for a defined period. These conditions show that the Framework seeks to combine industrial policy with regional cohesion considerations.¹⁶⁴

The most significant feature, however, is the ad hoc route for individually notified aid. Under this route, aid may not exceed the lower of two amounts: the subsidy the beneficiary could demonstrably receive for an equivalent investment in a third country outside the EEA, and the minimum aid amount necessary to incentivize the investment in the EEA rather than in the alternative location. The beneficiary must show that, without the aid, the investment would not take place in the EEA.¹⁶⁵

This preserves the matching-aid logic introduced under the TCTF. It is doctrinally important because the counterfactual is no longer merely economic, but geographical. The question is not only whether the market would deliver the investment without aid. It is whether the investment would be made in Europe rather than in a third country where subsidies are available. In traditional State aid logic, necessity is linked to market failure or funding gap. Under matching aid, necessity is also linked to global subsidy competition and investment diversion risk.

This development is consistent with the Court's clarification in Hinkley Point C that market failure is not an autonomous precondition for compatibility under Article 107(3)(c)

¹⁶² CISAF, section 6, in particular pt 160.

¹⁶³ Temporary Crisis and Transition Framework, in particular sections 2.5, 2.6 and 2.8.

¹⁶⁴ CISAF, pts 169-170; CISAF, pts 167-168.

¹⁶⁵ CISAF, pt 174.

TFEU. If market failure is not required as a matter of Treaty law, the Commission may take account of broader circumstances affecting the development of the relevant economic activity, including the risk that strategic investments are diverted outside the Union. Nevertheless, this creates a significant conceptual shift. The function of State aid control is no longer limited to preventing distortions within the internal market. It also becomes a tool for responding to subsidy competition outside the EU.¹⁶⁶

CISAF attempts to discipline this shift through cohesion and anti-relocation safeguards. Where several EEA locations are under consideration, aid must not attract the investment to an area with lower regional aid intensity if that would produce negative effects on competition and trade unlikely to be offset by positive effects. Beneficiaries must also confirm that no relocation has occurred in the preceding period and commit not to relocate for a defined period after completion.¹⁶⁷

These safeguards are real, but limited. They operate primarily where the competition is between EEA locations. They are less effective where the relevant counterfactual is outside the EEA, which is precisely the situation matching aid is designed to address. In that scenario, the Member State with the greatest fiscal capacity may be best placed to retain or attract the investment. This raises the broader Single Market concern addressed in Chapter 8: if the EU uses national State aid to respond to external subsidy competition, internal fiscal asymmetries may become more visible and more consequential.

This problem is not hypothetical. Recent literature on IPCEIs shows significant variation between Member States in their use of State aid for industrial policy projects. Such variation is shaped not only by fiscal capacity, but also by economy size, fiscal stress, past State aid spending and political preferences. The EESC has similarly warned that disparities in aid-granting capacity across Member States may undermine the integrity of the Single Market, and has encouraged mechanisms that reward cross-border coordination and positive spill-over effects.¹⁶⁸

¹⁶⁶ Hinkley Point C, paras 66-67.

¹⁶⁷ CISAF, pts 36 and 172; CISAF, pt 176.

¹⁶⁸ Ruben De La Cruz, 'A "Common" European Interest? Explaining Variation in IPCEI State Aid Between EU Member States' (2026) 14 Politics and Governance art 11453; European Economic and Social Committee, Opinion on the Framework for State aid measures to support the Clean Industrial Deal (COM(2025) 7600 final) OJ C/2026/68 (EESC Opinion), pts 1.2 and 3.4-3.5.

6.6 Resilience Criteria, Union Law Constraints and Conditionality

CISAF also encourages Member States to include additional resilience, social and environmental conditions when designing aid schemes or allocation procedures, provided that such conditions are transparent, published in advance and proportionate. The language should be handled carefully. It would be misleading to describe CISAF itself as creating a general binding “European preference” rule. The Framework is more cautious. It allows and encourages certain resilience-related criteria, but expressly requires compliance with Union law and the Union’s international obligations.¹⁶⁹

This distinction matters. The proposed Industrial Accelerator Act, discussed in Chapter 7, is more directly concerned with demand creation and possible low-carbon or Union-origin requirements in public procurement and public support schemes. CISAF, by contrast, remains a state aid compatibility framework. It does not itself rewrite procurement law or trade law. Its function is to indicate when State aid measures may be found compatible with the internal market. Any resilience criteria attached to aid must therefore remain compatible with EU law, including free movement rules, public procurement principles, WTO obligations and the EU’s bilateral commitments.¹⁷⁰

The point also connects to Paks II. Where conditions attached to aid are necessary to attain the objective of the aid or form an integral part of the measure, their legality may become part of the Commission’s compatibility assessment. The Commission cannot declare aid compatible while ignoring an EU law infringement that is inextricably linked to the aid. CISAF’s express reference to Union law compliance should therefore be understood as more than a drafting precaution. It is a legal constraint on the way Member States may design aid conditionality.¹⁷¹

Conditionality may also create internal market risks. The EESC, while welcoming CISAF as a key tool for supporting the decarbonization of European industry and maintaining strategic investments in the EU, has stressed the need for coherence, clear guidance and smooth integration with existing tools. It has also warned that conditionalities should not create excessive administrative burdens or lead to forum shopping in favor of jurisdictions where such conditions are more favorable. This is particularly relevant where aid schemes

¹⁶⁹ CISAF, pts 21-23.

¹⁷⁰ Industrial Accelerator Act proposal, Explanatory Memorandum, 1-5; Annexes to COM(2026) 100 final; SWD(2026) 72 final, 1-3.

¹⁷¹ Paks II, paras 54 and 70-71; CISAF, pt 20.

are implemented nationally, but the policy objective is Union-wide industrial transformation.¹⁷²

The legal difficulty is therefore not conditionality as such. Properly designed conditionality may improve State aid by ensuring that public support is linked to decarbonization, resilience, employment, skills or environmental outcomes. The difficulty is fragmentation. If each Member State attaches different conditions, applies different monitoring standards or uses conditionality to favor domestic undertakings indirectly, the result may be a more complex and less coherent internal market. CISAF recognizes the need for Union law compliance, but it does not fully solve the coordination problem.

6.7 What CISAF Does Not Do

CISAF opens with an acknowledgement that State aid rules contribute to preventing fragmentation of the internal market, preserving the level playing field and avoiding subsidy races between Member States. This acknowledgement is significant, but it is not matched by a fully developed mechanism for controlling aggregate effects. The omission is not merely practical. Hinkley Point C confirms that individual compatibility review is confined to the effects of the planned aid and may not be based on speculation about precedent effects or the cumulative impact of future aid plans. If cumulative effects are not addressed at framework level, there may therefore be no effective point within the State aid architecture at which they are assessed systematically.¹⁷³

At the framework-wide level, CISAF contains no aggregate ceiling on national expenditure and no allocation mechanism linked to Member States' fiscal capacity. This is distinct from the section-specific safeguards it does contain, including project-level aid intensities and ceilings, individual-notification thresholds, funding-gap requirements, relocation rules, and publication and reporting duties. Nor does the Framework require a horizontal assessment of the combined effect of national schemes operating in parallel or generally privilege EU-level or cross-border funding over national aid. The omission identified here is therefore systemic rather than project-specific: CISAF disciplines individual measures, projects and beneficiaries, but it does not govern the aggregate distribution of nationally financed support across the Union.¹⁷⁴

¹⁷² EESC Opinion on CISAF, pt 3.15; EESC Opinion on CISAF, pts 1.1 and 3.10.

¹⁷³ CISAF, pt 8; Hinkley Point C, paras 85-86.

¹⁷⁴ CISAF, pts 29-30, 153-158, 167-176 and 212-215.

This omission matters because State aid flexibility is not used equally by all Member States. The EESC notes that the use of State aid and the extent of flexibility granted during the recent COVID-19 and energy crises has been very uneven across Member States, and that the three largest Member States accounted for over 75% of the total budget for notified State aid schemes in the relevant crisis period. Even if those figures relate to the earlier crisis period rather than CISAF itself, they illustrate the underlying problem: flexibility can preserve industrial capacity, but it can also accentuate internal market imbalances.¹⁷⁵

The Draghi Report expresses this concern in broader terms. As cited by the EESC, crisis-related State aid flexibility helped Member States support companies and citizens, but also fragmented the common market, distorted competition, deteriorated public finances and triggered inefficient subsidy races. The EESC appreciates that CISAF acknowledges this problem, but is concerned that it does not directly address the risks of distorting the level playing field within the Single Market.¹⁷⁶

The difficulty is structural rather than merely administrative. In individual compatibility decisions, the Commission can assess the notified measure, its own effects and the information available at the time of approval. It cannot, however, be expected to correct future aggregate patterns that arise from other national schemes adopted later. The framework stage is therefore the main stage at which systemic safeguards against subsidy races, fiscal asymmetry and cumulative fragmentation can be designed. CISAF does so only partially. It regulates categories of aid, aid intensities, eligible costs, beneficiary obligations and reporting duties. It does not create an EU-level mechanism for managing the distributional consequences of national subsidy capacity.

Transparency and monitoring partly mitigate the problem, but they do not remove it. CISAF requires publication, reporting and record-keeping obligations. However, transparency does not itself prevent distortion. It allows scrutiny after aid has been granted, but it does not equalize fiscal capacity or ensure that aid is distributed according to Union-wide priorities. The EESC has criticized the available monitoring framework, noting that the rhythm and content of available State aid data do not provide sufficient information for

¹⁷⁵ EESC Opinion on CISAF, pt 3.4 and fn 14.

¹⁷⁶ EESC Opinion on CISAF, pt 3.5; EESC Opinion on CISAF, pt 3.4, citing Mario Draghi, *The Future of European Competitiveness - Part B: In-depth Analysis and Recommendations* (European Commission 2024) 301.

proper evaluation and review of the measures in place. This criticism is particularly relevant where the Framework will remain applicable until 2030.¹⁷⁷

The EESC therefore calls for a comprehensive assessment of CISAF before 2030, including its actual impact on decarbonization objectives and the Single Market, as well as faster and more granular analytical data on the amounts of aid granted and effectively disbursed under CISAF and related frameworks. That recommendation captures the central difficulty. CISAF may be legally coherent at the level of individual measures, but its systemic effect depends on how Member States use it collectively.¹⁷⁸

6.8 Interim Conclusion

CISAF is a coherent and important instrument for the EU's current policy context. It provides a medium-term framework for supporting clean energy, industrial decarbonization, clean technology manufacturing, electricity price relief for energy-intensive users and investment de-risking. It also gives Member States and undertakings greater legal certainty than a purely case-by-case system would provide.

At the same time, CISAF confirms the broader transformation examined in this thesis. EU State aid law is no longer operating only as a defensive mechanism against distortive subsidies. It is increasingly used as an enabling framework for green industrial policy. The CEEAG provided the general climate, environmental protection and energy aid framework. The TCTF introduced crisis-driven flexibility and the possibility of responding to global subsidy competition. CISAF consolidates this movement into a longer-term clean industrial policy framework.

Three conclusions follow. First, CISAF does not abandon Article 107(3)(c) TFEU, but it changes the way the compatibility assessment is carried out. Much of the negative condition of Article 107(3)(c) is front-loaded into the Framework's design. This is lawful in principle, but it means that the quality of the Framework's thresholds and safeguards becomes decisive.

Secondly, electricity price relief for energy-intensive users remains the most legally sensitive part of CISAF. Its compatibility depends on investment conditionality that connects operating-cost relief to decarbonization and electricity system benefits. The

¹⁷⁷ EESC Opinion on CISAF, pt 3.7; CISAF, pts 212-215.

¹⁷⁸ EESC Opinion on CISAF, pts 1.6 and 3.7.

temporary increase permitted under METSAF, without a corresponding increase in decarbonization conditionality, makes this tension more visible.

Thirdly, CISAF does not fully resolve the aggregate-effect problem. It recognizes the importance of preserving the internal market and avoiding subsidy races, but it does not contain a comprehensive mechanism for addressing unequal national fiscal capacity, cumulative spending or the distributional effects of green industrial State aid. This gap becomes more consequential in light of Hinkley Point C. Because individual decisions cannot be based on speculation about future cumulative effects, the thesis argues that framework design, monitoring and EU-level coordination are the principal mechanisms through which those systemic risks can be controlled. This issue will be central to the final evaluation in Chapter 8.

The result is therefore ambivalent. CISAF strengthens the EU's State aid toolbox for the energy transition and green industrial competitiveness, but it also exposes the limits of using nationally funded State aid as a central instrument of EU industrial policy. Its success will depend not only on whether it accelerates decarbonization, but also on whether the Commission can preserve proportionality, transparency and Single Market discipline while doing so.

The following chapter therefore shifts from the State aid framework itself to the regulatory architecture around it. If CISAF primarily addresses investment and production costs, the proposed Industrial Accelerator Act addresses the complementary demand-side problem: how to create markets for the low-carbon industrial products that subsidized projects are expected to produce.

Chapter 7 — Industrial Accelerator Act and Green Steel as a Sectoral Illustration

7.1 From subsidy approval to market creation

The preceding chapters have shown that EU State aid law has moved far beyond its traditional function of preventing selective national advantages from undermining undistorted competition. The CEEAG provided a controlled route for climate, environmental protection and energy aid; the TCTF introduced crisis-driven flexibility for renewable energy, industrial decarbonization and strategic net-zero sectors; and the CISAF consolidated a more structured State aid framework for the Clean Industrial Deal. Yet even this broader State aid toolbox remains primarily supply-side in orientation. It can reduce investment costs, de-risk projects and allow Member States to compensate part of the funding gap. It cannot, by itself, guarantee that there will be sufficient demand for low-carbon industrial products once the subsidized investments become operational.

This demand problem is particularly visible in energy-intensive industries. Low-carbon steel, cement and aluminum may involve higher capital expenditure, higher operating costs, uncertain access to renewable electricity or hydrogen, and uncertain willingness among downstream customers to pay a clean premium. The Clean Industrial Deal explicitly frames this problem as a combined competitiveness and decarbonization challenge: European industry needs a stronger business case for large climate-neutral investments in energy-intensive industries and clean technology manufacturing.¹⁷⁹ The European Steel and Metals Action Plan makes the point more concretely for steel and metals: high energy costs, global overcapacity, decarbonization investment needs and insufficient clean-premium demand make the commercial case for decarbonization fragile.¹⁸⁰

The Industrial Accelerator Act proposal should therefore be understood not as a replacement for State aid control, but as a complementary demand-side instrument within the wider Clean Industrial Deal architecture. Its relevance for this thesis lies precisely in that complementary function. State aid frameworks such as the CEEAG and CISAF permit public support for the transformation of production assets. The proposed Industrial

¹⁷⁹ Commission, ‘The Clean Industrial Deal: A joint roadmap for competitiveness and decarbonisation’ COM(2025) 85 final, 1-3.

¹⁸⁰ Commission, ‘A European Steel and Metals Action Plan’ COM(2025) 125 final, 1-3.

Accelerator Act seeks to influence the market conditions into which the resulting low-carbon products will be sold, by using public procurement, public support schemes, permitting reform and industrial acceleration areas to create more predictable demand for selected strategic products.

7.2 The legal and policy architecture of the proposed Industrial Accelerator Act

The Industrial Accelerator Act was presented by the Commission on 4 March 2026 as a proposal for a Regulation establishing a framework of measures for the acceleration of industrial capacity and decarbonization in strategic sectors. As at 10 August 2026, procedure 2026/0068/COD remained pending under the ordinary legislative procedure. It is therefore analyzed solely by reference to the Commission proposal, COM(2026) 100 final, and not as enacted law; references to what the proposed Act would do remain conditional on adoption and may require updating if the text changes before submission.¹⁸¹

The proposal is built around a broad internal market logic. Article 1 states that the proposed Regulation aims to improve the functioning of the internal market by establishing a framework to support the development, competitiveness and resilience of the Union's manufacturing sector, with a focus on selected strategic sectors, while contributing to the Union's climate objective, economic security and high-quality jobs.¹⁸² Article 2 then sets an industrialization objective: the Union and Member States should seek to ensure that by 2035 manufacturing industry accounts for at least 20 per cent of the Union's GDP.¹⁸³ The proposal is therefore not limited to climate policy. It links decarbonization to industrial capacity, economic security, strategic resilience and the Single Market.

The legal bases chosen by the Commission reinforce this dual nature. The proposal is based on Article 114 TFEU, concerning the establishment and functioning of the internal market, and Article 207(2) TFEU, concerning the common commercial policy.¹⁸⁴ These matters for the thesis because the proposal does not merely authorize more national

¹⁸¹ Commission, Proposal for a Regulation establishing a framework of measures for the acceleration of industrial capacity and decarbonisation in strategic sectors and amending Regulations (EU) 2018/1724, (EU) 2024/1735 and (EU) 2024/3110, COM(2026) 100 final ('Industrial Accelerator Act proposal'); European Parliament, Legislative Observatory, procedure 2026/0068(COD), ongoing as at 10 August 2026.

¹⁸² Industrial Accelerator Act proposal, art 1(1).

¹⁸³ *ibid* art 2.

¹⁸⁴ Industrial Accelerator Act proposal, preamble and explanatory memorandum. See also Commission Staff Working Document, Subsidiarity Grid accompanying the Industrial Accelerator Act proposal, SWD(2026) 70 final, 1-2.

spending. It seeks to discipline and coordinate certain demand-side and market-access conditions at EU level, precisely because uncoordinated national measures could fragment the internal market and weaken collective effectiveness.

The structure of the proposal reflects this regulatory ambition. Chapter II would establish enabling conditions for industrial production and decarbonization, including single access points and single permit-granting procedures for industrial manufacturing projects.¹⁸⁵ Chapter III would introduce Union origin and low-carbon requirements in selected public procurement procedures and other forms of public intervention.¹⁸⁶ Chapter IV would set conditions for certain foreign direct investments in emerging strategic sectors, Chapter V would enable the designation of industrial manufacturing acceleration areas, and Chapter VI would contain implementation, monitoring and review provisions.¹⁸⁷

7.3 Lead markets, low-carbon requirements and public support schemes

The most important aspect of the proposal for the present thesis is its attempt to create lead markets for low-carbon and Union-based industrial products. The proposal's explanatory memorandum identifies the lack of demand for European low-carbon industrial products as one of the core problems. High production costs, limited industrial scale and the absence of willingness among downstream customers to pay a low-carbon premium may delay or undermine industrial decarbonization investments.¹⁸⁸ The impact assessment executive summary frames the problem in similar terms, identifying limited demand for European low-carbon industrial products, supply-chain vulnerabilities and insufficient deployment of industrial decarbonization technologies at scale as the three main sub-problems addressed by the initiative.¹⁸⁹

The proposal responds by linking public demand and public intervention to product characteristics. Article 10 defines the notion of low-carbon products for the purposes of the proposed Chapter III. For products covered by Annex II, low-carbon status would depend on compliance with requirements set out in delegated acts adopted under the Construction Products Regulation or the Ecodesign for Sustainable Products Regulation, depending on

¹⁸⁵ Industrial Accelerator Act proposal, arts 4-6.

¹⁸⁶ *ibid* arts 7-12.

¹⁸⁷ *ibid* arts 17-33.

¹⁸⁸ Industrial Accelerator Act proposal, explanatory memorandum, section 1.

¹⁸⁹ Commission Staff Working Document, Executive Summary of the Impact Assessment accompanying the Industrial Accelerator Act proposal, SWD(2026) 72 final, 1-2.

the product category.¹⁹⁰ Article 10(2) would also empower the Commission to establish voluntary greenhouse gas intensity classification systems for industrial products placed on the Union market, taking into account EU ETS and CBAM data, emerging low-carbon production technologies, recycled materials and the EU climate neutrality objective.¹⁹¹

Article 11 would apply the relevant requirements in public procurement. Contracting authorities and contracting entities would have to apply Union origin and low-carbon requirements laid down in Annexes II and III for covered procurement procedures, subject to exceptions where application would lead to a single supplier situation, no suitable tenders, disproportionate costs or technical incompatibility.¹⁹² Article 12 would extend the logic to other forms of public intervention. It provides that, without prejudice to Articles 107 and 108 TFEU, Member States shall design public support schemes so that they contribute to strengthening the Union's strategic industrial value chains through Union origin requirements, low-carbon requirements, or both.¹⁹³ This savings clause is important: the proposed Regulation does not displace State aid control. Public support schemes remain subject to the compatibility discipline of Articles 107 and 108 TFEU.

Annex II gives the proposed demand-side requirements their sectoral content. For public procurement procedures launched on or after 1 January 2029 involving relevant products from energy-intensive industries, at least 25 per cent of the total volume of steel used in covered buildings, infrastructure and motor vehicles for civil purposes would have to be low-carbon. For concrete and mortar, at least 5 per cent of the relevant volume would have to be low-carbon and of Union origin. For aluminum, at least 25 per cent of the relevant volume would have to be low-carbon and of Union origin.¹⁹⁴ The same minimum percentages would apply to certain public support schemes established or updated on or after 1 January 2029, with the relevant eligibility conditions set out in Annex II, Part II.¹⁹⁵

This structure is significant for the State aid analysis. It demonstrates an evolution from a model in which public authorities merely finance the supply of cleaner production towards a model in which public expenditure is also used to shape downstream demand. The State aid rules can approve a grant or contract-for-difference-type support for the transformation

¹⁹⁰ Industrial Accelerator Act proposal, art 10(1).

¹⁹¹ *ibid* art 10(2).

¹⁹² *ibid* art 11.

¹⁹³ *ibid* art 12(1).

¹⁹⁴ Commission, Annexes to the Industrial Accelerator Act proposal, COM(2026) 100 final, Annex II, Part I.

¹⁹⁵ *ibid* Annex II, Part II.

of a steel plant. The Industrial Accelerator Act proposal would add a separate layer: public procurement and public support schemes would create a minimum market pull for low-carbon steel and other energy-intensive materials. The two functions are different but mutually reinforcing.

7.4 Green steel as a sectoral illustration

Green steel provides a useful sectoral illustration because it sits at the intersection of all the tensions examined in this thesis. It is emissions-intensive, strategically important, exposed to global overcapacity and price competition, dependent on affordable electricity and hydrogen, and embedded in downstream sectors such as construction, automotive manufacturing, energy infrastructure, defense and machinery. The European Steel and Metals Action Plan describes steel and base metals as crucial assets for downstream industries and for the EU's economic security and social stability. It also notes that the EU share of global steel production has fallen to around 7-8 per cent and that global steel overcapacity was estimated in 2024 to be more than four and a half times the EU's yearly consumption.¹⁹⁶

The decarbonization challenge is both technological and economic. The main low-carbon pathway currently discussed for primary steel production is the replacement of coal-based blast furnace/basic oxygen furnace production with direct reduction and electric arc furnace routes, using natural gas initially in some projects and progressively replacing it with renewable or low-carbon hydrogen. This transition requires large capital investments and, in many cases, materially higher operating costs. The policy problem is therefore not simply that undertakings need a subsidy to invest; it is also that the market may not reward the lower embedded emissions of the resulting product sufficiently and predictably.

The public versions of the Commission's recent State aid decisions on green steel show how the CEEAG has already been used to support this transformation. In 2022, the Commission approved a EUR 1 billion German measure for Salzgitter to support a direct reduction plant, an electric arc furnace and a 100 MW electrolyser, with the project expected to avoid 3.6 million tons of CO₂ annually once completed.¹⁹⁷ In 2023, it approved an EUR 850 million French measure for ArcelorMittal's Dunkirk project,

¹⁹⁶ Commission, 'A European Steel and Metals Action Plan' COM(2025) 125 final, 1-2.

¹⁹⁷ Commission Decision C(2022) 7166 final, State Aid SA.104276 (2022/N) - Germany - Aid to Salzgitter for project SALCOS stage I (public version), recitals 18-19, 31-42, 48, 105, 114, 121 and 127-134.

involving a direct reduction plant and two electric arc furnaces, with a commitment to phase in renewable or low-carbon hydrogen and mechanisms such as claw-back, monitoring and knowledge dissemination.¹⁹⁸

The same pattern appears in the ThyssenKrupp Steel Europe and ArcelorMittal Germany measures. For ThyssenKrupp, the Commission approved a EUR 550 million direct grant and a conditional payment mechanism of up to EUR 1.45 billion to support the Duisburg project and accelerate renewable hydrogen uptake, subject to safeguards including independent monitoring, tendering for hydrogen supply, claw-back and commitments not to use the aid to increase production capacity.¹⁹⁹ In 2024, the Commission approved a EUR 1.273 billion German measure, approximately EUR 1.3 billion, funded in part through the Recovery and Resilience Facility, for ArcelorMittal Bremen and Eisenhüttenstadt, again under Article 107(3)(c) TFEU and the CEEAG.²⁰⁰

These decisions confirm that green steel projects can be framed as the development of an economic activity within the meaning of Article 107(3)(c) TFEU. They also illustrate the Commission's standard compatibility logic: the aid must have an incentive effect, be necessary and appropriate, remain proportionate to the effective financing needs, include safeguards against undue distortions, and produce positive effects that outweigh negative effects on competition and trade. The cases therefore support the thesis hypothesis that Article 107(3)(c) can accommodate industrial decarbonization, provided the discipline of necessity, proportionality, incentive effect and balancing is preserved.

However, the green-steel examples also reveal the limits of State aid. Access to affordable renewable electricity and hydrogen, grid capacity, infrastructure timing, global overcapacity, the phase-out of free ETS allocation, CBAM implementation and downstream demand all remain outside the narrow approval of an individual aid measure. That distinction became concrete in 2025, when ArcelorMittal Europe did not proceed with its announced DRI-EAF plans in Bremen and Eisenhüttenstadt despite the prior approval of approximately EUR 1.3 billion in German support; Reuters reported that no aid had yet been paid. The evidentiary implication is limited: non-delivery shows that an

¹⁹⁸Commission Decision C(2023) 5013 final, State Aid SA.104903 (2023/N) - France - Aid to ArcelorMittal France (public version), recitals 14, 22-32, 44-49, 116, 126, 136 and 142-147.

¹⁹⁹Commission Decision C(2023) 5015 final, State Aid SA.105244 (2023/N) - Germany - Aid to ThyssenKrupp for project tkH2Steel (public version), recitals 18-20, 30-43, 127, 141, 151 and 159-170.

²⁰⁰Commission Decision C(2024) 1306 final, State Aid SA.104898 (2024/N) - Germany - RRF - Aid to ArcelorMittal Bremen and ArcelorMittal Eisenhüttenstadt for project DRIBE2 (public version), recitals 19, 28-43, 120, 129, 136 and 142-149.

ex ante compatible measure and even a support contract may be insufficient for commercial viability when energy, hydrogen, regulatory and demand conditions do not materialize. It does not retrospectively establish that the Commission's compatibility assessment was legally defective. Green-steel aid may therefore be justified yet practically insufficient, which supports analyzing it within a broader policy architecture rather than as a standalone solution.²⁰¹

7.5 Interaction with CBAM, the Net-Zero Industry Act and the Clean Industrial Deal

The proposed Industrial Accelerator Act also interacts with other instruments in the EU's climate-industrial toolbox. The European Climate Law provides the overarching binding climate trajectory. It sets the 2050 climate-neutrality objective, the binding 2030 target of at least 55 per cent net greenhouse gas emission reductions compared to 1990 levels, and, in the consolidated 2026 text, a binding 2040 target of a 90 per cent net reduction.²⁰² State aid frameworks and industrial policy instruments must be read against that legal background.

CBAM is particularly important for the green steel discussion because it addresses carbon leakage at the border. Regulation (EU) 2023/956 establishes a carbon border adjustment mechanism to address greenhouse gas emissions embedded in the goods listed in Annex I upon importation into the Union, to prevent the risk of carbon leakage and support the Paris Agreement goals.²⁰³ It complements the EU ETS by applying a carbon adjustment to imports of covered goods while free allocation for the production of CBAM-covered goods is progressively phased out.²⁰⁴ For green steel, CBAM can help reduce the risk that low-carbon investment in the EU is undercut by carbon-intensive imports, but it does not itself create a price premium for low-carbon EU steel in downstream procurement. The

²⁰¹Per-Olov Johansson and Bengt Kriström, 'Green steel investments in the EU: Pie in the sky?' (2025) 82 Resource and Energy Economics 101491; ArcelorMittal Europe, 'ArcelorMittal Europe urges faster implementation of Steel and Metals Action Plan' (ArcelorMittal, 19 June 2025) <<https://corporate.arcelormittal.com/media/news/non-regulatory-news/arcelormittal-europe-urges-faster-implementation-of-steel-and-metals-action-plan>> accessed 10 August 2026; Reuters, 'ArcelorMittal drops plans for green steel in Germany due to high energy costs' (Reuters, 20 June 2025) <<https://www.reuters.com/sustainability/climate-energy/arcelormittal-drops-plans-green-steel-germany-due-high-energy-costs-2025-06-19/>> accessed 10 August 2026.

²⁰² Regulation (EU) 2021/1119 establishing the framework for achieving climate neutrality [2021] OJ L243/1 (European Climate Law), arts 2 and 4, as amended by Regulation (EU) 2026/667 of the European Parliament and of the Council of 11 March 2026 amending Regulation (EU) 2021/1119 as regards the setting of a Union intermediate climate target for 2040, OJ L, 2026/667, 18.3.2026.

²⁰³ Regulation (EU) 2023/956 establishing a carbon border adjustment mechanism [2023] OJ L130/52, art 1(1).

²⁰⁴ *ibid* art 1(2)-(3).

Industrial Accelerator Act proposal is therefore best understood as operating on a different side of the market: not carbon equalization at the border, but lead-market creation within public demand.

The Net-Zero Industry Act provides another complementary layer. Regulation (EU) 2024/1735 establishes a framework to strengthen the European net-zero technology manufacturing ecosystem, including by identifying net-zero technologies and improving conditions for manufacturing capacity.²⁰⁵ The Industrial Accelerator Act proposal builds on this logic but broadens the focus to energy-intensive industries, automotive value chains and strategic industrial capacity. It also proposes amendments to the Net-Zero Industry Act to align origin requirements and public intervention tools.²⁰⁶

This broader architecture confirms a shift in EU policy from a purely regulatory decarbonization model to an integrated competitiveness model. The European Green Deal originally described climate neutrality as a new growth strategy for a modern, resource-efficient and competitive economy.²⁰⁷ REPowerEU then linked the clean transition to energy security and the reduction of dependence on Russian fossil fuels.²⁰⁸ The Green Deal Industrial Plan responded to global subsidy competition and the net-zero industrial race.²⁰⁹ The Clean Industrial Deal and the Industrial Accelerator Act proposal represent the next stage: decarbonization is framed not only as environmental necessity but also as industrial survival, market creation and economic security.

7.6 Legal constraints: State aid control, Single Market integrity and external openness

The demand-side orientation of the Industrial Accelerator Act proposal creates legal and policy sensitivities. First, Article 12 expressly preserves the application of Articles 107 and 108 TFEU. This is essential because public support schemes that include low-carbon or Union origin requirements may still involve State aid. The fact that a measure pursues industrial resilience or decarbonization does not remove it from State aid control. Rather, it changes the policy context in which compatibility is assessed. If a public support scheme confers a selective advantage through State resources and affects competition and trade, it

²⁰⁵ Regulation (EU) 2024/1735 establishing a framework of measures for strengthening Europe's net-zero technology manufacturing ecosystem, OJ L, 2024/1735, 28.6.2024, arts 1 and 4.

²⁰⁶ Industrial Accelerator Act proposal, explanatory memorandum and Chapter VI.

²⁰⁷ Commission, 'The European Green Deal' COM(2019) 640 final, 1-3.

²⁰⁸ Commission, 'REPowerEU Plan' COM(2022) 230 final, 1-3.

²⁰⁹ Commission, 'A Green Deal Industrial Plan for the Net-Zero Age' COM(2023) 62 final, 1-5.

must either fall within a block exemption or be notified and assessed under the applicable compatibility framework.

Second, Union-origin requirements must be designed within three overlapping legal limits. Within the EU and EEA, contracting authorities remain bound by Treaty free-movement rules and the procurement principles of equal treatment, non-discrimination, transparency and proportionality. For covered procurement involving goods, services or suppliers from GPA parties or partners covered by reciprocal agreements, Article 25 of Directive 2014/24/EU, Article 43 of Directive 2014/25/EU and Article IV of the revised GPA require no-less-favorable treatment within the scope of those commitments. Operators from non-covered third countries do not enjoy the same entitlement, but access policy falls within the Union's common commercial policy rather than unilateral Member-State action, as clarified in *Kolin* and *CRRC Qingdao Sifang*. Articles 8 and 9 of the proposal seek to operationalize that distinction; they do not create an unrestricted European preference.²¹⁰

Third, the proposal includes exceptions for procurement and public support schemes where the requirements would create serious practical problems. Contracting authorities may decide not to apply Annex II or III requirements where only one supplier can provide the required products, no suitable tenders are submitted, or the requirements would create disproportionate costs or technical incompatibility, with cost differences above 25 per cent presumed disproportionate in procurement.²¹¹ For public support schemes, disproportionate costs are presumed where compliance would increase the cost of the underlying final product or technology by more than 30 per cent, and significant delays may be presumed where delays exceed seven months.²¹² These exceptions make the proposed framework less rigid, but they may also reduce its market-creation effect if used broadly.

Fourth, the proposal must be read together with the concern that State aid and industrial policy can fragment the Single Market when the largest Member States have greater fiscal capacity. The EESC's opinion on the CISAF welcomes the framework as a tool for

²¹⁰ Directive 2014/24/EU on public procurement and repealing Directive 2004/18/EC [2014] OJ L94/65, arts 18(1) and 25; Directive 2014/25/EU on procurement by entities operating in the water, energy, transport and postal services sectors and repealing Directive 2004/17/EC [2014] OJ L94/243, arts 36(1) and 43; Protocol Amending the Agreement on Government Procurement [2014] OJ L68/2, art IV; Case C-652/22 *Kolin İnşaat Turizm Sanayi ve Ticaret* EU:C:2024:910; Case C-266/22 *CRRC Qingdao Sifang and Others* EU:C:2025:178; Industrial Accelerator Act proposal, arts 8-9.

²¹¹ *ibid* art 11(3).

²¹² *ibid* art 12(3).

decarbonization and industrial competitiveness, but warns that State aid must not undermine the integrity of the Single Market and expresses concern about disparities in aid-granting capacity across Member States.²¹³ This concern also applies to the Industrial Accelerator Act. EU-level lead-market rules may reduce fragmentation by providing common requirements, but national funding capacity will still determine how much support can be deployed in practice.

Finally, there is a conceptual limit. A demand-side Regulation can support the emergence of markets for low-carbon products, but it cannot substitute for the core disciplines of State aid law. Aid must still be limited to what is necessary; it must not subsidize capacity expansion unrelated to decarbonization; and it must not allow Member States to engage in disguised protectionism under the language of climate policy. This is where the thesis's central balance reappears: State aid law can become a toolbox for green industrial competitiveness, but only if its compatibility analysis remains capable of distinguishing targeted transition support from inefficient subsidy races.

7.7 Conclusion

The Industrial Accelerator Act proposal strengthens the argument that EU State aid law is increasingly embedded in a wider green industrial policy architecture. The CEEAG, TCTF and CISAF address the compatibility of public support for investment, production transformation and strategic net-zero manufacturing. The proposed Industrial Accelerator Act addresses a different but related problem: the creation of demand and market signals for low-carbon and Union-based industrial products. Green steel shows why both dimensions are needed.

The recent green steel State aid decisions demonstrate that Article 107(3)(c) TFEU can accommodate deep industrial decarbonization projects under the CEEAG, provided incentive effect, necessity, proportionality and safeguards are established. Yet those decisions also show the limits of project-by-project aid approval. Without predictable demand, affordable clean energy, hydrogen infrastructure, CBAM effectiveness and coherent public procurement or support rules, the business case for green steel remains uncertain. The Industrial Accelerator Act proposal responds to this gap by seeking to

²¹³ European Economic and Social Committee, Opinion on 'Framework for State aid measures to support the Clean Industrial Deal' (C/2026/68), points 1.1-1.3 and 3.3-3.7.

create EU-level lead markets, especially through low-carbon requirements in procurement and public support schemes.

For the thesis as a whole, Chapter 7 therefore supports the central hypothesis but also qualifies it. EU State aid law has become a more flexible legal toolbox for the energy transition and green industrial competitiveness. However, its adequacy depends on its interaction with complementary instruments. State aid can support the supply side of industrial decarbonization; demand-side instruments such as the proposed Industrial Accelerator Act can help create markets for the resulting low-carbon products; CBAM can reduce the risk of carbon leakage; and EU-level coordination can mitigate the fragmentation risk created by unequal national fiscal capacity. The adequacy of the toolbox therefore lies not in State aid control alone, but in its disciplined integration with the broader Clean Industrial Deal architecture.

The final analytical step is therefore to return from the green-steel illustration to the constitutional problem of the internal market. Once State aid, procurement, origin criteria and foreign-subsidy responses are combined, the decisive question becomes how the Union can pursue green industrial competitiveness without allowing national fiscal capacity to determine the geography of industrial transformation.

Chapter 8 — Balancing Green Industrial Competitiveness and Single Market Integrity

8.1 Introduction: the new balance problem

Chapter 7 showed that green industrial competitiveness is increasingly pursued through a combination of supply-side State aid and demand-side market-creation instruments. This final analytical chapter steps back from those instruments and evaluates their systemic effect on the Single Market. The core point is not that State aid should be excluded from the energy transition, but that its new enabling role must remain compatible with the internal market discipline that gives Article 107 TFEU its constitutional function.²¹⁴

This transformation raises the central tension of the thesis. On the one hand, the Union needs a more active industrial policy if it is to meet binding climate targets, preserve energy-intensive production, build clean technology value chains and respond to foreign subsidy competition. On the other hand, the internal market depends on the premise that firms compete on the merits and that investment location is not simply determined by the fiscal capacity of the Member State in which a project happens to be located. The question is therefore not whether State aid should be used in the green transition. It already is, and it will remain necessary. The more difficult question is how far State aid law can accommodate industrial competitiveness without turning the internal market into a contest between national treasuries.

This chapter argues that EU State aid law provides a necessary but incomplete safeguard against fragmentation. The compatibility assessment, the soft-law frameworks, transparency obligations, aid intensity limits, competitive selection, claw-back mechanisms and relocation safeguards all discipline the use of public support. Yet those controls operate primarily at the level of individual measures or schemes. They are less effective at dealing with aggregate effects: the cumulative concentration of aid in fiscally stronger Member States, uneven administrative capacity, duplication of national initiatives, or the risk that a permissive State aid environment produces *de facto* industrial policy divergence within the Union. For that reason, the adequacy of the State aid toolbox

²¹⁴ Consolidated version of the Treaty on the Functioning of the European Union [2012] OJ C326/47, arts 107(1), 107(3)(c); Commission Communication, ‘Framework for State aid measures to support the Clean Industrial Deal’ (CISAF) C/2025/3602, OJ C/2025/3602, 4 July 2025.

depends not only on compatibility control, but also on whether it is embedded in broader EU-level coordination, financing and demand-side instruments.

8.2 From market-preserving control to strategic industrial policy

State aid control has traditionally served a market-preserving function. Article 107(1) TFEU prohibits, in principle, aid granted by a Member State or through State resources in any form whatsoever which distorts or threatens to distort competition by favoring certain undertakings or the production of certain goods, in so far as it affects trade between Member States. The prohibition is deliberately broad. As discussed earlier, EU case-law interprets advantage, selectivity, distortion of competition and effect on trade expansively. This breadth reflects the internal market rationale of the regime: national subsidies may be politically attractive domestically, but they can export distortions to other Member States and undermine the level playing field on which cross-border competition depends.²¹⁵

At the same time, Article 107(3)(c) TFEU has always preserved a space for public policy. Aid may be declared compatible where it facilitates the development of certain economic activities or areas and does not adversely affect trading conditions to an extent contrary to the common interest. In the green transition, this exception has become structurally more important. Environmental externalities, coordination failures, first-mover risks, high capital expenditure, uncertain demand for low-carbon products and exposure to international competition mean that market incentives alone may not deliver the speed or scale of investment required. This is particularly true for energy-intensive industries, where decarbonization frequently requires replacement of core production assets rather than incremental efficiency improvements.²¹⁶

The policy context has also changed. The European Green Deal framed decarbonization as a new growth strategy. REPowerEU added an energy security dimension by linking the clean transition to the reduction of dependence on Russian fossil fuels. The Green Deal Industrial Plan and the Clean Industrial Deal then moved the center of gravity further towards competitiveness, clean technology manufacturing and strategic autonomy. The

²¹⁵ TFEU, art 107(1); Case C-280/00 *Altmark Trans GmbH* EU:C:2003:415; Case C-487/06 P *British Aggregates Association v Commission* EU:C:2008:757; Case C-279/08 P *Commission v Netherlands* EU:C:2011:551.

²¹⁶ Communication from the Commission, ‘Guidelines on State aid for climate, environmental protection and energy 2022’ (CEEAG) [2022] OJ C80/1, especially sections 3 and 4; Leigh Hancher and Phedon Nicolaides, ‘Compatibility of State Aid with the Internal Market’ in Philipp Werner and Vincent Verouden (eds), *EU State Aid Control: Law and Economics* (2nd edn, Kluwer Law International 2025) 269-302.

Competitiveness Compass made this trajectory explicit by connecting productivity, energy costs, regulatory burden, strategic dependencies and foreign subsidy competition.²¹⁷

The result is a functional shift. State aid law is still not an autonomous industrial policy competence, and it does not authorize Member States to pursue national champions without limits. Nevertheless, the Commission's compatibility frameworks now structure how Member States may use public resources to pursue industrial decarbonization and strategic clean manufacturing. The law therefore performs two tasks at the same time: it enables aid where aid is necessary for the transition, and it attempts to ensure that such aid remains compatible with the internal market. The tension between these two tasks is the central legal problem of the current phase.

8.3 The fiscal capacity problem

The first major risk is fiscal asymmetry. A more permissive State aid framework does not benefit all Member States equally. It benefits, in practice, those that have the fiscal space, administrative capacity and industrial base to design and finance large schemes. This is not merely a political concern. It is an internal market concern, because public support may affect where firms invest, where value chains develop and which Member States capture the employment and technological benefits of the transition.

The European Economic and Social Committee's opinion on CISAF identifies this issue directly. While welcoming CISAF as a key tool for decarbonizing European industry and maintaining strategic investments in the Union, the EESC emphasizes that State aid must not undermine the integrity of the single market. It expresses concern about disparities in aid-granting capacity across Member States and encourages mechanisms that reward cross-border coordination and projects generating positive spill-over effects.²¹⁸

This concern is reinforced by the experience of the temporary crisis frameworks. The relaxation of State aid rules during the COVID-19 pandemic and the energy crisis helped firms and households absorb severe shocks, but it also revealed the uneven ability of

²¹⁷ Commission Communication, 'The European Green Deal' COM(2019) 640 final, 11 December 2019; Commission Communication, 'REPowerEU Plan' COM(2022) 230 final, 18 May 2022; Commission Communication, 'A Green Deal Industrial Plan for the Net-Zero Age' COM(2023) 62 final, 1 February 2023; Commission Communication, 'The Clean Industrial Deal: A joint roadmap for competitiveness and decarbonisation' COM(2025) 85 final, 26 February 2025; Commission Communication, 'A Competitiveness Compass for the EU' COM(2025) 30 final, 29 January 2025.

²¹⁸ European Economic and Social Committee, Opinion on 'Framework for State aid measures to support the Clean Industrial Deal' (COM(2025) 7600 final), C/2026/68, 30 January 2026, points 1.1-1.3 and 3.3-3.5.

Member States to use flexibility. The EESC notes that the largest Member States accounted for a very large share of notified crisis-aid budgets and that the application of State aid control in crisis conditions contributed to fragmentation risks, distorted competition and subsidy races.²¹⁹

The same logic applies to green industrial aid, but fiscal capacity should not be treated as a single-cause explanation. The ability and willingness to use a permissive framework also depend on administrative capacity, the size and structure of the economy, the existing industrial base, previous State aid practice and national policy preferences. Fiscal space remains important because it conditions the scale and duration of support, but the empirical relationship is multicausal. The internal-market risk is cumulative: different combinations of those factors can concentrate individually compatible measures in particular Member States and thereby alter the geography of industrial investment within the Union.

Academic and policy literature increasingly treats this as a defining challenge for European industrial policy. The IMF's analysis of industrial policy from a Single Market perspective stresses that national industrial policies can generate cross-border spillovers, including negative externalities when Member States compete for mobile investment. Similarly, economic literature on State aid control emphasizes that industrial policy can be efficiency-enhancing when it addresses clearly identified market failures, but that State aid control is needed to prevent unnecessary distortions and subsidy races.²²⁰

IPCEIs illustrate the issue in a coordinated setting, but two outcomes must be distinguished. Formal participation asks whether a Member State joins an IPCEI and supports at least one project; participation depth asks how much State aid it provides relative to its economic size. De La Cruz operationalizes the outcome as Member-State IPCEI aid adjusted against GDP, rather than treating simple participation and aid intensity as interchangeable. The study concludes that variation cannot be explained by fiscal capacity alone: combinations involving economy size, fiscal stress, exposure to Chinese foreign direct investment, past State aid spending and government preferences shape the

²¹⁹ EESC Opinion on CISAF, points 3.4-3.5. See also Antoine Eisl, 'A European State Aid Framework for the Clean Industrial Deal' (Jacques Delors Institute, Policy Paper No 310, February 2025).

²²⁰ International Monetary Fund, 'Industrial Policy in Europe: A Single Market Perspective' IMF Working Paper WP/24/249 (2024); Joanna Piechucka, Lluís Saurí-Romero and Ben Smulders, 'Industrial Policies, Competition, and Efficiency: The Need for State Aid Control' (2023) 19(4) *Journal of Competition Law & Economics* 503-526.

amount of IPCEI aid. Coordination therefore creates cross-border spillovers but does not by itself equalize participation or support volumes.²²¹

8.4 Legal safeguards inside the State aid toolbox

The second question is whether the internal safeguards of State aid law are capable of controlling these risks. The answer is partly positive. The modern compatibility frameworks are not blank cheques. They discipline aid through cumulative conditions that require the aid to pursue an eligible objective, produce an incentive effect, be necessary and appropriate, remain proportionate and avoid undue negative effects on competition and trade. These criteria are central to the CEEAG and are preserved, albeit in a simplified and more standardized form, in CISAF.²²²

The incentive-effect requirement is especially important. It seeks to ensure that public funding changes the behavior of the beneficiary rather than merely subsidizing investments that would have occurred anyway. In industrial decarbonization, this requirement is demanding because firms often face multiple reasons for investment delay: uncertain carbon prices, hydrogen availability, electricity costs, permitting delays, customer unwillingness to pay a green premium and global overcapacity. A robust incentive-effect analysis helps distinguish genuinely enabling aid from windfall support. The Court's judgment in *Est Wind Power* confirms, in the renewable energy context, the importance of the timing of the aid application and the concept of "start of works" for assessing whether aid can still incentivize the project.²²³

Proportionality also performs a key role. In principle, aid must be limited to the minimum necessary to induce the investment. Competitive bidding, funding-gap calculations, aid-intensity limits, maximum aid amounts and claw-back mechanisms are all ways of translating proportionality into administrative practice. The Commission's green steel decisions illustrate this logic. In *Salzgitter*, *ArcelorMittal France*, *ThyssenKrupp Steel Europe* and *ArcelorMittal Germany*, the Commission presented the aid as necessary, appropriate and proportionate, and relied on safeguards such as claw-back mechanisms,

²²¹ Ruben De La Cruz, 'A "Common" European Interest? Explaining Variation in IPCEI State Aid Between EU Member States' (2026) 14 *Politics and Governance* art 11453; Commission Communication, 'Criteria for the analysis of the compatibility with the internal market of State aid to promote the execution of important projects of common European interest' [2021] OJ C528/10.

²²² CEEAG, section 3; CISAF.

²²³ Case C-11/22 *Est Wind Power OÜ v AS Elering* EU:C:2023:765, especially paras 48-69.

monitoring of emission savings, hydrogen phase-in obligations, know-how dissemination and, in some cases, limits on capacity expansion.²²⁴

CISAF adds further ex ante discipline by defining categories of eligible aid, thresholds, maximum intensities and conditions. This gives Member States legal certainty and accelerates approval, but it also shifts part of the compatibility exercise from individualized balancing to framework-based presumptions. That shift is defensible if the framework conditions are carefully calibrated. It becomes more problematic if simplified categories are too broad, if aid intensities are insufficiently sensitive to sectoral realities, or if transparency and ex post evaluation do not capture cumulative effects. The EESC's warning that some CISAF metrics and thresholds may not fully reflect sectoral and regional realities is therefore important.²²⁵

The Court's 2025 judgment in Paks II also matters for this chapter. It confirms that the Commission's State aid assessment cannot be isolated from other rules of EU law where the alleged infringement arises from the financed economic activity, from the object of the aid, or from aspects that are inextricably linked to the aid. This strengthens the legal discipline around State aid as industrial policy. A measure cannot be made compatible simply because it is labelled green or strategic if its object or inseparable modalities conflict with EU law.²²⁶

However, these safeguards do not fully solve the fiscal-capacity problem. They control the compatibility of aid measures; they do not allocate fiscal capacity across Member States. They can prevent clearly excessive or badly targeted aid, but they cannot ensure that firms in all Member States have equal access to public support. Nor can they fully address the cumulative internal-market consequences of many separate schemes that are compatible when viewed individually. This is the structural limit of State aid law as a toolbox for competitiveness.

²²⁴Commission Decision C(2022) 7166 final, State Aid SA.104276 (2022/N) - Germany - Aid to Salzgitter for project SALCOS stage I (public version), recitals 18-19, 31-42, 105, 114, 121 and 127-134; Commission Decision C(2023) 5013 final, State Aid SA.104903 (2023/N) - France - Aid to ArcelorMittal France (public version), recitals 14, 22-32, 44-49, 116, 126, 136 and 142-147; Commission Decision C(2023) 5015 final, State Aid SA.105244 (2023/N) - Germany - Aid to ThyssenKrupp for project tkH2Steel (public version), recitals 18-20, 30-43, 127, 141, 151 and 159-170; Commission Decision C(2024) 1306 final, State Aid SA.104898 (2024/N) - Germany - RRF - Aid to ArcelorMittal Bremen and ArcelorMittal Eisenhüttenstadt for project DRIBE2 (public version), recitals 19, 28-43, 120, 129, 136 and 142-149.

²²⁵ EESC Opinion on CISAF, points 1.4, 3.10-3.13.

²²⁶ Case C-59/23 P Republic of Austria v Commission EU:C:2025:686, especially the Court's reasoning on EU-law infringements linked to the financed activity, the object of the aid, or aspects inextricably linked to the aid.

8.5 Coordination, EU-level funding and positive spillovers

For this reason, the green industrial State aid toolbox must be complemented by coordination mechanisms that operate above the level of individual national schemes. The EESC's recommendation that State aid rules should reward cross-border coordination and positive spillover effects is persuasive. Where a project contributes to integrated European value chains, shared infrastructure, technology dissemination or multi-country deployment, a stronger case exists for higher permissible aid or more favorable treatment. This would align State aid control with the economic reality that industrial decarbonization is not confined to national borders.²²⁷

IPCEIs already provide one model, although an imperfect one. They allow Member States to jointly support projects that make an important contribution to EU objectives and generate spillovers beyond the participating undertakings or Member States. In theory, this is exactly the kind of instrument that can reconcile industrial policy with the Single Market. In practice, however, IPCEIs are complex, slow and administratively demanding. Participation is not equally easy for all Member States or firms. The challenge is therefore to preserve the cross-border and spillover logic of IPCEIs while simplifying access and avoiding a framework that mainly serves those with the administrative capacity to navigate it.²²⁸

EU-level funding can also reduce the pressure on national budgets. Instruments such as the Innovation Fund and the Recovery and Resilience Facility have already supported decarbonization investments, while the Clean Industrial Deal announces further financing initiatives. The legal significance of EU-level financing is that it can reduce the dependence of industrial policy on national fiscal capacity. It does not remove the need for State aid control, because EU-funded national measures may still involve State aid. But it can mitigate the distributional imbalance that arises when the transition relies predominantly on national budgets.²²⁹

²²⁷ EESC Opinion on CISAF, points 1.2 and 3.5.

²²⁸ IPCEI Communication; De La Cruz.

²²⁹ Commission, The Clean Industrial Deal: A joint roadmap for competitiveness and decarbonisation COM(2025) 85 final; Regulation (EU) 2021/241 establishing the Recovery and Resilience Facility [2021] OJ L57/17; Commission Decision C(2024) 1306 final, State Aid SA.104898 (2024/N) - Germany - RRF - Aid to ArcelorMittal Bremen and ArcelorMittal Eisenhüttenstadt for project DRIBE2 (public version), recitals 16 and 19.

Regional aid rules also remain relevant. The Regional Aid Guidelines allow higher aid intensities in disadvantaged regions and therefore offer a way to connect industrial decarbonization with cohesion. Yet regional aid cannot be the sole answer. Clean industrial investment depends on electricity infrastructure, hydrogen availability, skilled labor, industrial clusters, grid connections and downstream demand. Some regions may be formally eligible for higher aid intensities but still lack the infrastructure or ecosystem conditions required to attract projects. Cohesion-oriented State aid therefore needs to be connected with infrastructure, skills and demand-side policy.²³⁰

The proposed Industrial Accelerator Act is relevant for the same reason. Its legal and policy logic is different from State aid law. Rather than only subsidizing supply, it seeks to create lead markets for European low-carbon industrial products and net-zero technologies through public procurement, public support schemes, permitting simplification and industrial acceleration areas. The proposal's subsidiarity materials expressly recognize that uncoordinated national measures risk fragmenting the Single Market and that integrated value chains require EU-level action. This makes the IAA a potential demand-side complement to CISAF: State aid may help firms invest, while EU-level market-creation rules may help ensure that low-carbon products have a credible demand base across the Union.²³¹

This is significant for the overall thesis. It shows that the adequacy of the State aid toolbox cannot be assessed in isolation. State aid law can reduce the investment gap, but it cannot by itself create customers willing to pay for low-carbon steel, guarantee affordable clean electricity, build grids, shorten permitting or equalize fiscal capacity. A coherent EU approach therefore requires a division of labor: State aid rules should enable and discipline public support; internal market legislation should create common demand-side conditions; EU funding should reduce fiscal asymmetry; and competition control should prevent the transition from becoming a subsidy race.

²³⁰ Communication from the Commission, 'Guidelines on regional State aid' [2021] OJ C153/1.

²³¹ Commission Proposal for a Regulation establishing a framework of measures for the acceleration of industrial capacity and decarbonisation in strategic sectors, COM(2026) 100 final, 4 March 2026; Commission Staff Working Document, Subsidiarity Grid, SWD(2026) 70 final, 4 March 2026; Commission Staff Working Document, Executive Summary of the Impact Assessment, SWD(2026) 72 final, 4 March 2026.

8.6 The external dimension: foreign subsidies, CBAM and open strategic autonomy

The Single Market problem also has an external dimension. EU industry is not competing only within the Union. It is exposed to foreign subsidies, global overcapacity, uneven carbon constraints and strategic dependencies in clean technologies. This external pressure explains why the Union has moved towards a more assertive industrial policy. But it does not follow that the EU should respond by abandoning internal subsidy discipline. The legal challenge is to respond to external distortions without importing those distortions into the internal market.

The Foreign Subsidies Regulation is important in this respect. It establishes a harmonized framework to address distortions caused by foreign subsidies in the internal market, including in concentrations and public procurement. It defines a foreign subsidy as a financial contribution by a third country that confers a benefit on an undertaking engaging in economic activity in the internal market and is limited, in law or in fact, to one or more undertakings or industries. It also provides indicators for assessing distortions, including the amount and nature of the subsidy, the situation of the undertaking and the purpose and conditions attached to the subsidy.²³²

The Foreign Subsidies Regulation does not replace State aid control. It complements it. State aid rules discipline Member State subsidies; the Foreign Subsidies Regulation addresses third-country subsidies that affect competition inside the Union. Together, they support a more symmetrical competitive environment: EU firms remain subject to internal subsidy control, while foreign-supported undertakings operating in the internal market may also be scrutinized. This is relevant to the legitimacy of State aid control. Without an external instrument, strict internal discipline could appear one-sided in sectors exposed to heavily subsidized foreign competitors.

CBAM performs a different but related function. It addresses greenhouse gas emissions embedded in specified imported goods in order to prevent carbon leakage and complements the EU ETS by applying an equivalent set of rules to imports. For energy-intensive sectors such as steel, CBAM is intended to reduce the risk that EU decarbonization simply shifts production to jurisdictions with weaker carbon constraints.

²³² Regulation (EU) 2022/2560 on foreign subsidies distorting the internal market [2022] OJ L330/1, arts 1, 3 and 4.

In this sense, CBAM supports the business case for domestic low-carbon production and reduces the need to rely exclusively on subsidies to protect competitiveness.²³³

The relationship between State aid, CBAM and the Foreign Subsidies Regulation is therefore central to open strategic autonomy. State aid supports domestic transition where market failures or strategic risks justify intervention. CBAM reduces carbon leakage and strengthens the competitiveness of low-carbon production under equivalent carbon-cost conditions. The Foreign Subsidies Regulation protects the internal market from distortive foreign financial contributions. None of these instruments is sufficient alone. Together, however, they allow the EU to respond to external competition without relying only on national subsidies.

This also clarifies the legal risk around “European preference”. CISAF and related policy documents increasingly encourage Member States to consider European-specific criteria, social conditionalities and resilience objectives. The EESC welcomes such criteria only if they remain proportionate, linked to the objectives of the Clean Industrial Deal, consistent with open strategic autonomy and sensitive to the role of trusted partners. That caution is essential. European preference cannot become a disguised protectionist device or a route around procurement, trade or internal market obligations. It must be framed as resilience, sustainability, security of supply and EU added value, not as unconditional nationality-based favoring.²³⁴

8.7 Transparency, monitoring and the problem of cumulative effects

A further weakness of the current toolbox is the limited visibility of cumulative effects. State aid transparency has improved, but the pace and granularity of public information remain insufficient for real-time evaluation of a fast-moving industrial policy environment. This matters because the risks identified in this chapter are not always visible in individual compatibility decisions. They emerge over time, across sectors and across Member States. Hinkley Point C makes the problem doctrinal as well as empirical: an individual compatibility decision cannot be based on speculation about the precedent effect of the decision or the cumulative impact of future aid plans. On the analysis advanced in this thesis, the aggregate risks of fiscal asymmetry and subsidy competition must therefore be

²³³ Regulation (EU) 2023/956 establishing a carbon border adjustment mechanism [2023] OJ L130/52, arts 1 and 2.

²³⁴ EESC Opinion on CISAF, points 1.5, 3.15-3.16.

addressed through framework-level safeguards and evidence-based ex post monitoring, rather than treated as speculative negative effects in individual compatibility decisions.

The EESC calls for a comprehensive assessment of CISAF ahead of 2030, including its actual impact on decarbonization objectives and the Single Market. It also criticizes the lack of sufficiently prompt analytical data on aid granted and effectively disbursed under CISAF and related frameworks. This is a crucial point. Compatibility approval tells us that a measure satisfies legal conditions ex ante. It does not necessarily tell us whether the measure actually produced decarbonization, whether it crowded out private investment, whether it shifted activity from another Member State, or whether it concentrated industrial advantages in particular regions. The ArcelorMittal Germany example discussed in Chapter 7 illustrates this gap: a measure may satisfy the ex ante compatibility logic and nevertheless fail to deliver the investment if energy, hydrogen, regulatory and demand conditions remain insufficient. Recent commentary has therefore suggested stricter ex ante coordination for large aid projects, more rigorous ex post evaluation of outcomes and, more controversially, overall State aid caps as possible responses to the limits of a decentralized subsidy architecture.²³⁵

On this basis, the thesis proposes that monitoring should be treated not as an administrative afterthought but as part of the legal architecture of green industrial State aid. For large schemes and strategic projects, ex post reporting should track not only commitments and approved budgets, but also amounts effectively disbursed, realized investment, emission reductions, capacity effects, technology dissemination, relocation effects and cross-border spillovers. Where aid is justified by strategic resilience, monitoring should also evaluate whether the measure improved resilience at Union level or merely shifted resources within the internal market. A stronger evaluation architecture would not contradict Hinkley Point C; it would respond to the limitation identified in that case by moving cumulative-effect assessment to the framework and ex post stages, where it can be based on actual evidence rather than speculation.

Transparency is also relevant to democratic legitimacy. The more State aid becomes a central tool of industrial policy, the more important it is that citizens, firms and other

²³⁵EESC Opinion on CISAF, pts 1.6 and 3.7; Lena Hornkohl and Dionysios Pelekis, 'Aid and Abet? The Role of State Aid in Shaping EU Industrial Policy (And its Limits)' (Kluwer Competition Law Blog, 20 February 2025) <<https://competitionlawblog.kluwercompetitionlaw.com/2025/02/20/aid-and-abet-the-role-of-state-aid-in-shaping-eu-industrial-policy-and-its-limits/>> accessed 10 August 2026.

Member States can understand who receives public support, on what conditions and with what effects. This is especially important when aid is justified by broad concepts such as competitiveness, resilience or strategic autonomy. Without transparent monitoring, these concepts may become too elastic and risk weakening the discipline that makes State aid law compatible with the internal market.

8.8 Assessment: conditional adequacy rather than full sufficiency

Assessed against the four criteria defined in Chapter 1, the toolbox is strong on authorization capacity. The CEEAG, TCTF and CISAF allow Member States to support renewable energy, industrial decarbonization, clean-technology manufacturing and, under specific conditions, electricity-price relief at greater speed and scale. Criterion (i) is therefore substantially met, although project delivery still depends on energy, infrastructure, permitting and demand conditions outside State aid law.

Criterion (ii) is also met in legal design, but less uniformly across instruments. The CEEAG retain a relatively individualized assessment of incentive effect, necessity and proportionality; the TCTF and CISAF rely more heavily on standardized thresholds, presumptions, competitive allocation, funding-gap limits, claw-back mechanisms and reporting. Those devices preserve compatibility discipline in principle, but their effectiveness depends on calibration, national implementation and ex post verification, especially where aid reduces operating costs.

Criterion (iii) is only partly met. Anti-relocation rules, regional differentiation, aid ceilings, individual-notification thresholds and Union-law legality checks constrain direct location distortions. They do not remove the ability of fiscally and administratively stronger Member States to offer more or larger support, and matching aid can convert external subsidy competition into internal competition over the location of investment.

Criterion (iv) is the clearest weakness. The existing architecture can publish and evaluate individual measures, but it lacks a comprehensive mechanism for aggregating national expenditure, comparing realized outcomes across Member States or reallocating support according to Union-wide priorities. The overall answer is therefore conditional adequacy: EU State aid law is an effective enabling and disciplining instrument, but not a complete coordination or industrial-policy system. Full adequacy requires EU-level funding, cross-border design, timely data and complementary demand, energy and trade instruments.

8.9 Conclusion

This chapter has argued that the central challenge of EU State aid law in the energy transition is no longer simply whether green aid can be compatible with the internal market. The modern framework already answers that question affirmatively. The harder issue is whether green industrial aid can be made compatible with the internal market at scale. CISAF, CEEAG and related frameworks contain meaningful safeguards, but they cannot alone solve fiscal asymmetry, cumulative fragmentation or uneven industrial geography.

The proper role of State aid law is therefore neither purely restrictive nor fully permissive. It should operate as a conditional enabling framework: allowing Member States to support decarbonization and clean industrial competitiveness where markets fail, while preserving the Union-wide conditions of competition that make the Single Market valuable. The broader legal architecture - including the proposed Industrial Accelerator Act, the Foreign Subsidies Regulation, CBAM, EU-level funding and structural energy-market measures - must carry the parts of the transition that State aid law cannot perform alone.

The final conclusion of the thesis follows from this balance. EU State aid law can provide an adequate toolbox for the energy transition only if adequacy is understood as part of a wider EU governance framework. It is a necessary instrument, but not a complete industrial strategy. Its success will depend on whether the Commission and Member States can preserve the internal market discipline of State aid control while using that discipline to guide, rather than obstruct, the Union's green industrial transformation.

Chapter 9 — Conclusion

9.1 Answering the Research Question

This thesis answers the research question with a qualified affirmative. EU State aid law is adequate as an authorization and discipline mechanism: it can mobilize support for transition investments and subject that support to incentive effect, necessity, proportionality, legality and balancing. It is not fully adequate as a system of Union-wide industrial coordination, because it neither equalizes national aid capacity nor systematically governs cumulative effects. Its adequacy is therefore conditional on framework quality, monitoring, EU-level financing and complementary energy, demand and trade instruments.

The functional transformation traced in the thesis is one of regulated enablement. State aid control still protects the Single Market from selective national advantage, but it also defines the conditions under which public resources may support decarbonization, clean manufacturing and industrial resilience. This is not a movement from law to politics; it is an expansion of the tasks performed through Article 107(3)(c), while the provision's negative condition remains the constitutional limit.

The four criteria produce a differentiated result: authorization capacity is strong; legal discipline remains credible but depends increasingly on framework calibration; control of direct relocation and overcompensation is meaningful but incomplete; and aggregate coordination is the principal weakness. This conclusion is situated within the policy sequence from the European Green Deal and Climate Law through REPowerEU to the Clean Industrial Deal, but rests on the legal operation of Article 107(3)(c), not on policy aspiration alone.²³⁶

²³⁶ Regulation (EU) 2021/1119 establishing the framework for achieving climate neutrality [2021] OJ L243/1, arts 1, 2 and 4, as amended by Regulation (EU) 2026/667 of the European Parliament and of the Council of 11 March 2026 amending Regulation (EU) 2021/1119 as regards the setting of a Union intermediate climate target for 2040, OJ L, 2026/667, 18.3.2026; Commission, The European Green Deal, COM(2019) 640 final; Commission, REPowerEU Plan, COM(2022) 230 final; Commission, The Clean Industrial Deal: A joint roadmap for competitiveness and decarbonisation, COM(2025) 85 final; Consolidated Version of the Treaty on the Functioning of the European Union [2012] OJ C326/47, art 107(3)(c).

9.2 The Continuing Constitutional Discipline of Article 107(3)(c) TFEU

Article 107(3)(c) TFEU is sufficiently flexible to accommodate transition-oriented and strategic industrial aid, but it is not an unlimited industrial-policy mandate. Hinkley Point C removes neither the positive requirement that aid facilitate the development of an economic activity nor the negative requirement that trading conditions remain consistent with the common interest. The absence of an autonomous market-failure or common-interest-objective requirement therefore enlarges the Commission's policy space without eliminating Treaty discipline.²³⁷

That discipline is operationalized through incentive effect, necessity, appropriateness, proportionality and balancing. Est Wind Power shows that incentive effect must reflect the real state of the investment rather than formal timing alone. Paks II adds a legality constraint: infringements arising from the financed activity, the object of the aid or an aspect inextricably linked to it cannot be insulated from the Article 108 procedure.²³⁸

The thesis's original doctrinal contribution is narrower. Hinkley Point C prevents an individual compatibility decision from being based on speculative precedent effects or future cumulative aid plans. It does not itself create a formal burden shift. The inference advanced here is that systemic distortion must therefore be controlled principally through framework design, transparent data, ex post evaluation and EU-level coordination, where actual aggregate evidence can be assessed.

9.3 From CEEAG to TCTF and CISAF: A Three-Stage Evolution

The three principal frameworks reveal continuity as well as change. The CEEAG represent controlled flexibility: they authorize broad climate, environmental and energy aid while retaining individualized counterfactual, proportionality, competitive-allocation and anti-lock-in safeguards.²³⁹

The TCTF then combined crisis support principally under Article 107(3)(b) with transition sections under Article 107(3)(c). Its renewable-energy, industrial-decarbonization and strategic-manufacturing provisions introduced faster procedures, geographical

²³⁷ Case C-594/18 P Austria v Commission (Hinkley Point C) EU:C:2020:742.

²³⁸ Case C-11/22 Est Wind Power OÜ v AS Elering EU:C:2023:765; Case C-59/23 P Austria v Commission (Paks II) EU:C:2025:686.

²³⁹ Commission, Guidelines on State aid for climate, environmental protection and energy 2022 [2022] OJ C80/1.

counterfactuals and matching aid, making external subsidy competition an explicit compatibility consideration.²⁴⁰

CISAF stabilizes much of that transition logic until 2030. It gives greater certainty and speed through categories, thresholds and presumptions, but correspondingly places more weight on ex ante framework calibration, national implementation and ex post monitoring. The sequence is therefore not abandonment of State aid control, but a shift from individualized environmental aid towards more standardized green-industrial enablement.²⁴¹

The decisive question across the three stages is thus not how much aid they permit in the abstract, but whether simplified authorization remains capable of identifying additional investment, limiting overcompensation and containing location and cumulative distortions.

9.4 Green Industrial Competitiveness and the Limits of State Aid Alone

Green steel confirms both the capacity and the limit of the toolbox. The Commission's CEEAG decisions show that Article 107(3)(c) can authorize very large decarbonization projects with funding-gap analysis, claw-back, monitoring and capacity safeguards. ArcelorMittal's later non-delivery in Germany does not invalidate the ex ante decisions; it shows that lawful aid cannot by itself supply affordable electricity and hydrogen, infrastructure, regulatory certainty or a market for low-carbon output.²⁴²

The doctrinal significance of those decisions is therefore confined to compatibility: they demonstrate that deep process transformation can qualify as development of an economic

²⁴⁰ Commission, Temporary Crisis and Transition Framework for State Aid measures to support the economy following the aggression against Ukraine by Russia [2023] OJ C101/3, as amended and consolidated in 2024; Commission, A Green Deal Industrial Plan for the Net-Zero Age, COM(2023) 62 final.

²⁴¹ Commission Communication, Framework for State aid measures to support the Clean Industrial Deal (CISAF) [2025] OJ C/2025/3602.

²⁴² Commission Decision C(2022) 7166 final, State Aid SA.104276 (2022/N) - Germany - Aid to Salzgitter for project SALCOS stage I (public version), recitals 18-19, 31-42, 105, 114, 121 and 127-134; Commission Decision C(2023) 5013 final, State Aid SA.104903 (2023/N) - France - Aid to ArcelorMittal France (public version), recitals 14, 22-32, 44-49, 116, 126, 136 and 142-147; Commission Decision C(2023) 5015 final, State Aid SA.105244 (2023/N) - Germany - Aid to ThyssenKrupp for project tkH2Steel (public version), recitals 18-20, 30-43, 127, 141, 151 and 159-170; Commission Decision C(2024) 1306 final, State Aid SA.104898 (2024/N) - Germany - RRF - Aid to ArcelorMittal Bremen and ArcelorMittal Eisenhüttenstadt for project DRIBE2 (public version), recitals 19, 28-43, 120, 129, 136 and 142-149; Per-Olov Johansson and Bengt Kriström, 'Green steel investments in the EU: Pie in the sky?' (2025) 82 Resource and Energy Economics 101491; ArcelorMittal Europe, 'ArcelorMittal Europe urges faster implementation of Steel and Metals Action Plan' (ArcelorMittal, 19 June 2025) <<https://corporate.arcelormittal.com/media/news/non-regulatory-news/arcelormittal-europe-urges-faster-implementation-of-steel-and-metals-action-plan>> accessed 10 August 2026; Reuters, 'ArcelorMittal drops plans for green steel in Germany due to high energy costs' (Reuters, 20 June 2025) <<https://www.reuters.com/sustainability/climate-energy/arcelormittal-drops-plans-green-steel-germany-due-high-energy-costs-2025-06-19/>> accessed 10 August 2026.

activity and can survive the negative condition when additionality and proportionality are evidenced. They do not establish commercial viability independently of the wider industrial ecosystem.

The proposed Industrial Accelerator Act addresses the complementary demand-side problem through common low-carbon and origin-related conditions in procurement and public-support schemes. Because it remains a legislative proposal, it supports the thesis only as evidence of the direction of EU policy and of the perceived limits of supply-side aid, not as existing law.²⁴³

The resulting architecture is necessarily plural. State aid can reduce financing gaps; the Net-Zero Industry Act and proposed Industrial Accelerator Act can shape capacity and demand; CBAM can address carbon leakage; the Foreign Subsidies Regulation can respond to third-country distortions; and electricity-market and infrastructure measures determine key input conditions. Adequacy therefore depends on disciplined interaction rather than on State aid alone.²⁴⁴

9.5 Single Market Integrity as the Decisive Constraint

Single Market integrity remains the decisive constraint because national aid capacity is structurally uneven. The resulting pattern is not caused by fiscal space alone: administrative capacity, economic size, industrial structure, prior State aid experience and policy preferences also matter. The legal concern is the cumulative outcome when those factors concentrate individually compatible support and influence investment location.

The EESC's CISAF analysis and Hinkley Point C expose complementary parts of the problem. The former identifies unequal aid capacity and weak aggregate data; the latter limits speculative reliance on future cumulative effects in an individual decision. Together

²⁴³ Commission, Proposal for a Regulation establishing a framework of measures for the acceleration of industrial capacity and decarbonisation in strategic sectors (Industrial Accelerator Act), COM(2026) 100 final.

²⁴⁴ Regulation (EU) 2024/1735 establishing a framework of measures for strengthening Europe's net-zero technology manufacturing ecosystem, OJ L, 2024/1735, 28.6.2024; Regulation (EU) 2023/956 establishing a carbon border adjustment mechanism [2023] OJ L130/52; Regulation (EU) 2024/1747 amending Regulations (EU) 2019/942 and (EU) 2019/943 as regards improving the Union's electricity market design, OJ L, 2024/1747, 26.6.2024; Regulation (EU) 2022/2560 on foreign subsidies distorting the internal market [2022] OJ L330/1.

they support the thesis's conclusion that framework-level and ex post governance are indispensable.²⁴⁵

EU-level finance, cross-border projects and common lead-market rules are therefore not optional supplements. They reduce reliance on national budgets, reward Union-wide spillovers and make it less likely that the geography of the transition will be determined by the strongest national balance sheets.

9.6 Final Assessment

The final answer is that EU State aid law provides a powerful but conditionally adequate toolbox. It is capable of enabling transition investment and preserving meaningful compatibility discipline, but it is not sufficient to coordinate the Union-wide distribution and cumulative effects of nationally financed industrial support.

Three governance implications follow. First, simplified frameworks must retain rigorous incentive-effect, proportionality and legality controls, especially for operating-cost relief and matching aid. Secondly, the Commission should build timely cross-framework data and ex post evaluation around amounts granted and disbursed, realized investment, emissions, relocation and spillovers. Thirdly, greater use of EU-level finance, cross-border projects and common lead-market rules is needed so that national fiscal capacity does not determine the geography of the transition.

CISAF should accordingly be judged not only by approval speed or authorized budgets, but by realized additional investment, measurable decarbonization and distributional effects across the Single Market. The same outcome-based discipline should inform any future extension or replacement of the Framework.

The appropriate model is regulated enablement: broad enough to support industrial transformation, but conditional on evidence, legality, proportionality, transparency and control of cross-border effects. Green industrial competitiveness may inform compatibility; it cannot become a general justification for national industrial advantage.

The energy transition does not weaken the case for State aid control; it strengthens the need for a framework capable of enabling necessary intervention while preventing fragmentation. EU State aid law can perform that role only if ambition and discipline

²⁴⁵ European Economic and Social Committee, Opinion on Framework for State aid measures to support the Clean Industrial Deal (COM(2025) 7600 final) [2026] OJ C/2026/68, pts 1.1-1.3, 3.3-3.7; Hinkley Point C, paras 85-86.

develop together, preserving the Single Market on which European competitiveness ultimately depends.

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