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CLEAN INDUSTRIAL DEAL: POLITICAL CHALLENGES AND INDUSTRIAL OPPORTUNITIES FOR EUROPE

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EDITORIAL

SHAPING A CLEANER INDUSTRY: HIGH STAKES FOR EUROPE'S GLOBAL COMPETITIVENESS

Europe is wagering its industrial, economic, and strategic future in a decisive race: to succeed in its green transition without losing ground to China and the United States. The challenge is immense, but the roadmap is now clear: the Clean Industrial Deal, launched by the European Commission, marks a historic turning point where decarbonisation, sovereignty, innovation, and competitiveness converge.

The Industrial Backbone: Steel, Automotive, Chemicals

The Clean Industrial Deal is built around the most carbon-intensive sectors – steel, automotive, and chemicals – not to penalise them, but because they are the pillars of our economy and sovereignty. Their transformation will elevate entire European value chains. These industries already face very high energy costs, unfair competition, and aging infrastructure. Their recovery depends on a proactive policy combining public support, regulatory stability, and protection against trade distortions.

Hydrogen, Batteries, Circular Economy: Levers of Sovereignty

Three strategic levers have been identified: hydrogen, batteries, and the circular economy. Hydrogen is essential to decarbonise heavy industry, yet its rollout is hindered by high costs, lack of infrastructure, and sometimes discouraging regulation. A wake-up call is needed: support for low-carbon hydrogen, legal stability clauses, and faster permitting.

In the battery sector, Europe has started to build a competitive industry through public-private partnerships such as BATT4EU. But the pace remains too slow: the next budgetary framework must make massive investments in this value chain if we are to compete with Asia.

The circular economy remains too undervalued in Europe's industrial strategy. Yet reducing our dependence on critical raw materials requires repair, recycling, and eco-design. Instead of opening new mines, we must invest in efficiency and resource-conscious practices.

Competitiveness and Transition Go Hand in Hand

The green transition will only succeed if it is economically viable. Reducing electricity costs for industry – notably by strengthening energy independence and stabilising markets – is a priority. This also means moving toward a truly integrated European energy market: interconnected, resilient to external shocks.

Moreover, excessive bureaucracy is a burden. Businesses today must navigate a multitude of plans, reports, and indicators – often redundant – that slow down action and investment. The call for simplification, echoed by several Members of Parliament, is legitimate. A single transformation and investment plan, backed by clear incentives and administrative recognition, must become the norm.

Towards Assertive Industrial Autonomy

In a world where states heavily subsidise their industries, Europe can no longer afford to operate within an overly rigid framework. It must protect its champions, safeguard its strategic resources (such as steel scrap), develop effective carbon adjustment mechanisms, and avoid poorly calibrated rules that weaken its industrial base.

European industry can succeed in its transformation – but it needs a strategy that is clear, coherent, and easy to navigate. The Clean Industrial Deal is a first step. The real test will be in its swift implementation, with tangible results and governance that includes industrial stakeholders at every level.

In the face of climate urgency, geopolitical tensions, and global economic fragmentation, Europe must make a choice: endure or act. The real solution lies in accelerating investment, simplifying regulation, and ensuring strategic coherence.

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STÉPHANE **SÉJOURNÉ**

Vice-President of the European Commission for Prosperity and Industrial Strategy

Strategic Sectors for a **Clean Industrial Future**: The **Foundational Role** of **Steel, Automotive** and **Chemical Industries** in **Europe's Clean Industrial Deal**

The Clean Industrial Deal is the pledge of the von der Leyen II Commission. A pledge to stay on course with our climate objectives. while ensuring growth. It is a structural transformation of our industrial base — a roadmap to make Europe's industry both globally competitive and climate neutral. For these two must go hand in hand.

In fact with this Deal, we affirm a fundamental truth: our environmental and economic goals are not at odds, they are mutually reinforcing. Industrial decarbonisation, driven by innovation and investment, is an engine for resilience, sovereignty and prosperity in the 21st century.

But to succeed, the Clean Industrial Deal must be rooted in the strength of our industrial pillars. It must begin with the sectors that are both the most emissions-intensive and the most foundational: steel and metals, automotive, and chemicals. These sectors are not only essential for Europe's economic performance; they also anchor entire value chains, millions of jobs and strategic capacities.

From Challenge to Transformation

Today, these sectors face immense challenges. Europe's chemical industry, for example, is the fourth largest manufacturing sector in the EU, employing 1.2 million people directly and contributing indirectly to 19 million jobs across the continent. Yet, it is under pressure from high energy prices, ageing infrastructure, and a loss of competitiveness driven by unfair global competition. Since 2003, the EU's global market share in chemicals has halved. Basic chemicals are particularly at risk, with over 11 million tonnes of production capacity announced for closure in the past two years.

The steel and metals sector, once the very foundation of the European project, faces similar stress. With global overcapacity reaching four and a half times the EU's annual consumption, market distortions and high energy prices have led to reduced output and postponed decarbonisation projects. The aluminium sector's performance sends a warning sign: half of its primary production capacity has been curtailed since 2021.

The automotive sector, meanwhile, represents €1 trillion of EU GDP and employs 13 million Europeans. It is undergoing an unprecedented transformation — from combustion engines to electric drivetrains, from mechanical design to software engineering. For Europe to lead in the 21st century of zero-emission, connected, and autonomous mobility like it did in the 20th century, it needs to regain competitiveness in critical technologies like batteries, AI, and next-generation manufacturing.

These sectors are not relics of the past. They are the test beds for Europe's industrial future.

Their successful decarbonisation will send ripple effects through every supply chain — from raw materials to advanced manufacturing, from defence to pharmaceuticals, from mobility to energy storage. That is why the Clean Industrial Deal puts them at its core – Europe has the know how and innovative capacities in these areas and a strong competitive advantage in many of the clean tech sectors

Emergency Plans for Industrial Resilience

To avoid irreversible damage to our industrial base, the Commission has launched a series of emergency actions, building on extensive dialogue with industry stakeholders.

For steel and metals, we presented a European Steel and Metals Action Plan, focused on lowering energy costs, preventing carbon leakage, and investing in clean technologies like hydrogen-based and circular production. We are also working on modernising trade defence instruments and accelerating grid connections for electrification.

For the chemical industry, we are moving at full speed to prepare an action plan that will enable Europe's industry of industries" to rebound, transform, invest and drive growth in Europe.

For the automotive sector, our Industrial Action Plan lays out five key pillars: innovation and digitalisation, clean mobility, supply chain resilience, skills development, and a level playing field. We are investing €1 billion through Horizon Europe from 2025–2027, accelerating battery innovation and vehicle software platforms, and removing bottlenecks to zero-emission vehicle uptake, including through the Clean Transport Corridors initiative. We want to create a European battery value chain.

Strategic Dialogue and Policy Certainty

These actions are not ad hoc. They are part of a new, more strategic industrial governance for Europe. The Clean Industrial Deal must be implemented through permanent strategic dialogues with industry, social partners, and Member States.

They are designed to identify bottlenecks, align (and often accelerate) regulatory timelines, map investment needs and mobilise public support tools. In parallel, the new Clean Industrial Deal State Aid Framework, to be adopted in June, will give Member States more flexibility to accelerate decarbonisation investments, acknowledging that while maintaining fair competition in the Single Market is important, today's competition is global.

In addition, our upcoming guidance on Contracts for Difference, the use of Power Purchase Agreements, and anticipatory grid investments will provide the policy certainty needed to unlock private capital and derisk first-of-a-kind projects.

Industrial Sovereignty Through Clean Transition

The success of the Clean Industrial Deal depends on whether our foundational industries — steel, automotive, and chemicals — can lead the clean transition and stay globally competitive next to maintaining and enhancing the competitive edge of the clean tech industries. These sectors are not only among the most emissions-intensive; they are also deeply interconnected and central to Europe sovereignty and a condition of our prosperity.

Losing these capacities would not only undermine our climate objectives — it would risk hollowing out Europe's industrial sovereignty. That is why the emergency plans and strategic dialogues are more than crisis management. They are the conditions for the success of the Clean Industrial Deal.

With bold leadership, close collaboration, and an unshakable commitment to our industrial future, Europe can turn this transition into an opportunity. It is not only about reducing emissions — it is about renewing the promise of European industry. Giving confidence back to industrial actors, workers, and their families, thereby also cementing support for Europe and for political action.

The **Clean Industrial Deal** provides a framework for **SMEs** to become more competitive

PETER BURKE

Minister for Enterprise, Tourism and Employment of Ireland

The EU's Clean Industrial Deal aims to align environmental, climate and industrial policy. Ireland recognises that industrial decarbonisation is not just an environmental, but also a competitive and economic imperative. Reducing industry's reliance on fossil fuels insulates them from volatile energy prices.

In renewable fuels, industry has access to a clean, lower cost source of energy. This makes them more resilient, retains jobs and creates a vibrant economy. This also holds true for SMEs. Since becoming Minister of this Department, I have been focused on supporting small businesses, as they employ a large majority of workers in Ireland and are the backbone of the Irish economy.

Importantly Irish SMEs recognise the importance of being sustainable. A recent survey of over 300 SMEs carried out on behalf of my Department found that four in five businesses (83%) believe sustainability is important to them on a day-to-day basis. The survey was carried out by Amárach Research to identify what factors motivate small and micro businesses to become more sustainable.

Not only do a large majority of SMEs in Ireland think sustainability is important, but many have also already taken steps to become so. Almost two in three (63%) of the businesses surveyed had addressed the sustainability of their waste processing, two in five their water usage (41%), and nearly half (49%) had taken steps to address energy efficiency. It's also clear that climate change is already impacting Irish businesses, with almost a third reporting that they are being affected by climate change.

SMEs though have limited bandwidth to address the range of sustainability issues but with the right support, Irish SMEs can cut their emissions, lower their energy costs and become more competitive. Crucially there is money available from the government to help businesses to take the necessary steps to do so.

Small businesses in Ireland are supported through a number of government agencies: the Local Enterprise Offices (LEO), Enterprise Ireland and the Sustainable Energy Authority of Ireland (SEAI). The grants they offer include energy audits, which show SMEs where they can make savings and reduce emissions. Once a business knows where they should invest, there are grants available towards buying energy efficient equipment and building retrofits. Finally, there are loans available to SMEs, farmers, fishers and mid-caps to fund sustainability measures.

The Clean Industrial Deal seeks to address the high levels of energy costs across Europe, and it is vitally important to me that SMEs and industry in general reap the rewards of the green transition. In Ireland, creating the right conditions, such as ensuring a stable and affordable energy market, will incentivise private investment in decarbonisation which in turn, will help us to reach our climate goals. Huge work is being undertaken to upgrade Ireland's electricity grid to ensure that it has the capacity and resilience required to support our decarbonisation efforts and our ambition to become renewable energy leaders.

Under the Deal, the Industrial Decarbonisation Accelerator Act will also create new market opportunities for SMEs producing clean and sustainable products. SMEs that develop or supply low-carbon materials, energy-efficient equipment, digital solutions for emissions tracking, or circular economy innovations will find increased demand from larger industrial players needing to decarbonise their operations.

The Deal also aims to streamline the regulatory environment, making it easier for SMEs to navigate compliance and access support. It will streamline permitting processes for decarbonisation projects, which can benefit SMEs by reducing time and costs to deploy clean technologies, making it easier to participate in industrial modernisation projects, and enabling faster market entry for innovative solutions.

In implementing measures in the Clean Industrial Deal, Ireland will seek to strike the right balance between strengthening competitiveness and resilience without compromising fundamental principles of openness and a level playing field. In particular, any such measures to enhance resilience will be carefully designed to avoid negative impacts on both costs and our open, rules-based trade policy. We must also be careful, in taking measures to enhance our resilience, to ensure that we do not inadvertently add to administrative burdens or slow down the roll out of sustainable technologies.

Driving the **Clean Industrial Deal**: France's Leadership in Shaping a Sovereign and **Sustainable European Industry**

AGNÈS **PANNIER-RUNACHER**

French Minister for the Ecological Transition, Biodiversity, Forestry, Maritime Affairs and Fisheries

1. "Shaping a sovereign and sustainable European industry" represents an opportunity we absolutely cannot miss. Yet, some voices are urging us to pass by this opportunity to shape a sovereign and sustainable European industry.

These are challenging times for the environment and its defenders. In the United States, Donald Trump has once again withdrawn his country from the Paris Agreement on climate change, just as fires ravaged California and shortly after Hurricane Milton devastated Florida. The same adverse wind is blowing across France and Europe. Without questioning what is useful and what is expendable, some are calling for a backlash against the Green Deal. Unseasonably, this movement goes beyond mere statements from extreme parties.

This year marks the tenth anniversary of the Paris Agreement on climate change. Despite some bad news, it serves as proof that our collective action can make a difference. Before the Paris Agreement, climate projections were estimating global warming of approximately 4-5 degrees. Today, these projections are around 2-3 degrees. This is obviously still too much, and we are not moving fast enough. But it also demonstrates that our efforts are paying off, and that we need to intensify our efforts rather than succumb to the path of fatalism.

The dissenting voices we are hearing are based on the wrong belief that "ecology is an obstacle to business".

Between 1990 and 2020, the EU reduced its greenhouse gas (GHG) emissions by 32%, well above its -20% target. In 2023, EU total net GHG emissions decreased to 37% below 1990 levels. This illustrates that our economic actors are dedicated to decarbonization, and that they do not dispute the need to combat climate change. The EU GDP has grown by 68% over the same period, driven by the green industry.

So, why is ecology wrongly perceived as an obstacle to business? Ecology should not be confused with bureaucracy. Bureaucracy is an enemy of business, as it is of the ecological transition. An excessive accumulation of norms and standards is a burden.

What we are hearing from economic actors is not that ecology is an obstacle to business. They ask for the respect of two crucial conditions: first, providing economic actors with regulatory stability over the medium term; second, providing them with level playing field. And they are right! As long as foreign economic actors who pollute have free access to the European market whereas our economic actors are making sustained efforts, the ecological transition is hindered.

2. France's leadership aims to discredit voices that relegate the ecological transition and the move towards green industry to the background, as doing so would be a massive mistake.

The geopolitical context does not halt the climatic race against time: temperatures continue to reach record levels, natural disasters are recurring and increasing, biodiversity is declining with direct consequences on our ability to conduct business and even secure food supplies.

Inaction comes at a cost far greater than those of taking action, both in terms of ecological impact and economic leadership.

If we do not act *now*, our continent's competitive gap with China and the United States will continue to expand. We need to engage in the fight by adhering to what ecological and energy transition truly represent: sovereignty, independence, purchasing power, and the protection of European citizens – this is the essence of what ecology embodies.

Our economic and industrial future, along with our future growth, depend significantly on our ability to successfully execute this ecological and energy transition. China's substantial subsidies for electric vehicles and solar panels are not offered out of philanthropy, but rather strategically, with the intent of increasing global reliance on them for these advancing technologies.

To achieve this ecological and energy transition, we face challenges of unfair competition: without a level playing field, the commitment of our economic actors will diminish. The French Government was one of the first to address these issues, drawing attention to the subsidies provided to a multitude of companies: we must stop opening up our market to foreign economic actors while putting at a disadvantage our own actors, who must adhere to stricter norms/constraints and who lack equivalent state aid support.

3. France's leadership extends to both preventing Europe's disappearance from the global industrial map and advancing Europe's green reindustrialization and strategic autonomy, thanks in large part to the Clean Industrial Deal.

As the European Union faces challenges to its economic competitiveness and political leverage, it is crucial to preserve its standing through a robust policy to shape a sovereign and sustainable European industry. Just as

there are strong industrial policies in the United States and China, Europe is experiencing a shift, driven by French initiative, to reconcile the Green Deal with an Industrial Deal.

Through decisive leadership, France has significantly advanced Europe's green reindustrialization and strategic autonomy. French efforts have strengthened the European Union's strategic autonomy through four primary levers: first, by defending a technologically neutral approach for energy policy, particularly by acknowledging nuclear energy as a primary tool to decarbonize our economy; second, by setting clear targets, such as manufacturing benchmarks to develop European value chains, and by setting an achievable and realistic target for emissions reduction by 2040; third, by enhancing fair competition through mirroring measures and "debureaucratization"; and fourth, by ensuring financial support through the European Union state-aid framework and by mobilizing public and private investors from the European cleantech ecosystem for an ambitious commitment toward unlocking investments in clean technologies.

The Clean Industrial Deal is poised to enhance European industrial value chains, serving as a powerful lever for a greener, more competitive, and more resilient European industry. It comprises a cohesive package of measures aimed at boosting European industry while upholding high climate objectives. To support clean technologies and counteract the continent's industrial decline, the European Commission intends to quickly allocate 100 billion euros through the Clean Industrial Deal. These funds are earmarked for accelerating the decarbonization and electrification of energy-intensive industries, as well as fostering the development of clean technologies, which are deemed central to future competitiveness and growth.

In addition to lowering energy costs for businesses, the Clean Industrial Deal is designed to directly benefit European citizens by boosting demand for clean products "Made in Europe." This will be realized through sustainability, resilience, and European preference criteria in public and private procurement. I fully endorse the objectives of the Clean Industrial Deal, spearheaded by commissioners Stéphane Séjourné, Teresa Ribera, and Wopke Hoekstra. It represents a clear opportunity to merge the imperatives of industrial competitiveness with decarbonization objectives.

Now, a quick and concrete implementation of the Clean Industrial Deal is needed, to contrast with the delayed implementation observed for some IPCEI – more than two years and a half between the beginning of the application process and the last funding decision. To be consistent with the announced ambition of the Clean Industrial Deal, the art will lie in achieving its effective implementation.

Faced with numerous urgent challenges ahead, Europe now holds all the cards; it's up to us to play!

Empowering Europe through the Fight against Climate Change

YVAN **VEROUGSTRAETE**

MEP (Renew Europe Group – Belgium)

The decline of the European Union has now become undeniable, and its consequences are increasingly visible on our economy and population. While fierce debates are taking place across Europe about whether we should stay on course with our climate ambitions, conservative right-wing and far-right forces are seeking to reverse them. However, correctly identifying the root causes that have led to our societal model being challenged on the international stage means understanding that decarbonisation represents a real hope for emancipation for 21st-century Europe. More than an economic policy, the Clean Industrial Deal offers a genuine new doctrine.

A Bitter Reckoning: Time to Learn from It

The rise of extremism, deindustrialisation, impoverishment, geopolitical weakness, and energy and technological dependence are among the many factors that have cast doubt on the EU's ability to become a power in its own right. This feeling, shared by many of us, did not appear out of nowhere. It stems from a steady decline that began at the turn of the century, and particularly after the 2008 crisis. This is the storyline laid out in the *Draghi Report* published in September 2024.

In a quarter-century, China's GDP, which represented only 16% of the EU's in 2000, reached 96% in 2023. In addition, GDP per capita grew almost twice as fast in the United States over the same period.

The main reason identified by the former President of the European Central Bank for this gap is the EU's low productivity—largely due to its failure to embrace the first digital revolution in the 1990s. More broadly, the EU has fallen behind technologically in several sectors, increasing its vulnerability and dependence amid intensifying Sino-American competition in which the rise of China and its alternative value system appears unstoppable. The report also points to competitiveness issues facing Europe vis-à-vis China and the US—explained in part by high energy costs. With no natural energy resources, the EU became reliant on fossil fuel imports—a vulnerability that turned critical after the outbreak of war in Ukraine. Beyond energy and tech dependence, Europe's reliance on the US for defence has rendered it vassal-like in that domain.

Time passes and the fierce competition between the American and Chinese giants continues to grow. Their models seem ever further from our own, reminding us daily that the European Union is under threat. Our unique values—solidarity, tolerance, and freedom—cannot be preserved unless we develop the means to defend them.

Abandoning Climate Goals Means Misreading the Situation

In this context of economic hardship and compromised sovereignty, many have found an easy scapegoat. Even as the chaos of the climate crisis unfolds before our eyes, a wave of opposition is rising across Europe against decarbonisation efforts. Many claim that Europe's loss of competitiveness, deindustrialisation, and decline have been accelerated—or even caused—by climate policies. Right now, in the European Parliament, the Council, and across national governments, debates are intensifying over whether to stick to the 2040 target for emissions reductions. While a 90% reduction target is supported by climate scientists who stress the unviability of any alternative, others argue for lower targets—or even abandoning long-term goals altogether. Within the Parliament itself, conservative and far-right parties continue to exploit the issue, promising voters a return to the "glorious thirty" years after WWII—a time of full employment, cheap and abundant energy, and rising purchasing power, unencumbered by environmental constraints.

Yet the Draghi Report is unequivocal: the downward trajectory of the past two decades was not caused by recent environmentalpolicies. Abandoning ecological ambition will not reduce our global dependence, lower energy costs, increase productivity, or reverse deindustrialisation and impoverishment. Ignoring the actual causes of our current situation will only prevent us from implementing the solutions needed to overcome it. As always, the same causes produce the same effects. What is needed is a shift in paradigm.

More than a stimulus plan, the Draghi Report offers a true doctrinal shift to shape the EU's future in the 21st century. To move beyond stagnation, we must treat climate ambition not as an obstacle but as the engine of our emancipation. This vision—championed by the former ECB President and adopted by the European Commission in its *Competitiveness Compass*—is embodied in the *Clean Industrial Deal*.

The Clean Industrial Deal: Europe's Vision for the 21st Century

Among the various measures proposed in the Commission's *Competitiveness Compass* earlier this year are more traditional ones such as administrative simplification and investments in high-tech innovation. But what stands out is the environmental pillar. Following the Draghi Report's recommendations, the goal is to make decarbonisation a real driver of industrial revival and independence.

First, to drastically cut energy costs and boost competitiveness and autonomy, the plan calls for massive electrification of the economy and even wider deployment of renewables. Second, it provides strong support for the development of a European green industry. This will not only accelerate decarbonisation and electrification but also strengthen Europe's position in a critical tech sector. We can no longer afford to fall behind in the innovations that will shape the

future—especially in areas where we already have expertise. More than €100 billion could be mobilised to support the deployment of renewables, decarbonisation, and innovation. Third, recognising our limited resources and global dependency, the plan includes a comprehensive strategy for materials: better management, more efficient use, and support for the circular economy. The remanufacturing market alone is expected to reach €100 billion. Fourth, several measures aim to correct shortcomings in previous transition efforts, including a stronger carbon border adjustment mechanism and new economic defence instruments. Fifth, a skills strategy will support training to create 500,000 quality jobs.

Again, this is more than a green stimulus. It is a long-term strategy. In this context, the 90% emissions reduction target for 2040 is no longer a constraint—but the core engine of our industrial transformation. What once seemed the greatest challenge facing humanity—the climate crisis—could, paradoxically, become the opportunity that finally emancipates Europe.

China's Green Strategy: A Masterclass in Long-Term Vision

For those in Europe who view decarbonisation as naïve or exaggerated, it is worth recalling that the rest of the world has not waited for the EU to act. At the forefront is China, which long ago integrated green industry into its long-term development plans. Currently the world's largest emitter of greenhouse gases, underestimating China's commitment to building a clean economy would be a serious misjudgment. As always with China, its approach is strategic, patient, and thorough.

For the past two decades, China has invested in mastering green technologies such as solar panels, batteries, and electric vehicles. It gradually integrated more and more of the value chain and now controls the majority of it in several industries. China now produces over 80% of the world's solar panels and is the top producer and exporter of electric vehicles. These strategic choices required long-term vision and massive investments—made at a time when few foresaw the explosion in demand. China understood that, sooner or later, the world would have to shift from fossil fuels to alternative technologies—and it intended to lead the way. It also extended its control over rare earths, which are crucial not only to green technologies but to many of tomorrow's innovations. China's interlinked industrial strategies are now well established.

China has methodically built green industry into its broader development strategy based on its strengths and constraints. Europe should take note.

The Green Industrial Deal: Europe's Inflation Reduction Act

Among countries integrating decarbonisation into their long-term strategy, the United States stands out as a forerunner. While Joe Biden's green policies may now face headwinds with Donald Trump's return to the White House, we must not overlook the significance of one of the largest plans enacted in the US in decades.

The *Inflation Reduction Act* was not only a climate victory—it aimed to reorient the US industrial base amid intensifying global competition with China. Massive subsidies for households (e.g., for electric vehicle purchases) and green industries were meant to boost production and steer the US economy toward the industries of tomorrow. It also aimed to restore the middle class—long affected by deindustrialisation and declining job prospects.

It's worth noting that the US benefited from specific conditions: a strong economy, a powerful federal state, and low electricity costs. The green strategy was tailored to these strengths.

A United Europe Is Essential for Overcoming the Challenges Ahead

First, not all industries can be saved during this vast transformation. Unfortunately, no large-scale studies have been conducted to determine which sectors are truly competitive in Europe. The question of which industries to prioritise remains taboo.

Second, implementation will be critical. To succeed, the plan must be coherent and well-executed. But since some funding will be allocated by national governments, they may favour their own industries—even those no longer competitive. Effectively capitalising on the EU's single market will be key.

Finally, in terms of political fragmentation, the temptation to water down climate and energy transition targets remains strong. But while the US and China are implementing similar paradigms with long-term strategic depth, Europe's own characteristics and weaknesses make its rapid ecological transition even more urgent. If we want to regain competitiveness and sovereignty, relaunch our industry, and reclaim strategic sectors, we must act now. Prosperity is the only path to securing our social systems and continued progress. Maintaining the 90% emissions reduction target for 2040 is therefore essential. It is not a constraint, but the engine driving the transformation of our industry—and, ultimately, our continent's emancipation.

Source: Amprion GmbH/Julia Sellmann

DR. HENDRIK NEUMANN
CTO Amprion GmbH

No Competition Without Transmission: Why **TSOs Play** a **Vital Role** to **Ensure European Competitiveness** and **Decarbonization**

The Clean Industrial Deal (CID) is a crucial step for maintaining the competitiveness of the European industry as it transitions to climate neutrality. As part of the CID, the Action Plan for Affordable Energy is particularly relevant from the perspective of a transmission system operator (TSO). It forms the basis for the Grid Package, expected from the European Commission by the end of the year.

A fundamental transformation of the European energy system is needed to meet climate protection targets and climate neutrality in the EU by 2050. TSOs want to actively shape the process of planning the climate neutral grid of the future and provide their longstanding expertise in grid planning and system integration. As the transmission grid is the key enabler for further integration of renewable energies, TSOs play an important role in the entire energy transition - hence there is no competition without transmission as the industry heavily relies on functioning and strong infrastructure.

Regarding the challenges we are facing: One key prerequisite for a strong infrastructure is a regulatory framework that ensures solid financing for grid operators. Even though this must be stated for once at the beginning, financing or regulatory issues are not the focus of my following thoughts. As an electrical engineer, I would rather like to stress two other highly important success factors. These factors contribute to Europe being an attractive site for industrial allocation in global competition and for the conversion of the electricity system. More so, they are essential for the transformation of the electricity system and for the adherence to climate protection targets: Efficient grid planning and ensuring system stability by maintaining expertise among responsible stakeholders.

Efficient grid planning

Our grid operation area includes strong industrial sites and - still - a correspondingly large number of conventional power plants. The latter have secured the industrial power supply for decades and are gradually being replaced by renewables. On top, as electrifying is the most efficient way to decarbonize, the electricity demand will increase during the energy transition. This is due to the fact that the most densely populated German federal state of North Rhine-Westphalia with its numerous industrial sites is located in our grid area. For the grid, achieving climate neutrality necessitates the increased integration of renewables in the future. However, the sun does not always shine and the wind does not always blow, yet the frequency in the grid must be 50Hz at all times to maintain the stability of the grid. In Germany and in Amprion's grid control area, renewables to be integrated are primarily wind (onshore and offshore) and photovoltaic. Renewable electricity must be transported to industrial consumption centres in Germany to ensure their transition, see Figure 1.

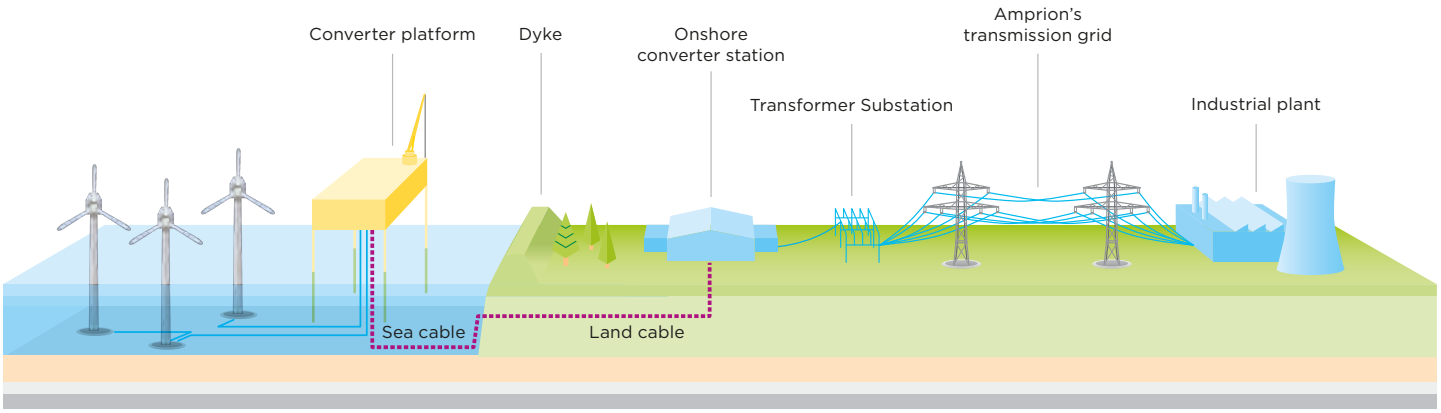
Amprion considers a demand-oriented climate neutral grid a necessity so that electricity can be transported to the consumption centres in the future. Current developments, including battery storage, electrolysers or the hydrogen grid, must be optimally integrated into electricity grid planning to ensure the efficient design and construction of the grid. An Amprion study regarding the intersectoral system planning shows that gas-fired power plants are essential for the security of supply in the electricity system and when powered by hydrogen in the future for the dimensioning of the hydrogen grid. Hence, the study demonstrates how the different energy systems of electricity, natural gas or hydrogen directly impact each other. Thus, the planning of electricity grids must consider developments in other sectors and vice versa. The processes surrounding the planning of the climate neutral grid of the future are therefore not only of particular importance for Amprion, but also for the German and European industry and economy.

Speeding up planning and approval procedures in grid planning

Efficient grid planning is of crucial importance. We can respond more effectively to current developments if we do not have to schedule projects too far in advance because of lengthy permission periods. Therefore, measures to speed up grid expansion are essential. In Germany, numerous steps have been taken in recent years to speed up planning and approval procedures. This includes innovative planning steps and exemptions from complex approval requirements for certain project types which strengthen the grid. For example, the step of spatial planning for new national DC projects was synchronized with the national development planning process. This ensured a faster realization of the Rhein-Main-Link Project, one of our central grid expansion projects for the energy transition. Another example is that replacing conductor ropes at existing power lines by others with a higher capacity requires no major approval, allowing TSOs to strengthen their grid significantly and more rapidly.

To be able to realise efficient grid planning by reacting to current developments, we must ensure that the accelerations in the approval process are maintained in the future. The possibilities outlined in Council Regulation (EU) 2022/2577 of 22 December 2022 ("EU Emergency Regulation") establishing a framework to accelerate the deployment of renewable energy demonstrated how this could work. Therefore, it is important for us in Germany to effectively implement the successor regulation, namely the Renewable

TRANSPORTING ELECTRICITY INTO THE CONSUMPTION CENTRES



Schematic illustration

Figure 1: Transporting electricity, for example from offshore windfarms to consumption centres

Energy Directive III. By amending this regulation, further improvements could be achieved. Specific exemptions from required expert reports demanded by the Water Framework Directive or the Marine Strategy Framework Directive could, for example, streamline processes.

Ensuring system stability by maintaining expertise among responsible stakeholders

The conversion of the electricity system of the future must prioritize system stability. It is vital that the availability of electricity can be ensured at all times. However, the maintenance of system stability varies due to regional and national circumstances such as environmental or geographic differences, interconnections between EU member states or the respective production landscape of electricity. We are fundamentally rebuilding the energy system. Hence, it is crucial to continuously set new and develop requirements for connected customers, generators and operating resources which focus on system stability. Within the future energy system, it is vital that all actors, such as loads, storages or electricity producers, need to ensure the stability of the system. This is why all actors must contribute to the grid (*Netzdienlichkeit*). The responsibility for system stability and the corresponding challenges remains with the TSOs.

Considering all sectors of the energy system, it is crucial to develop specific expertise in relevant infrastructure, allowing each TSO to effectively assess and respond to circumstances within its transmission grid. For example, the TSO's analysis can provide the most specific information on whether a project is cost efficient or where an interconnector should best be planned and built. Specific knowledge is indispensable considering that grid structures vary considerably across EU member states and regions. The TSO, typically being responsible for reliable and secure development, operation and maintenance of its grid, has all relevant information from a system engineering perspective. It is therefore essential that the planning competence for the future electricity grid remains with the TSOs to achieve the energy and climate policy targets.

Amprion collaborates with European TSOs and the European Network of Transmission System Operators for Electricity (ENTSO-E) for cross-border system development. This cooperation, established over decades, ensures a reliable and secure European grid. Decades of grid planning have led to exceptional experience in transmission system development, with recent expansions into offshore transmission infrastructure development. Amprion recommends maintaining and further developing the successful governance that has been established by the legal mandates of ENTSO-E building on the TSOs' system engineering expertise.

Summary

To ensure the goal of climate neutrality and the expansion of the electricity grids on which industry depends, the upcoming Grid Package must focus on more efficient grid planning and ensure, among other things, system stability. Tomorrow's energy system must be planned together with all relevant stakeholders. Nevertheless, for reasons of efficiency and time, responsible stakeholders shall realise the planning, construction and operation within the scope of their responsibilities. As a proactive TSO, Amprion helps to create the energy-related conditions necessary for an innovative and modern industrial transition in Germany and the EU. We are convinced that the transformation of European industry can only be achieved together.

We need smart **State Aids** for **smart energy systems**

PATRICK CLERENS

Secretary General of the European Association for Storage of Energy (EASE).

The turbulent geopolitical and economic context facing Europe today has exposed the strategic vulnerabilities of our energy system. The war in Ukraine, volatile fossil fuel prices, and the threats of trade protectionism have underscored the need for a more resilient, autonomous decarbonised energy infrastructure. In this setting, the incoming publication this month of the Clean Industrial Deal State Aid Framework (CISAF) is more than a technical update: it is a strategic opportunity. By enabling targeted, forward-looking public support, CISAF has the potential to unlock the flexibility needed not only to bring carbon-intensive industries on the path to climate neutrality but also strengthen European competitiveness and energy security.

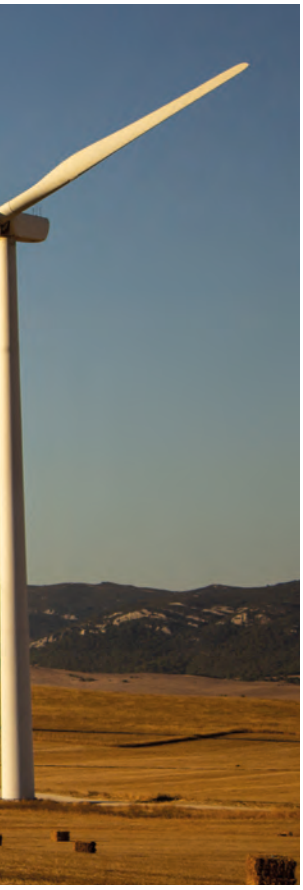
In this context, energy storage sits at the core of a stable and decarbonised energy system. Without energy storage, the EU cannot meet its renewable energy targets in a cost-efficient way or reduce its dependence on fossil-based backup, often imported. Whether in the form of batteries, pumped hydro, thermal or long-duration solutions, storage enables energy shifting but also provides multiple services across the power system, from frequency regulation to congestion relief and resilience enhancement. It is crucial to understand that energy storage is a wide set of different technologies that contribute in distinct ways to system flexibility and resilience, depending on their characteristics such as response time, storage duration, material availability, and suitability for different applications.

According to the European Commission's Joint Research Centre, the EU's flexibility needs will more than double by 2030 and increase sevenfold by mid-century. With a business-as-usual scenario, the JRC says, we will curtail 310 TWh in 5 years' time, which would come at a cost, calculated on the average MWh price

of 2024, to almost €23bn. Energy storage is the backbone of that flexibility (among other options) and should accordingly receive adequate support in EU policy and legislation. CISAF provides an opportunity to ensure this, enabling today the investments for tomorrow. Its stated goal, to align State aid with the Union's decarbonisation objectives, is fully compatible with a strong push for storage deployment. However, the current draft CISAF needs better clarity in several key areas.

In industrial decarbonisation, storage can be the enabler of deep emissions cuts by supporting electrified processes, managing on-site renewables, and recovering waste heat. However, certain industrial end-users who want to transition might be concerned that in case of a sudden drop in gas prices, the first movers with an electrified system may find themselves in a competitive disadvantage with peer industries that have not switched to decarbonised solutions. This competition risk is not anecdotical for energy-intensive industries where heat usually represents a significant share of their production cost. It may thus appear as a major deterrent for industries that are looking to decarbonise.

The inclusion of two-way carbon contracts for difference (CCfDs), such as those already



approved in Germany under the name of Climate Protection Contracts, would offer a powerful tool to mitigate these risks. CISAF should give Member States the green light to replicate such mechanisms, ensuring that first movers are protected across Europe, not penalised.

On a similar note, the draft CISAF offers enough flexibility to cumulate capacity mechanisms with other types of State aid (e.g. flexibility and capacity) but misses the opportunity to use this to further endorse system decarbonisation. It could do so, for instance, by strengthening CO_2 requirements in this specific case. Currently, the carbon cap for capacity mechanisms of 550g/KWh. Should the European Commission conditions the cumulation of capacity mechanisms with other aids to a lower threshold, e.g. 200g/KWh, it would bring more decarbonisation for more taxpayer money.

Equally important is the need for CISAF to support the full energy storage value chain, from R&D and manufacturing to deployment and end-of-life processing. European energy security depends not only on building clean technologies but on ensuring that they can be built in Europe. To that end, we have called on the European Commission to consider at least temporary OPEX support to counteract artificially low prices from heavily subsidised non-EU competitors, in order to ensure fair competition and stimulating EU investments.

A final point where CISAF is actually going in the right direction, is when it ensures that Member States open markets to energy storage for different services to the grid. Mistakenly, energy storage is often exclusively associated with energy shifting (e.g. storing electricity at low-demand times and discharging it later). However, it can provide further essential services to system performance, and being able to get remunerated for these different services helps build a stronger business case for projects. By clarifying that subsidised energy storage projects should be allowed to provide such services and access these revenue streams, CISAF rightfully pushes Member States to implement the new rules of the recent Electricity Market Design.

However, CISAF could further encourage a broader implementation of EU rules, and ensure that Member States' requirements are compatible with internal market principles. For instance, for technologies like battery energy storage systems (BESS), where standardisation is often essential to reach economies of scale, it is essential for CISAF to clarify Member States' standards (e.g. on safety) should not conflict with EU regulations such as the new Battery Regulation.

Overall, EASE strongly supports the European Commission's ambition to align State aid with climate goals and foster a more competitive industry. But to meet those goals in practice, the framework must do more than acknowledge the importance of storage: it must enable it. This means clear eligibility, long-term visibility, and flexibility in support tools. The coming years will define whether Europe leads or lags in clean energy resilience. With CISAF, the Commission has the chance to send the right signal. It must not be missed.

ANDREA **WECHSLER**

MEP (EPP Group – Germany)

Hydrogen: A **Strategic Imperative** for **Industrial Decarbonisation** and **European Competitiveness**

Europe stands at a defining moment. Achieving the continent's climate goals while safeguarding industrial competitiveness and strategic autonomy demands a clear-eyed, pragmatic approach — one that removes regulatory bottlenecks and accelerates the deployment of clean technologies. Hydrogen is not a peripheral element of this strategy; it is a central pillar. Without hydrogen, Europe cannot effectively decarbonise energy-intensive sectors such as steel, chemicals, and refining, nor can it hope to lead the global race for clean industrial innovation.

The European Union has already recognised the essential role hydrogen plays in achieving climate neutrality by 2050, as enshrined in the European Climate Law. Hydrogen's unique ability to deliver high-temperature heat without CO_2 emissions makes it indispensable for processes where electrification is technically or economically unfeasible. Projections suggest EU hydrogen demand could reach between 1,350 and 1,800 TWh by mid-century — a figure that signals not only an environmental necessity but a vast industrial opportunity.

Yet despite political momentum and a growing regulatory framework, the actual deployment of hydrogen technologies — especially at industrial scale — remains sluggish and fragmented.

Meanwhile, international competitors are advancing quickly. China already produces one-third of global hydrogen volumes, and the United States has introduced production tax credits of up to $3/kg through the Inflation Reduction Act. In contrast, European hydrogen production remains prohibitively expensive, with costs averaging around $8/kg. To reach the EU's 2030 target of 10 million tonnes of renewable hydrogen, between 95 and 140 GW of electrolyser capacity will be required. Currently, less than 20 GW are in the pipeline, and only a fraction of those projects are moving at pace.

Several structural barriers continue to undermine Europe's hydrogen ambitions. High electricity prices — often double or triple those in the U.S. — make European hydrogen production economically unviable. At the same time, infrastructure remains grossly underdeveloped. The European Hydrogen Backbone envisions 58,000 km of pipeline by 2040, yet today, only 1,569 km exist. Regulatory delays and permitting obstacles cast doubt on the timely delivery of this critical network.

Europe faces a textbook "chicken-and-egg" dilemma: investors are hesitant to commit to hydrogen supply without guaranteed demand, while potential off-takers wait for reliable, affordable supply. This stalemate is compounded by regulatory complexity and inconsistency. The draft delegated act on greenhouse gas savings from low-carbon fuels, for example, risks discouraging investment in transitional technologies such as blue hydrogen and carbon capture–based solutions.

To unlock hydrogen's potential, European policy must urgently realign with industrial realities. This requires enabling transitional solutions, including low-carbon and blue hydrogen, to scale rapidly. It also means recognising the value of nuclear-derived hydrogen and allowing the use of non-additional renewables via Power Purchase Agreements (PPAs).

A reassessment of emissions accounting frameworks is also needed. The methodology for low-carbon hydrogen must incorporate supplier-specific data and align with international best practices, such as OGMP 2.0 certification. Arbitrary emission penalties, especially those imposed upstream, risk deterring investment and straining hydrogen diplomacy with strategic partner regions such as North Africa and the Middle East.

Legal certainty is another non-negotiable. Grandfathering clauses must protect early

investments from retroactive regulatory changes. Europe cannot afford to undermine first movers through shifting goalposts.

Permitting delays remain a major bottleneck. Approval processes for hydrogen infrastructure — including pipelines, storage, and electrolysers — are stalling across member states. These must be streamlined to accelerate deployment. Additionally, Europe's electricity grid will require an estimated €210 billion in investment to support hydrogen production. Strategic siting of hydrogen assets — close to both renewable sources and industrial demand — and the development of integrated energy clusters combining hydrogen, renewables, carbon capture, and waste heat can significantly boost efficiency and project viability.

Industrial-scale hydrogen deployment also demands clear investment signals. A combination of EU-level subsidies — such as those from the Hydrogen Bank — and de-risking mechanisms like contracts for difference is essential. Legal and regulatory stability must underpin these financial frameworks to restore investor confidence.

Globally, Europe must act decisively. Establishing hydrogen import mechanisms, modelled on initiatives such as H2Global, would secure long-term supply contracts with exporting countries. At the same time, carbon border adjustments should be calibrated to support — not penalise — clean hydrogen imports that align with Europe's climate goals.

Finally, hydrogen policy must remain technology-neutral. Excluding certain production pathways — particularly those crucial in the short to medium term — is both scientifically questionable and economically counterproductive. A diversified hydrogen portfolio, including pathways based on nuclear energy and industrial off-gases, is vital to build resilience and scale.

The path to a decarbonised, globally competitive Europe runs through hydrogen. But the current trajectory is too slow, too bureaucratic, and overly constrained by ideology. A course correction is urgently needed — one grounded in technological openness, regulatory pragmatism, and industrial realism. Hydrogen is not a panacea, but it is a foundational element of Europe's climate and industrial strategy. It must be treated accordingly: with ambition, urgency, and above all, with common sense.

Low-Carbon Hydrogen for a competitive and decarbonised Europe

DAVID **BERMAN**

Head of EU Public Affairs, Air Liquide

As a world leader in gases, technologies, and services for industry and healthcare, Air Liquide is convinced that hydrogen will be a decisive molecule in the energy transition – to decarbonise heavy industry and revolutionise mobility. As a hydrogen pioneer for more than 60 years, Air Liquide welcomes the Clean Industrial Deal as an important step in the right direction. It now requires swift and decisive follow-up actions to strengthen the business case for industry to decarbonise and restore Europe's competitiveness and environmental leadership.

Transitioning through technology neutrality

Given the urgency of climate change, the EU has set itself ambitious targets to progressively reduce its greenhouse gas emissions and become climate-neutral by 2050. At **Air Liquide, we invest in clean technologies, develop innovative materials, and decarbonise industrial processes to become climate neutral, and help our customers do so**, by mid-century. The clean transition will only succeed if we tackle it jointly and decisively – as Europeans and together with our global partners.

The EU's decarbonisation agenda, however, has lately been **slowed down by the complexity** of regulations, by conflicts about the use and definition of technologies, and by the slow development of infrastructure across member states. Rather than favouring certain decarbonisation solutions, the EU should leverage the diversity of technologies that are already available and mature, while continuing to incentivise investments in future innovations.

- Stakeholders should be encouraged to **develop net-zero trajectories based on their sector's specific needs** and technological possibilities in order to reduce emissions swiftly and realise our climate potential effectively. There is certainly no time to lose.

Access to affordable low-carbon energy

Above all, access to abundant and affordable energy is the basis for energy-intensive industries to compete globally and domestically and to effect positive change in the world through innovative technologies. **The Clean Industrial Deal therefore rightly prioritizes the aim to reduce energy prices** and further integrate the internal energy market. Channeling investments in the electricity grid and incentivising demand flexibility are particularly important for stabilising and futureproofing the European energy market.

- The harmonised use of Contracts for Difference (CfDs) and Power Purchase Agreements (PPAs)

can further ensure access to affordable energy for European industry. Indeed, it is important to **adapt the framework of PPAs to the needs of industry to source renewable as well as nuclear power, and to well balance the risks of PPAs** between the different stakeholders.

CCS to decarbonize industry

Particularly **for hard-to-abate sectors, such as lime, cement or steelmaking, carbon capture and storage (CCS) is a key technology to decarbonise** processes, where electrification does not (yet) represent a feasible alternative. But also for the existing hydrogen production, CCS is of great importance to reduce emissions and contribute to the EU's climate targets innovatively, especially given the pace of development of renewable energy. The importance of CCS for hydrogen also is clear because industry needs the supply of H2 on base-load, which can not be guaranteed through an electrolyser running on renewable electricity, which is intermittent by nature. Air Liquide therefore welcomes the recognition of industrial carbon management in the Clean Industrial Deal. A regulatory framework on how to actually ensure a swift uptake of CCS technologies and investments is yet to be presented.

- It will be key for the future framework to ensure the development and **recognition of new storage capacities**, including outside of the EU (e.g. in the UK). It should also **ensure open access to CO_2 storages and long-distance transport** infrastructure, while refraining from overregulating industrial basins. **Transportation and storage businesses should be unbundled** to ensure competition and cost reduction, and technically and financially **reasonable CO_2 specifications** developed to ensure regulatory certainty for investment decisions. Particularly **early-movers should be supported through de-risking mechanisms** to channel the most innovative projects.

Scaling up the hydrogen economy and optimizing synergies between industrial and mobility

Production of renewable hydrogen (RFNBO) has not lived up to its overexpectation - which some have even called a 'hydrogen hype' during the Green Deal. However, the realism that this Clean Industrial Deal brings should now ensure the effective deployment of key decarbonization technologies. Air Liquide is currently developing various renewable and low-carbon hydrogen projects.

Scaling up the hydrogen economy is indeed key to fostering the EU's energy transition. Used as a feedstock and secondary energy source, both renewable and low-carbon hydrogen help to significantly reduce CO_2

Air Liquide is currently building its 200MW Normand'Hy electrolyzer to produce renewable hydrogen. It represents a major investment of more than €450 million for the decarbonization of industry and mobility on the Seine Axis. It benefited from the support of the French government and the European Commission, notably through the IPCEI.

emissions in hard-to-abate industries, such as electronics, glassmaking, and chemicals.

But also for mobility applications, hydrogen plays a critical complementary role to electric mobility. Hydrogen technologies are proven, industry is aligned, the momentum is real. This 2nd of July, 37 CEOs forming a Global Hydrogen Mobility Alliance, called on European decision-makers for **urgent political support and proper implementation of policies.** Europe risks falling behind and losing the industries, jobs, and energy resilience **that hydrogen has started to deliver.** Countries in Asia are deploying tens of thousands of hydrogen vehicles, mostly heavy duty ones, while only a few thousands are on the road in Europe.

While Europe's effort to put forward enabling policies and tools for hydrogen mobility over the last few years was a positive signal for our sector, **past policies have not succeeded to efficiently bridge the initial cost gap** with diesel, **resulting in limited ramp-up volumes** and jeopardizing the entire value chain development.

› **In order to fully unlock hydrogen mobility, w**e need today to **adopt a comprehensive and pragmatic approach with support mechanisms addressing both the investment of refueling infrastructure and the deployment of vehicles**. And we need to level the playing field with electric battery vehicles to ensure a similar development : no strict requirement of renewable energy source -**hydrogen color agnosticity- in the ramp-up phase**.

Developing low-carbon hydrogen

While the production of hydrogen is still limited, the growing demand, at least in the short term, cannot be covered by renewable hydrogen alone. Indeed, the different ways to produce renewable and low-carbon hydrogen (electrolysis with low-carbon or renewable electricity, SMR or ATR with CCS and/or fed with biomethane) will realistically coexist at least for a temporary period of time.

Particularly in the early stages of the hydrogen economy, the deployment of **low-carbon solutions has the potential to complement and facilitate the uptake of the currently still costly renewable** hydrogen production. More cost-competitive low-carbon solutions have the potential to foster a more reliable demand for and supply of hydrogen, deliver quick emission reductions, and build resilient supply chains for the future – a win-win for the uptake of both the CCS and hydrogen markets.

› To this end, Air Liquide calls for the **swift adoption of a sound and workable definition of low-carbon hydrogen**, including a complete life cycle assessment of the production (incl. upstream emissions) and flexibility in electricity sourcing. Also when it comes to the hydrogen economy, technology neutrality remains one of the preconditions for decarbonising European industry sustainably and successfully. Hence, beyond definitions, **low-carbon hydrogen also should contribute to the 2040 and 2050 decarbonisation targets**.

However, given the numerous hurdles that are yet to be tackled and the massive investments needed to ensure the market's uptake and long-term competitiveness, the EU's future industrial policy should ensure a **level playing field between domestically produced and imported hydrogen under the CBAM** and respective certification schemes. As one of the key factors that will decide upon the fate of the EU's energy transition, the hydrogen market's uptake simply cannot be left to chance, but must be led to success and allow European industry to become globally more competitive again.

Simplification for decarbonisation

Finally, a stable and harmonised regulatory framework across the EU is key for mobilising investments in clean technologies. At Air Liquide, we **welcome the simplification trend** put forward by the European Commission, particularly the **aim to provide more regulatory certainty for investment decisions and support for rapidly growing cleantech** markets. Only based on the consistent and coherent application of EU legislation and enough time for businesses to prepare for their implementation, Europe can meet the challenges of our time and unfold its full potential – for a more competitive and climate-resilient future.

Clean Industrial Deal
How to reconcile **climate ambition** with **industrial resilience**?

European Files Interview with

FRANÇOIS-RÉGIS MOUTON DE LOSTALOT

IOGP Europe Managing Director

Q1: What are the challenges facing Europe's Clean Industrial Deal?

François-Régis Mouton: *With this new Commission, Europe' ambition is finally crystal clear - to become climate neutral while keeping our industrial base competitive. These are noble ambitions on which we shouldn't compromise. The biggest obstacle, what really needs to change, is the policymaking 'software' used over the past 10-15 years to turn this ambition into reality. Not only has it proven its limitations, it has even become counterproductive. Changing the way we think about and design policies is of the utmost importance.*

Let's be clear, Europe is losing the global race in key industrial sectors and is having a tough time retaining investors and innovators. We can no longer bury companies under reporting and compliance obligations, pick and choose solutions, impose targets and investments disconnected from economic realities on entire sectors and then wonder why investors fled and we failed. The reality around us has changed; tiny updates won't fix the issue. It's time for a reset. We need a growth-oriented, goal-setting approach to which everyone can participate and be rewarded.

Q2 : Do you see a change in the way industry and policymakers work to address these challenges?

François-Régis Mouton: *Yes, although not to the extent needed, and not yet at working level. The Antwerp Declaration marked a turning point in that it brought the competitiveness issue to the attention of EU leadership and compelled them to react. Legislation shouldn't have gone so far in the first place, and I believe the message was clearly heard at political level.*

Now, for competitiveness to be more than a buzzword, it needs to be translated into policy to make a difference. That means taking a humble, critical look at the 'Acquis Communautaire', and making the necessary adjustments, for example through Omnibus packages. This is where things can become more difficult, where policy advisors will find it difficult to change their mindset and therefore try to avoid amending legislative files they worked on for years. They push back, they say 'this too shall pass', they suggest things can be solved in the implementation phase. The risk is that we end up with half-measures which don't make the necessary difference.

I think there is an opportunity for industry and policymakers to work closer as partners as it used to be the case before – this requires approaching desired outcomes as mutually beneficial ones and in the best interest of EU citizens.

Q3: What would be your main recommendation to policymakers?

François-Régis Mouton: *I would say: be pragmatic in the way you approach problem-solving. Ambition needs to look further than reality, but legislation cannot be disconnected from technology or economics.*

For example, when the EU finally decided to support the deployment of CCS, the landmark regulation it came up with consisted in putting an investment obligation on the EU's oil and gas producers into the development of 50 Mt of CO_2 storage injection capacity by 2030, without any certainty or support to ensure CO_2 would be captured by emitters and transported for storage in the first place. This makes no sense from a commercial standpoint, and it's now clear this target will not be met not because the technology doesn't work, but because of regulatory inadequacy.

Another example is methane mitigation. What started off as a laudable legislative project which we supported 5 years ago turned into a punitive tool used against the very industry it was meant to regulate, and which now poses significant risks to Europe's security of supply and severe non-compliance risk for our industry. The Regulation's provisions are so prescriptive, unworkable and disproportionate that all 27 Member States asked the European Commission to make targeted adjustments through the announced Energy Omnibus. These are fundamental issues which cannot be addressed through secondary legislation flexibilities as suggested by Commissioner Jorgensen.

A third and final example is low-carbon hydrogen. The EU adopted a Hydrogen Strategy in 2020 to give its hard-to-abate sectors certainty on the road to climate neutrality. However, instead of incentivizing all clean hydrogen production pathways in support of this objective, its support framework went all-in on renewable hydrogen, a nascent technology. The EU could have worked in parallel to decarbonize the 'grey', gas-based hydrogen production with CCS or simply use other forms of low-carbon hydrogen such as from nuclear. Today, with a mere 0.5Mt of renewable hydrogen production capacity, the 10Mt objective by 2030 is completely out of reach. The Court of Auditors has heavily criticized this approach and called for a reality check.

Q4: Affordability is clearly a concern. How should that be addressed in future legislation?

François-Régis Mouton: *Europe is not just losing speed relative to its global competitors, it is also losing the confidence of its people. 70% of Europeans aren't satisfied with the way the EU works and want change*[1]*. Doubling down on the approach that brought us here isn't going to solve this. We need humility to recognize where things went wrong, critical analysis, and pragmatic solution-finding.*

Affordability should be a core dimension of all impact assessments. Not just by throwing around big headline figures and unsubstantiated promises, but evidence-based comparisons of different decarbonization pathways. For example, renewable electrification is promoted as the default solution without taking into consideration the full infrastructure and system balancing costs. We are talking about billions in grid investments in the coming years – this will be passed on to consumers one way or another.

A low-carbon future that is unaffordable or achieved through de-industrialization and degrowth is not a sustainable one. By following a less technology-specific approach and supporting decarbonization solutions based on their abatement potential, we can maximize impact while minimizing the cost.

Q5. Finally, what would be the guiding principle for EU energy policy in the next five years?

François-Régis Mouton: *I would say realistic ambition, pragmatism, cooperation.*

We need to be realistic in our ambitious to set an achievable direction for a stronger, better Europe for future generations – the vision that brings everything together, including growth and jobs.

We need pragmatism to maximize our chances of success, to facilitate incremental progress, to foster innovation and reward results.

And finally we need cooperation between policymakers and industry from day one - not just in consultations, but in co-designing solutions from the beginning. This requires trust, openness, and the ability to reach compromises that drive progress.

Europe cannot control everything that impacts it, but it has everything it needs to overcome the challenges it faces. It just needs to unleash all its potential instead of regulating all aspects of its citizens' and businesses' lives.

1 https://www.ipsos.com/en/voices-europe-call-change

Promoting Energy and Technological Sovereignty

THOMAS **PELLERIN-CARLIN**

MEP (S&D Group- France)

Europe stands at a crossroads. The continent's long-standing dependence on fossil energy has become both a strategic vulnerability and an economic handicap. As of 2024, two-thirds of Europe's energy mix remains carbon-based. 90% of the gas and 97% of the oil consumed in the EU being imported. This addiction to imported fossil fuels cost the EU a staggering €427 billion in trade deficits last year alone. This is more than one billion euros per day.

As long as Europe remains tethered to the fluctuations of oil and gas prices, its industries will struggle to compete. This is a geological reality. Gas will always be cheaper in resource-rich Texas than in resource-poor Germany.

We however possess a few decisive advantages. We are a scientific and innovation powerhouse. EU law provides regulatory certainty for a market of 450 million wealthy consumers. We have enough solar radiation, wind, nuclear and renewable wind to provide to our industry decarbonised energy it needs, in a way that is secure and affordable.

More than environmental necessity; this is an economic imperative. Continued dependence on volatile fossil fuel prices is a recipe for industrial decline. By contrast, a transition to renewables and clean technologies offers a realistic path to economic sovereignty and prosperity.

Renewable energy is "freedom energy". It frees us from geopolitical dependencies on the enemies of Europe: Russia and the Islamic Republic of Iran who can, in a single decision, shoot gas and oil prices through the roof. By contrast, we retain control over our own homegrown energy sources. Renewables are already making 45% of the electricity and 25% of the overall energy consumption in the EU. They have played a vital role in reducing dependence on Russian gas and shielding consumers from extreme price volatility.

To fully realise this potential, the EU must play to its strengths. Let's scale our investments in renewable technologies—offshore and onshore wind, solar thermal and PV, geothermal, heat pumps, tidal and wave energy, and even emerging sources like airborne wind and osmotic power. Each Member State must adopt tailored investment plans based on their unique geography and industrial strengths.

Equally important is energy efficiency—the "invisible powerhouse" of our transition. By improving building insulation, modernising industrial processes, Europe can significantly reduce its energy needs and bills, while creating local jobs, lifting families from energy poverty and guarantee comfort against both cold winters and heatwaves.

To maximise the economic and geopolitical benefits of the cleantech revolution, we need to invest to manufacture most of this equipment in Europe. Each sector needs a specific kind of support. For heat pumps, supporting demand through regulation or public support is likely to suffice. For batteries however, we need to create a system that provides an output subsidy of, say, 20€ per kWh of battery manufactured in the EU, for our companies to be competitive vis-à-vis US and Chinese higher level of public subsidy.

The Clean Industrial Deal of the European Commission is a welcomed step in the right direction. But we need an investment arm to that Deal. Europe needs a cleantech investment plan, coordinated at EU level, deployed with Member States. The European Parliament's resolution on the Clean Industrial Deal (CID), adopted in June, rightly identifies this as a strategic priority by asking the European Commission to launch both a structural dialogue and an investment plan for cleantech manufacturing in Europe.

While we work on providing more investment certainty through a cleantech investment plan, we also need to refrain from creating regulatory uncertainty. As Donald Trump is generating policy uncertainty on a massive scale, we Europeans need to play to our strengths: stable and ambitious regulations that provide certainty to industries and financial partners.

Rolling-back important legislation, such the 2035 target set in the CO2 standards for cars regulation, would generate uncertainty, leading to the destruction of clean industrial jobs. True, carmakers are facing headwinds due to inconsistent fiscal policy choices, especially in Germany and France. But the answer to this should be the deployment of a European social leasing scheme that would help millions of hard-working Europeans from our rural areas to access cheap electric cars made in Europe.

Europe faces a fundamental choice.

If Europe were to retreat, to roll-back the regulations and refrain from adopting a cleantech investment plan, Europe would cling to a fossil-fuelled past, manage industrial decline and leave technological leadership to China.

If Europe were to choose to lead, to preserve its regulatory stability and build the investment plan its industry so desperately need, Europe would gain more geopolitical power, create jobs while protecting the environment, and allowing other democracies in the work the option to work with European democracies rather than authoritarian China.

Now is the time for Europe to lead, not retreat.

Italy's Nuclear Reawakening

NICOLA PROCACCINI

MEP (ECR Group - Italy), Co-President of the ECR Group in the European Parliament, Head of Energy and Environment Department for Fratelli d'Italia

Europe is facing a new energy reality. The war in Ukraine, global supply shocks, and the weaponisation of energy have exposed just how fragile our dependence on external sources has become. At the same time, Europe is pushing hard to cut emissions while keeping its industries alive and competitive, a balance that's proving harder to strike than expected. Yet while renewable energy continues to expand, it remains intermittent and insufficient on its own to meet the demands of a modern, electrified economy. The continent must now ask itself a difficult but necessary question: how do we guarantee clean, reliable, and sovereign energy in a world that is anything but stable? For a growing number of member states, the answer is becoming clear: nuclear energy must be part of the solution.

In Italy, my country, this shift is particularly significant. For years, nuclear power was politically untouchable, frozen by two referendums that reflected a very different historical context. But today, the picture has changed. Energy security is no longer abstract; it is urgent. And the technology behind nuclear generation has evolved beyond recognition. Acknowledging this new reality, the government led by Giorgia Meloni has made the bold and necessary decision to reintegrate nuclear energy into our future planning.

This is not a symbolic gesture but a deliberate and strategic move. A draft law currently under consideration in the Italian Chamber of Deputies lays out the legal and regulatory framework for a nuclear return. This progress opens the door to new-generation reactors, such as Accelerator-Driven Subcritical Reactors (ADSRs) and small modular reactors (SMRs), while also reinforcing support for advanced research. At the European level, our recent accession to the Nuclear Alliance affirms our commitment to play a leading role in the continent's energy transition. We are also taking on a coordinating role in fusion research, a testament to both technical capability and renewed political purpose.

What's being proposed today builds on a foundation of deep expertise. In the 1960s and 70s, Italy ranked among the global leaders in nuclear capacity. The Caorso Nuclear Power Plant — one of the most powerful in Europe at the time — was built and brought online in just over eight years, a remarkable achievement. Institutions like ENEA (the Italian National Agency for New Technologies, Energy and Sustainable Economic Development) played a key role in advancing safe and innovative nuclear technologies. That knowledge base has endured. Today, with clear direction and renewed investment, we are reactivating it. A new generation is being trained, and the expertise of the past is being aligned with the challenges of the future.

This revival comes at a pivotal moment for Europe's industrial policy. The EU is right to focus on reindustrialisation, but without sufficient, reliable energy for key sectors like steel, chemicals, and manufacturing, those efforts risk falling short. Nuclear can bridge the gap that renewables alone cannot fill. It offers dependable, low-emission baseload power, ensuring grid stability and economic competitiveness.

Recent decisions in Brussels mark real progress. After long debate, nuclear energy has finally been included in the EU's Taxonomy for sustainable investments. This opens the door to financing, innovation, and pan-European cooperation. It is more than a regulatory shift; it is a validation of common sense and of the approach we in the European Conservatives and Reformists (ECR) Group have defended for years — one grounded in technological openness, scientific integrity, and strategic foresight.

Looking beyond fission, we cannot ignore the promise of fusion. Once seen as a distant dream, fusion is now steadily moving toward practical application, here too, agencies such as ENEA are playing a central role. From Italy's participation in the international ITER project to private-sector initiatives like Eni's partnership with MIT, the country is deeply engaged in advancing fusion. Earlier this year, I hosted a dedicated event in the European Parliament on the state of fusion. The message from experts was clear: this is no longer a question of "if," but "when." We must be ready — and we are.

Public opinion, understandably, still carries the weight of past experiences. The fears of earlier decades were never irrational. But it is now our responsibility to explain how much has changed. Today's reactors are fundamentally different. Safety protocols, waste management, and transparency standards have advanced significantly. Building trust means listening carefully and communicating clearly what nuclear energy really represents — not as a memory of the past, but as a necessity for the future.

For the ECR Group, this moment affirms a long-standing commitment. We have always defended a pragmatic and secure energy strategy, one that balances environmental goals with industrial needs. Europe must be able to innovate, produce, and lead — not rely on others for the energy it requires to stay competitive.

DENNIS **RADTKE**

MEP (EPP, Germany)

Towards a **European Steel Pact**: Integrating the **Steel Industry** into the **Heart** of the **Clean Industrial Deal** to **Strengthen Europe's Industrial Sovereignty**

Europe finds itself at a historic crossroads. The dual challenges of industrial competitiveness and climate neutrality are converging in ways that will define our continent's future. Nowhere is this more apparent than in the steel sector, an industry that stands not only as a bedrock of our industrial fabric, but also as a key enabler of the green transition. As we shape the Clean Industrial Deal, it is time to place steel where it belongs: at the very heart of our strategy for a resilient, sovereign, and climate-neutral Europe.

Steel is Europe's industrial spine. It underpins critical sectors. From automotive to construction, from wind turbines to railways. It is not merely a material; it is a strategic asset. Yet over the past two decades, we have seen this pillar of European strength weakened by a toxic combination of global overcapacity, unfair trade practices, and rising production costs. At the same time, the steel sector is under growing pressure to decarbonise, a goal we share, but one that must be met with realistic pathways and a robust industrial policy.

This is why I strongly advocate for a European Steel Pact: a comprehensive, forward-looking policy framework that embeds steel production into the core of our Clean Industrial Deal. Such a pact must serve two fundamental objectives: achieving climate neutrality in steel production and reinforcing Europe's industrial sovereignty.

Clean Steel, Competitive Steel

Europe's steelmakers are not standing still. Many are already pioneering breakthrough technologies like hydrogen-based direct reduction, carbon capture, and circular production systems. However, innovation alone will not suffice. Without a coherent European strategy that combines environmental ambition with industrial realism, these efforts risk faltering.

We need to recognise that green steel is not just a climate imperative but also a global race. The U.S. Inflation Reduction Act and China's state-backed steel capacity expansion are reshaping competitive dynamics. If Europe wants to lead, we must ensure a level playing field. That means accelerating access to decarbonised energy, scaling up hydrogen infrastructure, and simplifying the permitting process for industrial transformation. It also means deploying instruments like the Carbon Border Adjustment Mechanism (CBAM) not as a punishment, but as a shield for European industry and a driver for global standards.

Strategic Autonomy Begins with Strategic Materials

The debate around "open strategic autonomy" is rightly gaining traction. Nevertheless, we cannot speak of sovereignty while outsourcing the foundations of our economy. If Europe becomes dependent on foreign steel, especially from countries with lower environmental and labour standards, our green transition will be neither just nor secure.

A European Steel Pact must therefore commit to preserving and modernising domestic steelmaking capacity. We must view steel not as a legacy burden but as a strategic sector. Public support mechanisms, whether through the Innovation Fund, IPCEIs, or a revamped EU industrial policy, must prioritise green steel projects and secure long-term investment. At the same time, we must foster a climate of social partnership, ensuring that workers are part of the transition and that no region is left behind.

An Industrial Policy That Delivers

For too long, Europe has hesitated to embrace a proactive industrial policy. This must change. The Clean Industrial Deal offers a unique opportunity to reshape the relationship between climate goals and economic development. However, to be credible, it must be grounded in the reality of our industrial base.

Steel offers a test case. If we can develop a competitive, low-carbon steel industry in Europe, we can do the same in cement, chemicals, and other energy-intensive sectors. Nevertheless, this requires coherence. We cannot, on the one hand, impose ever-stricter climate targets, and on the other, delay the rollout of support frameworks. We cannot promise green jobs while turning a blind eye to deindustrialisation.

This is where political leadership comes in. The Clean Industrial Deal must speak the language of Europe's workers, engineers, and industrial innovators. It must be anchored in the principles of strategic foresight, economic fairness, and technological excellence. The European Parliament, together with national governments and the Commission, must drive this agenda forward, with steel as a flagship.

Towards a Common European Future

The transition to clean industry will not be easy. It will demand courage, compromise, and unprecedented cooperation. But it also offers Europe a chance to reimagine its economic model, one that respects the planet, uplifts its people, and secures its place in the world.

A European Steel Pact is not a nostalgic appeal to the past. It is a strategic blueprint for the future. It is about reindustrialising Europe in a green and fair way. It is about proving that climate policy and industrial strength can go hand in hand.

Let us not miss this moment. Let us place steel at the core of our Clean Industrial Deal, not only to decarbonise, but also to lead. Not only to compete, but to thrive. Europe's future depends on it.

AXEL **EGGERT**

Director General of the European Steel Association (EUROFER)

The **Clean Industrial Deal**: A Critical First Step – Now Deliver the Radical **Change Europe's Steel** Industry Urgently Needs

The European Commission's Clean Industrial Deal marks an important political milestone. It signals a growing awareness that Europe cannot succeed in its green transition or compete in a more fragmented, high-stakes global economy without a strong, sovereign industrial base.

For the European steel sector—not only a symbol but a determiner of European sovereignty, foundational to everything from wind turbines to electric vehicles, construction to defence—the Clean Industrial Deal (CID) and the subsequent Steel and Metals Action Plan (SMAP) rightly identify many of the core challenges: global steel overcapacity, unfair trade practices, skyrocketing energy prices, weaknesses in the Carbon Border Adjustment Mechanism (CBAM) and availability of critical raw materials such as ferrous scrap.

But while the diagnosis is on point, the treatment remains incomplete or still to be implemented. Without rapid, structural solutions to these issues, laudable initiatives on lead markets, local content and circular economy risk being insufficient to turn the tide.

As Mario Draghi pointed out, in light of today's geoeconomic shifts our industry has become even more strategic: the EU must deliver "radical change" to ensure competitiveness, decarbonisation, business stability and, ultimately, prosperity and autonomy.

The European steel industry has outlined four priority issues for immediate and effective action from European policymakers:

1) Stop spillover effects of global overcapacity and level the playing field for European steel

The "external dimension" of the CID focuses mainly on horizontal issues such as raw material access and international partnerships. While steel sector-specific measures are mentioned in the SMAP, without rapid follow-up—particularly aiming at restoring a level playing field—the EU risks losing not just its industrial base, but its strategic autonomy.

Global steel excess capacity has surpassed 600 million tonnes and is projected to reach 720 million tonnes by 2027—over four times the EU's production. Recent U.S. tariffs further pressure trade flows to be diverted. The EU must urgently develop, before summer and without waiting until June 2026, the "highly effective trade measure" as promised in the SMAP to reflect today's market reality and replace as a matter of urgency the current steel safeguard, which has proven ineffective.

2) Update the CBAM to close loopholes and prevent resource shuffling

The CID was quickly followed by the adoption of the Omnibus package, which simplifies the CBAM before fixing its loopholes. Yet revision of key elements critical to CBAM's effectiveness—exports, circumvention, resource shuffling, downstream sectors—have been scheduled only for the second part of the year. A full review is urgently needed now, with loopholes closed well before 2026:

- Under the current CBAM, non-EU steel producers can sell their less carbon-intensive products on the EU market at cheaper prices while maintaining carbon-intensive production for domestic or non-EU markets—without added costs or emissions reductions.

- Without an effective export solution, EU producers will still pay carbon costs on exports, becoming even less competitive globally and putting around 19 million tonnes of production at risk.

- CBAM doesn't cover steel-intensive downstream applications, such as automotive and renewable infrastructure components, incentivising non-EU production and the relocation of entire EU manufacturing value chains to third countries.

3) Make Energy Affordable

EU wholesale energy prices remain above historical levels and 2–4 times higher than in the U.S. or China. With energy a major part of steel production costs, affordability is vital for competitiveness and decarbonisation.

While the Clean Industrial Deal and the Action Plan for Affordable Energy acknowledge the industry's need for lower energy prices, proposed solutions still don't include a structural reform of EU electricity market design to decouple electricity prices from fossil fuels. The plan relies on tools—like long-term power purchase agreements (PPAs)—that haven't delivered meaningful benefits to energy consumers, while transitional energy price relief arrangements at internationally competitive levels are needed for energy intensive industries as well as relief from regulatory costs in electricity bills. In this regard, the recent Clean Industrial Deal State Aid Framework (CISAF) presents a mixed picture, whose concrete impact on the ground is yet to be fully assessed. Efforts to boost capacity and grid investments in low-carbon electricity are welcome but will only deliver in the medium term.

4) Retain strategic resources such as ferrous scrap and boost their recycling and reuse in Europe

Ferrous scrap is a vital secondary raw material, essential not only for the EU steel industry but for the broader economy. Recycling it into new steel significantly cuts CO_2 emissions, reduces energy consumption, and limits dependence on virgin materials. As a cornerstone of steel decarbonisation, its strategic importance is increasingly recognised globally.

The Circular Economy Act's mention in the Clean Industrial Deal as a way to increase supply of high-quality secondary raw materials is a positive step. Yet the EU remains the world's largest exporter of ferrous scrap, often to countries with lower environmental and social standards. This enables foreign industries to outbid EU steelmakers, putting them at a competitive disadvantage.

To achieve tangible results, the Circular Economy Act should formally recognise ferrous scrap as a strategic secondary raw material. Targeted tools and measures must help retain this resource within the EU, ensuring availability and quality to support decarbonisation while safeguarding EU industrial competitiveness and strategic autonomy.

Europe can only be stronger with European Steel!

Reducing energy costs to boost industrial competitiveness

PETER LIESE

MEP (EPP Group - Germany)

In recent years, end consumers and, in particular, the European industry, have been confronted with **extraordinarily high energy costs**. Energy prices for European companies are significantly higher than those of comparable industrialised economies, such as the US and China. These high costs represent a significant burden and pose a **fundamental threat to the competitiveness of European companies**.

In order to reach the European Commission's goal of boosting industrial competitiveness in Europe and **keeping up with the US and China**, reducing energy costs must be an integral part of competitiveness strategies. At the same time, it opens up the **opportunity to decarbonise Europe's industry** by using energy more efficiently**, increasing electrification,** and scaling up the infrastructure for-and the use of-renewable energy sources. The Clean Industrial Deal recognises that economic resilience and decarbonisation are strongly intertwined and that one cannot be achieved without the other.

As a response to these challenges, the Clean Industrial Deal prioritises the phase out of CO2 emissions to drive industrial growth across Europe. It rightfully focuses on improving the **conditions for energy-intensive industries**, such as the steel and cement industries, as they and small and medium-sized enterprises (SMEs) are particularly impacted by high energy prices and unnecessary bureaucratic procedures.

The **Affordable Energy Action Plan** proposed by the Commission as part of the Clean Industrial Deal in February, has set out eight concrete measures on how to reduce energy costs. This package of targeted actions is highly welcomed, as it addresses the urgent needs to reduce electricity prices, ensure well-functioning energy markets as well as stabilise energy supply, and thus incentivises investment in clean technologies.

Essentially, the Action Plan recognises the issue of **electricity bills being up to three times higher than gas bills** in some European countries and calls for a decrease in the costs of electricity bills and the costs of electricity supply. Scaling up the use of affordable electricity is crucial for the clean energy transition. Whether through the electrification of industrial processes, installation of heat pumps or the promotion of electric vehicles for private transport, its decarbonisation potential, versatility and efficiency make **affordable electricity a cornerstone for a sustainable future**.

Beyond affordability, energy independence is also critical. Scaling up electricity not only allows for energy generation from renewable sources, integration with renewables via electricity grids and storage to cater fluctuations in demand, but also enables **independence from problematic gas suppliers**, such as Russia, Azerbaijan and Qatar. The high energy costs we are facing now were greatly exacerbated by the energy crises and Russia's war on Ukraine. Boosting competitiveness requires us to stabilise our energy supply, respond flexibly to surges in demand and stop relying on unpredictable suppliers.

Completing the Energy Union will help create an independent, integrated and stable electricity market in Europe that strengthens the coordination between EU member states and makes us better **prepared to respond in times of crisis and fluctuations in demand.**

A **stable and predictable environment** is a prerequisite to **attract investment** from within and outside of Europe. By formulating an action plan, increasing our independence from other nations and creating well-functioning energy markets, we are reducing uncertainties for investors and businesses seeking to invest in renewable energy sources, such as hydrogen, and their infrastructure.

Similarly, we need to **accelerate the approval procedures**, particularly for SMEs and firms operating in energy-intensive industries, to transform their factories and operations to align with the clean energy transition. This goes hand in hand with the Industrial Decarbonisation Accelerator Act. The CEO of the steel mill in Salzgitter, Germany for instance, explained to me that he needs to receive over 50 approvals from different authorities to convert his mill in pursuit of climate neutrality.

Such inefficiencies that hinder firms willing to invest and transform their operations to accommodate the clean energy transition cannot persist; instead, these firms should be supported throughout the process. The successful proposal to reduce bureaucracy for SMEs in the Carbon Border Adjustment Mechanism (CBAM) resulted in 91% of firms being exempted from CBAM reporting requirements while 99% of emissions continue to be captured. This shows how the **streamlining of unnecessarily bureaucratic procedures is inevitable to reduce costs and time, and enhance efficiency.**

Finally, it is important to acknowledge that the implementation of the proposed measures, stabilisation of the energy markets and the long-term reduction of energy prices will take time. This transition requires structural changes and efforts on multiple levels. One measure, however, that can be immediately taken, is to **reduce energy taxes in EU member states to provide short-term relief.**

Overall, climate and competitiveness goals go hand in hand and require a coordinated approach. Reducing energy costs remains a crucial step toward achieving both.

JAMES WATSON

Director General – Eurometaux

The Role of the **European Metals Industry** in the **Clean Industrial Deal**: **Reconciling Mineral Sovereignty** and the **Ecological Transition**

The future of Europe will be built on metals. This is not a fancy statement of intent, it is an estimation of the most likely outcome of the twin transitions that we are currently going through – in digitalisation and energy. The past and the present belong to the era of fossil fuels: our economies, our societies, and our daily lives depend on access to fossil fuels to allow us to work, sleep, eat and have fun! This is changing, faster than most people realise. Renewable energy, high speed internet, artificial intelligence and electric transport all require metals. No metals = no clean, digital future. That is as close to a fact as you can state about a speculated future!

This means Europe needs to get its policies in order, to ensure that we have access to the raw materials that we will need to make the metal based transitions happen, and not simply outsource full responsibility for our own economic security to third countries. We must learn the lessons of the past – the war in Ukraine should be the catalyst for not just de-fossilising our economies, but to also refrain from putting all our economic eggs in one basket. We must never rely on one country for our energy security, as we did with Russia for decades, only for them to bite us bitterly in the end.

If we don't heed the warnings of the past we will see our metals based economy of the future being organised and controlled in a large part by China. China is the country with the highest production of solar energy materials, they are increasingly dominating in wind energy, they have the battery market under control and are starting to make in roads to heat pumps, electrolysers and electric vehicles. If we make a transition from fossil fuels to an economy and society based on dependence on China we will have failed.

This is where European metals come in – we have a robust non-ferrous metals sector in Europe. However, every year smelters of aluminium, zinc, silicon and others close. This is a catastrophe and the opposite of what is needed to own our future. The European Commission identified this and in 2023 brought forward the Critical Raw Materials Act (CRMA) and almost all the metals we represent in Eurometaux are included as CRMs in the CRMA.

This is good news as it means that we in Europe understand that we need to develop our production and processing of the metals we need for our clean and digital future here in Europe. The CRMA sets targets that imply we would need at least 10 new mines, 15 new smelters and 15 new recycling plants in Europe by 2030 according to Eurometaux, otherwise we will miss this objective (and all the negative implications that has for our dependency). So, here is the rub – we are losing capacity in metal production at exactly the time it should be ramping up.

The answer to this has been to see the start of 2025 being crammed full of competitiveness related initiatives from the Ursula Von Der Leyen II Commission. We had a Competitiveness Compass in January 2025 – with little details but good sounding intentions. In February we saw the launch of the Clean Industrial Deal – a focus on competitiveness but a continued push for decarbonisation at its heart. The so called omnibus package has been the first competitiveness element that has been rolled out in legislative terms – reducing the burden of reporting on companies. We welcome this but this alone does not drive competitiveness.

More action is needed on energy prices – the Affordable Energy Action Plan also of February 2025, gave some good new ideas: we welcome the fact that the EIB will be able to underwrite Power Purchasing Agreements (PPAs) for Energy Intensive Industries (EIIs), but this alone does not go far enough. The answer for solid support for a competitive metals industry in Europe is a short to mid term clarification on the roll of state aid. Here we have the Clean Industrial Deal State Aid Guidelines (CISAF), unfortunately there is a risk that these Guidelines will link access to state aid to a plants ability to respond to price signals. All well and good if possible – but metals are must run producers. Once the process is started it cant be stopped! So how can we possibly jump through a hoop that does not take account of the laws of physics?

Finally I will recall the Steel and Metals Action Plan, which arrived in March 2025. This was a great chance to set out how the metals sector would deliver its role in the twin transitions. Instead it was limited to steel, aluminium, copper and nickel. Missing many metals that are fundamental for the energy transition – like lithium, zinc or cobalt. This narrow lense does not help plan for the future of the sector as a whole, cherry picking some and ignoring others. We will need all metals for our future – lets hope we see more action to support our sector before its too late.

The **Clean Industrial Deal: Towards** a **Democratic** and **Socially Just Industrial Transition**

DARIO **TAMBURRANO**

MEP (The Left Group – Italy)

In 2019, Commission President Ursula von der Leyen unveiled the European Green Deal, which promised to make Europe the first climate-neutral continent.

Six years later, the EU's industrial sector is in a deep crisis. A cost-of-living squeeze reduced domestic demand, while soaring energy prices undermined Europe's global industrial competitiveness.

If shutting down Europe's industrial sector was the goal of the Green Deal, we'd be on our way - though clearly, that was never the intention.

But even if I believe deindustrialisation was not the intention, our stubbornness in failing to understand the root causes of the crisis and identify real solutions is pushing us in that direction.

Why the Green Deal was and still is the solution

The goal and rationale behind the Green Deal still make sense. Europe rightly aims to contribute to global climate action and reduce the economic damage caused by climate change. Numerous studies confirm that the costs of inaction far outweigh those of the energy transition.

We should also not forget that Europe largely depends on fossil fuel imports to meet its energy needs. Phasing out fossil fuels would free Europe from volatile fossil fuel prices and help ensure lower, stable energy prices for industry and consumers.

Rather than rolling back the Green Deal, as some conservatives suggest, we should focus on why it is failing—and what must change to help European industry transition effectively.

Learning from the Green Deal's Shortcomings

While the Green Deal rightly raised the level of ambition, it failed to recognise the need for sustained financial support to help industry transition.

The Just Transition Fund was a step in the right direction, but it was too small and too narrow in scope. The Recovery and Resilience Facility provided temporary—often ineffective—relief, not a long-term funding framework.

This forced Member States to scramble together national subsidy programmes, leading to fragmentation, unequal competition, and growing tensions over state aid. Meanwhile, the US moved ahead with the Inflation Reduction Act, a massive programme of public support for clean industry, and China had already implemented long-term plans to scale up the manufacturing of clean technologies - which is why they now hold a strong position in global industrial competition.

Europe, instead, relied on a patchwork of short-term national plans that lacked sufficient financial support, hoping that the industry would make the necessary long-term investments. However, they perceived that the risks were too high—especially with major elections approaching and far-right parties gaining in the polls, casting doubt on the long-term stability of EU decarbonisation policies.

Instead of addressing these shortcomings, the EU appears to be shifting direction. The industrial crisis triggered a dangerous U-turn: rather than reinforcing the Green Deal, policymakers are supporting the defence industry as a driver of economic recovery. Defence spending is now being rebranded as a strategic investment. This shift risks diverting limited public funds away from the climate and social priorities of the Green Deal.

The consequences are becoming clear. Industries are delaying green investments, regions are losing jobs and missing out on new ones, citizens are growing increasingly sceptical. Europe risks not only worsening the industrial crisis, but also triggering a broader social one, putting the future of the European Union into question.

The Case for a Clean Industrial Deal

A Clean Industrial Deal should build on the Green Deal's foundation while correcting its most critical flaw: the lack of strategic public investment. It must maintain the climate and energy objectives, while treating industrial decarbonisation not just as an environmental necessity, but as a social and democratic project.

This means:

- A long-term EU-level fund dedicated to clean industrial transformation
- Public procurement strategies that prioritise green and local production
- Support for workers and communities to manage the transition
- Stronger democratic governance over industrial policy
- No downward revision of Europe's energy and climate ambition

We need to invest in European industrial sovereignty by ensuring that green industries

have the infrastructure, the workforce, and the support they need.

But we also need to invest in people. Without targeted social policies, the green transition risks leaving workers and communities behind. Training programmes and instruments ensuring decent wages for workers must become core pillars of industrial policy.

No Transition Without Support

Public investment is not just a financial issue. It is a question of legitimacy.

People will not support a transition that they perceive as unjust, imposed from above, or driven by corporate profit. They will support a transition that offers them good jobs, affordable energy, and thriving communities.

The Clean Industrial Deal must ensure that decarbonisation becomes a source of prosperity—not a trigger for economic anxiety or social backlash. This is not just a matter of economics, but of democracy.

The 2024 EU elections sent a clear message: citizens are worried about the economy and their way of life and fear that the energy transition will damage both. To rebuild public trust in the green transition, Europe must prove that it can deliver economic prosperity—and that it can work for everyone, not just investors or large corporations such as the weapons industry.

Why is **Demand-Side Flexibility Europe's** untapped competitiveness advantage?

TZENI VARFI

Head of Policy, smartEn - Smart Energy Europe. The European association of the Flexible Demand Management Industry

Europe's energy transition is well underway, but let's be clear: we are not moving fast enough in the areas where it matters most. Significant investments have been made in renewables and grids. Yet, we continue to overlook a critical enabler that's already in our toolbox: Demand-Side Flexibility (DSF). If the EU is serious about affordability and competitiveness, DSF needs to be at the core, not on the sidelines, activated by a specific clean tech industry, the Flexible Demand Management Industry (FDMI).

The Competitiveness conversation we are not having

Across Europe, industries are under pressure. Energy costs are higher than in North America or Asia. Electricity demand is rising, yet our grids are increasingly constrained. And while supply-side solutions receive the majority of funding, we are underusing the fastest, cleanest solution we have: flexible demand.

Simply put, DSF allows energy consumers—*flexumers*—to shift or reduce their electricity use in response to price signals or grid needs. That flexibility helps balance the system, integrate more renewables, and reduce the need for expensive backup generation. It also cuts emissions, lowers energy bills, and gives businesses a competitive edge.

The opportunity is massive. According to a study by smartEn and DNV, unlocking DSF across Europe by 2030 could deliver:

- €71 billion in annual consumer savings
- €11– €29 billion in avoided grid investments
- 61% less renewable curtailment
- Over 2.7 GW of avoided peak generation

These are not marginal gains. These are systemic changes.

Undervalued and underused: the DSF Gap

Today, in most EU countries, DSF is still stuck in pilot projects or early-stage markets—far from the scale we need. For example, Demand Response Aggregators face high entry barriers, regulatory uncertainty, and inconsistent rules across countries.

smartEn's latest Market Monitor, developed with LCP Delta, shows that only a few countries (France, Belgium, Sweden, and the UK) are making efforts in enabling DSF across wholesale and balancing markets. The rest lag behind due to incomplete market design implementation, patchy smart meter rollouts, and outdated rules that still prioritise supply-side responses.

Even in countries where DSF is technically allowed, market design often fails to support it. Capacity mechanisms still favour fossil backup. Industrial tariffs remain static. And while the EU Electricity Market Design reform (EMD) provides the right direction, we are certainly not delivering on the ground.

Let's call it what it is: a missed opportunity that we can no longer afford.

DSF is a competitive strategy for the European industry.

For industrial consumers, DSF is a strategic tool. It enables companies to control their energy costs, hedge against volatility, and turn energy management into a revenue stream. This is already happening where the regulatory environment supports it.

In France, for example, some energy-intensive industries (EIIs) have joined balancing markets via aggregators and now generate revenue by adjusting their loads. In the UK, flexible demand already participates in capacity markets and provides grid services. The same should be possible across all of Europe.

When combined with digitalisation, on-site storage, or renewable self-generation, the business case becomes even stronger. Flexible plants could align production with low-cost hours, reduce peak charges, and enhance grid stability—all while shrinking their carbon footprint.

For Europe, this translates into cleaner industry, cheaper electricity, and stronger energy security.

Five things Europe needs to do to unlock the DSF potential -Now

Policy inertia, inconsistent or lack of implementation, and a supply-side mindset, no longer fit the system we are trying to build. To unlock the full value of flexible demand, Europe must deliver on what is already agreed, and support what is still missing.

Here is what should happen next:

Full implementation across all Member States of the 70 EU legislative provisions in the Electricity Market Design and Fit for 55 package to allow the FDMI to scale-up

Existing EU rules already require Member States to allow consumers to receive price signals and incentives to activate their flexibility with the support of business models offered by the Flexible Demand Management Industry (FDMI). For instance, Flexibility Service Providers must have non-discriminatory access to wholesale, balancing, and capacity markets and should be compensated in a manner that reflects the actual value of the services they deliver (e.g., avoided grid costs, reduced peak demand, or balancing support).

Support data interoperability

DSF starts with visibility. Without accurate metering and (near) real-time data, flexumers can't respond or be rewarded. Europe needs EU rules for data access and sharing in an interoperable way.

Accelerate the Smart Electrification of the EU power system

To support the cost-effective clean transition, electrification should be the no-regret option. However, by simply electrifying demand congestions and peaks in demand will occur. While increasing the electrification rate from 23% to 32% in the next five years, equal efforts must be put to speed up the flexibility of (existing and future) electricity demand.

Include DSF in industrial State aid and clean PPA frameworks

The EU is deploying financial tools like the Clean Industrial Deal State Aid Framework (CISAF) and clean PPA support to drive decarbonisation. These frameworks must recognise DSF as an eligible measure. It helps industry align consumption with renewables, avoid peak prices, and ease grid pressure —resulting in lower emissions, lower costs, and smarter industrial electrification.

From niche to normal

We know DSF works. We have the data, the tools, and the technology. What we need is political will and regulatory follow-through. We also need to change the narrative: DSF isn't niche -it is a smarter way to run our energy system and our economy.

Europe has led on clean energy before. We can lead again but only if we use every tool at our disposal. That includes DSF.

If we want an energy system that is affordable, reliable, and competitive, we cannot keep leaving DSF on the bench.

DR FABRICE STASSIN

Secretary General of the Batteries European Partnership Association (BEPA)

To remain on the **global battery map**, **Europe** needs an ambitious **competitiveness-driven battery innovation** partnership in the next MFF

Batteries are key to clean mobility such as electric vehicles, but also stationary energy storage (for integration of renewables into the grid), our digital way of life, and energy-dependent defense technologies.

All these applications depend on the development of cost-effective, performant, sustainable and circular batteries. Competing with Asia in such a tough global arena is about innovating more, better, faster … or Europe will be out innovated.

Against this backdrop, the European Commission set up under Horizon Europe a public private partnership to support R&I across the battery value chain. This battery partnership (called BATT4EU - Batteries for Europe) was one recommendation out of EU's Strategic Action Plan on Batteries prepared with the European Battery Alliance.

To interact with the European Commission in running BATT4EU, the Batteries European Partnership Association (BEPA) was created late 2020 to build a battery innovation ecosystem, to foster collaborative battery R&I, and to strengthen European innovation capabilities.

BEPA, the European battery R&I voice, today counts 240+ members of which 50 percent come from industry (incl. 50+ startups). In the 2021 – 2024 period, BATT4EU channeled 514 million euros of Horizon Europe public funding to 85 projects involving 750+ beneficiaries. We have also demonstrated unlocking about 3 euros of in-kind additional activities from BEPA members for 1 euro of Horizon Europe public funding.

BATT4EU projects cover the full battery value chain (22% on raw materials and recycling, 25 % on advanced materials and chemistries, 20 % on battery cell manufacturing, 19 % on end-applications for mobility, 14 % for others) and also included community building projects such as "Batteries Europe" and "Battery 2030+". Also, 10 out of the 85

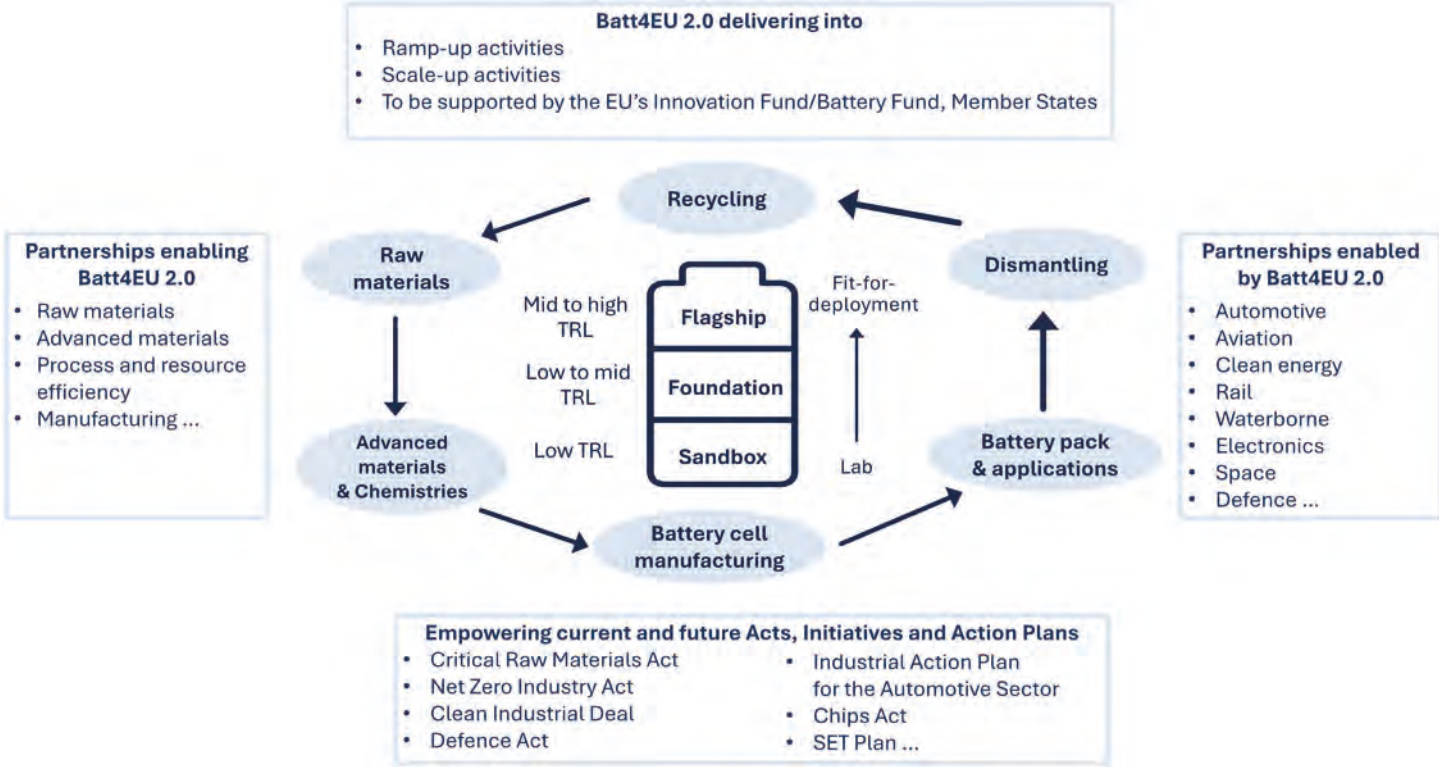


Figure 1. Outline of BATT4EU 2.0 – The next MFF's battery partnership.

projects are ending in 2025 and deliver results of value to industry.

Topic-wise, the partnership covers the development of affordable battery chemistries with less critical raw materials, and next-generation battery chemistries with higher performance, safety, competitiveness such as solid-state batteries. We also support the design of less capital-intensive & more agile manufacturing processes but also less energy-intensive & cleaner production processes. Digital tools for production lines and platforms for accelerated materials discovery are becoming important topics. Finally, BATT4EU also prepares for cost-optimized high-efficiency recycling of various complex feeds … and innovates on battery sustainability.

Like all Horizon Europe partnerships, BATT4EU operates within a range of TRLs (technology readiness level). 65 % of current projects should reach TRL 4-5 (technology (pre-)development), while 35 % should reach TRL 6-7 (technology demonstration).

The end goal is of course the first industrial deployment (TRL 8) and later full industrialization of these technologies (TRL 9). This will require policies, instruments, and public funding schemes that are however outside the scope of Horizon Europe.

Continuing researching and developing technologies from lab to fit-for-deployment stage (TRL 7) will require further R&I activities and ideally public funding within BATT4EU and in EU's next multiannual financial framework (MFF) … Collectively we have to run both an innovation sprint and an innovation marathon to build and maintain Europe's competitiveness.

In the next MFF, for the period 2028 – 2034, BEPA therefore calls for the continuation of BATT4EU as a self-standing partnership (BATT4EU 2.0 – see Figure 1) with more ambitious, effective, and efficient funding to safeguard innovation capabilities and keep Europe on the global battery map.

Through research & innovation, BATT4EU 2.0 will support the industry's challenges related to the scope of operations and technologies, the scale of investments and their profitability, the speed of industrialization and innovation, and the sustainability of operations and products.

Building on solid foundations, BATT4EU 2.0 will cover the battery value chain, and it will address the various battery chemistries for various relevant applications. By tackling challenges under one roof, the battery partnership will ensure a coordinated and synergetic development of fit-for-purpose technology blocks needed for the Clean Industrial Deal.

To cover the relevant technology development from the lab to fit-for-deployment, we anticipate BATT4EU 2.0 to consist of a sandbox track (lower TRL, fewer partners, smaller projects, less prescriptive), a foundation track (replicating the success of BATT4EU) and a flagship track (higher TRL, fewer partners, bigger projects, more prescriptive). We believe this construction should facilitate and accelerate innovation while preparing for the future.

BATT4EU 2.0 will also build strong interfaces with relevant innovative partnerships such as application-specific partnerships which rely on battery technology as one of the technology blocks to integrate into applications. Strong upstream and downstream interfaces will reduce fragmentation, unlock synergies, and deliver highest return on public funds.

Finally, we believe that the BATT4EU 2.0 construction will best account for the diversity of the European battery ecosystem, to minimize the risks associated with technology development, market dynamics and value chain complexity. Optimizing "risk vs impact" ratio of public funding will enhance our chances to build battery technology leadership across multiple applications in Europe.

Europe and its industry need a strong battery partnership in the next MFF to support efforts for technological sovereignty, strategic autonomy, and resilience in battery technology - Let us do it!

European Industry Urgently Calls for Policy Action to Secure Energy Competitiveness and Climate Goals

ISABELLE CHAPUT

Secretary General
IFIEC Europe - International Federation of Industrial Energy Consumers

Europe's industrial future is at a critical crossroads. The International Federation of Industrial Energy Consumers (IFIEC Europe) is sounding the alarm — immediate, coordinated policy measures are essential to restore competitiveness, ensure Europe's strategic autonomy, and meet our climate commitments.

Why Action Can't Wait

Europe's energy crisis demands more than piecemeal solutions. No single fix will do. That's why IFIEC emphasizes the need for a short-term, strategic approach supported by both EU institutions and Member States. With the overall aim of **minimising total energy system costs**, we've outlined ten urgent policy recommendations to keep Europe's industry thriving while advancing toward climate neutrality in 2050.

Top 10 Policy Calls to Action

1. **Make the Tripartite Approach a reality !** — Foster collaboration among EU institutions, Member States, energy producers, and industries through tripartite contracts to develop tools that protect competitiveness on the road to climate neutrality.

2. **Strengthen Energy Market Integration** — Improve cross-border energy trade, provide clearer price signals, and attract investments by making internal markets more efficient.

3. **Cut Grid & Storage Costs** — Lower transmission, distribution, and storage fees, and explore innovative financing options to prevent additional costs for the industry.

4. **Implement Efficient Demand Response Policies** — Create technology-neutral incentives that enable industries to be flexible and responsive, aligning with upcoming regulations and considering economic and technical constraints.

5. **Accelerate Low-Carbon Energy Projects** — Boost investments in decarbonized technologies, renewables, nuclear, and CCUS, focusing on demonstration projects and emerging technologies to speed up decarbonization.

6. **Set Realistic Climate Targets** — Support the 2050 net-zero goal but push for pragmatic 2030 and 2040 milestones that safeguard economic viability and industry competitiveness, especially for green hydrogen.

7. **Plan Beyond 2039** — Develop a practical framework for the EU Emissions Trading System (ETS) post-2039, incorporating international cooperation, CCUS, and credible greenhouse gas accounting.

8. **Address CBAM Export Concerns** — Establish clear protections for exporters under the Carbon Border Adjustment Mechanism and tackle risks of circumvention in global supply chains.

9. **Mitigate Rising Energy Costs** — Reduce energy taxes, fully compensate all sectors subject to delocalisation for indirect emissions costs, and unlock funding from institutions like the European Investment Bank to accelerate decarbonization efforts.

10. **Simplify Permitting Processes** — Fast-track approvals for energy infrastructure projects, especially cross-border, offshore, and LNG initiatives, to ensure timely development.,

IFIEC Europe

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  EUR 549bn (4.55% of th
- Strategic values chain fo
  strategic autonomy
- 13% of EU GHG emissi

MISSION & Objectives of I
Secure competitive and su
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KEY PRIORITIES: EII glob
- Efficient electricity, gas
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- EU strategic autonomy f
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END GOAL : maintain & r

A Call to Action

At the EU Energy Week 2025, IFIEC actively participated in shaping the debate, co-organizing a high-profile session with Cefic that drew a large audience and sparked vital discussions on energy security, competitiveness, and climate ambitions. We also actively participated in the 40th European Electricity Regulatory Forum in Florence, the 39th European Gas Regulatory Forum in Madrid, the 11th Energy infrastructures in Copenhagen, and the 15th Citizens Energy Forum, advocating for policies that balance energy transition and climate ambitions with industrial resilience and European strategic autonomy.

Europe's industrial strength depends on swift, decisive policy measures. IFIEC urges EU and national leaders to act now — to prevent further decline, protect jobs, and secure a sustainable, competitive future.

The time to act is now. Europe's industry and climate future depend on it!

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ifiec europe
international federation of industrial energy consumers

**Source: European Commission, DG Grow, Fiche EIIs, July 2022*

Less could be more: **Simplifying Industrial Transformation** in the **EU**

RADAN KANEV

(EPP, Bulgaria) is Member of the European Parliament and seats in the committees for Environment (ENVI) and Industry (ITRE).

How many plans does an industry need to reach Net Zero? Surely, one should suffice; two are already too many. Yet, companies face transition plans, CAPEX plans, climate neutrality plans, and transformation plans. Navigating this regulatory labyrinth is a hassle, isn't it? While simplification is clearly needed, what matters most is the smart optimisation of existing reporting requirements to lessen the organisational burden on businesses. Above all, we must establish meaningful incentives for companies to engage fully in the reporting process.

Although we are entering a cycle of deregulation, marginalising the experts who have brought us this far in order to 'speed things up' is far from wise. It might make sense from an inter-institutional standpoint, but not from a political or legislative one. Instead, we need a strategic and intelligent approach. This is vital if we want to uphold the EU's competitiveness agenda, climate ambition, and the uniqueness of our approach. In a world increasingly driven by state-backed production and subsidised exports, we must embrace smart financing to enable our industry to stay on course: to set strategic direction, transform, innovate, adopt new technologies, and—most importantly—remain globally competitive.

The European Commission repeatedly hinges on a mix of legislative reforms and financial support tools: from expanding the Emissions Trading System (ETS) and introducing the Clean Competitiveness Fund, to strengthening the EU taxonomy on sustainable finance for green projects. Decarbonisation in the coming years will be supported largely through the Innovation Fund, the newly launched €100 billion Industrial Decarbonisation Bank, and the Modernisation Fund. Major public instruments such as the Recovery and Resilience Facility and cohesion policy funds, all supported by revenues from the EU ETS and mechanisms like InvestEU, will also play a role. Together, this toolbox of laws, finance, and new targeted state aid is intended to accelerate the shift to a climate-neutral economy.

Hard-fought compromises are tangible solutions because they require all sides to give up something important while safeguarding their core priorities. Such deals often leave all sides frustrated, yet strongly invested. When every protagonist feels the sting of sacrifice, it is a strong sign that the agreement reflects a genuinely shared, balanced outcome, not simply a reflection of the dominant opinion of the day.

One such hard-fought, yet very meaningful, compromise - the toughest to reach in the Industrial Emissions Directive (IED) negotiations (where I served as rapporteur) - was the Deep Industrial Transformation (DIT). This mechanism strikes a balance: it allows for extended compliance deadlines - up to four more years - in exchange for major technological shifts and robust environmental outcomes. Applicable only in cases of advanced transformation, DIT demands significant emissions reductions, verified progress, and annual reporting on key milestones and co-benefits. It offers flexibility without compromising transparency or ambition. This could become a model to underpin broader efforts to decarbonise and modernise European industry, particularly where public money is involved or private investment is unlocked by public support. In short, companies that embark on genuine technological transformation to decarbonise or trigger substantial energy efficiency improvements should report solely under the DIT framework and be exempt from redundant, parallel reporting obligations. The reward? Access to financial support for their transformation.

If we take that path, we can transform the various transformation plans - with their overlapping and burdensome obligations - into a single, clear, and simple investment strategy: a single transformation and investment plan. This should be backed by national and European funding tools and administrative incentives. These could range from CAPEX support for technological transition and adopting clean technologies, to OPEX support via secured PPAs and two-way CFDs, to investments in energy efficiency, demand-side flexibility, CCUS or energy storage, and improved access to public or private infrastructure, be it modern electricity grids or supply chains for hydrogen, ammonia, or biofuels. All of this with one clear purpose: to build a modern, competitive industrial base powered by cutting-edge clean technology. Doing so will ensure that the EU has a shared, consistent long-term competitiveness strategy focused on industrial innovation and modernisation.

Quo Vadis Clean Industrial Deal - six months in

SUZANA **CARP**

Co-Founder CleanTech for CEE

Innovation requires breaking away with a pathway, creating a new tradition based on new ideas which generate forward-momentum. Six months into the Clean Industrial Deal is an opportune moment to analyse whether this mega package of proposals is re-inventing the European Union's approach to scaling innovation, with a view to deriving long-term competitiveness.

1. Clean Industrial Deal - How it started

The Clean Industrial Deal did not emerge in a vacuum, but followed shortly the Net-Zero Industry Act, an innovative policy creating a strategic list of key net-zero technologies with a target spelling out a clean industrial revolution was in the making. A logical next step would have been to innovate the EU's financial landscape to support it. The timing couldn't have been more urgent: just as the Clean Industrial Deal passed the European Parliament's endorsement, Europe's most financially supported cleantech innovator was in the process of filing for bankruptcy.

The story is known but it matters more than ever: Widely perceived as the future European champion in battery manufacturing, Northvolt had become the poster child for what Europe's could offer innovators. It had attracted multiple investments, both from European sources but also from Swedish pension funds. Worryingly, the company meant to catapult European competitiveness in clean technology manufacturing to a new era filed for bankruptcy before producing any European-made cathodes, due to multiple factors.

There are two main take-aways from this case that should have emerged as vectors of direction for the Clean Industrial Deal: 1. the absence of any production-related incentives means no matter how high the investment, we are not guaranteed to see any homegrown production; 2. putting all your bets for success in one proverbial basket is generally poor industrial strategy. The main question to ask in assessing the Clean Industrial Deal to date is therefore how it has dealt with these two lessons.

2. Clean Industrial Deal - How it is going

The best lens of analysis to answer the question is the recently published Clean Industry State Aid Framework (CISAF). This has been a much anticipated instrument to allow Member States to offer direct subsidies to companies (also in cleantech) quicker. A revision of state-aid was necessary but the question remains: can a state-aid driven approach be the innovative policy that brings a new idea forward and allows it to make Europe harness growth dynamics across the Single Market to propel us forward in the global technology competitiveness race?

The proposal removes obstacles to state-led investments, which can be a powerful ingredient to innovation scale-up, as shown by the experiences of other jurisdictions. In the case of the EU, this approach also brings to the forefront 27 different Member States with different financial capabilities and different visions, which invites a fragmented and unpredictable landscape, difficult to gauge for private investors.

With the 27 Member States encouraged to facilitate cleantech investments utilising a range of financial instruments (now without a concern for piling up too many subsidies on the same companies), questions around transparency will become increasingly more relevant. A side effect of the proposed approach is that funding could flow in a cascade to a technology that may get a reality check from the markets, which are key in enabling innovation to prove its relevance and scale beyond the short-lived subsidies-cycle. This might mean that a well funded company still does not make it.

Following the CISAF proposal, Member States can take up equity in some of these companies. This may ironically have an adverse effect, as it may make Member States more prone to take on less innovative solutions which have smaller risk factors associated with them (not least because in the case of failure, there could be backlash from the population). This could yield further scenarios of placing multiple solutions in the same basket, to minimise risk, but which may fail on multiple accounts.

Diversification is the key in any industrial strategy for minimising risk as well as it ensures that innovators can compete with each other to keep driving momentum forward, which is how China does it and what is needed to keep an economy competitive for the long-term (it avoids inertia). Europe's competitiveness can't come down to one leading company in each sector, nor to one Member State per sector; instead it will need to be truly bottom-up, spread across Europe's regions, so that the future European champions keep innovating while developing increasingly more localised supply-chains.

Finally, such an approach as that proposed by CISAF does mean that certain Member States will have more financial leverage to support their industries than others, reinforcing existing economic path-dependencies. Luckily, this could in principle be addressed through the MFF, where a Competitiveness Fund could be designed specifically for the regions where Member States with a lower GDP than the EU average are constrained by default in their fiscal capacity. In other words, a Member State led pathway to financing the cleantech transformation requires additional European adjustment or correction instruments, exactly so that the power of the Single Market is not undermined following the CISAF, but rather strengthened through synergies.

Reporting First, **Sustainability** Second?

MARTIN **DAHLGREN**

Global VP Products & Technologies, Systemair AB

Europe's ambition to lead the global green transition is commendable, but the road to sustainability must be paved with *pragmatism, global ambition, industrial logic, and trust.* As Europe's largest manufacturer of ventilation equipment, with deep industrial roots across the European Union and a strong presence in global markets, Systemair has been supporting the EU's sustainability agenda since its beginnings. In fact, we have witnessed its remarkable transformation first-hand across all our HVAC segments and markets.

Yet increasingly, well-intended regulations risk undermining the very competitiveness needed to realise Europe's green goals. There is a need to rebalance the equation: *prioritising performance over paperwork.* In short, **reporting first, sustainability second,** is not a viable model.

From Pioneer to Paperwork: How Sustainability Risks Evolving

The EU's sustainability policy has come a long way. For example, the early stages of the Ecodesign and Energy Labelling frameworks were built on a logic of continuous energy efficiency improvements—clear and ambitious targets, harmonised implementation, and tangible results. European manufacturers have successfully responded with innovation and investment. This has significantly strengthened the global position of European technology, with EU standards often serving as reference models worldwide.

However, today's EU framework is becoming increasingly dominated by *reporting obligations*, especially around lifecycle metrics. Environmental Product Declarations (EPDs), for example, are becoming a baseline requirement in the building and construction sector, not only in public procurement, but also increasingly across private sector buyers. While positive in principle, applying the wrong category of EPDs will become counterproductive in practice. This depends on the type of Life Cycle Assessment (LCA) applied — particularly when going beyond the so-called 'cradle-to-gate' approach — and on the number of EPDs required to meet the demands of different markets, formats, and regulatory frameworks.

One of the main reasons for this fragmented EPD landscape is the slow progress by EU policymakers in developing harmonised policy frameworks. For example, delays in revising many Ecodesign regulations have prompted Member States, such as France, to introduce their own sustainable product rules and verification schemes. The lack of harmonisation within the EU increases complexity and administrative burden, without benefiting the environment or the green transition.

For complex technical products, such as HVAC systems, EPD preparation can cost thousands of euros and weeks of documentation work per variant. Despite high costs, EPDs remain largely non-harmonised. What should be an instrument for sustainability is becoming an industry of administrative compliance.

As things stand, European manufacturers are investing increasingly more time and resources into *reporting on sustainability* than into *delivering it*. In an increasingly competitive global economy, such an imbalance could cost us dearly.

A Fragmented Internal Market Still Holds Europe Back

The still persistent fragmentation of the Single Market in some crucial areas, such as the building sector, further compounds the challenge. After decades of integration, we still face national interpretations of EU rules, divergent enforcement practices, and a patchwork of market surveillance mechanisms, or lack thereof. We see, for example, how some Member States attempt to categorise energy-related products as construction products, enabling them to use national product safety verifications to introduce protectionist measures.

As Systemair's own experience has shown, while our HVAC products are fully compliant with harmonised EU regulations, they can still face re-testing or re-certification when sold in some EU Member States due to national gold-plating or lack of mutual recognition. A notable example among many is the Belgian "EPD regelgeving".

In a global race where scale, agility, simplicity and capital allocation matter, European industry cannot afford to be distracted by internal frictions and divisions. According to the IMF, internal market barriers on Europe's own manufactured goods are equivalent to a substantial 44% tariff — rising to as much as 110% for services. The Letta Report rightly quantifies that the incomplete Single Market is costing Europe around **10% of potential GDP**. That is growth we cannot and must not leave on the table.

Bureaucratic Ambition Isn't Industrial Strategy

While we fully believe in the value of environmental transparency, reporting frameworks must benefit the European industry, being *fully harmonised, proportional*, *pragmatic*, *aligned with industrial realities and global ambitions*. Policymaking must distinguish between *essential data* that guides sustainability and *excessive, and often duplicated, reporting* that merely satisfies theoretical completeness while hindering the implementation of sustainability initiatives. The focus shifts from managing outcomes to managing data.

Too often, we see policies designed from a zero-risk mindset, introducing layers of documentation, overlapping standards, and audit mechanisms without streamlining and properly monitoring what already exists through effective market surveillance. Over-regulation signals mistrust in the capacity of industry to deliver the needed green transition.

Think European, Act Global

There is yet another dimension too often overlooked: **global relevance**. The innovations that Europe mandates—higher energy efficiency, better circularity, lower emissions—must not only serve our internal market but thrive in other geographies. This should be built into policy from the start.

European manufacturers are producing some of the most sustainable, high-quality products in the world. However, without international regulatory alignment and effective EU trade promotion — including, for example, a thorough response to recent global movements to roll back decades of sustainability evolutions — and thorough market surveillance within the EU's Single Market, these advantages risk being undermined by cheaper, lower-standard imports.

To lead the green transition, Europe must not only *invent* and *require* innovation—it must ensure those innovations are **recognised and adopted globally**. This means focusing on coherent and simplified EU, and not Member State-driven, regulatory frameworks, aligning and standardising EPD and LCA schemes in a harmonised European law, negotiating mutual recognition agreements, and designing product policy that enables—not impedes—export growth. Sustainability cannot be confined within borders. It is and must be a competitive asset on the global stage.

A Pragmatic Policy Reset

Europe's industrial and sustainability agendas must converge. As the Draghi report on competitiveness rightly outlines, the EU's future hinges on delivering a *coordinated*, *innovation-led*, and *globally competitive* strategy. For the HVAC and broader building technology sector, this requires:

1. **Completing the Single Market,** prioritising mutual recognition and harmonised product enforcement across all Member States—overcoming protectionist schemes such as the PEP Ecopassport in France or differing national calculation methods for the energy performance of buildings. After all, harmonisation drives growth — not the other way around.
2. **Streamlining sustainability reporting**, particularly around EPDs, Digital Product Passports (DPP), and lifecycle declarations — prioritising *simplicity and value* over *volume* of data *and avoiding duplication of information requirements over multiple platforms.*
3. **Simplify requirements** from an industrial perspective to enable product innovation and global competitiveness, instead of deregulating Europe's climate and energy objectives – simplification can go hand-in-hand with ambitious sustainability objectives, while deregulation creates loopholes and hinders business growth within Europe.
4. **Thinking globally**, ensuring that the global European sustainability leadership enhances—not inhibits—our trade and industrial positioning.
5. **Unlocking innovation and investment** by simplifying funding instruments and promoting EU-wide, demand-driven initiatives, ensuring better use of tools like Horizon Europe and reducing fragmentation across Member States. Let industry drive innovation through economic and competitive incentives, not through excessive regulation.

Conclusion: Let Industry Breathe

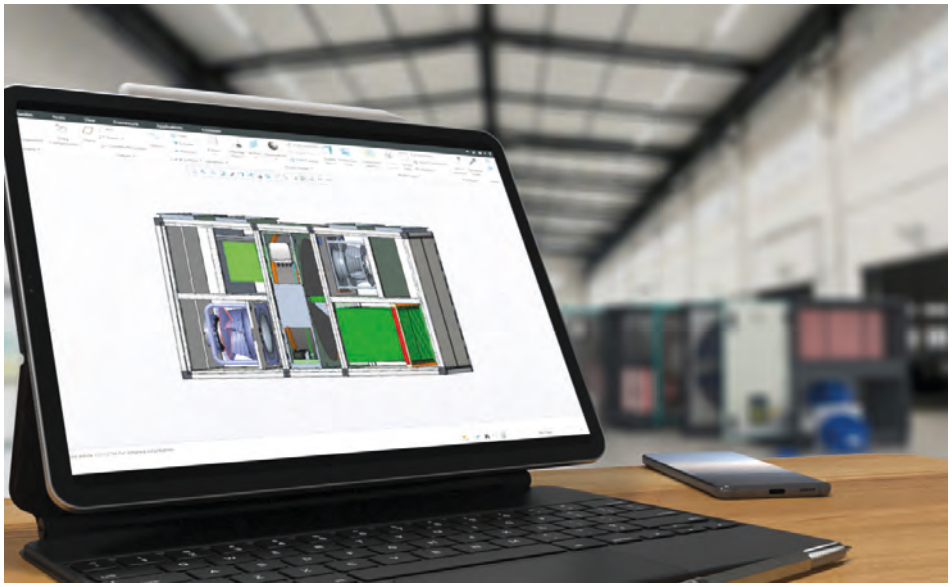
At Systemair, we embrace our role in driving sustainable building transformation in Europe and across the globe. We support bold targets, strong climate ambition, and transparent product impact assessments. And we are not alone in this: Eurovent, the key European industry association representing HVACR manufacturers, has issued a clear manifesto urging the EU to maintain ambition on environmental targets while simplifying legislation and advancing a European industrial strategy.

Ambitious sustainability goals and streamlined regulation can go hand in hand — deregulation and loopholes would undermine climate targets and weaken Europe's long-term manufacturing strength.

We therefore call on policymakers to build frameworks that empower, not entangle.

Sustainability must be more than a compliance exercise. To meet Europe's green goals, we must trust industry and keep it globally competitive. That means, amongst others, speeding up regulatory processes while spending less time on reporting—and more time on making sustainability real.

Without a harmonised EU sustainability strategy, execution lacks direction. Yet without execution, even the best strategy is of no use.



The **Clean Industrial Deal** as a driver for **decarbonizing European transports**

ARNAUD LEMAIRE

Head of Strategy and Public Affairs – Paris & Brussels, CAF Group.

Since 2020, transportation has been the primary source of greenhouse gas emissions in the European Union (EU), surpassing energy production and industry. It remains the only sector with unchanged emissions since 1990, making it crucial for decarbonizing the European economy.

Rail transport, accounting for 8% of passenger and 18% of freight transport in the EU, contributes only 0.5% of the sector's greenhouse gas emissions. Trains have a long lifespan, averaging 40 years, compared to 15 years for cars, reducing their environmental impact over time. Additionally, the rail sector excels in the circular economy, with 95% to 99% of trains being recyclable. These factors make the rail industry a strategic Net Zero sector for the EU.

The European Commission's strategy for sustainable and smart mobility, presented in December 2020, aims to increase rail freight traffic by 50% by 2030 and 100% by 2050 compared to 2015. It also targets doubling high-speed passenger traffic by 2030 and tripling it by 2050.

Achieving these goals requires significant financing for renovating and developing rail infrastructures and train fleets, as well as for innovation. The European rail industry advocates for maintaining and increasing the budget of the Connecting Europe Facility, which funds the Trans-European Networks – Transport (TEN-T) and the deployment of a unified signalling system (ERTMS). It also calls for a larger share of Cohesion Funds dedicated to rail and the creation of a successor to the Europe's Rail Joint Undertaking with an increased budget for innovation in decarbonization, train automation (ATO), and AI applications in rail transport.

Simplifying regulations is also necessary to reduce the complexity of rail certification processes and limit the impact of cross-cutting legislation like the Cyber Resilience Act, the Data Act, or the AI Act. The industry needs to produce more trains, faster and cheaper, to meet growing demand and decarbonization requirements.

Industrial sovereignty is another critical aspect. Rail infrastructures are vital for military mobility and cybersecurity concerns. Furthermore, over 70% of rail investments come from public funds and public procurement. Ensuring that public money supports European jobs and achieves the EU's strategic objectives— independence, green industrial power, and technological leadership—is essential.

Public buyers should consider the quality of European offerings, giving more weight to non-price criteria such as social and environmental quality through the MEAT (Most Economically Advantageous Tender) principle. In 2023, across all sectors, 80% of public contracts in the EU were still based on the lowest price criterion. Besides, a true European preference principle should ensure a minimum European content of 50% for strategic sectors such as rail and zero emission buses. It should also exclude bidders from certain third countries that do not respect reciprocity rules in public market access. The revision of the Public Procurement Directives, planned for 2026, will be decisive in this regard.

In conclusion, the Clean Industrial Deal is a step in the right direction, but its success depends on concrete proposals. It can be a milestone in achieving the EU's ambitious decarbonization strategy. The rail industry is a strength and a strategic sector for the EU. Strengthening its competitiveness is essential, especially as the global rail equipment market grows by 3% annually and is expected to reach 240 billion euros annually by 2030, with non-European competitors implementing aggressive strategies.

About CAF (Construcciones y Auxiliar de Ferrocarriles)

The CAF Group is one of the world leaders in the construction, maintenance, and renovation of rail rolling stock. It offers tailored solutions for all types of public transport equipment, whether urban, suburban, or long-distance, promoting sustainable and environmentally friendly mobility. Through its subsidiary Solaris, CAF is also the European leader in zero-emission buses (battery, hydrogen, trolley). The group employs 16,000 people and has industrial sites in Spain, France, the United States, Mexico, Poland, and the United Kingdom. Its revenue in 2024 amounts to over 4 billion euros.

The **circular economy** as a sovereignty lever for **strategic materials** in **Europe**

SIRPA PIETIKANEN
MEP (EPP Group - Finland)

The European economy is in need of a boost and the European Commission has promised to focus on European competitiveness during the ongoing legislative term. Nevertheless, it is still unclear how much of this competitiveness is planned to be achieved through circular economy actions. Strategic autonomy is repeatedly used as an argument during political debates, and there is a clear consensus regarding the need to reduce the dependencies on third countries, namely China and Russia. With President Trump's decision to start a trade war with the world - including the EU - the dependency on the US is now also under scrutiny.

But why are legislators not focusing more on the circular economy to achieve this strategic autonomy? Europe is the most resource-dependent continent, so tackling issues of circularity and resource-efficiency are both critical and urgent for us. Dependence on the availability of raw materials in the global markets increases uncertainties and investment risks. The competition for the scarce resources that are mainly found outside of Europe is intensifying every day, making the one who is able to produce the most goods from the least resources, the winner. As a solution, we would need to produce the same level of output and wellbeing with one tenth of our resources and one tenth of our emissions.

With well-functioning internal circular economy markets, the EU could reduce the need for imported raw materials and energy from third countries and thus enhance Europe's self-sufficiency and independence. In order to do so, we need clear, legally binding targets for circular economy, resource- and energy-efficiency, eco-design, and material footprints. Together with targets, we need indicators to follow the progress and to collect comparable data. Setting targets without appropriate indicators would not lead us very far.

Despite all the potential value-added aspects of circular economy, the EU decided to go to a different direction in the end of the last term when proposing the Critical Raw Materials Act. The underlying idea is desirable, as European self-sufficiency stabilizes our markets against global fluctuations and ensures the availability of raw materials needed for technology and the achievement of our carbon neutrality goals. Nevertheless, instead of focusing on ten-fold resource efficiency and closed-loop material cycles together with the design-out-waste principle, the EU proposed a fast-track procedure to open new mines in the EU to respond to the critical resources challenge. The proposal is completely in contradiction with the EU biodiversity strategy as investing in environmentally destructive new mines is neither environmentally sustainable nor economically reasonable.

To fix this destructive side-track direction, we need to set clear ambitious targets in the upcoming Circular Economy Act to accelerate the circular economy markets. In addition, we would need a European Resource Economy Law comparable to the European Climate Law. This would set clear, legally binding targets for resource efficiency, resource use reduction and the share of recycled content in products. The law would also need to be incorporated into corporate sustainability reporting systems as the law should set requirements for companies to measure their resource use and efficiency. Instead of destroying the much-needed CSDDD, we would need to strengthen the non-financial reporting requirements to ensure the achievement of EU climate and environmental goals as well as gaining competitiveness while achieving stronger strategic autonomy. Backing down sustainability reporting means that it is also easier for non-European companies to gain a competitive advantage in our markets, as Chinese companies with weaker environmental and human rights laws can produce faster and cheaper goods to our internal markets without needing to address their sustainability issues.

Circular economy is not only about recycling our materials in closed-loop cycles but also following the circular economy hierarchy - starting with reducing, reusing and repairing. For this, we need to continue our work on Ecodesign and to set up ambitious targets for the minimum requirements for product durability, reparability and reusability to ensure the longevity of products. An example of this would be to create a definition for single-used textiles, which sets clear requirements for minimum standards for the durability and quality of clothes and other textiles, as well as their maximum environmental footprint while addressing human rights issues. However, in order to set targets for minimum requirements in the textile supply chain, we are back with the crucial need for strong CSDDD to ensure that the minimum requirements in the whole supply chain are respected.

What we need is a paradigm change. Because as long as our core paradigm remains the same, our methods and actions remain the same. This paradigm change starts by solving Europe's massive financial challenge. European investments are lagging behind and what money we have is locked in fossil-based operations. As much as 70 % of our assets are in unsustainable targets - not even neutral ones, but in outright harmful or even dangerous industries and sectors. Imagine what we could do with that money if we invested it in green energy and circular economy - both of which boost European competitiveness and strategic autonomy while addressing the existential crises of climate change and biodiversity loss.

We are at the crossroads of either making sustainable future-proof decisions or continuing the paradigm based on a linear fossil-based economy, which keeps further hindering our competitive position. The choice is ours.

The **Bioeconomy**, the **Clean Industrial Deal's** 5th strategic sector

JORI RINGMAN

Cepi Director General.

The Bioeconomy is identified in the Clean Industrial Deal Communication strategy as one of five key sectors poised to drive investment and mobilise capital towards a clean and competitive industry. This positions us alongside more established sectors, better known for their impact in the EU economy.

The bioeconomy rivals these sectors' impact in terms of employment, with recent Joint Research Centre (JRC) data showing it now represents 8% of all EU jobs, on par with the automotive sector. The forest-based sector alone, which includes the paper industry represented in Brussels by Cepi, comprises one in five factories in Europe and supports 4 million jobs.

By increasingly providing bio-based materials and wood-fibre to other industries, such as chemicals or apparel, in support of their decarbonisation strategies, one could say that the forest-based bioeconomy (green bioeconomy) is as strategic as steal or transport in its role in the broader EU economy.

MADE IN EUROPE

The Clean Industrial Deal specifically tasks our sectors with "tapping the significant growth potential of bio-based materials in substituting fossil-based materials" and "further reducing dependencies on imported raw materials." The green bioeconomy is uniquely positioned to meet these interconnected goals. With 85% of our raw materials sourced from within the European Union, our industries are committed to remaining in Europe, utilizing technology developed on the continent.

Meanwhile, forests cover more than 40% of the EU land surface and, over the past 15 years, the forest area in Europe has expanded by 59,000 km², positively impacting biodiversity. This growth enables us to sustainably address Europe's overreliance on imported fossil materials. While energy dependency often garners attention, many products consumed in the EU are still derived from fossil sources extracted and manufactured far from our shores.

RURAL JOBS

Compared to fossil-based industries, the forest-based sector has a more diverse ownership structure and its operating costs are consequently higher, with approximately 400,000 small and medium-sized enterprises contributing to its ecosystem.

It offers the possibility of a more inclusive distribution of income and jobs across the EU territory. In many of our companies, even the largest ones, over 90 percent of our employees live in rural communities.

FOREST MANAGEMENT

This includes not only 'good industrial jobs', but also the very people who care for the forests. Europe is counting some 16 million forest owners. These owners adhere to an extensive set of regulations aimed at sustainable forest management, including over 100 pieces of EU legislation, national rules, and voluntary wood certification schemes.

Which is why many in our industries are calling for the EU Commission to evaluate the existing sustainability framework before introducing new legislation. The current framework as it exists has already yielded positive results, such as reducing the frequency of forest fires and enhancing carbon capture. Foresters, particularly those in private companies, are committed to ensuring that the forest economy operates in harmony with the natural balance and biodiversity of these vital ecosystems.

RECYCLING CHAMPIONS

The story of our sustainability does not end with forest management. The European paper sector exemplifies the best practices of circularity, boasting a remarkable recycling rate of 79.3%. This achievement not only benefits the environment but also strengthens the strategic and industrial position of EU-based companies, ensuring raw material self-sufficiency.

The global impact of our sector's self-regulation is evident in initiatives like 4evergreen, which unites some of the world best known and largest companies to ensure that wood fibre is the most recyclable and most recycled material for packaging. To build on this success, it is essential that biogenic materials are prioritised in the future Circular Economy Act, for which the upcoming Bioeconomy Strategy should lay a solid foundation.

DEMAND PULL

The substitution of fossil products with forest-based alternatives already prevents 410 million tons of CO_2 emissions annually in Europe. Scaling up this substitution presents a significant opportunity for our climate. However, the competition between bio-based and fossil products is currently unbalanced, with $705 billion invested in fossil fuels in 2023 by the world's 60 largest private lenders.

To address this, we advocate for measures that create market demand for bio-based products, including recognising their fossil substitution potential in product policy legislation, prioritising bio-based solutions in public procurement and removing permitting barriers for industrial symbioses, which will further enhance our efforts to supply biogenic carbon to industries which now rely on fossil sources.

ENGINE OF FUTURE GROWTH

According the World Business Council for Sustainable Development, the global bio-economy is projected to present a business opportunity of $7.7 trillion USD by 2030. A figure now cited in reports and policies aiming to develop the sector in other parts of the world. Yet, many publications also point to early signs that Europe can be leading the 'bio revolution', and that biomanufacturing innovation could be a crucial driver of the EU's future growth.

A recent study commissioned by Cepi identifies 143 biorefineries across the continent, with biorefinery products currently accounting for approximately 6% of the total turnover of Europe's pulp and paper sector. This figure is set to rise significantly. Based on identified investment plans, projections indicate an annual sector growth rate of up to 5% through 2050.

While it is essential to support industries that form the backbone of the EU economy, it is equally important to invest in sectors that will foster our future growth and cultivate new industrial champions. Other global regions have not hesitated to do so in the past, the United States in ICT or China in renewable energy. Now is the time for Europe to follow suit.

Mining at the Core: **Europe's Clean Industrial** Deal Needs Raw **Material Sovereignty**

ROLF KUBY
Euromines Director General

The European Union's Clean Industrial Deal promises to position Europe as a global leader in climate-neutral industry, green innovation, and strategic autonomy. But this vision rests on a fragile base: the availability of critical raw materials. No wind turbine turns, no electric vehicle drives, no battery stores power without a steady, sustainable supply of metals and minerals. And yet, Europe today depends overwhelmingly on third countries—often with questionable environmental and governance standards—for these vital inputs.

The Critical Raw Materials Act (CRMA) was a crucial first step in recognising this dependency and outlining an industrial strategy to reduce it. It sets clear targets for extraction, processing, and recycling within Europe, and aims to increase the resilience of supply chains that underpin our green and digital transitions. But achieving these targets is a political challenge as much as an industrial one.

From Policy Ambition to Project Delivery

At the heart of the CRMA is a call to reindustrialise responsibly. Yet today, launching a new mining project in the EU remains the exception rather than the rule. Out of a thousand exploration efforts, only a handful reach production. The reasons are not geological, but political and regulatory: long, unpredictable permitting timelines, inconsistent interpretations of environmental rules, and administrative delays continue to hinder investments.

Modern mining in Europe already operates to the highest environmental and social standards globally. But a core political contradiction remains: every environmental objective—on water use, land, emissions, and energy—may be individually attainable, but taken together, they can become mutually exclusive. For example, reducing water discharge through osmotic filtration can massively increase energy use, compromising energy efficiency targets. A Clean Industrial Deal requires an honest reckoning with these trade-offs. A cross-policy review to resolve such regulatory bottlenecks is overdue.

Europe must enable—not just govern—the extraction of raw materials. Environmental safeguards are critical, but they must be applied with scientific realism and policy coherence.

Strategic Autonomy Needs a Business Case

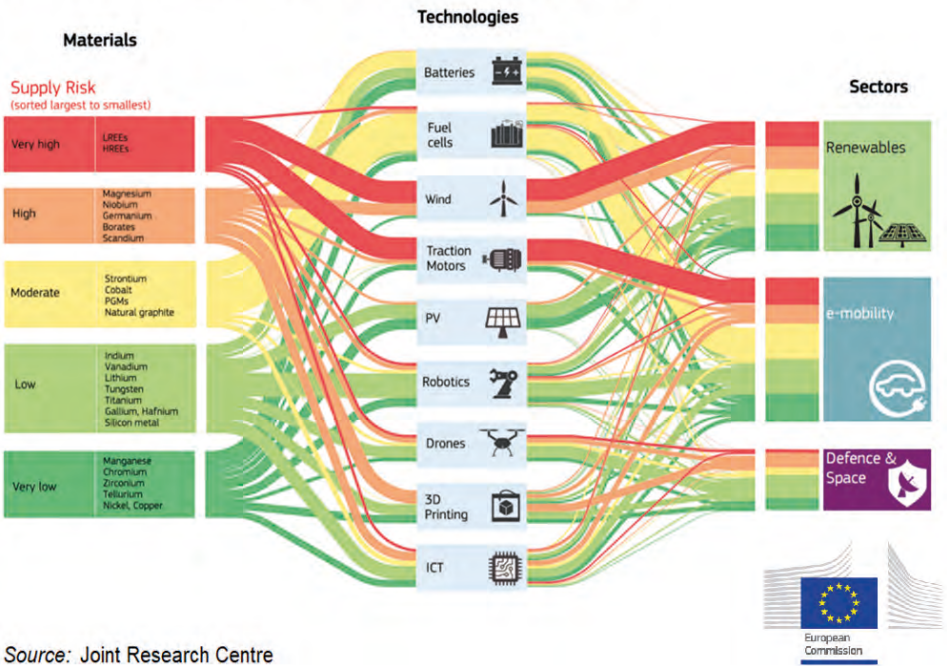
On the industrial side, the question is simple: why isn't investment flowing into European mining at the pace needed? Despite soaring demand for lithium, nickel, cobalt and rare earths, investor confidence remains low. The reasons are clear: high operational costs, energy price volatility, and regulatory uncertainty deter long-term commitments.

If the Clean Industrial Deal is to create opportunity, it must present a viable business case. This includes:

- **Energy market reform** to ensure affordable and predictable energy prices, crucial for energy-intensive industries like mining;
- **Clear permitting rules and timelines**, with guidance across Member States to avoid legal ambiguity;
- **Financial instruments** to de-risk investments, including CAPEX support and insurance against price volatility;
- **Dedicated recognition of exploration** as a distinct activity in need of a simplified, fast-track permitting regime.

Mining should not be treated as a last resort or a procurement issue, but as a strategic industrial asset. Otherwise, Europe risks

Critical raw materials and their supply risk



Source: Joint Research Centre

powering its green economy with high-carbon imports—undermining the very goals of the Clean Industrial Deal.

Political Leadership for Social Acceptance

A third pillar of the challenge is public perception. Mining in Europe too often faces blanket opposition, fuelled by outdated views of the industry. But modern mining—responsible, technologically advanced, and transparently regulated—can and does operate in harmony with environmental goals.

Social acceptance, however, is not the sole responsibility of industry. It must be a shared project between companies, governments, and communities. Clear public communication, real local benefit-sharing, and political leadership are needed to demonstrate that responsible mining is not a contradiction, but a requirement for climate action and strategic independence.

Without this, the Clean Industrial Deal will fail. Investments will be driven to less regulated jurisdictions, and Europe will remain exposed to geopolitical and environmental risks it cannot control.

Mining as Opportunity

The CRMA, and the broader Clean Industrial Deal, offer a rare chance to reimagine European industrial policy. Strategic autonomy and ecological sustainability are not in conflict—but aligning them will require difficult decisions and coordinated political action.

Mining is not Europe's industrial past. It is a critical part of its industrial future. The continent that gave the world the Industrial Revolution must now lead a new one—one that is clean, sovereign, and grounded in responsibility. But we cannot build wind turbines with wishful thinking, or batteries with bureaucracy. We need the raw materials—and the political will—to make it happen.

Recycling's is a security issue. **Will Europe** treat it like one?

JULIA **ETTINGER**

Secretary General - EURIC

With supply chains still fragile and geopolitical competition only intensifying, Europe's reliance on imported critical raw materials has turned from a long-term concern to a strategic a vulnerability now unfolding. As the EU pushes forward with its green and digital transitions, demand for materials like lithium, cobalt, and rare earths is rising fast. And while extraction remains part of the picture, recycling can't be treated as a side issue. It needs to be front and center, serving both as an environmental solution, and as a strategic pillar of Europe's industrial and economic resilience.

In 2023, only 11.8% of the materials used in the EU came from recycling That's better than the 8.2% recorded in 2004, but it's still far too low if the goal is to serve the EU climate ambitions while strengthening our industrial base. Nearly 90% of Europe's material use still comes from virgin resources. That's a massive, missed opportunity, especially at a time when we know demand is only going to keep growing.

The EU is starting to respond to change this picture. The revised Critical Raw Materials Act sets a target for 15% of critical raw material use to come from recycling by 2030. The message is clear: unless Europe improves recovery from end-of-life products, it will stay at the mercy of trade disruptions, market shocks, and foreign supply chains.

Closing the loop on strategic dependencies

Whether we're talking about electric vehicles, wind turbines, smartphones, or data centers, the technologies driving Europe's future all are resource-intensive, depending on critical raw materials. But the supply of those materials is often concentrated in just a few countries. Over 90% of rare earth magnets used in the EU, for example, come from China. Boron? Mostly from Turkey. Platinum? South Africa. The COVID-19 pandemic and Russia's war in Ukraine have exposed how quickly these supply lines can break - with major ripple effects.

Can we completely ditch mining? Realistically, no - at least not yet. But we can mine less and smarter by tapping into what we've already extracted. This is the idea behind *urban mining*: recovering valuable materials from products and infrastructure already around us. It won't replace primary extraction overnight, but it can reduce dependency, strengthen supply chains, and support Europe's climate and industrial goals. By 2040, the IEA estimates up to 35% of copper and 20% of lithium used in clean energy tech could come from recycled sources.

Europe already recycles around 60% of its aluminium and 50% of its copper, but rates for newer or more complex critical materials remain low. Rare earth elements, for example, have a recycling rate of under 1% - mostly due to poor product design, limited collection, and inadequate sorting systems.

Barriers to scaling recovery

The main obstacles are not as much technical as they're systemic. Valuable materials are lost because products aren't collected, aren't designed for disassembly, or are exported with little oversight. This doesn't just apply to electronics or batteries - the same

goes for tyres, an often-overlooked stream with major strategic importance – but that's a whole different topic.

Poor design and the lack of harmonised standards make recovery costly or even impossible. Many products are built to last, not to be dismantled. Rare earth magnets, for instance, are often glued deep inside devices, making extraction uneconomical.

This is where EU policy can make a difference. The upcoming Ecodesign for Sustainable Products Regulation (ESPR) and the Digital Product Passport (DPP) aim to ensure recyclability, disassembly, and traceability are built in from the start. If done right, they could unlock large volumes of materials that could be recycling but are currently slipping through the cracks. We have high hopes for ESPR, especially for the delegated act on iron and steel, now being prepared by the Commission and the Joint Research Centre.

Strategic autonomy starts at home

Europe must start treating recycling infrastructure as strategic - on par with energy, transport, and defense. That means creating the right incentives to boost investment in advanced sorting and recycling technologies that deliver high-quality recyclates.

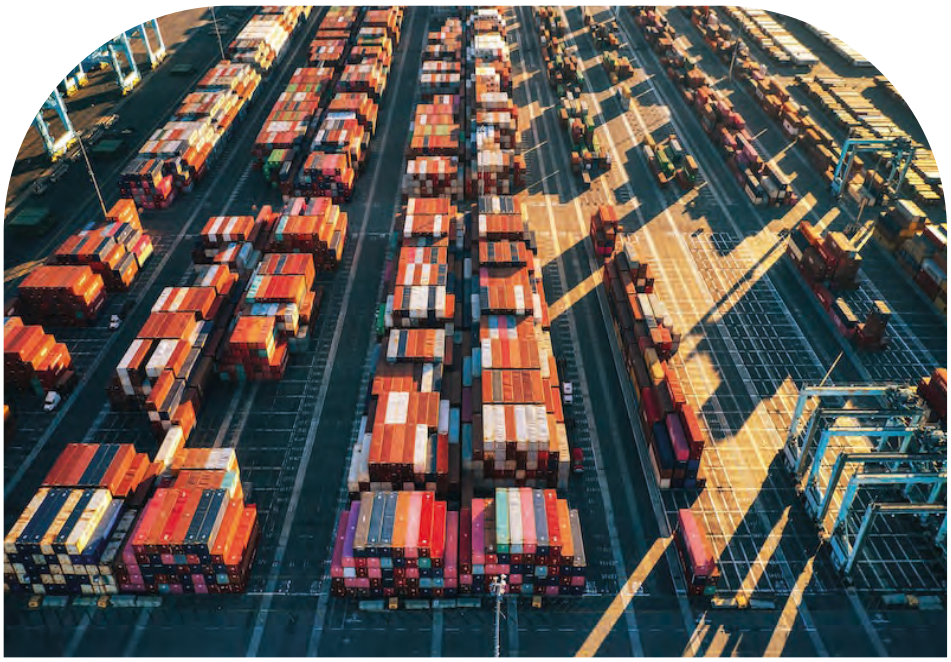
But investment alone isn't enough.

Regulation needs to enable, not constrain. The revised Waste Shipment Regulation, for example, risks creating bottlenecks by restricting the movement of strategic recycled materials that are still classified legally as waste\ Without a flexible, risk-based approach, we risk stalling recovery efforts and losing access to key markets before domestic demand is ready.

If strategic autonomy is to start at home, the EU must mandate the use of recycled content in new products and ensure there is strong, stable demand for recycled materials.

In the current geopolitical and financial context, seeing recycling only as an environmental option is a short-sighted vision. We're no longer talking only about reducing the alarming amounts of waste we generate or achieving better recycling rates for some streams. We are talking about letting Europe go off dependencies on third-party supplies, protecting against price volatility, and rebuilding its industrial base - all while advancing climate goals and cutting emissions.

Europe must leverage the materials it already possesses, hidden in plain sight, embedded in state-of-the-art technologies that are already available. Because recycling is a security issue. Will Europe finally treat it like one?



Driving Europe's clean industrial deal: time to close the loop on circular economy policy

AXEL DARUT

Founder of Circulearth

As the European Union pushes toward climate neutrality, one pillar of its strategy must stand taller: the circular economy. Not simply a tool for environmental stewardship, circularity is essential to the EU's industrial competitiveness, resilience, and autonomy in an increasingly volatile world. Yet, despite a decade of policy work, Europe's circular material use rate has stagnated at just 11.8%. Material consumption continues to rise, and the European Environment Agency warns that the bloc is far from meeting its 2030 targets to halve its material footprint and double the share of recycled materials.

If Europe continues on this path, it risks not only missing its climate goals but also failing to equip its industry for the future. A new approach is urgently needed, one that finally embeds reuse, repair, and material efficiency as central principles of EU industrial policy.

The Clean Industrial Deal, the European Commission's new flagship initiative, gives the European Green Deal an "industrial twist" and offers a genuine opportunity to change course. With the upcoming 2040 Climate Law expected to recognise circularity as a cornerstone of decarbonisation, the Clean Industrial Deal sets an ambitious target: to double Europe's use of circular materials by 2030. However, this promise must now be backed by concrete legislative muscle-most crucially through the forthcoming Circular Economy Act, due by the end of 2026.

Achieving such an ambition demands far more than tweaking recycling targets. The shift must begin with reducing material use across the board. In a world of resource scarcity and growing geopolitical competition, material efficiency has become a matter of strategic interest. Less dependence on imported virgin resources means more industrial sovereignty for Europe and fewer environmental and social costs exported elsewhere.

Yet the EU's regulatory framework remains riddled with outdated rules that obstruct circular innovation. From packaging laws to building codes, the policies that govern how we make, use, and dispose of goods too often reinforce the linear model. Circular approaches, particularly those centred on reuse, still face significant regulatory and market barriers, leaving many pioneering solutions stuck in early-stage pilots.

This is especially true for cities and regions, which implement around 70% of EU legislation and are the natural laboratories of circular experimentation. Local authorities across Europe are leading efforts to scale reuse systems, support repair services, and set new standards in sustainable procurement. But despite this leadership, they are still treated as implementers, not shapers, of circular economy policy. And when it comes to EU funding, cities often struggle to access the investment needed to move from pilots to full-scale implementation. More strategic investment is essential—yet current EU programmes remain skewed toward research and development, with too little emphasis on deployment. The result is a €27 billion annual investment gap in building a circular economy at scale.

Public procurement offers one of the most powerful levers to bridge this gap. Representing over 14% of EU GDP, procurement can shape markets by creating stable demand for circular products and services. But for now, the potential of public purchasing remains largely untapped. Procurement rules still favor short-term cost considerations over life-cycle performance, while contract criteria often exclude reused or remanufactured materials. Integrating reuse and durability into procurement would boost market uptake and innovation. With better regulations and funding, cities and regions could drive systemic change, using procurement to shift entire value chains toward circularity.

Furthermore, circular frontrunners, especially small and medium enterprises, face investment barriers due to their unconventional models like repair, leasing, or shared ownership. These businesses are often excluded from EU funding because they don't fit traditional risk frameworks. To support them, financial rules must adapt to their unique risks, and fiscal policies should favor secondary materials over virgin ones.Taxation that reflects the true environmental cost of extraction, and rewards the circular use of resources, could significantly shift market incentives.

The recent publication of the Clean Industrial Deal State Aid Framework marks modest but important progress, explicitly referencing circularity and prioritising relevant projects. This is a welcome shift, as the original draft largely overlooked the circular economy, risking a significant gap in Europe's strategy to build a resilient, low-carbon industrial base. Yet despite this improvement, the broader policy architecture remains fragmented. What Europe now needs is a coherent and comprehensive resource strategy, one that goes beyond waste management and places materials at the core of industrial resilience and competitiveness.

Circularity is more than just improved recycling—it involves rethinking how products are designed, used, maintained, and reused across sectors like electronics, clothing, vehicles, and buildings. It means empowering local actors, unlocking funding for innovation, and making sustainability the easiest path for European industry. A well-designed circular economy can reduce costs by extending product lifespans, lowering maintenance, and reducing reliance on unstable global supply chains. It can also create quality jobs in repair, remanufacturing, digital traceability, and AI-driven lifecycle management, while helping Europe meet climate targets without outsourcing environmental harm. To fulfill the Clean Industrial Deal's vision, Europe must move from fragmented pilots to a unified, strategic, and well-funded circular transition—featuring harmonised standards, reimagined procurement, and investment mechanisms that reward reuse and regeneration. Only then can the EU truly close the loop in both policy and practice.

European Commission

Clean Industrial Deal

February 2025

The Clean Industrial Deal is our business plan to **accelerate decarbonisation** and **competitiveness** for European industry - by boosting innovation and reinforcing our resilience.

Become **climate neutral** by **2050**

The Clean Industrial Deal **focuses on:**

Energy-intensive industries

to safeguard competitiveness from high energy costs and unfair global competition

Clean-tech sector

to allow it to expand in the EU as it is a key enabler of competitiveness and decarbonisation

Circular Choices

#CircularChoices Conference on the Bioeconomy Strategy

In dialogue with Jessika Roswall, European Commissioner for Environment, Water Resilience & a Competitive Circular Economy

17 September 2025

Residence Palace, Brussels
Wetstraat/Rue de la Loi 155

The Broadest Coalition yet from the EU forest-based bioeconomy sector invites you to discuss the upcoming Bioeconomy Strategy under the Clean Industrial Deal, its challenges and opportunities for Europe.

www.circularchoices.eu