

# Executive Summary

## The Challenge:

### Building a European Clean Hydrogen Market

Europe stands at a defining moment. Geopolitical instability, rising energy insecurity, and intensifying global competition are undermining Europe's industrial base and competitiveness. Clean, resilient energy is therefore no longer just a climate objective; it is a matter of economic security and sovereignty. Clean hydrogen<sup>1</sup> is central to that effort: it can cut dependence on imported fossil fuels, decarbonize core industrial sectors, and improve the resilience of Europe's energy system.

A massive pipeline of clean hydrogen projects across the value chain and a comprehensive regulatory architecture exists – yet fewer than 7% of projects have reached Final Investment Decision (FID). The barriers are structural: fragmented national regulations, high power cost components, complex rules for Renewable Fuels of Non-Biological Origin (RFNBO), no clear role for low carbon hydrogen in the current policy framework, uncertain infrastructure timelines and – above all – an absence of bankable demand. As a result, clean hydrogen remains significantly more expensive than fossil alternatives, widening the gap between policy ambition and market reality.

**The challenge is no longer vision – it is execution.**

## The European Resilience Alliance:

### A Platform to Support Delivery

What makes the European Resilience Alliance for Clean Hydrogen & Derivatives (ERA) both unique and strategically valuable for European policymakers is its comprehensive scope and unprecedented coordination. For the first time, Europe's leading companies across the entire clean hydrogen value chain – from production to infrastructure to end-use – have aligned around a shared goal: building a functioning European hydrogen market. This level of industrial alignment has never existed in the hydrogen sector, creating a unique opportunity for policymakers to unlock billions in private investment through targeted, coordinated action.

<sup>1)</sup> Definition of clean hydrogen used in this paper: all hydrogen made in a way that is compatible with climate neutrality, including RFNBOs and verifiable forms of low-carbon hydrogen.

## The Solution: from Policy to Market

Breaking the current deadlock requires a shift from regulatory ambition to market construction, anchored in four mutually reinforcing priorities that require support from policymakers:

### 1 Demand must drive clean hydrogen production.

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Europe must move beyond indicative targets and focus on driving demand by enforcing rules more consistently across the EU. This requires:

- Immediate and full transposition of the Renewable Energy Directive III (RED III) across all Member States, alongside faster, harmonized implementation of ReFuelEU Aviation and FuelEU Maritime.
- Creation of 'lead markets' in hard-to-abate sectors (steel, chemicals, aviation, maritime, as well as defense) through EU-wide Carbon Contracts for Difference (CCfDs), tax incentives, and mandatory clean public procurement criteria.
- Recognition of clean hydrogen-based decarbonization pathways in hard-to-abate sectors under the Industrial Accelerator Act (IAA), while keeping the market fair and competitive.

Demand must become bankable – providing long-term visibility for investors and enabling FIDs.

## 2 Clarity and simplification of clean hydrogen support frameworks is key.

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Currently for electrolyzer-based hydrogen, 70% of the Levelized Cost of Hydrogen (LCOH) comes from electricity, making it vital to lower the cost of carbon-free power production to make clean hydrogen competitive. This can be done by lowering electricity costs (grid fees, levies, taxation) and extending exemptions beyond 2030. Beyond this, it requires:

- Enabling large-scale carbon-free Power Purchase Agreements (PPAs) with long-term price stability.
- Redesigning support instruments such as the European Hydrogen Bank to fully close the funding gap, prioritizing large-scale, strategically located projects with anchored demand.
- Allocate limited resources (water, grid capacity, public funding) strategically to projects where production and demand are already concentrated, enabling economies of scale.

## 3 Turn private capital into clean hydrogen power.

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Public policy must enable – not replace – private investment. A predictable and sufficient greenhouse gas price under the Emissions Trading System (ETS) and Carbon Border Adjustment Mechanism (CBAM) is central. All revenues from ETS auctioning, including those flowing to Member States and from the gradual phase-out of free allocation should support the low-carbon transition. A substantial share should be recycled to reward companies investing in decarbonization. Beyond effective carbon pricing, this requires:

- Simplifying RFNBO requirements during the ramp-up phase and extending transitional provisions well beyond 2030.
- Introducing a state-backed portfolio guarantee mechanism to reduce counterparty risk.
- Establishing a dual-auction system for hydrogen supply and demand, operating on a contingent liability basis.
- Strengthening EU funding instruments (Innovation Fund, Industrial Decarbonisation Bank) with greater predictability and scale.

By lowering risk premia and improving financing conditions, these measures can unlock billions in private capital and accelerate project deployment.

## 4 Infrastructure as the lifeline of an integrated European energy market.

The European hydrogen market cannot exist without physical integration. This requires:

- Accelerating Projects of Common Interest (PCI) and using Connecting Europe Facility (CEF) funding for hydrogen infrastructure.
- Delivering coordinated cross-border planning between the European Commission, Member States, regulators and Transmission System Operators (TSOs).
- Providing long-term visibility on the European Hydrogen Backbone.
- Introducing EU-wide de-risking mechanisms for early-stage infrastructure investments.

### The Cost of Inaction

The cost of inaction is severe: industrial job losses, capital flight, stranded assets, missed climate goals, defense concerns, falling behind technologically, and erosion of political credibility. Meanwhile, global competitors – particularly China – are accelerating rapidly. Europe must respond with equal determination and urgency.

European Resilience Alliance stands ready to reverse this trajectory. With bankable projects, committed capital across the full value chain, and cross-border coordination that simplifies the policy dialogue, the Alliance offers policymakers a credible industrial partner and an engine behind accelerating clean hydrogen deployment. What is needed now is political resolve to act – industry and policymakers together.

#### Who are we?

The European Resilience Alliance brings together companies across the entire hydrogen value chain – from production and infrastructure to end-use. We offer policymakers coordinated industry input: a practical partner committed to making Europe's hydrogen transition both competitive and resilient.

As a CEO-led, pan-European initiative, the Alliance identified regulatory bottlenecks, tested policy frameworks against economic reality, and made concrete proposals to accelerate Europe's hydrogen deployment.