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Recalibrating Europe's Hydrogen Strategy to Support the Clean Industrial Deal
Tue, May 13
3:00-4:15 p.m. CET (9:00-10:15 a.m. ET)

Agenda

0-15 min	Opening remarks and RMI presentation
15-60 min	Facilitated discussion with panelists
60-70 min	Audience Q&A
70-75 min	Closing remarks

The Case for Recalibrating Europe's Hydrogen Strategy

Oleksiy Tatarenko, Senior Principal, RMI

The Case for Recalibrating Europe's Hydrogen Strategy

Europe needs to right-size its approach to hydrogen and realign to realistic supply goals and stimulating demand within hard-to-electrify sectors

The Case for Recalibrating Europe's Hydrogen Strategy

March 10, 2025

By Quailan Homann, Joaquin Rosas, Connor Kerr, Oleksiy Tatarenko

Five pillars to unlock Europe's hydrogen ambitions:

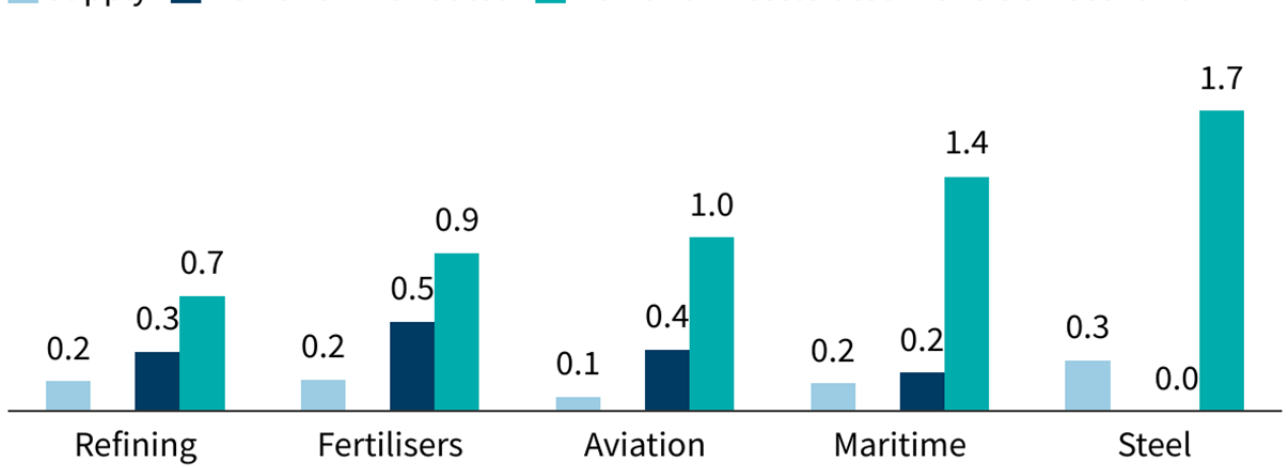
1. Achievable supply and demand projections
2. Directing focus to hard-to-electrify sectors
3. Balancing carrots and sticks to drive offtake
4. Aligning public funding to policy objectives
5. Guiding industry with a stable regulatory environment

Aligning on realistic supply and demand projections

Existing policies will encourage substantially less demand than expected but increased adoption is achievable through tailored demand creation measures

- **Demand projections:** We project demand from existing policy measures to range between **2.2 and 2.8 Mtpa** by 2030.Our Accelerated Transition Scenario suggests **up to 7.0 Mtpa** of demand could materialize.
- **Steel, Shipping and Aviation** are the three priority sectors that can drive additional demand under the Accelerated Transition Scenario.

Exhibit 2b: Estimated supply and demand of hydrogen in key sectors



Sectoral uptake was determined using an analysis of the IEA Hydrogen Production Projects Database assuming an even distribution of hydrogen to indicated target industries.

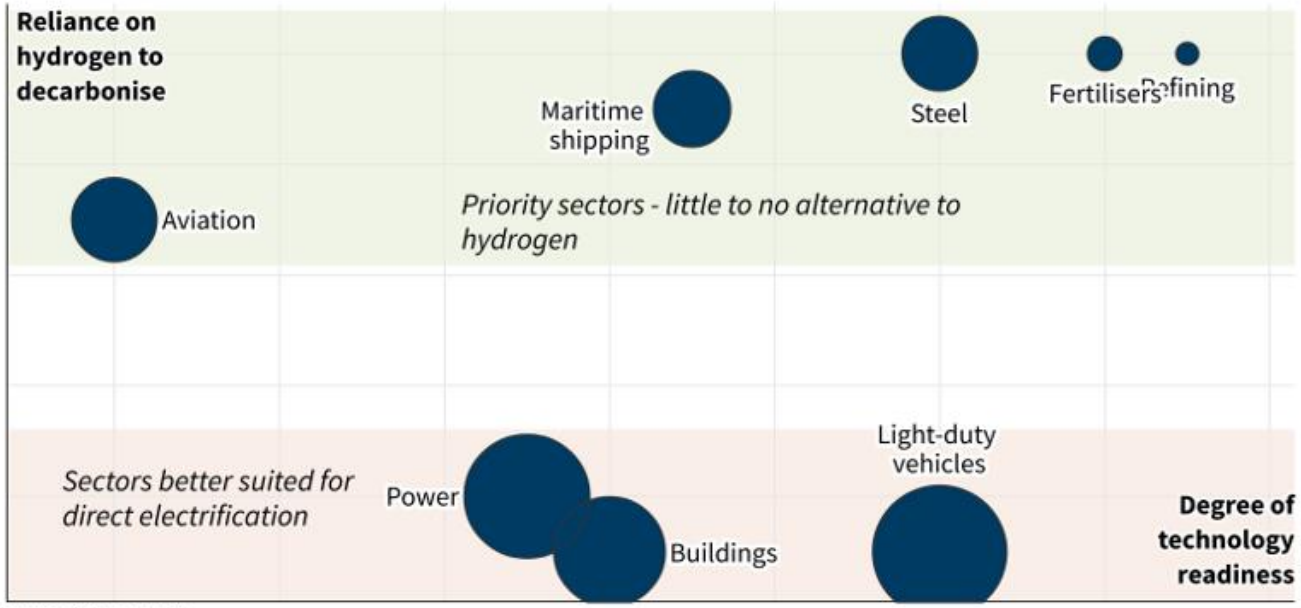
Source: European Hydrogen Observatory, Eurostat, IEA, RMI analysis

Public and private investment should be directed at key sectors where hydrogen provides the greatest decarbonisation value

Focusing on heavy industry and transport avoids stretching limited hydrogen supplies to industries with more efficient decarbonisation strategies

Exhibit 4: Prioritisation of RFNBO hydrogen within sectors

Bubble size represents carbon dioxide abatement potential



Source: RMI analysis

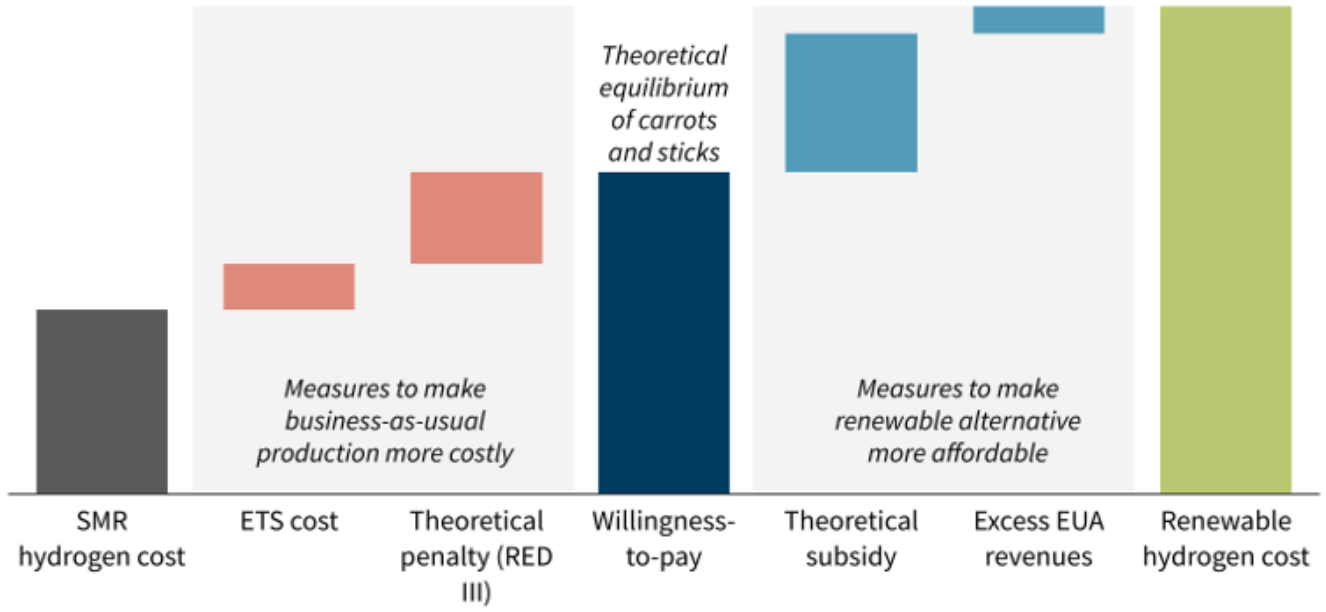
Priority sectors: Steelmaking, fertilisers, refining, aviation, and shipping struggle to electrify and require hydrogen for decarbonisation.

Sectors for electrification: Allocating resources to low-impact uses like heating and light-duty vehicles represents inefficient use of scarce public funds and risks delaying necessary transitions through electrification and energy efficiency measures.

Implementing a complementary ‘carrots’ and ‘sticks’ approach can enhance the economic viability of renewable hydrogen production and consumption in the bloc

The EU can build on its system-wide regulatory frameworks to support hydrogen value chains

Exhibit 5: Illustrative implications of both mandates and penalties



Source: RMI analysis

Ensuring consistent and timely implementation of sectoral mandates is the most effective way to stimulate demand, allowing policymakers to steer investment to priority sectors.

Coupling sectoral mandates with targeted distribution of funds along sectoral lines is required through competitive mechanisms like the European Hydrogen Bank and proposed Industrial Decarbonisation Bank.

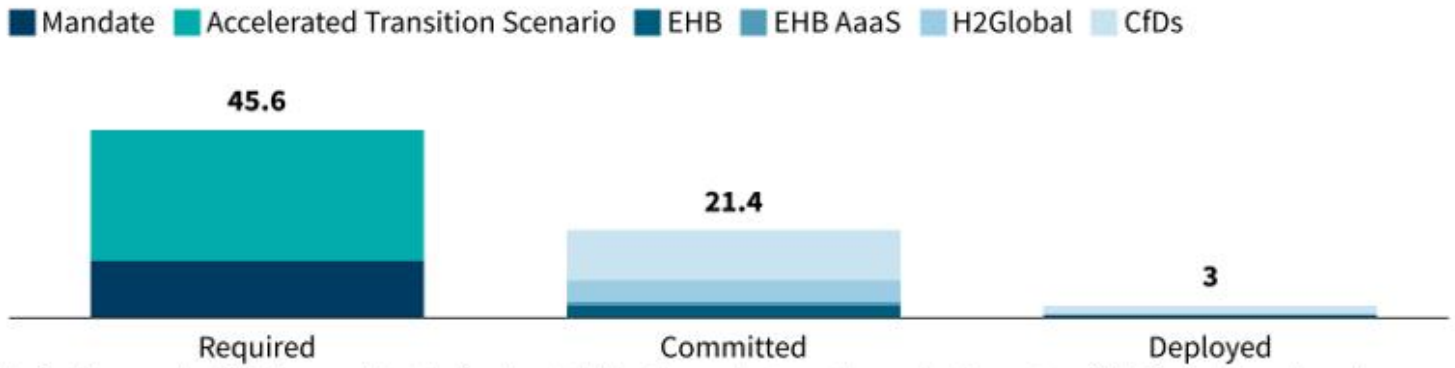
A ‘carrots-only’ approach will increase uncertainty for investors with evolving geopolitics and funding priorities.

Aligning Public Funding with Climate and Clean Industrial Deal Goals

Current funding commitments fall short of what is needed to achieve the EU's hydrogen and climate objectives

Exhibit 7a: Comparison of the public funding needed vs committed and deployed from the EC and Members States

Billion EUR, c. 2025



The funding required funding considers the funding to bridge the gap between the production cost and WTP for hydrogen-based commodities in sectors such as fertiliser, shipping, aviation, refineries, and steel. AaaS = Auction as a Service. EHB AaaS includes Spain, Austria, and Lithuania; Germany withdrew its €350 million contribution to the second auction round of the EHB but has stated it plans to use it later. H2Global includes the €300 million contribution from the Netherlands. CfD schemes include Austrian Decarbonisation of industrial processes, Danish Power-to-X tender, Dutch SDE++ and OWE, French Decarbonised hydrogen production, and German Climate Protection Contracts.

Source: Hydrogen Europe, European Court of Auditors, European Commission, RMI analysis

Public Funding Gap: **€13,9 billion** in public funding will be needed to implement RED III mandates and an **extra €31,7** to enable faster decarbonization under the Accelerated Transition Scenario.

Public funding could unlock circa **€275 billion in private capital** expenditures = 7x leverage effect

Slow Deployment: despite €21,4 billion in relevant committed funds from the Commission and Member States, only €3 billion in public funding has been disbursed

It is critical that the EU upholds its robust RFNBO regulations to provide the investment certainty required to finance projects

Maintaining a stable regulatory environment that establishes a climate-aligned industry is paramount

Reopening the RFNBO Delegated Acts will delay investment decisions and risk the creation of an industry with questionable sustainability credentials.

Emissions guardrails must be maintained by ensuring the regulatory framework for low-carbon hydrogen is robust and holistic.

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2023/2405 — 31.10.2023

REGULATION (EU) 2023/2405 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

of 18 October 2023

20.6.2023 — EN — Official Journal of the European Union — L 157/11

COMMISSION DELEGATED REGULATION (EU) 2023/1184

of 10 February 2023

supplementing Directive (EU) 2018/2001 of the European Parliament and of the Council by

L 157/20 — EN — Official Journal of the European Union — 20.6.2023

COMMISSION DELEGATED REGULATION (EU) 2023/1185

of 10 February 2023

supplementing Directive (EU) 2018/2001 of the European Parliament and of the Council by establishing a minimum threshold for greenhouse gas emissions savings of recycled carbon fuels and by specifying a methodology for assessing greenhouse gas emissions savings from renewable liquid and gaseous transport fuels of non-biological origin and from recycled carbon fuels

THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union,

Having regard to Directive (EU) 2018/2001 of the European Parliament and of the Council of 11 December 2018 on the promotion of the use of energy from renewable sources (1), and in particular Articles 25(2) and 28(5) thereof,

Whereas:

(1) Taking into account the need to substantially reduce greenhouse gas emissions in the transport sector and the possibility for each fuel to make significant greenhouse gas emissions savings by applying carbon capture and storage techniques, among other measures, and considering the greenhouse gas saving requirements set for other fuels in Directive (EU) 2018/2001, a minimum greenhouse gas emission saving threshold of 70 % should be set for all types of recycled carbon fuels.

(2) Clear rules need to be set, based on objective and non-discriminatory criteria, for calculating greenhouse gas emissions savings for renewable liquid and gaseous transport fuels of non-biological origin and recycled carbon fuels and their fossil fuel comparators.

(3) The greenhouse gas emissions accounting methodology should take into account the full life-cycle emissions from producing renewable liquid and gaseous transport fuels of non-biological origin and recycled carbon fuels and be based on objective and non-discriminatory criteria.

(4) Credits should not be granted for capturing CO_2 which has already been taken into account under other provisions of Union law. Therefore that kind of captured CO_2 should not be considered as being avoided when determining the emissions from the inputs' existing use or fate.

Introducing Today's Panel

MODERATOR

Oleksiy Tatarenko
RMI

Jon Creyts
RMI

Roeland Baan
Topsoe

Lukas Wernert
European Commission

Ana Quelhas
EDP Renewables

Thank you for joining

For more information, scan this QR code or email otatarenko@rmi.org to connect with RMI's Hydrogen Team