MS and Stakeholders Consultation

IMPLEMENTATION AND TRANSPOSITION OF HYDROGEN REGULATIONS IN THE EU MEMBER STATES

30th January 2025

Andrei Marcu
Olivier Imbault
Chiara Cavallera

ERCST
Roundtable on Climate Change and Sustainable Transition

AGENDA

Topics

1. EU hydrogen framework
2. Financing mechanisms and tools at Member State level to support H2
3. Cooperation between Member States
4. Hydrogen Market Setbacks

Member States selected as case study:

1. Austria
2. Ireland
3. Czech Republic
4. Hungary
5. Poland

ERCST
Roundtable on Climate Change and Sustainable Transition

Takeaways from the first meeting

Case Study: Germany, France, Spain, The Netherlands and Sweden

- A swift implementation of the EU framework is key to give the required regulatory visibility to the EU industry to make investments.

- Green hydrogen’s high prices still represent a significant obstacle to the uptake of the hydrogen market and the creation of a solid business model. Mechanisms at the Member State level can play a crucial role in addressing the price gap.

- Hydrogen is not a means to an end, and not an end in itself. The regulatory framework, including incentives, should be designed in the most technologically neutral way for decarbonisation.

- Countries have different approaches to providing incentives, which reflect the diverse ways EU Member States can implement and transpose the EU hydrogen framework, adapting it to their local specificities.

COUNTRY	H2 Strategy	H2 Targets *	Body in charge of the implementation	Key Projects	Financing (some instruments)
Germany	Yes	10 GW by 2030	• State Secretaries' Committee on Hydrogen • National Hydrogen Council (advises and supports the committee) • Hydrogen Coordination Office • Federal Ministry for Economic Affairs and Climate Action (BMWK) – ultimate decisions. • Länder H2-related measures	H2 Flagship Projects (H2GIGA, H2MARE, TRANSHYDE), Green Wilhelmshaven project, HydrOxy Hub Walsum Project, GET H2 Nukleus project	• CCFDs • Federal Gov. 7th Energy Research Programme • 'Amortization Account' • H2 Global
France	Yes	6.5 GW by 2030	• National Hydrogen Council (CNH) • Gov. Direction Générale de l'Energie et du Climat	HyAMMED, H2V Industry H2 Valleys - Regional Hydrogen Roadmap (Dijon Métropole Smart Energy), Normandy Hydrogen, ZEV	• France Relance • CFDs
Spain	Yes	12GW by 2030	• Ministry for Ecological Transition and the Demographic Challenge (MITECO) • Spain's Autonomous Communities	SUN2HY, H2PORTS, BP and Iberdrola's Castellón Project Hydrogen Valleys - Basque Hydrogen Corridor, Green Crane initiative, Green Hysland	• PERTE ERHA • H2 Roadmap • IDAE investment plan
The Netherlands	Yes	3-4 GW by 2030	• Ministry of Economic Affairs and Climate Policy (EZK)	NortH2, H2M, Port of Rotterdam H2 Projects H2 Valleys: HEAVENN, Europe's H2 Hub, Hydrogen Delta	• OWE • SDE++ • DEI+
Sweden	Draft	5 GW by 2030	• Swedish Energy Agency. • Energy Market Inspectorate - implementation of the gas market package	HYBRIT, H2 Green Steel	• Industriklivet Program

Note: 2030 **electrolysis capacity targets*

1. EU HYDROGEN FRAMEWORK

- EU Hydrogen Strategy
- EU Taxonomy
- Fit for 55 package
  - H2 and Decarbonized Gas Market package
    - Delegated Act low-carbon H2 method.
  - Renewable Energy Directive
    - RED II delegated Acts
    - RED III
  - Carbon Border Adjustment Mechanism (CBAM)
  - EU ETS Revision
  - Alternative fuels infrastructure regulation (AFIR)
  - FuelEU maritime
  - RefuelEU aviation
- REPowerEU Plan
- Green Deal Industrial Plan
  - Net Zero Industry Act

Components of H_2 Market	**Policies (communications, directives, regulations, delegated acts)**
Supply	EU Hydrogen Strategy, RED II Delegated Acts, Hydrogen and Decarbonised Gas Market package, EU Taxonomy, Net Zero Industry Act, REPowerEU Plan, RefuelEU Aviation, Critical Raw Materials Act
Industrial and Transport Demand	EU Hydrogen Strategy, recast Renewable Energy Directive (RED III), REPowerEU Plan, Carbon Border Adjustment Mechanism (CBAM), FuelEU Maritime, RefuelEU Aviation, EU ETS
Infrastructure	EU Hydrogen Strategy, Hydrogen and Decarbonised Gas Market package, Net-Zero Industry Act, Alternative Fuels Infrastructure Regulation (AFIR), Trans-European Transport Network (TEN-T), Trans-European Networks for Energy (TEN-E), Critical Raw Materials Act

Source: 2024 State of the European Hydrogen Market Report (Link)

- Complex framework
- Clear Targets for renewable H2 only

ERCST
Roundtable on Climate Change and Sustainable Transition

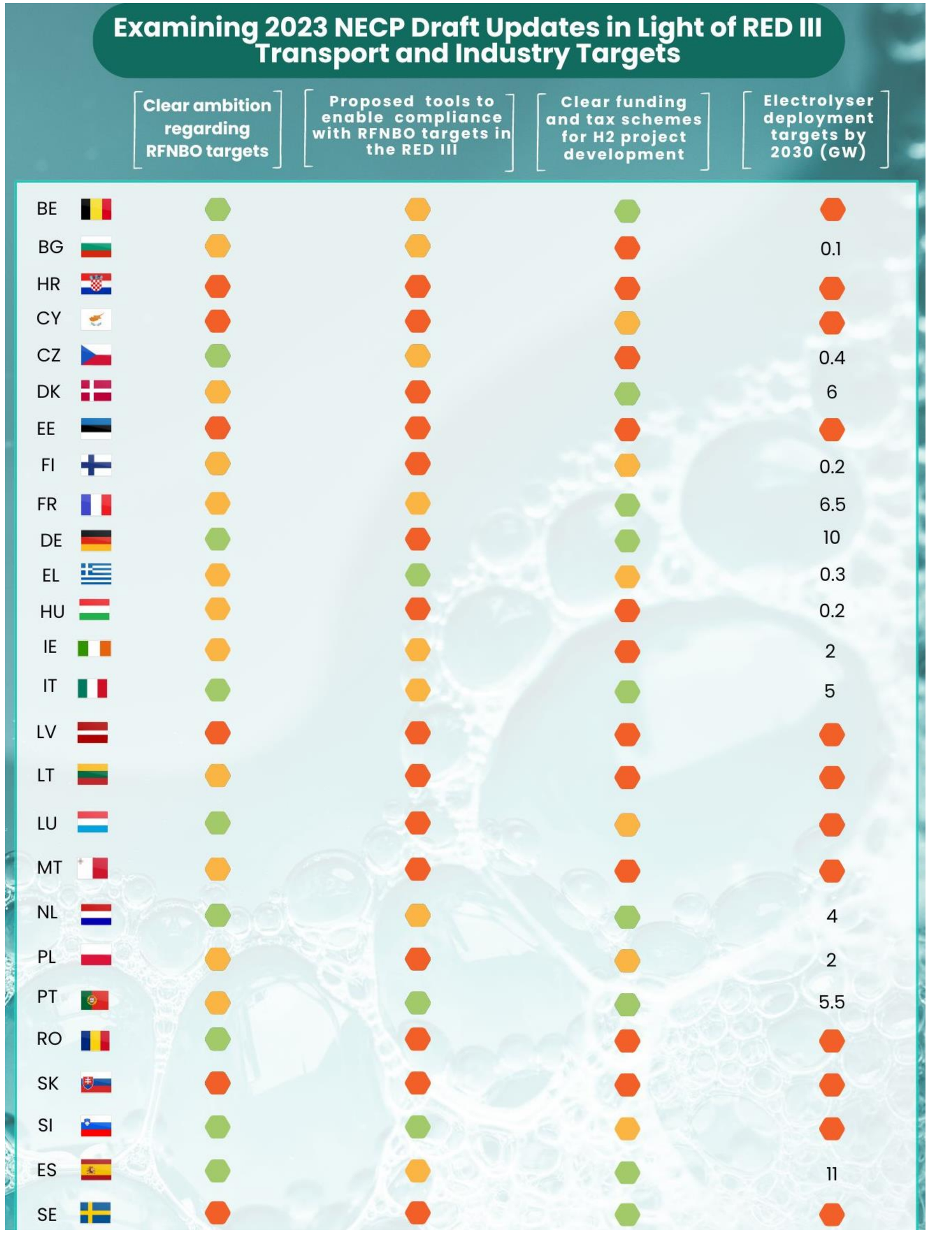
1. EU HYDROGEN FRAMEWORK

Role of the EU Member States in implementing and transposing EU Directives

National Energy and Climate plans (NECPs)

- Scope: The NECPs outline how the EU countries intend to address the 5 dimensions of the energy union: decarbonisation, energy efficiency, energy security, internal energy market, research, innovation and competitiveness

- Period covered by the NECPs: 2021-2030



Measures in place Measures in place, no clear timeline Lack of measures
Source: Hydrogen Europe (link)

2. FINANCING MECHANISMS AND TOOLS AT MEMBER STATE LEVEL TO SUPPORT H2

State aid	Regulation
Important Project of Common European Interest (IPCEIs)	IPCEI State aid Guidelines
Hydrogen Bank "Auctions-as-a-Service" scheme	Guidelines on State aid for Climate, Environmental Protection and Energy (CEEAG)
Contracts for Difference (CfDs) and Carbon Contracts for Difference (CCfD)	
State aid for Climate, Environmental Protection and Energy (CEEAG)	
State aid for research and development and innovation (RDIF)	State aid for research and development and innovation (RDIF)
State aid for energy infrastructure, R&D, environmental protection, energy efficiency, renewable electricity for new installation waste recycling/re-utilization	General Block Exemption Regulation (GBER)
State aid - national plans	Recovery and resilience facility (RRF) guiding templates
MS State aid schemes to tackle energy crisis, foster energy security, support the transition to a net-zero economy	State aid Temporary Crisis and Transition Framework

Other instruments:

- **Grants**
- **Tax incentives**
- **Guarantees**
- **National Guidelines and/or creation of a National Hydrogen Strategy**

ERCST
Roundtable on Climate Change and Sustainable Transition

3. COOPERATION AMONG MEMBER STATES

- **Important Project of Common European Interest (IPCEIs)** (e.g. IPCEI Hy2Tech, IPCEI Hy2Use)

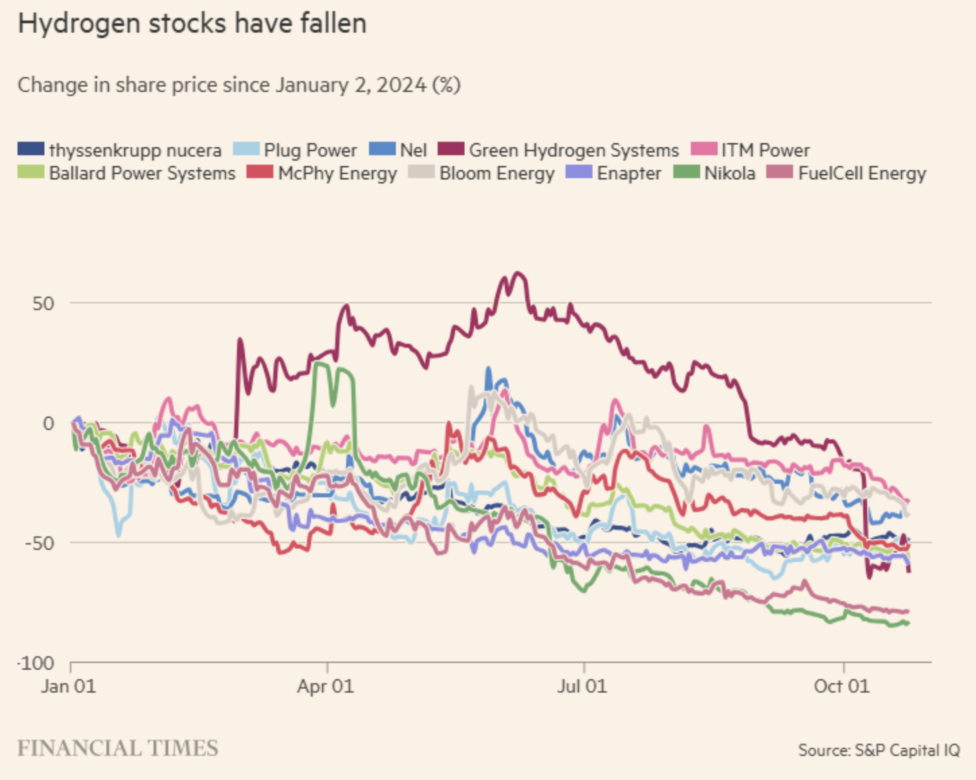
- **Projects of Common Interest (PCIs)** (e.g Hydrogen Transmission projects)

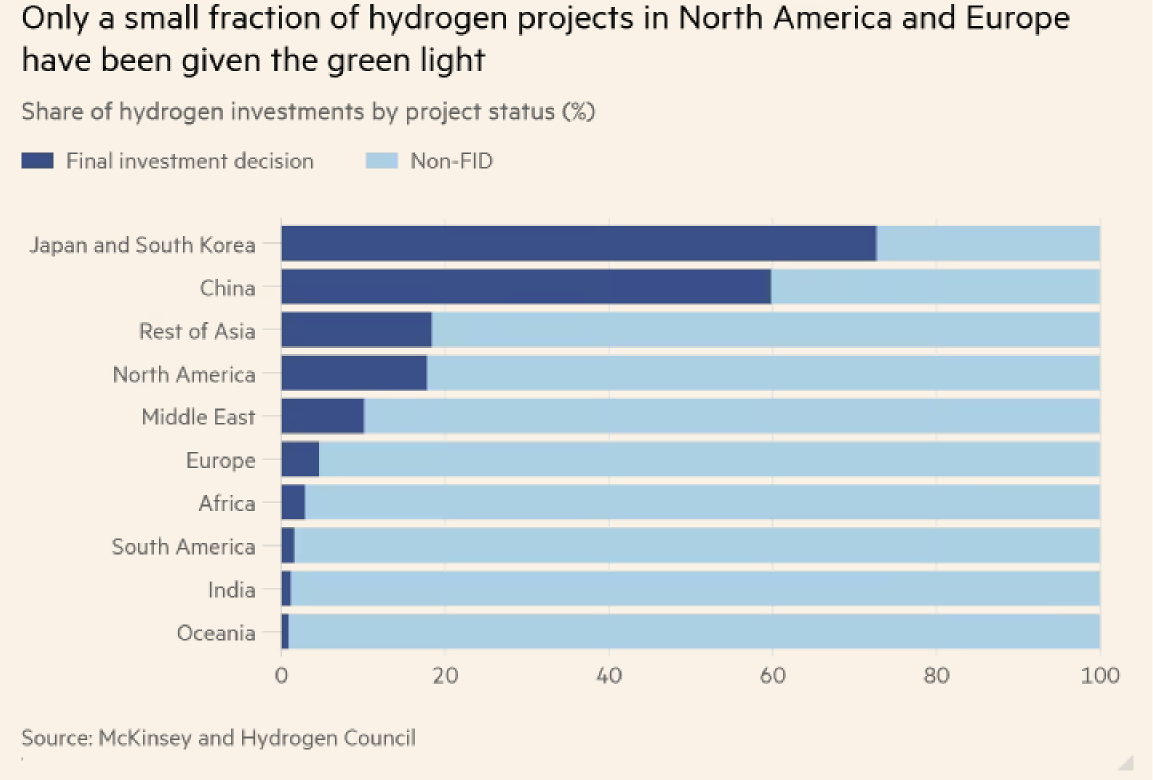
- **Bilateral or Multilateral cooperation among Member States** (e.g. North Seas Energy Cooperation)

- **Memorandum of Understandings** (e.g the one signed in 2023 by the Commissioner for Energy, Kadri Simson, with the energy ministers of France, Portugal and Spain on cross-border energy interconnections in South-West Europe).

- **Projects co-funded by the EU** (e.g. MultHyFuel, JIVE)

4. HYDROGEN MARKET SETBACKS





Source: US and European hydrogen stock prices collapse as prospects deflate, Financial Times (link)

EU Court of Auditors report: EU's goal to produce 10mn tonnes of green hydrogen by 2030 is 'unrealistic' 'reality check' needed

US: While the Department of the Treasury released final rules for the Clean Hydrogen Production Tax Credit, Trump presidency brings additional uncertainties as he suspended funding from the Inflation Reduction Act (IRA)

THANK YOU!