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# The evolution of CLEAN HYDROGEN

Perspectives from production to use in mobility and industry

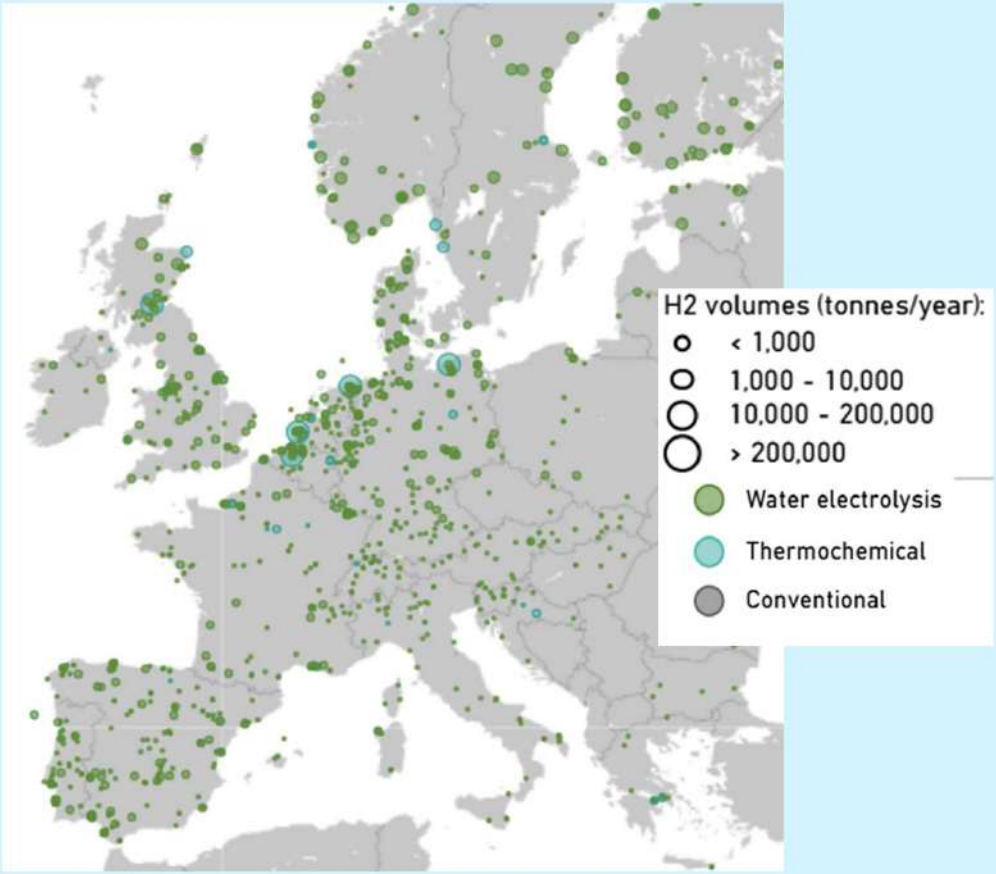
**29th of October 2025**
Venezia Heritage Tower
(Marghera, Venice)

# Beyond the hype: clean hydrogen for a competitive and resilient Europe


Luca MARSILI, Hydrogen Europe


Hydrogen Europe

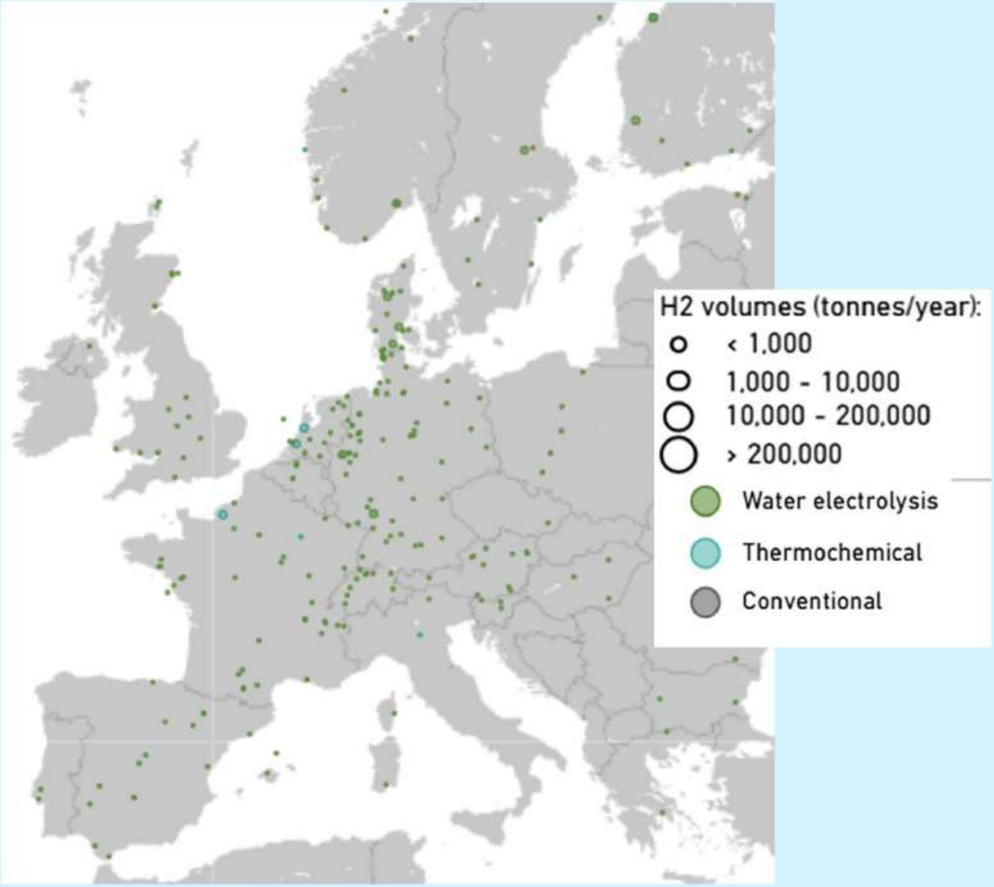
# Europe's hydrogen market: from ambition to deployment




*Source: Hydrogen Europe –clean installations planned by 2035*

- Over 1,200 hydrogen projects announced in Europe – yet **less than 10% have reached FID**.
- Industrial hubs emerging around **North Sea, Iberia, and Nordics**, but **infrastructure** still lagging behind demand centers.
- **Currently**, **around 7.8 Mt** of hydrogen used in Europe comes from fossils. **By 2030**, projections show a **12.5 Mt** production potential.
- **By June 2025**, installed water electrolysis capacity in Europe reached **~94,000 tonnes of H2/year**, from 229 identified plants.
- Installed **electrolysis** capacity in operation today ≈ **600 MW**, still far from the 2030 target of 100 GW.

# Europe’s hydrogen market: from ambition to deployment




*Source: Hydrogen Europe – clean installations today (2025)*

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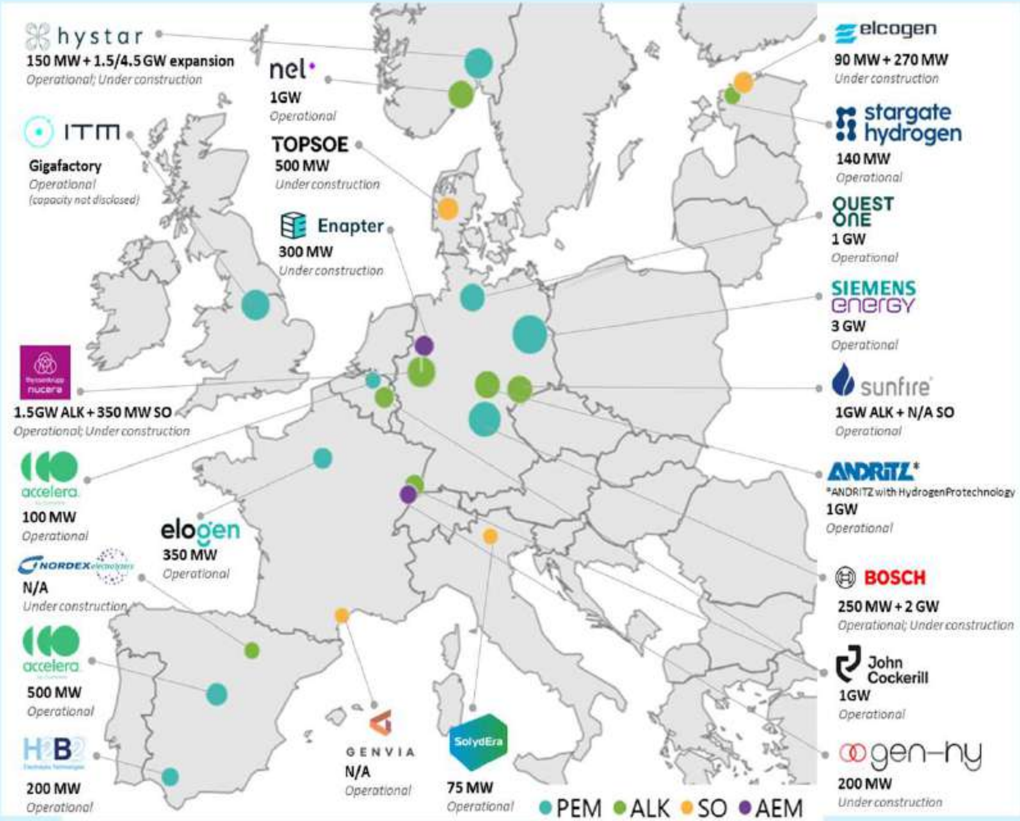
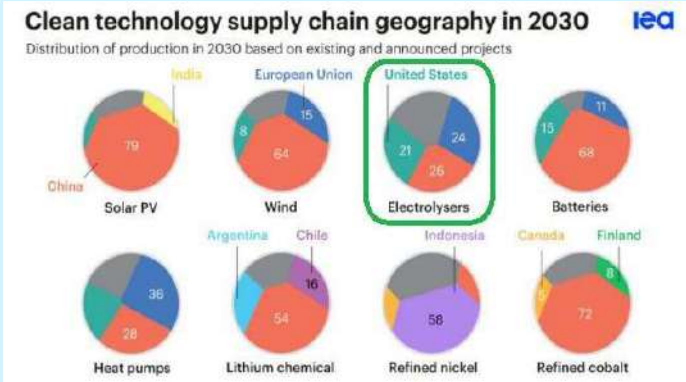
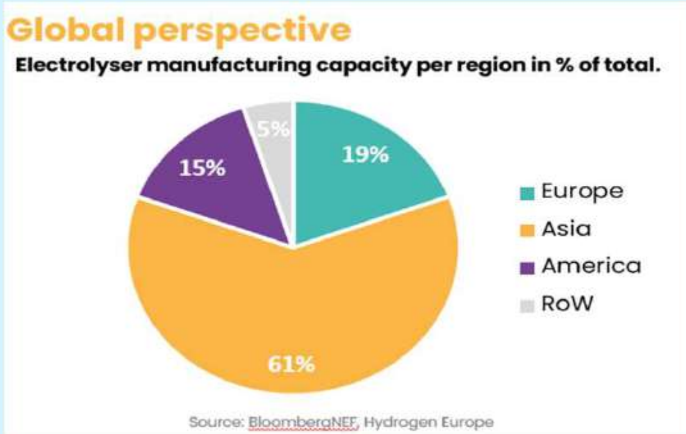
# Europe's hydrogen technological leadership at risk



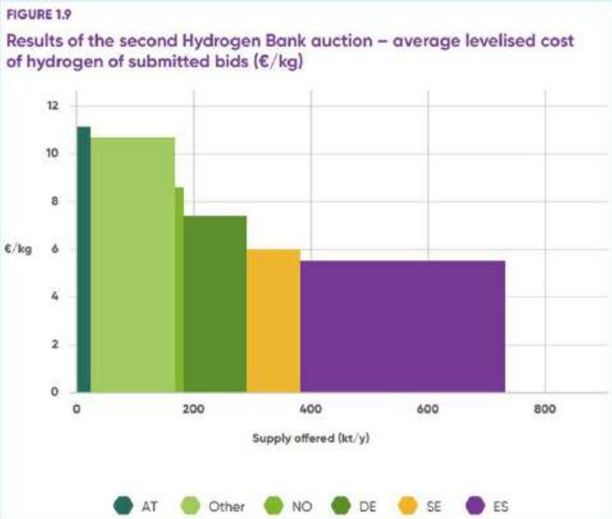

Note: The map covers both stack manufacturing and assembly capacities.

*Source: Hydrogen Europe – electrolyser manufacturing factsheet (2025)*

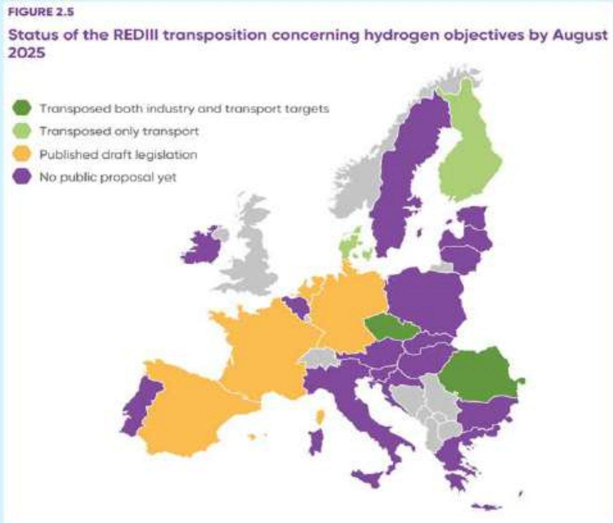


# The mutually-reinforcing challenges for hydrogen deployment




Price for RFNBO hydrogen is not there yet




Regulatory complexities and unclear market signals

Between a rock and a hard place: US and China

**A strong H2 demand is the missing link and the ultimate enabler of Europe's hydrogen economy. But how to foster it?**

# Lead markets: creating H2 demand, re-industrialising and re-employing

*"[…] We now need to speed up with the implementation. Because investors want to know that if they invest, there will be* ***demand for clean European products****. This is why* ***lead markets*** *must be at the heart of our action. […]*

***Examples of lead markets:***

*H2 steel*

*H2-based fertilisers*

*H2-derived fuels*

**Accelerated permitting for energy intensive**

**Voluntary labels for sustainable products**

**Sector specific quotas for H2**

**Made in Europe products and technologies**

**Review of carbon policies, like ETS and CBAM**

**Innovative funding schemes (e.g CCfDs)**

# Beyond the hype: building a competitive and resilient H2 economy

1. **Create certainty on demand** – fast-track the IAA, harmonise rules, and define lead markets. Implementation is key!
2. **Close the green premium** – scale up (Carbon) Contracts for Difference, guarantees via the EIB and procurement mechanisms. Better use EU resources!
3. **Secure industrial resilience** – implement NZIA with a strong focus on components and skills, more Made in Europe. Let's not repeat the mistakes of the past!
4. **Enable international partnerships on fair trade basis** – level playing field, technology exports and raw material cooperation. Same rules, for all!
5. **Streamline regulation** – coherence across hydrogen Directives, taxonomy, and Delegated Acts. Simplicity first!

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***PROPELLING GLOBAL CARBON NEUTRALITY BY ACCELERATING THE EUROPEAN HYDROGEN INDUSTRY***

# Thanks for the attention


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