

EU framework and support for H2 Mobility

27th March 2025



Hydrogen as a fuel

Hydrogen offers:

- Faster refuelling times
- Longer range
- Zero emission
- Fuel cells or H2ICE

Why is hydrogen relevant?

- Complementary to battery electric
- Helps relieving pressure from electricity grids
- Helps the transport sector decarbonize faster



EU policies and funding opportunities

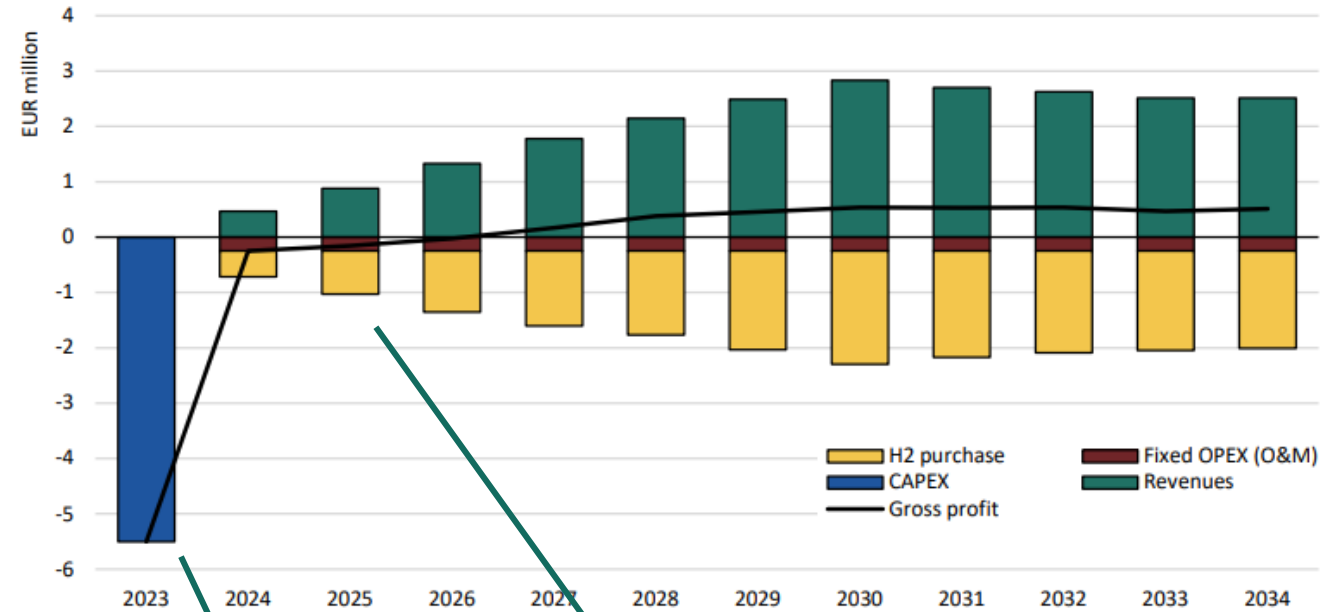
- In force:
 - Clean Vehicles Directive
 - CO2 Standards
 - Alternative Fuels Infrastructure Regulation

- Under discussion:
 - Weights and Dimensions Directive

- Coming up in 2025:
 - Greening of corporate fleets
 - Sustainable Transport Investment Plan
 - Proposal for the revision of CO2 LDVs

Actions:

- Protect EU Green Deal / FF55 level of ambition
- Adjust existing regulations where needed
- Update support instruments to current challenges



Source: Authors' calculations based on figures provided by HY24.

Notes: The figure refers to a station of 1.6 tons H₂/day capacity. The average H₂ selling price is assumed to decrease

High upfront investment costs
(CAPEX)

Fixed OPEX (O&M) representing
a significant part of the costs in
early years

Overview EU funding instruments dedicated to hydrogen and related technologies as part of the MFF 2021-2027

	Hydrogen Applications	Budget	Climate/clean tech dedicated budget (relevant for H2)	Approximate budget used/committed (2023)	Approximate budget used for H2 (2023)
Horizon Europe (2021-2027) Among which: Clean Hydrogen Partnership (2021-2027)	R&I projects, testing, demo and validation of H2 technologies, innovation & market deployment, Open Innovation Test Beds for H2 technologies.	€95.5 bln €1.2 bln	€33.4 bln €1.2 bln	€43.2 bln €495 mln	N/A €495 mln
LIFE (2021-2027)	Innovative frameworks & capacity building on H2 technologies.	€5.4 bln	€1.94 bln for climate action	€ 1.82 bln	N/A
ETS Innovation Fund (2020-2030)	Breakthrough H2 technologies, CCUS, ELYS manufacturing, H2 use in applications.	€40 bln* (carbon price of €75/tCO2)	€40 bln	€6.7 bln (3.1 bln signed, 3.6 bln 2023 grant preparation)	€1.19 bln
Breakthrough Catalyst (2022-2027)	Clean Hydrogen, Sustainable Aviation Fuels, Direct Air Capture and Long Duration Storage	€820 mln	€410 mln (clean hydrogen & SAFs streams)	N/A	N/A
CEF – E (2021-2027)	Cross-border H2 transmission & distribution projects, storage, electrolyser.	€5.84 bln	€3.5 bln (60% for climate objectives)	€2.537 bln	Circa 0, to change with eligibility of H2 in 2023 6th PCI list
CEF – T (2021-2027) Among which: AFIF (2021-2023)	HRS on TEN-T road and railway networks, dedicated to public transport in urban nodes and to deployment of H2 alternative fuels for TEN-T maritime and inland ports, inland waterways.	€25.81 bln €1.575 bln	€15,49 bln (60% for climate objectives) €1.575 bln	€18.12 bln €920 mln	€232 mln (September 2023) (AFIF, see below) €232 mln (September 2023)
InvestEU	H2 production, HRS & other H2-related infrastructure, storage, H2 technology equipment, supply at commercial scale.	€26 bln of guarantee (backed by €10.46 bln of budget through 40% provisioning rate)	€99 bln of guarantee for sustainable infrastructure stream, backed by €3.96 bln budget)	€21.4 bln (backed by €8.5 bln budget)	N/A
ERDF	HRS, H2 transmission & distribution, H2 innovative projects for territorial integration.	€191 bln	€57.3 bln (30% target for entrepreneurship for climate transition)	€ 5.7 bln	N/A
Cohesion Fund	HRS & other H2-related infrastructure on TEN-T networks.	€43 bln	€15.91 bln (37% for entrepreneurship for climate transition)	€1.1 bln	N/A
Modernisation Fund	Production & use of green hydrogen from renewable electricity; assets like green H2 fueled trains/ trucks / cars; high-efficiency hydrogen CHP.	€48 bln (carbon price of €75/tCO2)	€33.6 bln (70% for priority investment, mostly focused on renewable energy and energy efficiency)	€7.5 bln	€372 mln

EU policies and funding opportunities

Fund	Total Budget	Time period	Financing forms	Alternative fuels	Components & manufacturing	Infrastructure	Operations	Road Vehicles	Rolling Stock
Public Sector Loan Facility	€1.3 billion	2021-2027	Grants/Loans	✓		✓	✓		
Innovation Fund	€40 billion	2020-2030	Grants	✓	✓	✓		✓	✓
Connecting Europe Facility - Transport	€25.8 billion	2021-2027	Grants	✓		✓			
Digital Europe	€7.6 billion	2021-2027	Grants		✓				
European Investment Bank instruments	n/a	Ongoing	Loans/Financial instruments	✓	✓	✓		✓	✓
European Structural and Investment Funds	€274 billion	2021-2027	Grants	✓		✓		✓	✓
Horizon Europe	€95.5 billion	2021-2027	Grants	✓	✓	✓	✓	✓	✓
INTERREG Programme	€8.1 billion	2021-2027	Grants	✓		✓		✓	✓
InvestEU Fund	€9.9 billion	2021-2027	Financial instruments	✓	✓	✓		✓	✓
LIFE Programme	€5.4 billion	2021-2027	Grants	✓			✓	✓	✓
Modernisation Fund	ETS-Driven	2021-2030	Grants/Financial instruments	✓				✓	✓
Recovery and Resilience Facility	€723.8 billion	2021-2023	Grants/Loans	✓	✓	✓		✓	✓
Social Climate Fund	€86.7 billion	2027-2032	Grants/Loans						

Source: [UITP](#)

CEF funded HRS

- Stations funded by all CEF programmes
- 226 HRS in total (202 of them not in operation)
- Sources:
 - CINEA [map](#)
 - CINEA [project dashboard](#)
 - H2Live
- Data tracked: country, city, operator, pressure, access, status

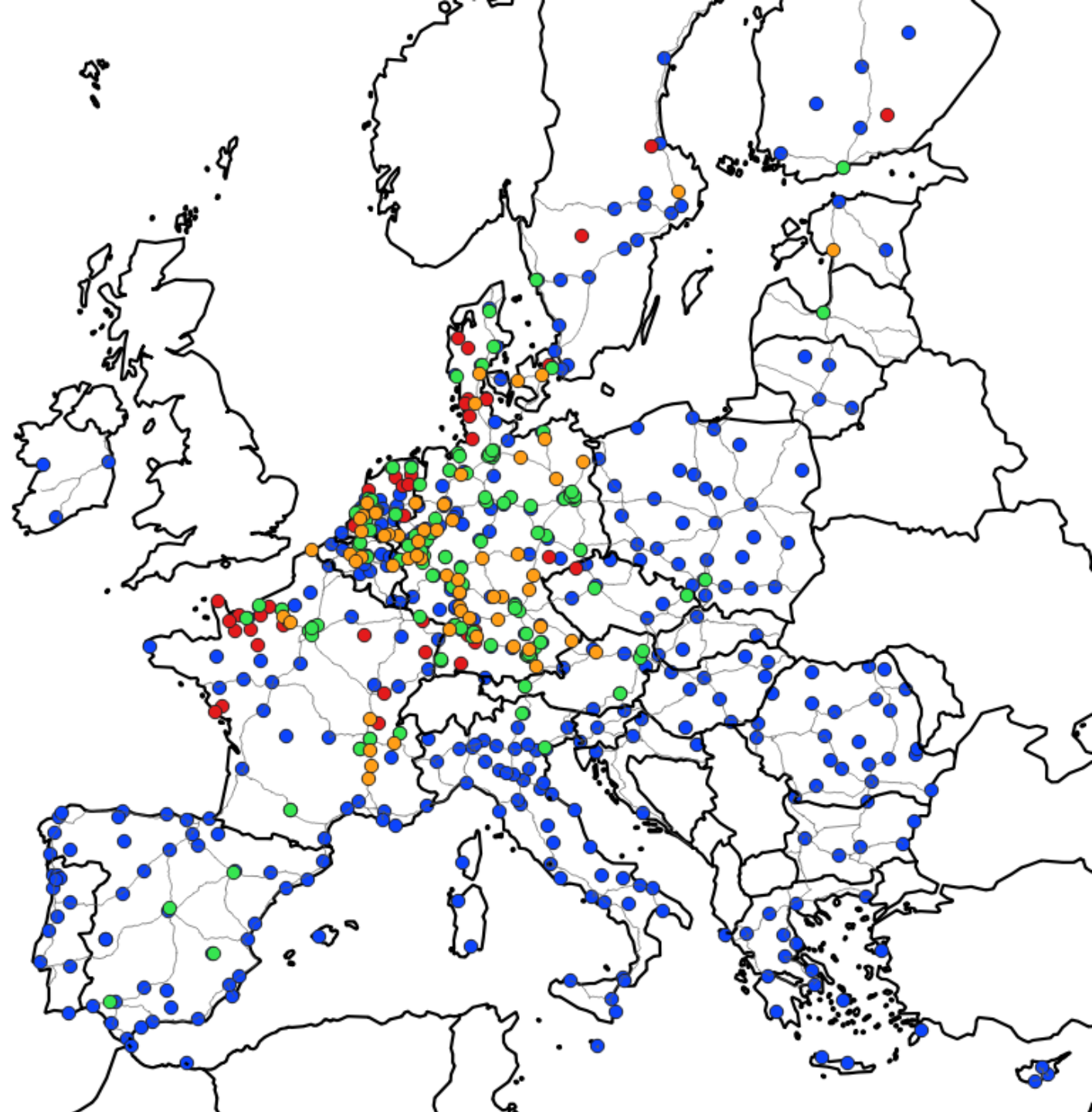


Country	City	Operator	Pressure	Access	Status	included in map
France	Clermont Ferrand - Cournon d'Auvergne	Hypulsion	350, 700	Public	Planning	N
France	Lyon Venissieux	Hypulsion	350, 700	Public	Optimisation stage	Y
France	Lyon Airport	Hypulsion	350, 700	Public	Optimisation stage	Y
France	Chambery	Hypulsion	700	Public	Out of service	Y



Current challenges

- Pushback from many Member States against set decarbonization targets
- Difficult/slow implementation of flagship laws (e.g. AFIR / RED)
 - Slow HRS deployment
 - High price of hydrogen
 - Vehicles rollout postponed
- Technical barriers:
 - Uneven taxation regimes
 - Permitting procedures
 - Refuelling standards/protocols
- Lack of efficient communication among involved stakeholders



Overcoming bottlenecks – the role of regions

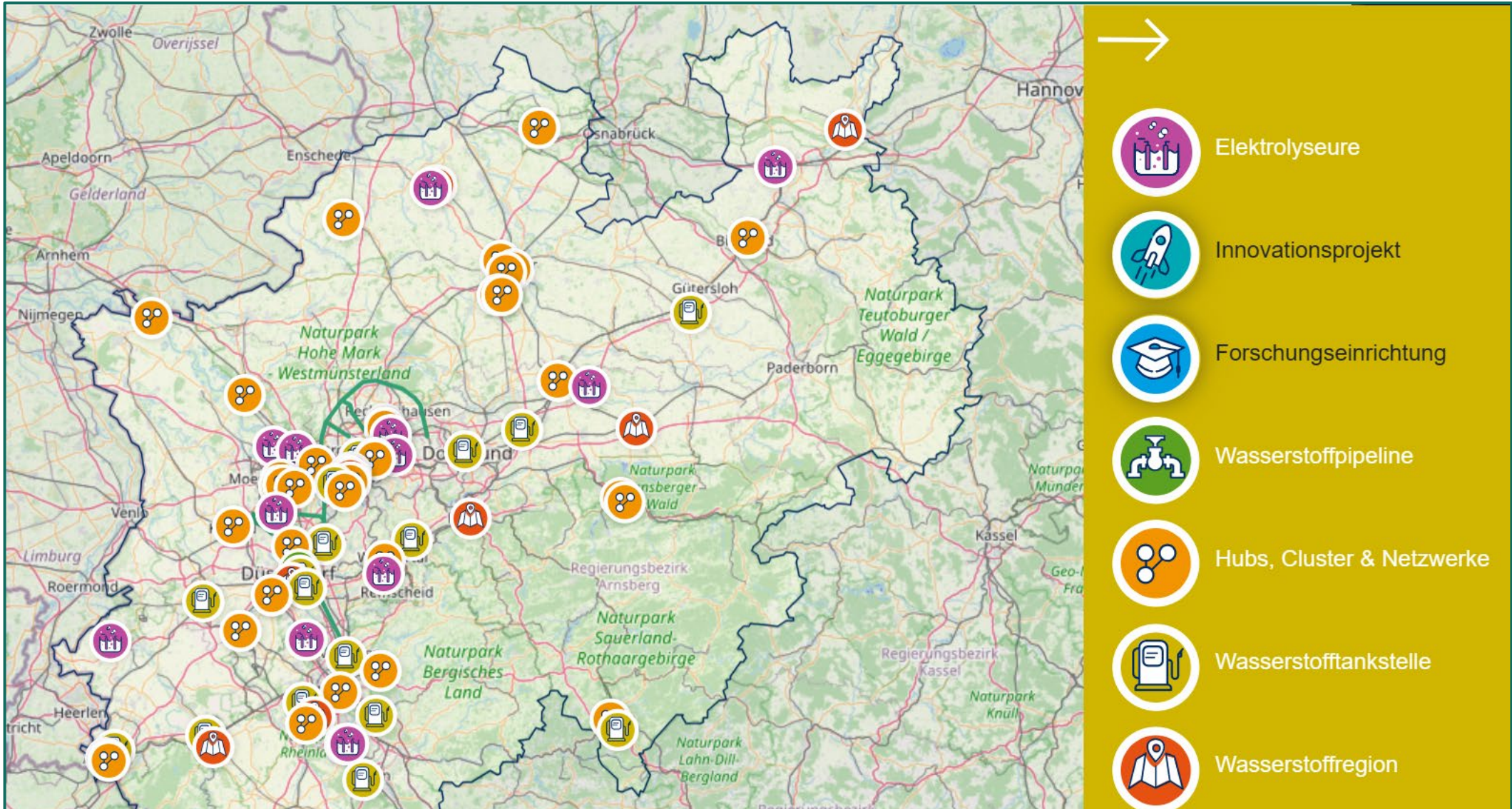
How can you help?

- The industry is moving past the demonstration phase, and now needs to scale up.
- How can regions help?
 - Review relevant local legislation (e.g. permitting)
 - Put in place modern funding schemes
 - Get involved in Brussels
 - Facilitate the creation of clusters / ecosystems

SWiM 2025 call (budget: 40M Eur)		
Vehicle class	Powertrain	Subsidy
N1	FC	60.000
N2	FC	150.000
N2	H2ICE	50.000
N3 < 30t	FC	220.000
N3 > 30t	FC	300.000
N3 < 30t	FC	70.000
N3 > 30t	H2ICE	30.000
M1	Not specified	100.000
M2	Not specified	150.000
M3	FC	300.000
M3	H2ICE	100.000

Overcoming bottlenecks – the role of regions

How can you help?



Source: [North Rhine Westphalia](#)

Overcoming bottlenecks – the role of regions

How can you help?



Source: HySetCo

Overcoming bottlenecks – the role of regions

How can you help?



Source: BMW

Thank You



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