

Making Hydrogen Work

A roadmap for hydrogen governance in Poland

Wednesday 22 October 2025 | 9:30am - 3:00pm CEST

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About Clean Air Task Force (CATF)



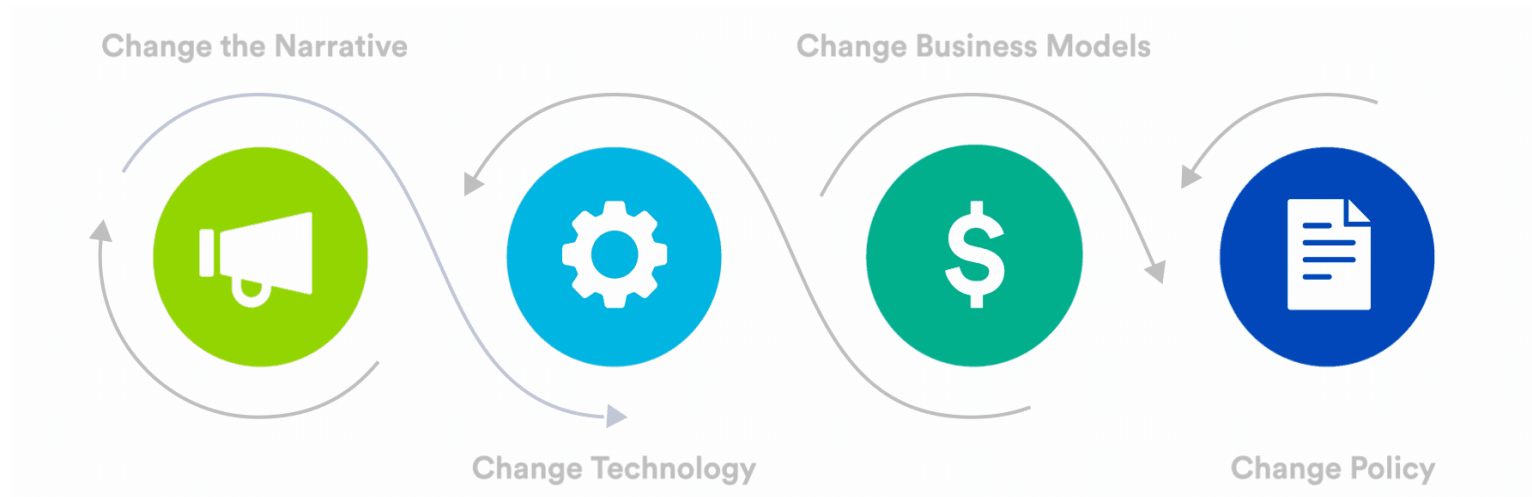
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Organisation:

- Founded in 1996.
- Headquartered in Boston, with representations in Brussels and Washington DC
- 100+ global staff worldwide.

Mission:

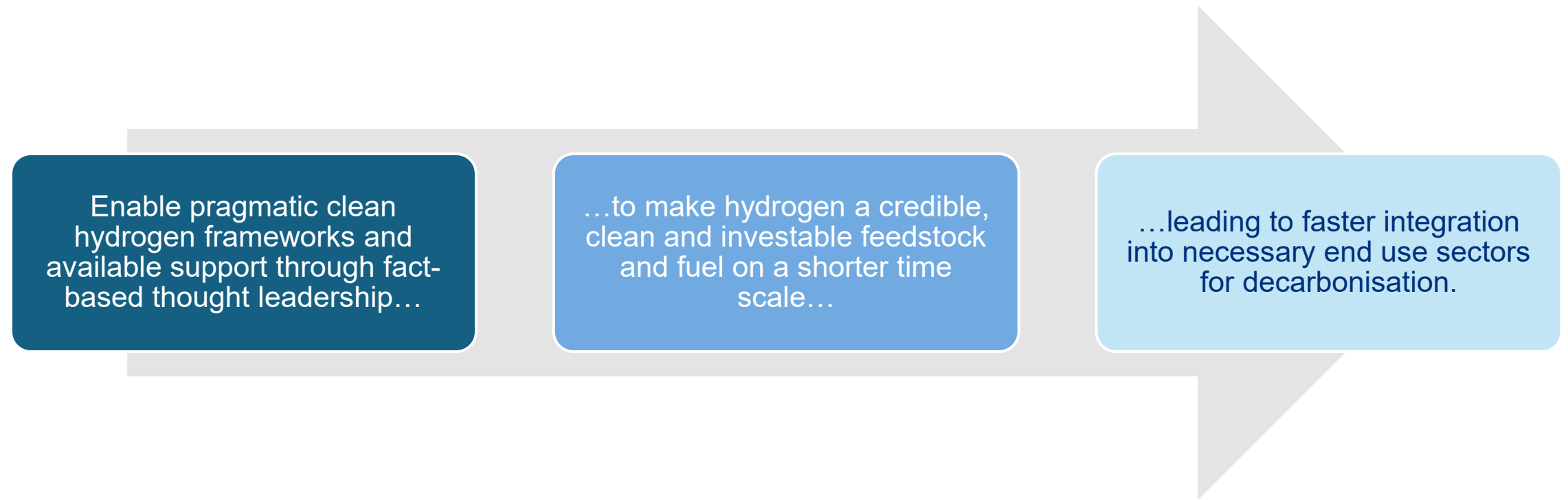
Push the technology and policy changes needed to achieve a zero-emissions, high-energy planet at an affordable cost.





CATF's Hydrogen Programme

Vision: Ensure the responsible development and deployment of clean hydrogen where it makes the most sense to maximise global emissions reductions and geopolitical realities.



Hydrogen in Poland

- Clean hydrogen will be essential for Poland's decarbonisation and industry.
- Poland's decarbonisation is critical to meeting EU climate goals.



Clean Hydrogen for Poland's Decarbonisation

Policy Brief

Poland faces significant challenges in transitioning to a decarbonised energy system, given its historical reliance on coal and the need to diversify away from fossil fuels. To ensure a sustainable, resilient, and just transition, the country must implement a comprehensive, sector-specific plan that will deploy a diverse portfolio of decarbonisation solutions, including electrification, carbon capture and storage, and zero-carbon fuels, including clean hydrogen and its derivatives.



Hydrogen deployment in Poland – challenges and opportunities

Jack Gomersall - Consultant (Europe), Hydrogen

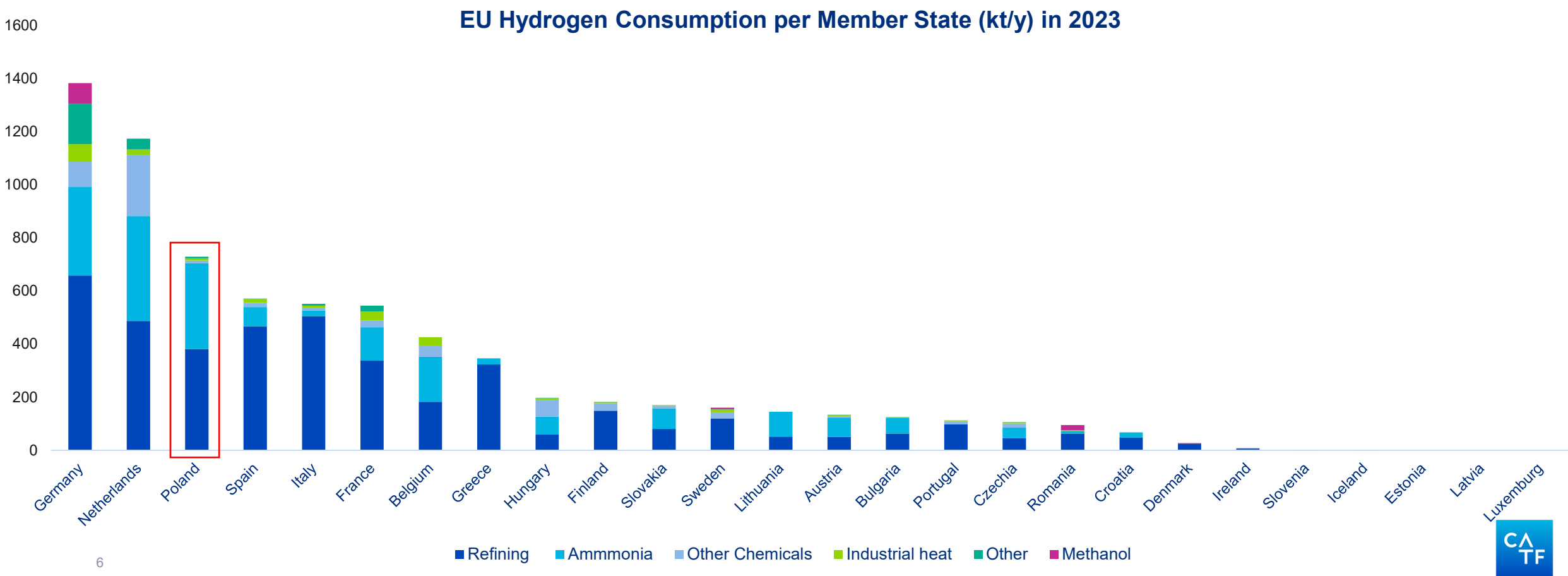
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Hydrogen Demand in Poland

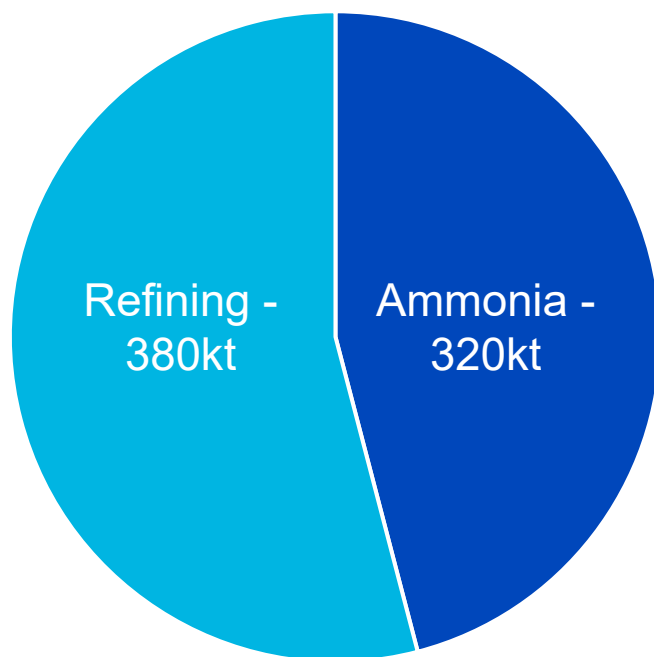
Poland is the third largest hydrogen consumer in the EU, with a demand of ~710 kilotonnes (kt) of hydrogen per year, accounting for approximately 7.8 million tonnes of carbon dioxide emissions annually (MtCO₂eq/pa).



Prioritise the Deployment of Clean Hydrogen in Polish Industry

Most existing Polish hydrogen demand is concentrated in **just two sectors - refining and ammonia production** – across eight major industrial sites.

Other heavy industrial sectors like primary steel, may also seek to deploy clean hydrogen due to limited available decarbonisation pathways. Poland has one main primary steel site.



■ Ammonia ■ Refining ■ Steel

REDIII Mandated Renewable Hydrogen in Industry

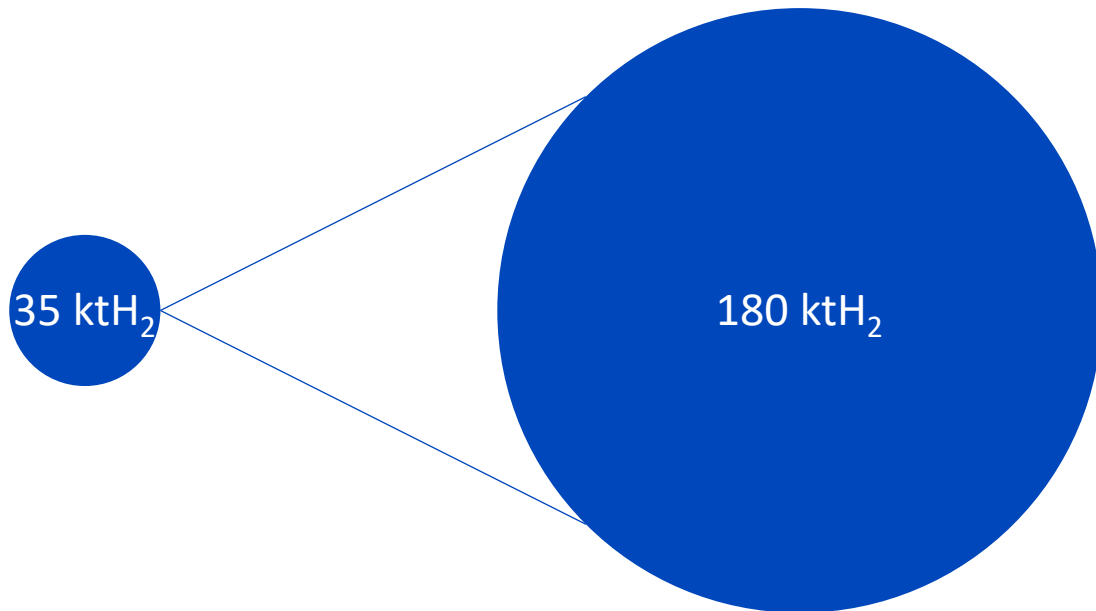
Under the EU Renewable Energy Directive (REDIII), each Member State is already mandated to use at least **42% renewable hydrogen in their industry by 2030**. For Poland, this will require at least 180kt of renewable hydrogen.

	2030	2035
RED III Industry RFNBO Target	42%	60%
Required RFNBO	180 kt H2	257 kt H2
Electrolyser Capacity	1.57 GW	2.25 GW
Required Renewable Electricity	9.7 TWh	13.8 TWh

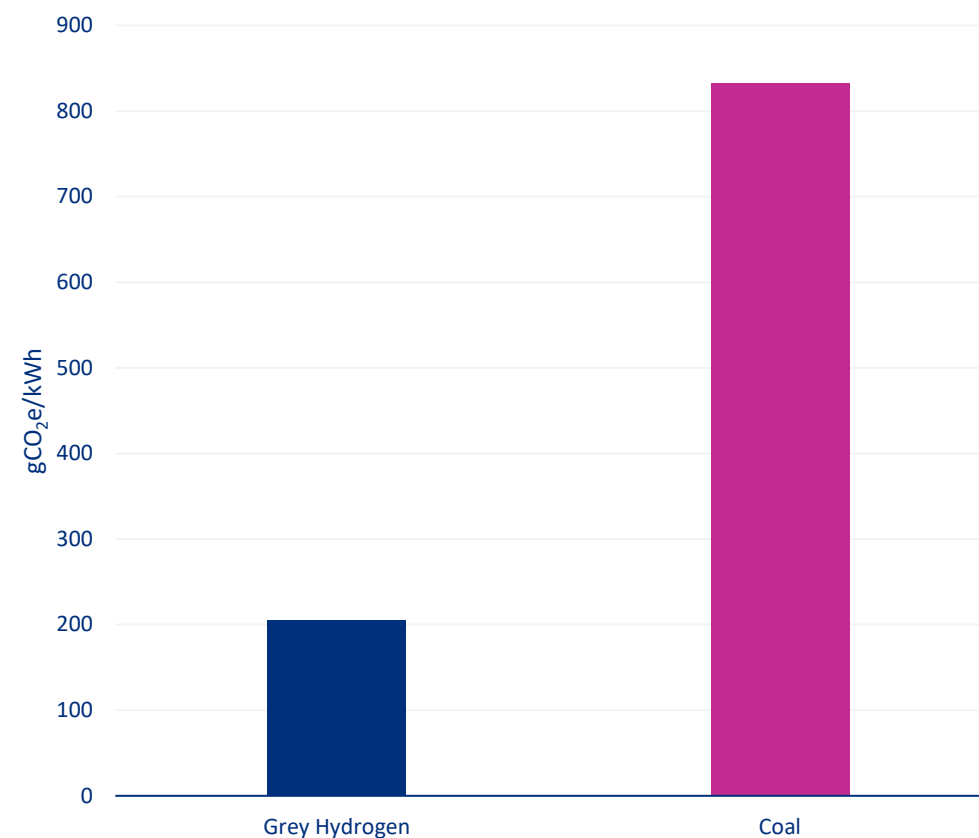
Challenges for Renewable Hydrogen Deployment

1. Infrastructure Deployment
2. Intermittency of Production
3. Production costs

Meeting the 2030 REDIII mandate for renewable hydrogen in Poland would require 5 times the entire EU production in 2024.

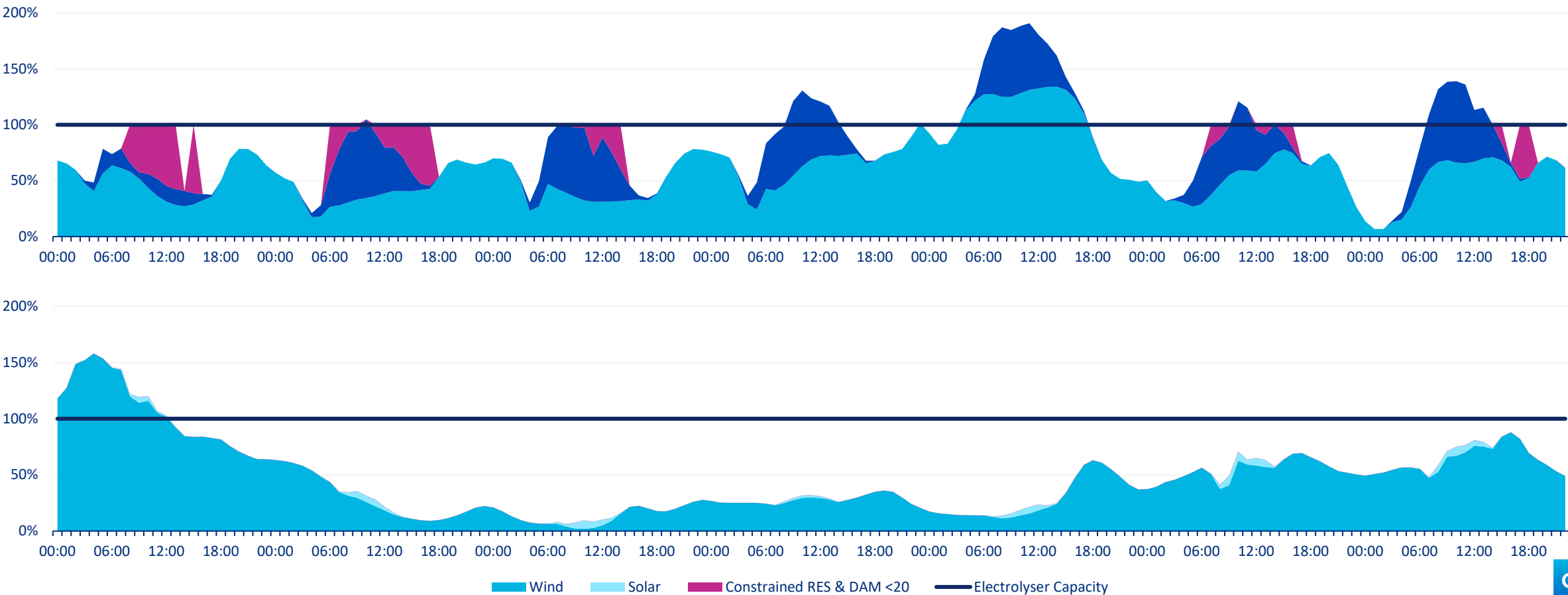


Prioritising the displacement of coal in the power sector would deliver greater environmental benefits than using the electricity to displace existing hydrogen with renewable.



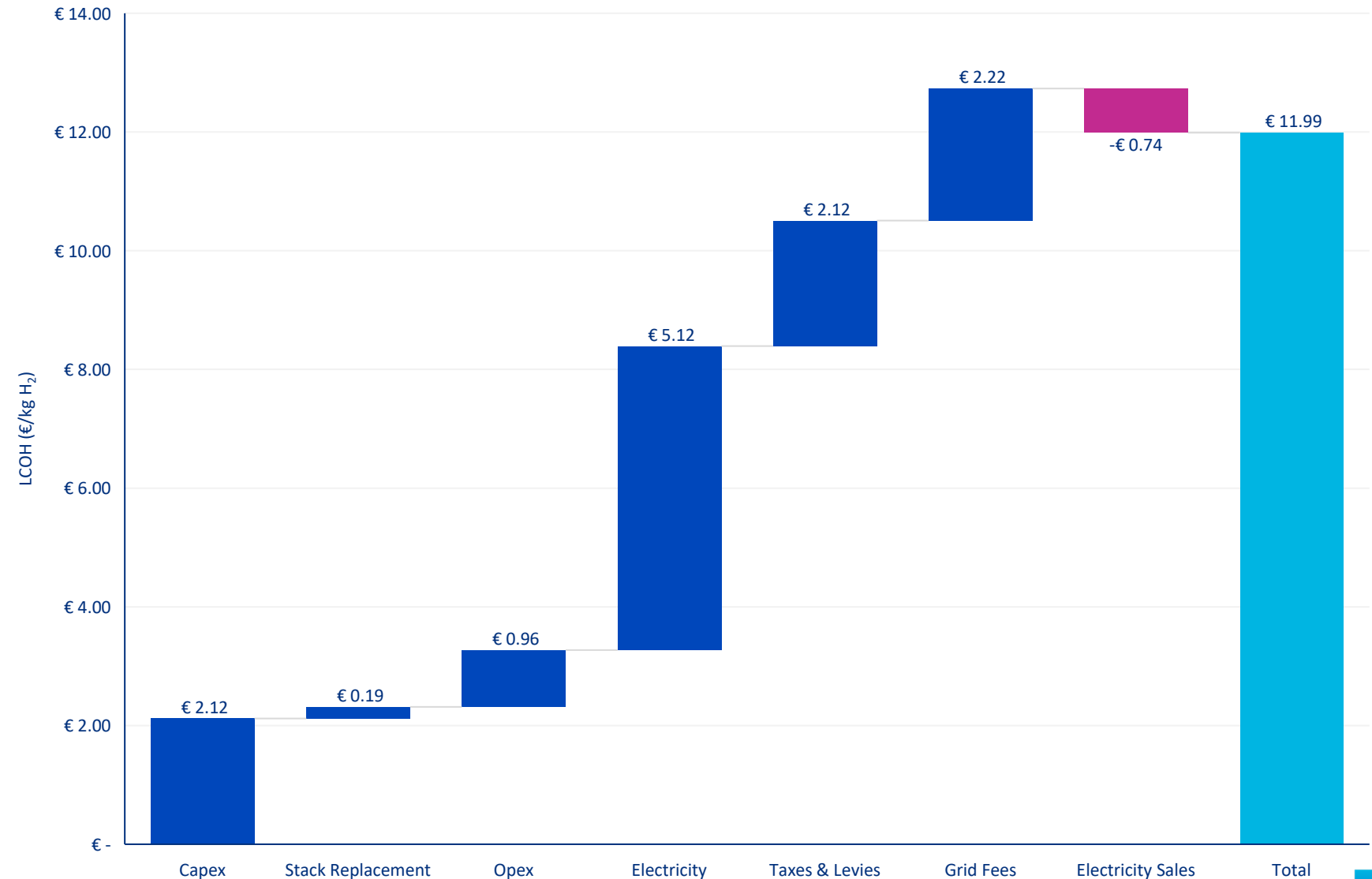
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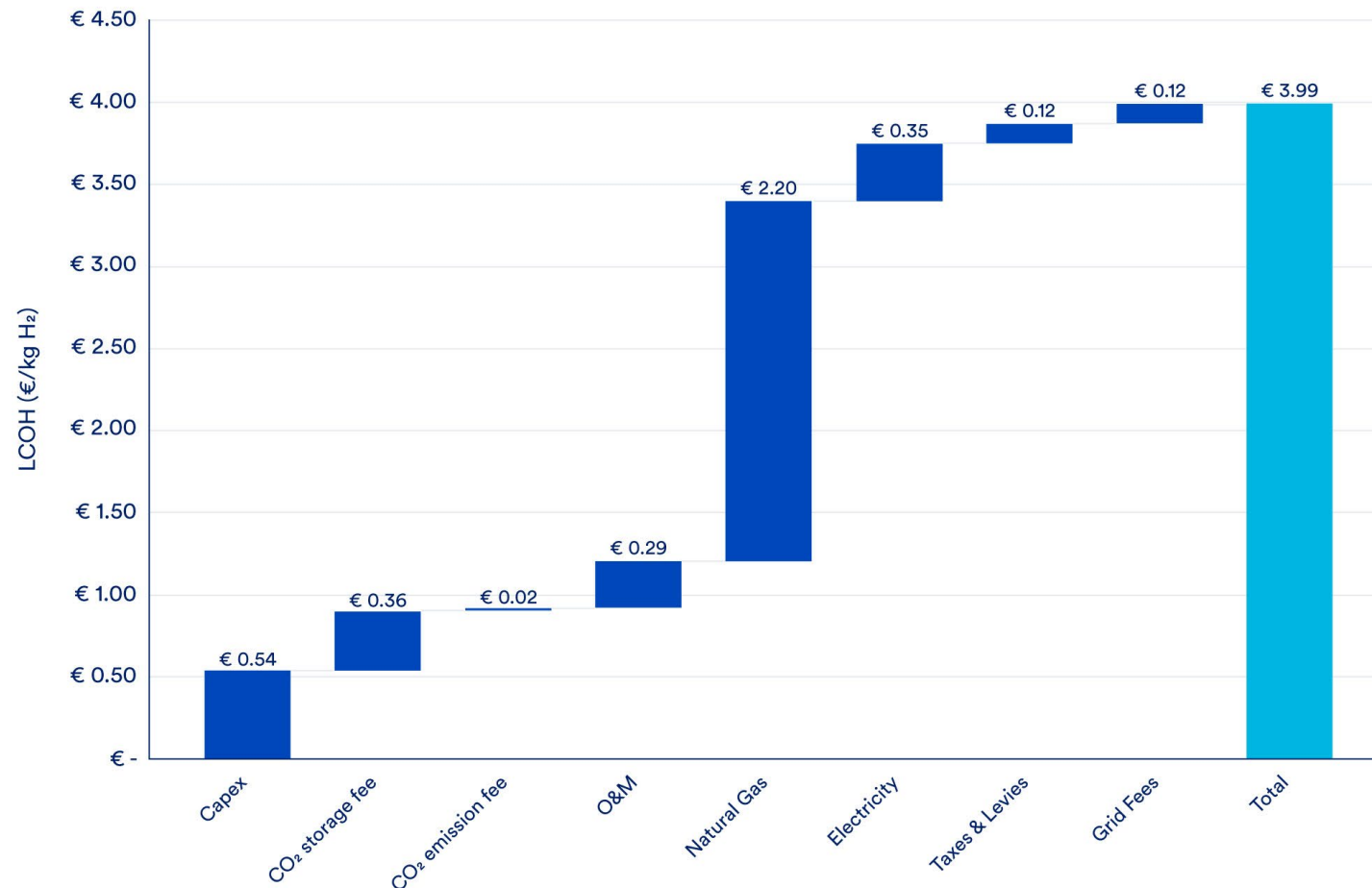
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Low-Carbon Hydrogen will be Critical for Polish Industry

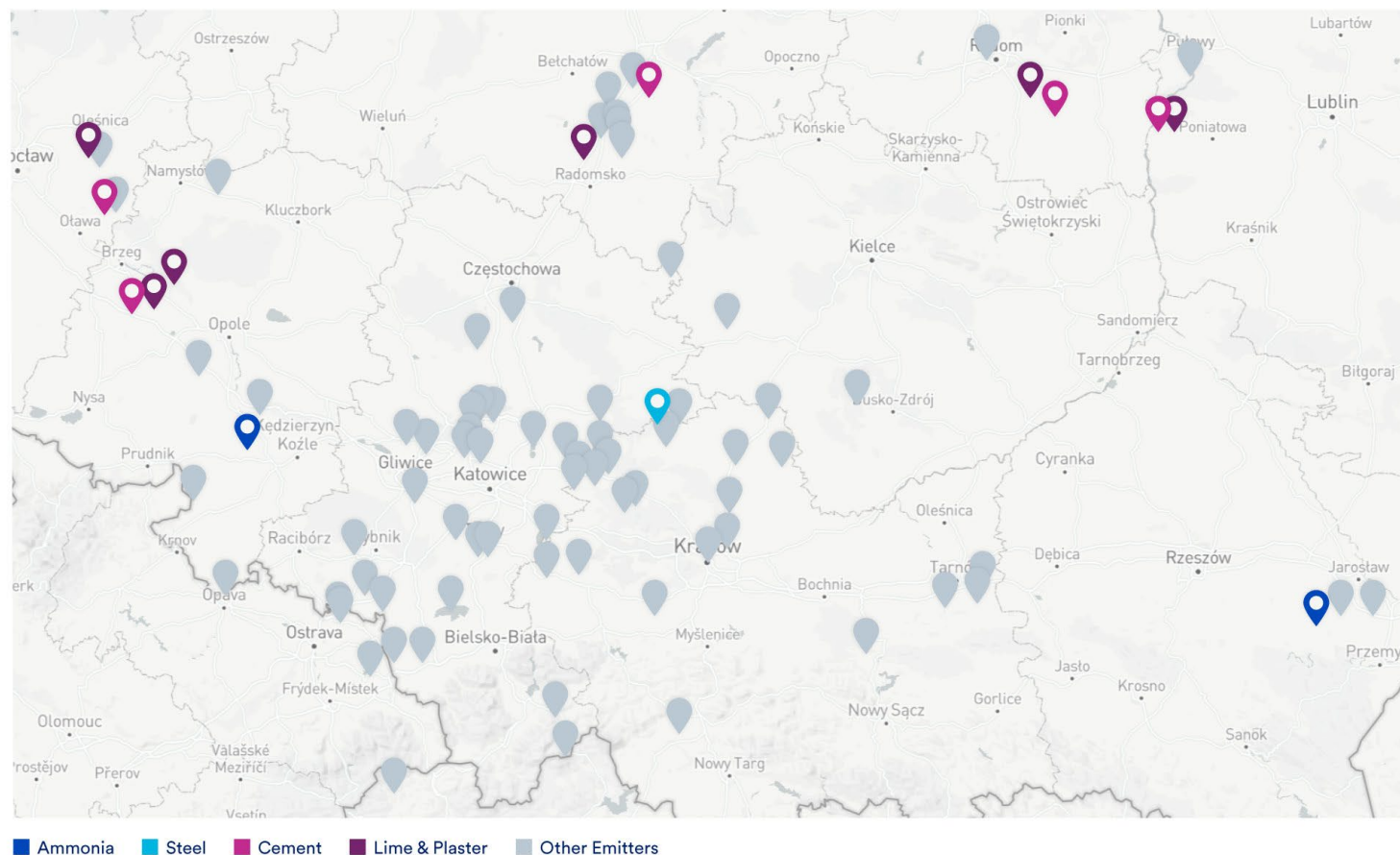
Low-carbon hydrogen – produced through reformation of natural gas with CCS – is an alternative production pathway that can facilitate the decarbonisation of Polish industry, supplying a consistent, reliable and lower cost supply of clean hydrogen.



Develop CCS Infrastructure in Industrial Clusters

CO2 transport and storage (T&S) infrastructure should be first deployed in regions where high-emission industries are located within close proximity – an ‘Industrial Cluster’. **Low-carbon hydrogen projects can play a central role within these as anchor emitters.**

For example, the Silesia-Opole region in Southern Poland where the clustered demand for CCS infrastructure can drive down storage costs spreading the high capital infrastructure expense across multiple industrial users



Key Takeaways

- **Prioritise the deployment of clean hydrogen** in heavy industry, especially sectors who already use hydrogen, to secure stable, long-term offtake and drive decarbonisation in hard-to-abate sectors where hydrogen consumption is essential.
- **Support a staggered approach to deploying different clean hydrogen production pathways** that accelerates meaningful deployment, first with the immediate scaling of low-carbon hydrogen in existing offtake industries, while planning for broader renewable hydrogen deployment once Poland's electricity system is more deeply decarbonised.
- **Align clean hydrogen deployment with a cluster-led industrial decarbonisation approach**, anchoring low-carbon hydrogen as an important enabler to necessary CCS infrastructure deployment in priority industrial cluster locations, creating the backbone for Poland's wider industrial decarbonisation.

Thank you

For more details, scan the QR code to view the full brief, or access via our website at: catf.us

FACT SHEET

Getting Hydrogen Right for Poland's Industrial Decarbonisation

October 20, 2025

Category: [Policy](#)

Work Area: [Hydrogen](#)

