



# European Clean Hydrogen Alliance

The European Clean Hydrogen Alliance was set up in July 2020 by the European Commission.

## Goals

- Deploy renewable hydrogen at large scale by 2030.
- Shift away from fossil fuels.
- Decarbonise otherwise hard-to-abate energy-intensive industries and modes of transport.
- Reduce the EU's dependence on Russian gas.

## Members

- Over 1,650 members from industry, civil society, public authorities, research institutes, and investors.
- These members are committed to the green transition of the EU economy.
- They represent the entire **hydrogen value chain, covering renewable and low-carbon hydrogen, from production to transmission to its end-uses in mobility, industry, energy, and heating applications.**

## Achievements

- The Alliance report on barriers to the large-scale deployment of clean hydrogen in the EU and related mitigation measures, leading to the creation of two working groups on hydrogen standards and permitting procedures.
- The Alliance report on the permitting of hydrogen projects and related policy recommendations.
- An ambitious pipeline of more than 750 viable investment projects for the large-scale deployment of renewable and low-carbon hydrogen to facilitate the creation of European hydrogen value chains by profiling projects with investors and stakeholders.
- Following the 2022 update of the Pipeline, the total number of projects is more than 840!
- An Electrolyser Partnership, to increase ten-fold the EU's electrolyser manufacturing capacity by 2025 to meet the EU's target to produce 10 million tonnes of renewable hydrogen by 2030.

*"The European Clean Hydrogen Alliance is instrumental in bringing hydrogen from lab to market. It facilitates partnerships and collaboration, fosters European investments and helps create a favourable regulatory environment for clean hydrogen production and deployment."*

Thierry Breton, Commissioner for Internal Market

## Governance

- Members meet twice per year in the **Hydrogen Forum**.
- The Alliance's **roundtables** cover the different parts of the hydrogen value chain.
- Two working groups** focus on hydrogen permitting and hydrogen standards.
- The **Electrolyser Partnership** consists of Alliance members from the electrolyser value chain.

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## Key Facts & Figures

### Current situation in the EU

Capacity to produce renewable hydrogen from electrolysis in EU today: 8000 tons (70 MW)\*.

\*Assuming electrolyser load factor of 2/3, meaning the electrolyser runs 2/3 of the year (5840 hours / year).

### REPowerEU targets

**10 million tonnes of renewable hydrogen produced in the EU by 2030** and 10 million tonnes of renewable hydrogen imported by 2030.

Additional capacity of **80 GW of renewable electricity installations to produce renewable hydrogen**. That is 'additional' to the 90 GW of renewable electricity already foreseen in the Fit-For-55 legislative proposals to meet the 5.6 million tonnes of hydrogen consumption by 2030.

### Alliance Project Pipeline and the 2022 update

80% of the current pipeline projects plan to enter into operation by 2025.

The projects accepted in the 2021 pipeline have an expected capacity of 50 GW by 2030.

Following the 2022 project pipeline update, the total capacity could reach 67 GW by 2030.

## Financing & Funding

The Alliance has facilitated contacts between project promoters and institutional and private investors. The Innovation Fund's 3rd Large Scale Call will be launched in November 2022 and run until March 2023 with a budget of €3 billion. Additionally, two waves of important projects of common European interest (IPCEI) were approved focusing on technology and production.

**76 technology and production projects have already received approval for public funding amounting to over €10 billion.**

Hydrogen Generation Technology	Fuel Cells Technology	Storage, Transportation and distribution Technology	End User Technology	Hydrogen Infrastructure	Hydrogen application in Industry
1s1 Energy * Advent* Ansaldo AVL Christof Industries De Nora Elcogen* Elogen Enel Gervia H2B2* Cummins John Cockerill McPhy* Nordex Ørsted Sener Stargate Sunfire* Synthos	1s1 Energy * Advent* Alstom Ansaldo Arkema Bosch DE Daimler Truck De Nora EKPO Elcogen* Fincantieri Gervia Iveco Nedstack* Plastic Omnium AT Symbio	Arkema B&T Composites* Daimler Truck Enel Faurecia NAFTA NAFTA Neste Ørsted Plastic Omnium FR	Alstom FR Alstom IT Bosch AT Daimler Truck Fincantieri HYVIA Iveco CZ Iveco ES Iveco IT Neste Ørsted Plastic Omnium AT Plastic Omnium FR	Air Liquid France Air Liquide Netherlands - CurtHyL Air Liquide Netherlands - ELYgator Bay of Biscay Hydrogen (Petronor/Repsol) Bondaltil Cartagena Hydrogen Network (Repsol) ENGIE Belgium ENGIE Netherlands Fluxys H2 Abono (EDP) H2-Fifty H2 Los Barrios (EDP) HyCC Iberdrola Masshylia (TotalEnergies and ENGIE France) Ørsted P2X Solutions * PKN Orlen Shell Uniper	Borealis Enel Green Power/Endesa ENGIE Belgium Everfuel Hybrit Development IAM Caecius NextChem RINA-CSM RONA SardHy Green Hydrogen Solar Foods* South Italy Green Hydrogen TECforLime TITAN Cement VERBUND

\*SMEs

