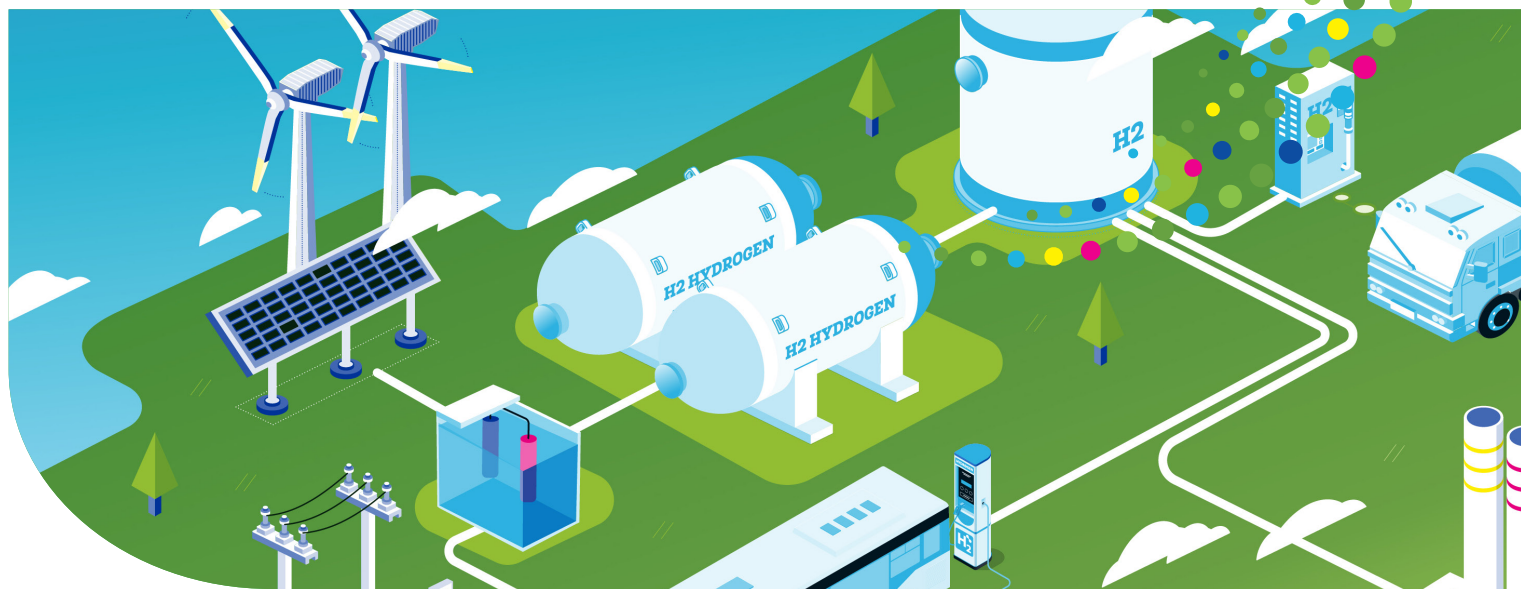


Hydrogen Valleys: Powering Innovation and Regional Growth Across Europe



As Europe accelerates its journey towards climate neutrality, clean hydrogen is emerging as a cornerstone of the green transition. At the heart of this transformation are Hydrogen Valleys. With strategic support from the Clean Hydrogen Partnership, these ambitious initiatives are not only driving innovation but also creating regional economic value.

What is a Hydrogen Valley?

Hydrogen Valleys are geographical areas where clean hydrogen is produced and used locally to decarbonise key sectors. Valleys are ecosystems integrating the entire hydrogen value chain: production, storage, distribution, and diverse end-uses, making hydrogen more economically viable and technically scalable, while anchoring the green transition in local economies.

The result? Innovative clusters that reduce emissions, create jobs, and boost regional markets. The valleys serve as living laboratories, testing new business models, advancing technology readiness, and demonstrating how clean hydrogen can work at scale.

A strategic vision: The Role of the Clean Hydrogen Partnership

Since 2016, the Clean Hydrogen Partnership has championed the development of Hydrogen Valleys.

Its work began with early support for pathfinder projects like **BIG HIT** in the Orkney Islands and **HEAVENN** in the Northern Netherlands. These pioneering efforts laid the foundation for what has become a key pillar of the EU's energy strategy.

A coordinated approach to regional-transformation

Hydrogen Valleys supported by the Clean Hydrogen Partnership vary in scale and geography, from major industrial hubs to transport-focused projects in islands. Large-scale projects such as **NAHV** (northern Italy, Slovenia, and Croatia) and **BalticSeaH2** (southern Finland and Estonia) aim at producing over 4,000 tonnes of hydrogen per year. Smaller-scale valleys like **Green Hysland** in Mallorca and **H2tALENT** in Portugal demonstrate the viability of hydrogen in insular and dispersed contexts, highlighting the flexibility of the model and its application across diverse end-uses, from industry to transport.

"Hydrogen Valleys integrate multi-sectoral demand and address three urgent challenges: decarbonisation, competitiveness, and security and resilience. They attract investment and strengthen regional ecosystems."

Danica Maljković, Chair of the Governing Board, Clean Hydrogen Partnership

In addition to grant support, the Partnership has de-risked hydrogen investments by supporting project development and capacity building among regional authorities through Project Development Assistance (PDA). Building on the success of 25 regions supported to date, the new Hydrogen Valleys Facility offers tailored support to help both regions and private project promoters move from early concepts to investment-ready projects.

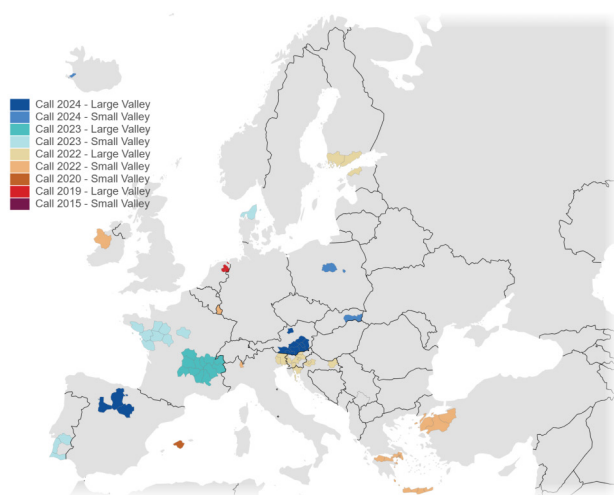
Looking Ahead

Europe's Hydrogen Valleys represent a blueprint for systemic change. They prove that clean hydrogen is not a distant dream but a real and replicable solution that delivers environmental and economic dividends. Thanks to the support of the Clean Hydrogen Partnership, regions across the EU are seizing the hydrogen opportunity – transforming local economies and contributing to the continent's green leadership on the global stage.

The goal To accelerate the development of integrated clean hydrogen ecosystems across Europe, enabling regional decarbonisation, economic growth, and technology leadership through the deployment of Hydrogen Valleys.

Key results The Clean Hydrogen Partnership has transformed the Hydrogen Valley concept from pioneering pilots into a Europe-wide model for sustainable growth. Supported projects are demonstrating the viability of hydrogen across geographies and sectors, leveraging over €1.3 billion in investment and laying the foundation for Europe's hydrogen economy.

Hydrogen Valleys



KEY ACHIEVEMENTS

21 HYDROGEN VALLEYS
supported across 19 countries

OVER €1.3 BILLION
in total investment mobilised

€250+ MILLION
in funding provided

300 MW¹ OF ELECTROLYSER
CAPACITY installed or planned

OVER 30,000 TONNES
of clean hydrogen produced and
used annually in the 21 valleys

DE-RISKING HYDROGEN VALLEYS
PROJECTS
25 European regions supported
with Project Development
Assistance

IMPACTS

DECARBONISATION
across multiple sectors including
transport, industry and power
and heat

REGIONAL ECONOMIC GROWTH
through reinforced local value
chains

JOB CREATION
and skills development in
hydrogen technologies

REPLICATION POTENTIAL
scalable, flexible models
adaptable to diverse geographies

DE-RISKING INVESTMENTS
through the Hydrogen Valleys
Facility and Project Development
Assistance services

FIND
OUT
MORE

https://www.clean-hydrogen.europa.eu/projects-dashboard/projects-repository_en
https://www.clean-hydrogen.europa.eu/get-involved/hydrogen-valleys_en

¹This is an estimated equivalent electrolyser capacity calculated using the H₂ production requirements of the Call topics. The actual "to be installed" capacity may differ.

²This is an estimated number calculated using the H₂ production requirements of the Call topics. The actual hydrogen produced may be larger.