

Helmholtz Cluster for a Sustainable and  
Infrastructure-Compatible Hydrogen Economy

# Working Together to Shape Structural Change and Transform the Energy Sector

**Become part of the Helmholtz hydrogen cluster!**

Climate changes poses major challenges for us as a society. The realization that we need to defossilize our entire economic system is just the start of a gigantic transformation process. This is particularly evident in the Rhenish mining area (Rheinisches Revier). The region is faced with far-reaching changes due to the planned phase-out of lignite mining.

The Helmholtz Cluster for a Sustainable and Infrastructure-Compatible Hydrogen Economy (HC-H2) with Forschungszentrum Jülich's Institute for a Sustainable Hydrogen Economy (INW) at its core have been established to fill knowledge gaps in restructuring the energy supply and to help drive the transformation of the economy here in the Rhenish mining area. This can only be achieved by working together with strong partners as part of a network. We therefore invite you to **become part of the Helmholtz hydrogen cluster!**

**Institute for a Sustainable Hydrogen Economy &  
Helmholtz Cluster for a Sustainable and Infrastructure-Compatible Hydrogen Economy  
(HC-H2)**

As part of the German Structural Reinforcement Act for Mining Regions ("Strukturstärkungsgesetz Kohleregionen") for coal-mining regions, which was adopted on 8 August 2020, the legislator made the decision for the "establishment of a Helmholtz Cluster for a Sustainable and Infrastructure-Compatible Hydrogen Economy at Forschungszentrum Jülich including the development of research utilization chains" (measure 30, Section 17).

HC-H2 will research, develop, and demonstrate on a large scale innovative hydrogen technologies in the areas of production, logistics, and utilization. It is a long-term, large-scale research and innovation cluster that is helping to shape the structural change in the Rhenish mining area and create a sustainable energy region. HC-H2's activities encompass the key technological elements of a future hydrogen economy. HC-H2 aims to become a scientific and technological beacon, helping to create new economic power and jobs in the Rhenish mining area through large-scale demonstration projects.

The concept of HC-H2 is based on two structural elements. The scientific core of HC-H2 is Forschungszentrum Jülich's **Institute for a Sustainable Hydrogen Economy**, which was founded in November 2021. The research priorities of INW's four subinstitutes are centred on methods of chemical hydrogen storage, ranging from the nanoscale and research into the elementary processes of catalyst surfaces to the development of process and systems technology. The second structural element is our

**H2 demonstration region**, where the most promising and economical developments are prepared and demonstrated on a large scale. This takes place **in cooperation with partners from industry, academia, municipalities, and local authorities in the Rhenish mining area.**

A unique selling point of HC-H2 is its focus on sustainable and infrastructure-compatible hydrogen technologies. This means that HC-H2 is focused on technologies that make use of existing infrastructures or infrastructures that can be installed in a quick and inexpensive manner.

## How can you contribute and what are the benefits for you?

### Become a project partner

HC-H2 is implementing demonstration projects in the region to show future investors that innovative hydrogen technologies work and that they are safe and economically viable. The demonstrators, which will be installed at different locations within the region, will be developed in cooperation with our partners from industry, science, and the public sector and will receive financial support from HC-H2's federal funds (BMBF) that have been earmarked for this purpose.

You can find details on the funding guidelines, how to approach us with a project idea, and information on how to ensure a particularly effective initial exchange at: **HC-H2 project funding**

### Become part of the HC-H2 network

Visit [hch2.de/netzwerk/datenbank](http://hch2.de/netzwerk/datenbank) to register either yourself, your company, your local authority, or your research institution and become part of our network. Registration in our database is free of charge and offers you the following advantages:

- Invitations to events
- Regular newsletters (if desired) featuring the latest information on hydrogen and structural change in the Rhenish mining area
- Networking with other stakeholders in the region and in case of project requests submitted to H
- The opportunity to distribute requests within the HC-H2 network

We aim to be a contact partner that is easy to approach. Please do not hesitate to get in touch with us. We would be happy to work with you on the development of your initial ideas. And should the Helmholtz hydrogen cluster not be the right partner for your project, we can use our network to help you find a more suitable one.

## Get in touch

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