

## European Hydrogen Regions for the European Clean Hydrogen Alliance

The European Hydrogen Valleys Partnership welcomes the European Commission's initiative to launch a new European Clean Hydrogen Alliance in order to accelerate the decarbonisation of Europe's industry and to maintain global industrial leadership. Building on the successful model of existing industrial alliances such as the Battery Alliance, this future Alliance will foster cooperation between Members States, industrial and institutional partners in order to facilitate large-scale investments and unlock regulatory and market obstacles for the deployment of Hydrogen technologies. However, **we as the European Hydrogen Valleys Partnership regret the absence of European regions in this future Alliance and plead for the full involvement of regional and local authorities in this initiative.**

The European Hydrogen Valleys Partnership was launched in May 2019 and is led by four European Regions, Aragon, Auvergne-Rhône-Alpes, Normandy and the Northern Netherlands, working on the forefront of clean Hydrogen development.. This partnership is part of the Smart Specialisation Strategy Industrial Modernisation Platform of the European Commission and currently involves 35 European regional authorities located in 13 European countries, from Norway to Bulgaria. This partnership aims to strengthen the European green Hydrogen value chain by promoting the production of green Hydrogen via renewable energy sources and its use in different sectors such as energy transport as well as industry feedstock<sup>1</sup> via the exchange of good practices and the set-up of concrete joint projects. The European Hydrogen Valleys Partnership is, thus, fully in line with the ambitious objectives of the EU as set out in the European Green Deal and the European Industrial Strategy.

All the members of the European Hydrogen Valleys Partnership are determined to contribute to the decarbonation of the EU economy and to achieve the ambitions of the European Green Deal. Indeed, the very existence of this partnership shows that **European Regions play a key role in supporting the Hydrogen sector, mainly by:**

- **Investing heavily in all the stages of the Hydrogen value chain**, from research projects to deployment projects. This was demonstrated in September 2018 by the final study of the FCH JU "Regions and Cities Initiative"<sup>2</sup>, which showed that many European regions and cities are already, or soon will be, involved in deployment projects of FCH technologies, with an estimated total investment of around 1.8 billion € in the next five years.<sup>3</sup> In other words, the FCH projects planned by regions and cities represent the biggest share of the demand side for these technologies today. Moreover, in many Member States, regional and local authorities are managing the European Structural and Investment Funds, especially the European Regional Development Fund (ERDF).
- **Positioning themselves as testbeds for green Hydrogen deployment projects, especially "Hydrogen valleys" projects, involving all relevant regional stakeholders.** Many European regions have important competences in areas that need decarbonisation, for example transport. For instance, Auvergne-Rhone-Alpes is in charge of the regional transport policy and the region decides about the acquisition of Hydrogen buses and three H2 trains. By bringing together the relevant stakeholders, regional authorities facilitate the creation of innovative business models for green Hydrogen, by creating a private company the so called Zero Emission Valley, to implement

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<sup>1</sup> <https://s3platform.jrc.ec.europa.eu/hydrogen-valleys>

<sup>2</sup> Launched in 2017 in order to support the European local authorities willing to develop FCH deployment projects, this initiative gathered 92 regional and local authorities located in 22 countries. For more information: <https://www.fch.europa.eu/page/about-initiative>

<sup>3</sup> Fuel Cells and Hydrogen for Green Energy in European Cities and Regions, September 2018, available at : <https://www.fch.europa.eu/publications/fuel-cells-and-hydrogen-green-energy-european-cities-and-regions>

1000 individual H<sub>2</sub> cars and 20 refuelling stations by 2023. As such, regional testbeds are instrumental in removing barriers for innovation, by providing the necessary best-practices. Regions can also serve as Hydrogen Valleys, so called territories that cover the entire value chain of green Hydrogen. For instance, the Northern Netherlands recently received support from the FCH JU to develop a fully functioning green Hydrogen value chain in the region, the so called HEAVENN project<sup>4</sup>. The Northern Netherlands is, thus, becoming the first Hydrogen valley in Europe and is recognised as such. This project will develop the entire green Hydrogen value chain, from production to filling stations, thereby supporting sectoral integration; from large scale production of green Hydrogen as raw material for industry, as well as storage, transport and distribution of Hydrogen and its application for energy supply for both built environment and mobility. The regional experience of a Hydrogen valley<sup>5</sup>, that links individual sub-projects to each other, in order to demonstrate the systemic integration, allows the large scale green Hydrogen use and application deployments. A Hydrogen valley will eventually enable an improved business case for green Hydrogen and will provide valuable insights to the Hydrogen Alliance.

- **Putting in place the right conditions, especially in terms of economic development and skills, to foster the development of the Hydrogen sector all across the EU.** Regional and local authorities are investing in human capital by enhancing the access to employment and education, supporting the development of small and medium sized businesses, and strengthening research and innovation through research related jobs. Thus, regions are empowering the entrepreneurs working within the Hydrogen economy. At the regional level the necessary skills are developed in order to allow our economies to go green. In Normandy, local authorities, education and training stakeholders as well as industrial players have fostered the creation of a training platform called “H<sub>2</sub> Academy” in order to make sure that the relevant skills and training programmes are in place to meet the demand of the H<sub>2</sub> value chain. Strengthening the necessary skills will allow our economies to work with a strong workforce that is needed by our SME’s in order to play a key role in Europe’s industry. In Europe, SME’s are providing two out of three jobs<sup>6</sup> and are essential in making the Hydrogen economy and industry a success. This is the case of Aragón Region, the Spanish region started in Hydrogen Technologies in 2003 with a clear industrial perspective. Since then, thanks to its main instrument, the Foundation for the Development of the New Hydrogen Technologies in Aragon, has been enabling and preparing its regional industrial sector and all those companies of related sectors (Renewable energies, Automotive, Transport, Chemical, Natural gas) to seize the opportunities offered by the Hydrogen Technologies and Fuel cells sector<sup>1</sup>.
  
- **Raising awareness and liaising with citizens in order to increase social acceptance for green Hydrogen projects.** A large majority of the European population supports the principle of energy transition and recognizes the urge of climate neutrality<sup>7</sup>. Nevertheless, large scale projects that are needed for the production of green Hydrogen, such as the construction of offshore windfarms, often meet local resistance due to fears for the loss of “traditional” jobs or because of a lack of

<sup>4</sup> <https://newenergycoalition.org/en/hydrogen-valley/>

<sup>5</sup> Roland Berger, 2018,

[https://www.fch.europa.eu/sites/default/files/181123\\_FCHJU\\_Regions\\_Cities\\_Final\\_Report\\_FINAL.pdf](https://www.fch.europa.eu/sites/default/files/181123_FCHJU_Regions_Cities_Final_Report_FINAL.pdf)

<sup>6</sup> <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM%3A2020%3A103%3AFIN>

<sup>7</sup> 93% of EU citizens see climate change as a serious problem and 79% see it as a very serious problem, European Commission, 2019, Eurobarometer report:

[https://ec.europa.eu/clima/sites/clima/files/support/docs/report\\_2019\\_en.pdf](https://ec.europa.eu/clima/sites/clima/files/support/docs/report_2019_en.pdf)



proper information. Since regions are the entities that stand close to their citizens, they are able to raise awareness about the opportunities offered by the green Hydrogen sector and to spread information and expertise. As an example, the Normandy Region is supporting the THETIS and ARTEMIS research projects, which involve the main regional research institutions and universities and aim at improving the social acceptability of H<sub>2</sub>-related projects and the involvement of citizens within these projects. Normandy is indeed a pioneer region in France regarding the use of hydrogen for zero-emission mobility, with the CEF-supported EAS-HyMob project, which aimed at supporting the deployment of 15 refuelling stations and 250 hydrogen cars by 2019. Therefore, involving them in the process of citizen participation, can help to generate general acceptance and a broad support base for green Hydrogen industrial projects.

**Therefore, it is crucial to fully involve European regions in the governance and work of the future European Clean Hydrogen Alliance. We, as European Hydrogen Valleys Partnership, offer our interregional framework and collective expertise to do so and to support the work coordinated by Hydrogen Europe of the future Alliance.**

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Aragon Hydrogen Master Plan 200 – 2010, 2011 – 2015 and 2016 – 2020.<sup>i</sup>  
<https://hidrogenoaragon.org/en/communication/interesting-documents/>