



Hydrogen Europe: European Hydrogen & Fuel cell Project Database

Project HyUnder

Assessment of the potential, the actors and relevant business cases for large scale and seasonal storage of renewable electricity by hydrogen underground storage in Europe

Scope and background of project In the 4th call of the European FCH JU (AIP 2011) a project has been called to map out the relevance of hydrogen underground storage. The focus being on seasonal energy storage at large scale, the potential, application profile, impact of and schedule to implement this concept may differ across Europe. In recent studies a clear profile for various large-scale storage concepts / technologies has been elaborated for Germany, and here specifically the northern regions, with involvement of the public sector and industry. Utilizing this knowledge, also actors in other regions have started to assess the individual geographic hydrogen underground storage potential in their respective region such as in Spain and the UK and show interest to commercially deploy this concept. Expected results The idea behind the project is to establish a European initiative supporting the deployment of hydrogen energy storage in underground storage caverns at large scale, benchmark their storage potential in relation to the energy market and competing storage technologies, and to identify and assess application areas, stakeholders, safety, regulatory framework and public acceptance. The general concept of the project foresees case studies for five representative European regions benchmarking against the results from ongoing German industry projects. Each of these case studies will consider the competitiveness of hydrogen storage against other large scale energy storage concepts, the geologic potential for hydrogen storage in the region, and how to embed the hydrogen energy storage in the energy market. The perspective of the cases studies is potential business cases for each region and the development of an Implementation Plan at European scale.

Project Information

Type of project : Others

Timing : 18/06/2012 > 17/07/2014

Project website: <http://www.hyunder.eu/>

Project Budget : 1.766.516 €

Funding

European Union through FCH JU: **Grant agreement 303417 - CORDIS link**

Project partners

Coordinator :

[Aragon Hydrogen Foundation - Fundación para el Desarrollo de las Nuevas Tecnologías del Hidrógeno en Aragón](#)

Partners :**Hinicio**

[ICIT - Institutul National de Cercetare-Dezvoltare pentru Tehnologii Criogenice si Izotopice - ICSI Rm.Valcea](#)

[Uniper Energy Storage](#)

[SHELL GLOBAL SOLUTIONS INTERNATIONAL B.V.](#)

[CEA - Commissariat à l'énergie atomique et aux énergies alternatives](#)

[Ludwig-Boelkow-Systemtechnik GmbH](#)

[KBB UNDERGROUND TECHNOLOGIES](#)

[DEEP. Underground Engineering GmbH](#)

[STICHTING ENERGIEONDERZOEK CENTRUM NEDERLAND](#)

[CENEX - CENTRE OF EXCELLENCE FOR LOW CARBON AND FUEL CELL TECHNOLOGIES](#)

[SOLVAY CHEMICALS GMBH](#)

Sub project(s)**Sub project 1**

Country: Spain

Address:

CR ZARAGOZA N 330A KM 566 CUARTE 22197 HUESCA

Sub project categories

Others

Project Id: 1018

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