



# Hydrogen Europe: European Hydrogen & Fuel cell Project Database

## Project ELYntegration

Grid Integrated Multi Megawatt High Pressure Alkaline Electrolysers for Energy Applications

The strategic goal of the ELYntegration Project is the design and engineering of a robust, flexible, efficient and cost-competitive single stack Multimegawatt High Pressure Alkaline Water Electrolysis of 4,5 T H<sub>2</sub>/day capable to provide cutting-edge operational capabilities under highly dynamic power supplies expected in the frame of generation/ transmission/ distribution scenarios integrating high renewable energies (RE) shares. The final design of the MW HP AWE will be achieved on the basis of the development, validation and demonstration of a HP AWE industrial prototype of 250 kW (250 HP AWE) (TRL 7) comprising:- cylindrical stack consisting of industrial size elementary cells (1,600 mm cell diameter)- balance of plant (BOP)- power electronics- advanced communication & control system In the early phase of the development process, great attention will be brought to the identification of end-user's needs and relevant/critical operational requirements. The target behaviour of the industrial prototype will be thoroughly demonstrated in an operational environment reflecting different on-grid integration schemes using power facilities already available to the Consortium (notably, 635 kW wind and 100 kW photovoltaic power plants). As previously mentioned, the successful demonstration of the industrial prototype will be paving the way towards the implementation and the commercial deployment of the 4.5 T H<sub>2</sub>/day HP AWE technology in the frame of large scale demonstration projects which shall be the next step after the conclusion of ELYntegration.

## Project Information

**Type of project :** Research

**Timing :** 01/09/2015 > 31/08/2018

**Project website:** <http://www.elyntegration.eu>

**Project Budget :** 3.301.391 €

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## Funding

European Union through FCH JU: **Grant agreement 671458 - CORDIS link**

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## Project partners

**Coordinator :**

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

**Partners :**

[IHT Industrie Haute Technologie](#)

[Fraunhofer ICT-IMM Fraunhofer Institute for Chemical Technology ICT, Branch IMM](#)

VLAAMSE INSTELLING VOOR TECHNOLOGISCH ONDERZOEK N.V.

INSTRUMENTACION Y COMPONENTES SA

RHEINISCH-WESTFAELISCHE TECHNISCHE HOCHSCHULE AACHEN

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**Sub project(s)**

**Sub project 1**

**Country:** Spain

**Address:**

CR ZARAGOZA N 330A KM 566 CUARTE 22197 HUESCA

**Sub project categories**

Research

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Project Id: 958

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