



# Hydrogen Europe: European Hydrogen & Fuel cell Project Database

## Project ELY4OFF

PEM ElectroLYsers FOR operation with OFFgrid renewable installations

Hydrogen production by PEM water electrolyzers (PEMWE) has the potential of becoming a key enabling technology in the deployment of FCH technologies in the future energy market as an energy storage system able to deliver hydrogen to different applications and enabling a high penetration of renewable energy sources (RES). PEMWE has showed capabilities in the emerging hydrogen scenarios to be a valid alternative to previously developed technologies, especially considering the dynamic and versatile operation expected of hydrogen production methods when integrated with RES. Despite the advances and improvements experienced to date with these systems, the technology needs to be further improved if it is to be installed as a competitive solution for energy markets and even more so in the case of off-grid configurations due to their particularities. The development of an autonomous off-grid electrolyzers as an energy storage or backup solution (e.g. replacing diesel engines) is an unusual and challenging goal because it needs to have the capability of being directly coupled to RES in locations where the electricity grid is not deployed or weak. The main goal of the ELY4OFF proposal is the development and demonstration of an autonomous off-grid electrolysis system linked to renewable energy sources, including the essential overarching communication and control system for optimising the overall efficiency when integrated in a real installation

## Project Information

**Type of project :** Research

**Timing :** 01/04/2016 > 31/03/2019

**Project website:** <http://www.ely4off.eu>

**Project Budget :** 2.315.217 €

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## Funding

European Union through FCH JU: **Grant agreement 700359 - 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 :**

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

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INSTRUMENTACION Y COMPONENTES SA

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**Sub project(s)**

**Sub project 1**

**Country:** Spain

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**Sub project categories**

Research

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Project Id: 956

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