



Hydrogen Europe: European Hydrogen & Fuel cell Project Database

Project HyIndoor

Pre-normative research on safe indoor use of fuel cells and hydrogen systems

This project addresses the issue of safe indoor use of hydrogen and fuel cells systems (priority 4.6 of the call FCH-JU-2010-1) for early markets (forklift refuelling and operation, back-up power supply, portable power generation, etc.): It aims to provide scientific and engineering knowledge for the specification of cost-effective means to control hazards specific to the use of hydrogen indoors or in confined space and developing state-of-the-art guidelines for European stakeholders. Specific knowledge gaps need to be closed in the areas of indoor hydrogen accumulations, vented deflagrations, and under-ventilated jet fires. A focus on foreseeable release conditions for fuel cell systems in the prescribed power range and enclosure characteristics related to early markets will feed the precise formulation of analytical, numerical and experimental studies to be performed in the project. The generated knowledge will be described in the state-of-the-art safety guidelines including contemporary engineering tools and recommendations to provide safe introduction of fuel cells and hydrogen in early markets. The recommendations will be formulated for integration into ongoing or new Regulations Codes and Standards activities to be implemented at national and international levels. The consortium includes key players in the field comprising industry (Air Liquide, HFCS), research organisations (CEA, KIT-G, HSL, JRC, NCSR), academia (UU), and an actor in RCS development (CCS Global Group). The outputs of the project will be disseminated to the hydrogen safety community through different channels including international and national associations (IA-HySafe, EHA, EIGA, etc.), standard development organisation (ISO, CEN, etc.), national regulators (e.g. HSE/HSL in the UK) and educational/training programs (e.g. MSc course in Hydrogen Safety Engineering and International short course and advanced research workshop series “Progress in Hydrogen Safety” at Ulster).

Project Information

Type of project : Research

Timing : 02/01/2012 > 01/01/2015

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

Project Budget : 3.657.760 €

Funding

European Union through FCH JU: **Grant agreement 278534 - CORDIS link**

Project partners

Coordinator :

[L'AIR LIQUIDE S.A](#)

Partners :

[CCS Global Group Ltd.](#)

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

[NCSR Demokritos - INRASTES](#)

[KIT - Karlsruher Institut für Technologie](#)

[HyGear Fuel Cell Systems B.V.](#)

[Ulster University](#)

HEALTH AND SAFETY EXECUTIVE

JRC - JOINT RESEARCH CENTRE- EUROPEAN COMMISSION

LGI CONSULTING SARL

[Sub project\(s\)](#)

Sub project 1

Country: France

Address:

Quai d'Orsay 75 75007 PARIS 07

Sub project categories

Research

Project Id: 1003

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