



# Hydrogen Europe: European Hydrogen & Fuel cell Project Database

## Project FLHYSAFE

Fuel Cell HYdrogen System for AircraFt Emergency operation

In order to meet the increasing demand to reduce fuel consumption, Green House Gas emissions as well as operating and maintenance costs, while optimising aircraft performances, fuel cell systems are considered as one of the best options for efficient power generation systems in the context of more electric aircraft (MEA). FLHYSAFE's ambition is to demonstrate that a cost efficient modular fuel cell system can replace the most critical safety systems and be used as an emergency power unit (EPU) aboard a commercial airplane providing enhanced safety functionalities. Additionally the project will virtually demonstrate that the system is able to be integrated into current aircraft designs respecting both installation volumes and maintenance constraints. In order to shift from demonstrator levels (achieved in other projects such as Antares DLR H2 and FCH HYCARUS), to the ready-to-certify product level, it is necessary to optimise the different components of the fuel cell system to reduce its weight, increase its lifetime, ensure its reliability, certify its safety and make its costs compatible with market requirements. Within FLHYSAFE a consortium driven by two major aeronautical Tier 1 OEMs will propose fuel cell technologies using PEM fuel cell stacks, more integrated power converters and air bearing compressors. Thanks to the experience of the participants in previous projects, the necessary tests will be carried out in order to demonstrate compatibility to representative environment and safety levels.

## Project Information

**Type of project :** Research

**Timing :** 01/01/2018 > 31/12/2020

**Project Budget :** 7.365.901 €

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## Funding

European Union through FCH JU: [Grant agreement 779576 - CORDIS link](#)

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## Project partners

**Coordinator :**

SAFRAN POWER UNITS

**Partners :**

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

[DLR - German Aerospace Center](#)

[INTA - Instituto nacional de Técnica Aeroespacial](#)

[Zodiac Aerotechnics](#)

ARTTIC

UNIVERSITAET ULM

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**Sub project(s)**

**Sub project 1**

**Country:** France

**Address:**

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**Sub project categories**

Research

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Project Id: 1227

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