

# FCH JU Programme Review Days

23 - 24 November 2020

Online Event

MONDAY, 23 NOVEMBER

**09:00 - 09:20 Welcome to the European Hydrogen Week**

Bart Biebuyck, Executive Director, Fuel Cells and Hydrogen Joint Undertaking (FCH JU)

Bertrand Piccard, Initiator and Chairman of the Solar Impulse Foundation

**09:20 - 09:35 FCH JU Programme Status**

Mirela Atanasiu, Head of Unit Operations & Communication, FCH JU

**09:35 - 10:35 FCH JU Projects Portfolio Analysis**

Hydrogen Production, Storage and Distribution  
Nikolaos Lymperopoulos, Project Officer, FCH JU

Transport Applications  
Lionel Boillot, Project Officer, FCH JU

Stationary Applications  
Antonio Aguilo Rullan, Project Officer, FCH JU

Support for Market Uptake  
Alberto Garcia Hombrados, Project Officer, FCH JU

**10:35 - 10:45 Joint Research Centre support to FCH JU activities**

Eveline Weidner, Scientific Officer, Joint Research Centre of the European Commission

**10:45 - 11:00 Break**



European  
Commission

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## 11:00 - 12:20 Parallel Sessions

### **Electrolysers for Industrial & Storage Application**

moderated by Nikolaos Lymperopoulos, Project Officer, FCH JU

H2FUTURE - Hydrogen meeting future needs of low carbon manufacturing value chains

REFHYNE - Clean Refinery Hydrogen for Europe

GrinHy 2.0 - Green Industrial Hydrogen via steam electrolysis

STORE&GO - Innovative large-scale energy STORagE technologies AND Power-to-Gas concepts after Optimisation

### **Buses, Light Duty Vehicles and Refuelling infrastructure**

moderated by Lionel Boillot, Project Officer, FCH JU

JIVE / JIVE 2 - Joint Initiative for hydrogen Vehicles across Europe

H2Bus Europe

H2ME / H2ME 2 - Hydrogen Mobility Europe

ZEFER - Zero Emission Fleet Vehicles for European Roll-out

## 12:20 - 12:30 Break

## 12:30 - 13:50 Parallel Sessions

### **Next Generation Electrolysers**

moderated by Dionisis Tsimis, Project Officer, FCH JU

NEPTUNE - Next Generation PEM Electrolyser under New Extremes

QualyGridS - Standardized Qualifying tests of electrolysers for grid services

REFLEX - Reversible solid oxide Electrolyzer and Fuel cell for optimized Local Energy miX

PRETZEL - Novel modular stack design for high pressure PEM water electrolyzer technology with wide operation range and reduced cost

### **Heavy Duty Transport Applications**

moderated by Pietro Caloprisco, Project Officer, FCH JU

MARANDA - Marine application of a new fuel cell powertrain validated in demanding arctic conditions

H2Haul - Hydrogen fuel cell trucks for heavy-duty, zero emission logistics

H2Ports - Implementing Fuel Cells and Hydrogen Technologies in Ports

Hydrogen-powered aviation, a study on hydrogen's potential for use in aviation

13:50 - 14:00 Break

## 14:00 - 15:20 Parallel Sessions

### Alternative Renewable Hydrogen Production

moderated by Nikolaos Lymperopoulos, Project Officer, FCH JU

PECSYS - Technology demonstration of large-scale photo-electrochemical system for solar hydrogen production

BIOROBURplus - Advanced direct biogas fuel processor for robust and cost-effective decentralised hydrogen production

BIONICO - Biogas membrane reformer for decentralized hydrogen production

HYDROSOL-beyond - Thermochemical HYDROgen production in a SOLar structured reactor: facing the challenges and beyond

### Fuel Cell Technology for Transport Application

moderated by Claudiu Pavel, Project Officer, FCH JU

CRESCENDO - Critical raw material electrocatalysts replacement enabling designed post-2020 PEMFC

GAIA - Next Generation Automotive membrane electrode Assemblies

DOLPHIN - Disruptive PEMFC stack with novel materials, Processes, architecture and optimized Interfaces

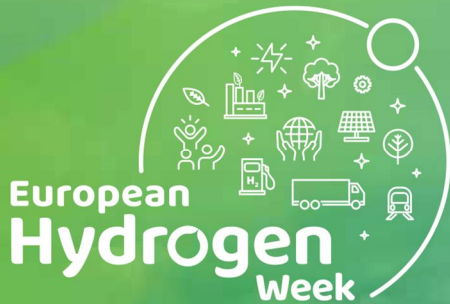
PEGASUS - PEMFC based on platinum Group metal free Structured cathodes

Giantleap - Improving Automation of Non-polluting Transportation with Lifetime Extension of Automotive PEM fuel cells

15:20 - 15:30 Break

## 15:30 - 17:10 Fuel cells hydrogen trucks - heavy duty's high performance green solution

Presentation of the main facts of the study assessing the market potential of heavy duty fuel cells and concrete case studies



# FCH JU Programme Review Days

TUESDAY, 24 NOVEMBER

## 09:30 - 10:50 Parallel Sessions

**Hydrogen for Sectoral Integration**  
 moderated by Enrique Giron, Project Officer, FCH JU

BIG HIT - Building Innovative Green Hydrogen systems in an Isolated Territory: a pilot for Europe

HEAVENN - Hydrogen Energy Applications for Valley Environments in Northern Netherlands

Zero Emmission Valley

LAST MILE

**Stationary Applications: Gas to Power and Heat**

moderated by Antonio Aguilo Rullan, Project Officer, FCH JU

PACE - Pathway to a Competitive European FC mCHP market

EVERYWH2ERE - Making hydrogen affordable to sustainably operate Everywhere in European cities

INNO-SOFC - Development of innovative 50 kW SOFC system and related value chain

10:50 - 11:00 Break

## 11:00 - 12:20 Parallel Sessions

**Education and Training**  
 moderated by Alberto Garcia Hombrados, Project Officer, FCH JU

FCHgo - Fuel Cells HydroGen educatiOnal model for schools

NET-Tools - Novel Education and Training Tools based on digital applications related to Hydrogen and Fuel Cell Technology

TEACHy - Teaching Fuel Cell and Hydrogen Science and Engineering Across Europe within Horizon 2020

Fuel Cells and Hydrogen Observatory

**Fuel Cell Technology for Stationary Applications**

moderated by Dionisis Tsimis, Project Officer, FCH JU

Cell3Ditor - Cost-effective and flexible 3D printed SOFC stacks for commercial applications

qSOFC - Automated mass-manufacturing and quality assurance of Solid Oxide Fuel Cell stacks

LOWCOST-IC - Low Cost Interconnects with highly improved Contact Strength for SOC Applications

GRASSHOPPER - Grid assisting modular hydrogen PEM power plant

12:20 - 14:00 Break

14:00 - 15:20 Parallel Sessions

### Hydrogen in the future

moderated by Pedro Guedes de Campos,  
Financial Engineering Officer, FCH JU

Opportunities for Hydrogen Energy  
Technologies Considering the National  
Energy & Climate Plans

Waste2Grids - Converting WASTE to offer  
flexible GRID balancing Services with  
highly-integrated, efficient solid-oxide  
plants

Guarantees of Origin for Hydrogen

Project Development Assistance for  
Regions

### Hydrogen Distribution & Carriers

moderated by Enrique Giron, Project  
Officer, FCH JU

HyCARE - An innovative approach for  
renewable energy storage by a  
combination of hydrogen carriers and heat  
storage

HyGrid - Flexible Hybrid separation system  
for H<sub>2</sub> recovery from NG Grids

PRESLHY - Pre-normative research for safe  
use of liquid hydrogen

HySTOC - Hydrogen supply and  
transportation using liquid organic  
hydrogen carriers

15:20 - 15:30 Break

15:30 - 16:00 Clean Hydrogen Partnership: R&I priorities until 2030 and synergies

### Closing Panel Discussion

Introduced and moderated by Bart Biebuyck, Executive Director, Fuel Cells and  
Hydrogen Joint Undertaking (FCH JU)

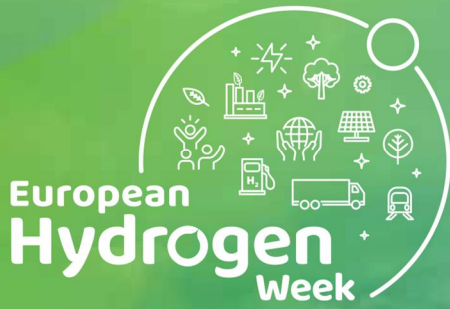
Panellists:

Nicolas Brahy, Director, Hydrogen Europe

Dirk Beckers, Director, Innovation and Networks Executive Agency (INEA), European  
Commission

Christian Sattler, Head of Department Solar Chemical Engineering, German Aerospace  
Center (DLR)





## FCH JU Programme Review Days

### 16:00 - 17:00 FCH JU Awards

Introduced and moderated by Mirela Atanasiu, Head of Unit Operations & Communication, Fuel Cells and Hydrogen Joint Undertaking (FCH JU)

#### **Best Success Story**

handed-over by Valerie Bouillon-Delporte, President of Hydrogen Europe, Chair of the FCH JU Governing Board

#### **Best Innovation**

handed-over by H el ene Chraye, Head of Unit Clean Energy Transition, DG RTD, European Commission

#### **Best Outreach**

handed-over by Bart Biebuyck, Executive Director, Fuel Cells and Hydrogen Joint Undertaking (FCH JU)

#### **Hydrogen Europe Research Young Scientist Award**

introduced and handed-over by Laurent Antoni, President of Hydrogen Europe Research