



Hydrogen Europe

Research

# HYDROGEN EUROPE RESEARCH

Policy Working Group 13/07/2021

# Agenda

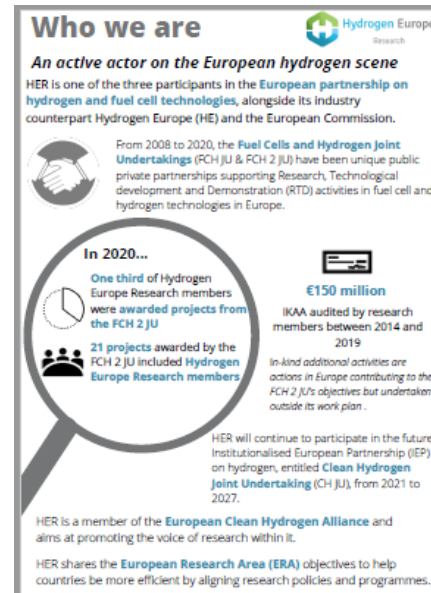
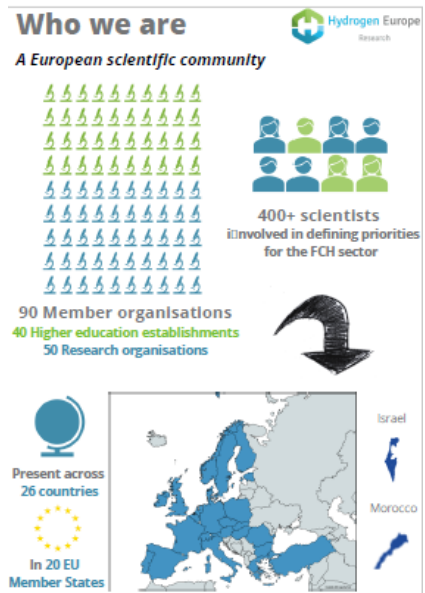
1. Welcome & Approval of the agenda
2. Subgroups updates  
*Communication paper*  
*Technical paper*
3. Latest updates on EU news
4. Funding opportunities  
*Hydrogen Funding Compass*
5. Brainstorming on the future of the Working Group

# Updates on the Subgroups

# Communication Paper

- Communication paper finalised based on the last comments from the Board. It will be updated to include the new number of members in the association.
- Publication through LinkedIn: only the infographics or the whole paper?

## Introduction - Who we are



## Recommendations (5 pages)

### Our recommendations

To support the development of a new industrial ecosystem based on hydrogen, R&I is needed all along the value chain. HER's member organisations concentrate a rich expertise and knowledge of the FCH sector and are involved in all research segments, from fundamental to applied research, within a wide spectrum of applications. Well-aware of the challenges ahead to produce clean hydrogen and make it available to the consumers in different end-uses, the FCH research community is calling to share its expertise with policy makers.

#### 1 Secure funding for basic and applied research

Although some hydrogen technologies are mature and already present on the market, **low TRL research is still needed to develop the next generation of products**. Technological innovation is indeed of paramount importance in order to improve current hydrogen technologies and solve the challenges they face for their uptake. For example, undertaking fundamental and applied research aiming at the reduction of critical raw and toxic materials in FCH technologies is a vital step for the sustainable development of hydrogen. Research is also required to drive innovation in new technologies which have the potential to decarbonise hard to abate sectors but are currently at low TRL.

**Research institutions and universities are active actors in the development of the next generation of products**. They are working in intelligence with industry stakeholders, who provide them expertise on the market developments and needs, but also with policy-makers and institutions, who set objectives and directions for the future of these developments. Research institutions and universities are a cornerstone of this ecosystem, and the **funding of their activities on the whole TRL spectrum is an important consideration for the ecosystem as a whole**.

# Technical Paper

## Content – reminder

- Research areas that should be further funded in the EU and in Member States, beyond the scope of the CHE partnership
  - Absent from the SRIA/MAWP and not covered in CH JU
  - Present in the SRIA/MAWP but not specifically or not enough

A **questionnaire** will shortly be sent out to the Point of Contact of each association. Please follow up on this internally.



## Research Priorities Questionnaire

The Hydrogen Europe Research Policy Working Group is currently working on a paper which aims to share the research priorities identified for the FCH sector. Whilst a similar work was undertaken with our industry partner when drafting the Strategic Research and Innovation Agenda (SRIA), this paper will present an overview of the strategic research activities that should be funded further in the EU and Member States from the perspective of the scientific community.

**IMPORTANT:** These priorities should go beyond the scope of the Clean Hydrogen Joint Undertaking and not be included in the SRIA or the Multi-Annual Work Plan.

Link to the SRIA: <https://www.hydrogeneurope.eu/wp-content/uploads/2021/04/20201027-SRIA-CHE-final-draft-1.pdf>

The scope of the paper is to provide several priorities for fuel cell and hydrogen technologies from the perspective of the research community to the different stakeholders. It will acknowledge and support the work undertaken within the next JU, and other European partnerships, but also stress the basic research priorities that are not covered due to lack of budget. It will also be important to ensure that the research community can gather the best competences, skills and technological infrastructures.

The goal is to identify gaps in research funding for FCH and the impact that further research would have on the sector. This paper will be shared with:

1) Policy makers & Funding Agencies – Entities responsible for funding at national and European level. The paper will help them to identify areas where public investment would be of added value.

2) Industry – This paper will contribute to shed light on research areas which should be of high priority. These priorities could eventually be incorporated into the SRIA following discussions with Hydrogen Europe.

Latest update on EU news

# Upcoming legislative proposals - FIT for 55

## 13 Proposals expected on 14 July - below are the ones with some relevance for HER

Updates to existing EU laws	Policy field
Revision of the EU Emission Trading System ( <a href="#">EU ETS</a> ), including revision of the <a href="#">EU ETS</a> Directive concerning aviation, maritime and CORSIA	Emissions
Effort Sharing Regulation ( <a href="#">ESR</a> )	Emissions
Amendment of the Renewable Energy Directive to implement the ambition of the new 2030 climate target ( <a href="#">RED</a> )	Energy production
Amendment of the Energy Efficiency Directive to implement the ambition of the new 2030 climate target ( <a href="#">EED</a> )	Energy efficiency / Buildings
Revision of the alternative fuels infrastructure directive ( <a href="#">AFID</a> )	Transport
Amendment of the regulation setting <a href="#">CO2 emission standards for cars and vans</a>	Transport / Emissions
Revision of the <a href="#">energy taxation directive</a>	Taxation
New legislative proposals	
A carbon border adjustment mechanism (CBAM)	Emissions
A Climate Action Social Facility	Fund
ReFuelEU Aviation – on sustainable aviation fuels	Transport
FuelEU Maritime – on greening Europe’s maritime space	Transport

# Upcoming legislative proposals - Other

Other EU law review planned	Policy field
RED II delegated act on Renewable Fuels of Non-biological Origin ( <i>planned for end 2021</i> )	Energy / Fuel
EU Taxonomy - possible inclusion of nuclear and natural gas	Taxonomy
Hydrogen and decarbonised gas market package ( <i>planned for Q4 2021</i> )	Gas market

**One of the topic identified as relevant by the WG would be to follow the discussions around the method to measure carbon footprint. This aspect is transversal and would be relevant across policies.**



# News – H2ero Net Zero

**On the 28th of June, Hydrogen Europe published their position paper of the Fit for 55 package**

The main recommendations are:

- Revise renewable energy targets upwards in line with the 2030 target plan to facilitate faster decarbonisation and additional renewable sources.
- Consider specific sub-targets for hard to abate sectors (e.g., steel production, aviation and maritime) to incentivise further and speed up deployment and adoption of renewable energy in specific sectors and industrial segments.
- Regulatory barriers imposed by the Delegated Act related to the criteria for additionality, geographic and temporal correlation must be tackled. Consider providing an exemption from proving additionality to RFNBO producers until 2025.
- Create a Trackable, Traceable, Tradeable, Transparent & Trustworthy Guarantees of Origin (GO) system, with hydrogen as a distinct energy carrier separate from electricity and gas.
- Include road transport and maritime under the ETS and restructure energy taxation by reducing fossil fuels subsidies, eliminating double taxation, and granting fiscal rewards to those investing in clean energy technologies.
- Foster close synergies between the Directive on Alternative Fuels Infrastructure (DAFI) and the revised proposals on Trans European Networks for Energy (TEN-E) and Trans European Networks for Transport (TEN-T) in particular.
- Ensure DAFI reflects the multi-faceted solutions that hydrogen technologies can bring to the transport sector's decarbonisation such as multipurpose hydrogen refuelling stations at strategic locations that could serve for different transport applications e.g., at airports and ports.

**H2ero Net Zero**

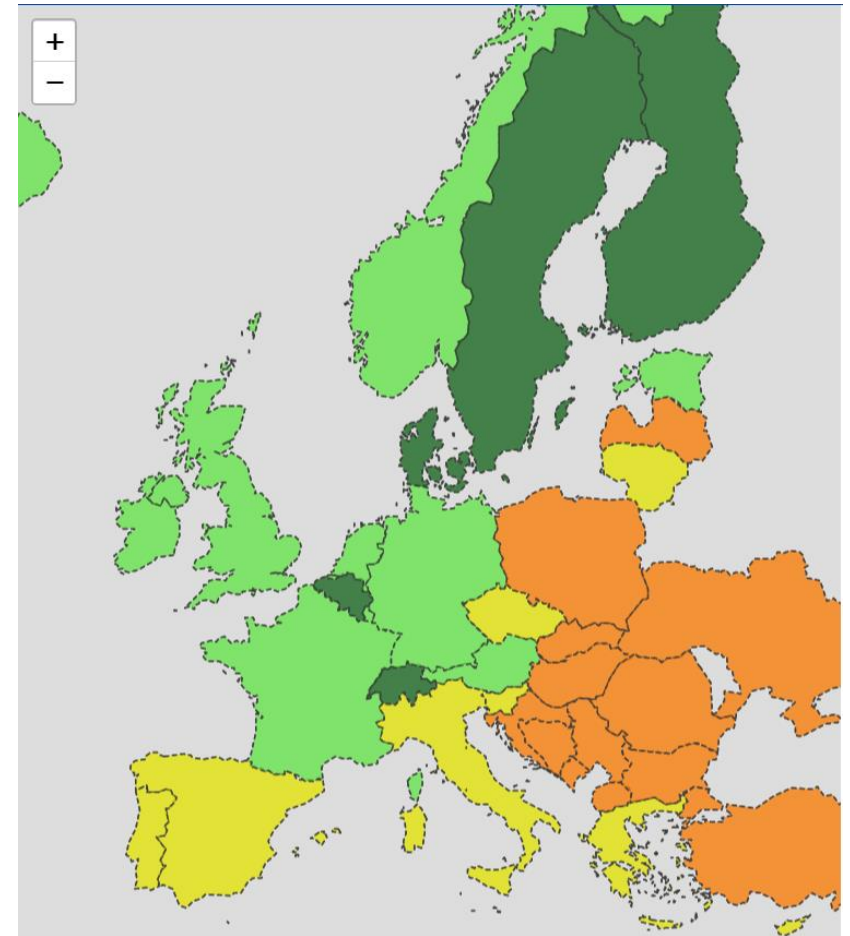
# News – Agora Energiewende

- Study from Agora Energiewende - Making renewable hydrogen cost-competitive, Policy instruments for supporting green H2
- 4 key conclusions:
  1. **There is a limited set of applications in all sectors that urgently need renewable hydrogen to become climate neutral:** steel, ammonia and basic chemical production in the industrial sector, long haul aviation, maritime shipping, long-term storage, district heating in some cases.
  2. **Ramping up renewable hydrogen will require extra policy support that is focused on rapid cost reductions**
  3. **CO2 process in the 2020s will not be high enough to deliver stable demand for renewable hydrogen, underscoring the need for a hydrogen policy framework:** carbon price even if set quite high will not be sufficient to incentivise renewable H2 production.
  4. **A policy framework to ramp up the market for renewable hydrogen should initially target the applications where hydrogen is clearly needed and a no-regret option:** several policy instruments should be deployed: carbon contracts for difference, a quota for aviation, auction to support combined heat and power plants.

Link to the study: [https://static.agora-energiewende.de/fileadmin/Projekte/2020/2020\\_11\\_EU\\_H2-Instruments/A-EW\\_223\\_H2-Instruments\\_WEB\\_2.pdf](https://static.agora-energiewende.de/fileadmin/Projekte/2020/2020_11_EU_H2-Instruments/A-EW_223_H2-Instruments_WEB_2.pdf)

# News – European Innovation Scoreboard

- On the 21<sup>st</sup> of June, the European Commission published the 2021 **European Innovation Scoreboard**.
- The European innovation scoreboard provides a comparative analysis of innovation performance in EU countries, other European countries, and regional neighbours. It assesses the relative strengths and weaknesses of national innovation systems and helps countries identify areas they need to address.
- The main highlights are:
  - Progress has been made, notably in usually underperforming countries.
  - The mean performance of countries considered as “moderate innovators” has increased by 16% compared to 2014 (Cyprus, Estonia, Greece, Italy and Lithuania improved their score by 25% or more).
  - The difference between “innovative” and “moderately innovative” countries is decreasing (Sweden remains the most innovative country, ahead of Finland, Denmark and Belgium).
  - However, the difference between “moderately innovative” and “emerging” countries has increased (Croatia, Hungary, Slovakia and Poland are still lagging).
  - The EU is still underperforming compared to Japan, Australia, Canada, South Korea and the United States.



Funding opportunities

# Funds

- As part of the ECHA, the European Commission presented on 17-18 June its Hydrogen Funding Compass. The goal is to help stakeholders identifying public funding sourced for hydrogen projects.
- Structured in 2 parts:
  - EU funding programmes and funds financed by the MFF 2021-2021 and NextGenerationEU
  - National funding programmes and funds available at EU country level

The compass will be updated in November 2021.

Hydrogen Public  
Funding Compass



[https://ec.europa.eu/growth/industry/hydrogen/funding-guide/index\\_en](https://ec.europa.eu/growth/industry/hydrogen/funding-guide/index_en)



# Funds

The EU funding compass highlights objectives and key features for each programme/fund. It is structured as follow:

- Objectives
- Type of hydrogen related actions that can be funded
- Details: financing, conditions for application, How to apply and when, award criteria, payment modalities, specific website with background information
- Examples of supported projects

Who are you? Programme relevant for:

Academic institution

Project life cycle stage:

All  
Applied R&D  
Proof of concept  
Piloting  
Demonstration (CAPEX / OPEX)  
Deployment / Scale-up

Type of funding or support:

All  
Grants/Subsidies  
Financing (Loans/Guarantees)  
Technical Assistance (for project promoters)  
Procurement

Filter

Reset



## EU Country Funds

- 11 countries covered so far: AT, BG, CZ, DE, ES, FR, LU, LI, NL, PT, SE
- The information is supplied by EU country authorities
- For each relevant EU country funding programme or fund, access information on:
  - the entities eligible for funding
  - the type of funding
  - the type of hydrogen activities eligible for funding
  - the implementing entity
  - the budget available and the expected date of project calls
- It is presented as an Excel document with one sheet for each fund / programme described.

<b>1 Name of the instrument</b>	Energy Research and Innovation
<b>2 Implementing agency/entity</b>	<a href="#">Swedish Energy Agency</a>
<b>3 Webpage</b>	<a href="http://www.energimyndigheten.se/forskning-och-innovation/">http://www.energimyndigheten.se/forskning-och-innovation/</a>
<b>4 Contact details</b>	<a href="#">See homepage</a>
<b>5 Expected date of the next call / auction</b>	<a href="#">Regularly, see homepage</a>
<b>6 Budget of the next call/auction</b>	151 mEUR

### Entities eligible for funding

Please indicate which of the following is eligible to

7 apply:	YES/NO
Large companies	YES
SMEs	YES
Public authority	YES
Academic institutions	YES
NGOs	YES
Natural persons	NO
<b>8 Are entities from outside of the country/region eligible</b>	YES

### 9 Other eligibility rules

[See information in calls](#)

### Type and character of funding

#### 10 Please indicate the character of the scheme

[Industrial transition net zero emissions](#)

### Eligible activities

#### 11 Please indicate which type of activities are eligible for funding

Brainstorming on the future of the WG



# Brainstorming on the future of the WG

## Your feedback matters!

### Satisfaction

- Are you satisfied with the frequency of the meetings?
- Are you satisfied with the content provided during the WG? What should evolve/remain?
- Do you find the presentation of reports and studies relevant in the framework of this WG?

### Scope of the activities

- What topics should we closely monitor as of September?
- What should the policy WG position itself on?
- Is it relevant to keep on monitoring science and innovation news not related to hydrogen?

### Type of activities

- Would you find it relevant for HER to develop argumentations to be used by members at local / national / European level?
- Would you like to be involved in meetings with policy stakeholders (MEP, Commission, etc.) to carry HER's vision and share your expertise on given topics?



# Thank you for your participation!

## **Contacts**

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