

General Assembly

November 21, 2023

14:00-14:30 Connection

- Checking presences and Proxies via Big Pulse
- Acknowledgment of 36th General Assembly agenda
- Approval of minutes 35th General Assembly

14:30-15:00 New members & Financial updates

- New Members
- Update on budget 2023
- Budget 2024 (decision)

15:00-15:45 Updates on HER activities

- Communication & Events
- External Affairs
- Policy update
- Skills activities update
- New Working Groups

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30 MINUTES BREAK

16:15 -17:15 Clean Hydrogen Partnership updates

- 2023 Call for Proposals
- Annual Work Plan 2024
- Annual Work Plan 2025
- Update of Roadmaps
- Future beyond the Clean Hydrogen Partnership

17:15-17:30 AOB

17:30 End of the General Assembly

Checking presences and Proxies



Organisation 🔽	Presen 🔻	Organisation 🔽	Presen 🔻	Organisation	Presen 🔻	Organisation 🗸	Presen 🔻
Aalborg University	х	CIEMAT	х	EPFL	х	INTA	х
Aalto Uni		CIRA	х	ERIG	х	IREC	х
AGH University of Science and		CIRCE		Faculty of Engineering at the	v	ISINNOVA	
Technology	x	CIRCE	х	University of Mondragon	х	ISINNOVA	х
AIT	x	CNH2	x	FBK	x	Istanbul Technical University	x
Aragon H2 Foundation	x	CNR	x	FORTH/ICEHT	x	ISTD	x
BAM	x	CNRS	x	Foundation CIDETEC	x	ITE - Instituto Tecnológico de la Energía	x
BAS	x	CNT – Center for advanced technologies in Sarajevo	x	Fraunhofer	x	Jülich	x
BERA	x	ComUE NU		FUNDECYT-PCTEX - CIIAE	х	кіт	х
Brandenburg Uni of Technology	, x	Coventry University	x	Ghent University	x	ктн	x
Brunel University London	x	CSIC	x	Helmholtz-Zentrum Dresden- Rossendorf	x	LEITAT	x
Campus Sul		Danish Technological Institute	x	HEREON	x	LIST	x
CARTIF Foundation	x	DBI		Hycenta	х	Łukasiewicz-IEL	х
CATIM	х	DEU	х	ICSI	х	Luleå University of Technology	x
CEA	x	DLR	х	IEN	х	LUT University	х
CENER	х	DTU	х	IFE	х	Marin	x
CERIC ERIC	х	DVGW	х	IFPEN	х	Mines - ParisTech	
CERTH/ CPERI	х	EFZN		IMDEA Energy	х	NCSR Demokritos	х
CETIM	x	EIFER	х	INEGI	х	NLR	
CIC energiGUNE	x	EMPA		INIG-PIB	х	NORCE	х
CIDAUT	х	ENEA	х	INL	х	NPL	
	18		16		20		17

Checking presences and Proxies



Organisation 🔽	Presen 🔻	Organisation	Presen	Organisation	Presen	Organisation	Presen
NTNU	х	TU Delft	x	Uni of Nantes	x	VKI	
NUIG	x	TU Eindhoven		Uni of Oulu	x	VTT	х
Parthenope Uni Naples	x	TU Graz	x	Uni of Padua	x	WHS	x
Plocan	х	TUBITAK	x	Uni of Perugia	х	WUT	х
Polimi	x	TUKE SJF	x	Uni of Pisa	x	Wrocław University of Science and Technology	x
Polito	x	Turku Uni	x	Uni of Salerno	x	YTU	
PSI		UBFC	Р	Uni of Southern Denmark	x	ZBT	x
RCNS/TTK	х	UC3M	х	Uni of Tartu	x	ZHAW	х
RISE	x	UCL		Uni of the Basque Country	x	ZSW	x
RWTH Aachen University	x	UCT Prague	x	Uni of Turin	x		7
Rzeszow Uni of Technology	x	Uni of Alicante	x	Uni of Ulster	x	TOTAL FULL MEMBERS	128
Sabanci Uni	x	Uni of Antwerp	x	Uni of Zagreb			1 Proxy
SINTEF	x	Uni of Birmingham	x	Uni Trieste	x		
SINTEF Energy AS	х	Uni of Bologna	x	Uni Twente		IRESEN	
SINTEF Ocean	х	Uni of Cassino	x	UNIMORE	x	TOTAL ASSOCIATE MEMBER	0
TECNALIA	х	Uni of Florence		UNITUS	х		
Tekniker	х	Uni of Genoa		UPC	x	Quorum needed: 50% +1 full	members
TNO	x	Uni of Groningen	x	UPM	x	75 organisations represented ou	it of 149 full
TU Berlin		Uni of Ljubljana		UPV – CMT	х	members.	
TU Chemnitz	х	Uni of Lorraine	x	νιτο	х		
	18	3	14		18		

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- New Members
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- Budget 2024 (decision)

15:00-15:45 Updates on HER activities

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- New Working Groups

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Approval of minutes 35th General Assembly



Minutes of the 35th Hydrogen Europe Research General Assembly

7 June 2023 / 9:15 - 14:30

Hybrid meeting: Webinar (Zoom and Big Pulse for voting)

Escuela Técnica Superior Ingenieros Industriales, C. de José Gutiérrez Abascal, 2, 28006 Madrid

Date	7/06/2023	7/06/2023				
Start	9:15 am	9:15 am End 14:30 pm				
Location	for voting) - I Ingenieros Indust	Hybrid meeting: Webinar (Zoom and Big Pulse for voting) - Escuela Técnica Superior Ingenieros Industriales, C. de José Gutiérrez Abascal, 2, 28006 Madrid				
Session Chair	Luigi Crema Telephone +39 3 Number 61049					
Minutes Secretary	Simona Vitali Telephone +32 4 Number 43 29 0					
Participants	See attached list	See attached list of participants				

Agenda topics

Connection

Luigi Crema, HER President, welcomed all members in person and online.

The GA presentation will be sent to participants and representatives of the organizations who could not attend.

a) Checking presence and proxies

123 Hydrogen Europe Research voting member organisations were present at the beginning of the meeting (out of a total of 143 full voting members) and 3 were represented by other organizations through a proxy.

Overall, 123 member organisations attended the meeting. <u>The required quorum (72) was</u> met.



received a link to access this platform - if this is not the case, please get in touch with Louis.

Following the collection of feedback, dedicated Roadmap meetings, led by Roadmap leaders with the support from Technical Committee leaders and the Innovation Team, will take place during the month of July. These meetings will be the opportunity to discuss the feedback received and agree on a way forward for the Roadmap update.

Louis shared that some key elements should be kept in mind whilst undertaking this Roadmaps update:

- As we are close to halfway through the Clean Hydrogen Partnership and more than half of the budget will be spent once AWP24 is published, only a limited amount of research activities will be able to be funded in the next years – impact and urgency should therefore be well evaluated.
- Consideration to previous funding for research activities should be given.
- Only three Annual Work Plans are left (AWP25, 26 & 27).

Nevertheless, the future beyond the Clean Hydrogen Partnership should also be prepared. Therefore, some forthlooking research activities could also be included. There was support from the audience to showcase the support and need for further research activities on hydrogen beyond the Clean Hydrogen Partnership.

A Hydrogen Valley Roadmap is under elaboration by the European Commission. This Roadmap is still at an early development stage – HER should be involved in due course.

Luigi Crema (President)

Simona Vitali (Secretariat)

Simona Vitali

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Alberto Abánades (Representing Member)



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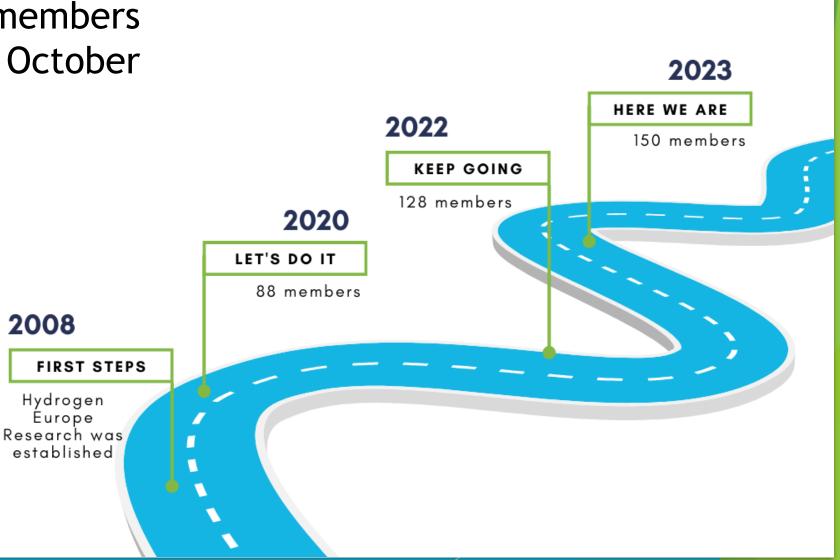
New Members



6 new members were accepted since the last General Assembly in June:



The goal of 150 members was achieved in October 2023!



Hydrogen Europe Research

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Voting procedure - Big Pulse

- As done in the last General Assemblies, we will use the tool Big Pulse to vote for the item in our agenda (budget 2024). This means that, even if you are attending the GA in person, the vote will take place online.
- You received an email from the tool Big Pulse with the <u>voting link</u> on yesterday, November 20 at 2 pm, and a reminder today at 9 am. The link is the same: you can use one of them without any difference to access the platform during the General Assembly.
- If you didn't receive the link in your inbox, please check your spam folder.
- The connection to the platform is password protected. The password is 56789
- In case you have a Proxy, make sure to also vote on behalf of the other organisation. A copy of the votes will be sent to the organisation you are representing.

Voting procedure - Big Pulse

> During the General Assembly:



Click on the unique link received via automated email.



Proceed to the vote for the open item.

	vember 2023 General Assembly – Hydrogen Europe Research 24 Budget	
Do yo	you approve the 2024 foreseen budget?	
_		
	YES	
	NO	
	ABSTAIN	
You ha	I have not yet voted in this ballot.	
Proc	oceed to vote confirm page	

Anonymous setting A1 · Restricted access voting · Votes cannot be changed · Page visible to authorized people only



Enter the PIN given during the meeting: 56789

Verify your account details

Enter PIN:

Submit



Confirm the vote - click "Submit".

Check and confirm your vote selection

WARNING: Vote not yet submitted.

Please check and confirm your selection then click Submit Vote or Back to make a correction.

2024 Budget

YES

After submitting, your vote receipt notification will be sent to your email address: s.vitali@hydrogeneuroperesearch.eu

Note: Both your vote selections and vote receipt code will be included in the vote receipt notification sent to your email address.

Submit Vote Back to make a correction

Hydrogen Europe

Research



HER bank accounts on 31 August 2023

CURRENT ACCOUNT	1.272.475,07 €
SAVINGS ACCOUNT	243.306,42 €
Total amount on our accounts	1.516.781,49 €

Income overview



	Income 2022 Real	Income 2023 (Budget October 2022)	Income 2023 YTD August	Income 2023 Expected Final
EU projects	49.782,00 €	30.000,00 €		5.500,00€
Membership fees	388.362,00 €	452.500,00 €	489.710,00 €	496.710,00 €
TOTAL INCOME	438.144,00 €	482.500,00€	489.710,00€	502.210,00 €

EU Projects: The European Hydrogen Observatory 2 budget amounts to 5500€/year. The GreenSkills4H2 budget is received as follows: 40% in 2022, 40% In 2024, and 20% in 2026.

- Membership fees 2022: we had 127 members + 1 associate (26 new members accepted throughout the year).
- <u>Membership fees real 2023</u>: we are over the budget estimations with 148 members + 1 associate in August and still 4 new members expected to join by the end of the year.



Outstanding membership fees on 31 August 2023

	December 2021	December 2022	May 2023	August 2023
2021	€ 34.750,00 [10]	€ 3.500,00 [1]		
2022		€ 47.792,00 [16]	€ 17.500,00 [5]	€ 17.500,00 [5]
2023			€ 167.542,00 [50]	€ 136.258,00 [38]
Overall:	€ 34.750,00	€ 51.292,00	€ 185.042,00	€ 153.758,00

In brackets: the number of outstanding invoices

EXPENSES: Year 2023

Hydrogen Europe Research

	Year 2022	Budget 2023	YTD August 2023	Final 2023 Expected
Running costs	19.610,26 €	25.000,00 €	26.273,50 €	29.000,00€
Events & Comm.	74.411,64 €	70.000,00 €	47.143,34 €	57.000,00€
- Events			44.653,84 €	50.000,00 €
- Comm.			2.489,50 €	7.000,00€
EY Law & Accountant	16.727,09 €	5.000,00 €	3.265,00 €	14 500,00 €
Rental costs	25.432,09€	70.000,00 €	35.000,00 €	70.000,00 €
Human Resources	196.223,00 €	330.000,00 €	123.173,00 €	240.000,00 €
HER awards	9.111,36	8.000,00 €		10.000,00 €
IKAA	11.144,17 €	15.000,00 €	700,00 €	10.930.00€
PPFA		7.000,00 €		
GreenSkillsforH2	49,85 €	1.000,00 €	700,00 €	700,00€
TOTAL EXPENDITURES	352.709,46 €	531.000,00€	238.744,34 €	432.130,00€

Income 2024: Budget



	YEAR 2022	EXPECTED 2023	BUDGET 2024
EU projects	49.782,00 €	5.500,00€	46.500,00 €
Membership fees	388.362,00 €	496.710,00 €	547.750,00 €
TOTAL	438.144,00€	502.210,00€	594.250,00 €

- <u>EU projects 2024</u>: European Hydrogen Observatory: 5.500,00€ GreenSkills4H2: 41.000€
- <u>Membership fees 2024</u>: 149 x 3.500,00€ = 521.500,00 €

15 x 1.750,00€ = 26.250,00 €

- => 547.750,00€
- <u>Risk fund 2024</u>: from the balance of 2023 we allocate a risk fund for 2024 of 60.000,00€ which is covering about 50% of the sum between outstanding memberships and new expected memberships.
- <u>Communication fund 2024</u>: from the balance of 2023 we allocate a communication fund for 2024 of 10.000,00€ which is covering the new design of the HER website.

EXPENSES: Budget 2024



	YEAR 2022	EXPECTED 2023	BUDGET 2024
Running costs	19.610,26 €	29.000,00 €	30.000,00 €
Events & Comm.	74.411,64 €	57.000,00 €	85.000,00 €
- Events		50.000,00 €	75.000,00 €
- Comm.		7.000,00€	10.000,00 €
EY Law & Accountant	16.727,09 €	14 500,00 €	15.000,00 €
Rental costs	25.432,09€	70.000,00 €	70.000,00 €
Human Resources	196.223,00 €	240.000,00 €	350.000,00 €
HER awards	9.111,36	10.000,00 €	11.000,00 €
ΙΚΑΑ	11.144,17 €	10.930.00€	15.000,00 €
GreenSkillsforH2	49,85 €	700,00€	1.000,00 €
TOTAL EXPENDITURES	352.709,46 €	432.130,00 €	577.000,00 €
DEDICATED FUNDS 2024 (RISKS + COMM.)	From SAVINGS	60.000,00 € risks fund 10.000,00 € comm. fund	

Hydrogen Europe Research

2024 Budget

> Do you approve the 2024 foreseen budget?

Do you approve the 2024 foreseen budget?					
	Votes	Results - Votes Casts			
Yes	119	99,17%			
No	1	0,83%			
Abstention	4				
Total	124				

- Majority 50% + 1 vote
- Articles 18 & 22 of the Statutes

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LinkedIn

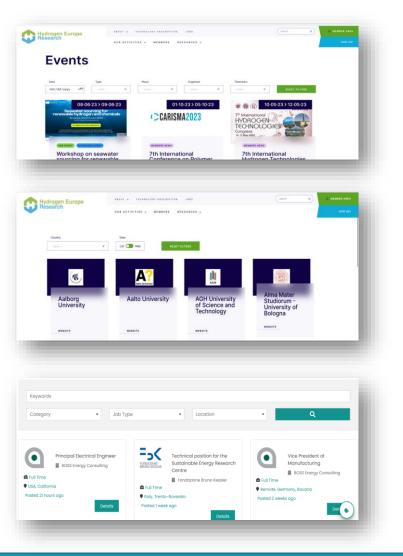


We use Linkedin to:

- spread information about Hydrogen Europe Research activities and events;
- promote members' news and vacancies;
- \succ inform our public when the new issue of our newsletter is out.

Share your news with us!

Website



We are happy to disseminate and promote your events in our <u>Events page</u>.

We welcome information about your institutions to be published on the <u>Members' page</u>. Do not hesitate to visit your personal member page and send us a short paragraph, highlighting your most important activities and achievements!

We have a shared <u>Job platform</u> with Hydrogen Europe. Here, you will be able to publish yourself your vacancies and increase the chances to find suitable candidates in the hydrogen community.





Intranet

Launched on February 14! The Secretariat can send a new link to everyone who may have missed the registration email.

There are different levels of «privacy» on the intranet:

- > A **References** page is accessible to all full members; here, they will be able to find:
 - Minutes and presentations of the General Assemblies held between 2020 and 2023.
 - Our Statutes and Internal Rules;
 - Useful documents on the project contribution and the in-kind contributions.
- A Policy Library and a Skills Library are accessible only to the members of the Policy Working Group and Skills Working Group. In this libraries, you may retrieve documents from meetings, as well as key files relevant to the hydrogen sector and the research and innovation ecosystem.
- In the Clean Hydrogen Partnership page, full members may retrieve all relevant documents and presentations developed within our activities related to the Partnership.
- The Members' Activities Mapping page is available only for members who contributed to this activity. This tool is composed of an interactive map and "search engine" enabling users to identify which HER members develop, test (or both) hydrogen technologies all along the hydrogen value chain. NB: you will need to create a free PowerBI account to access the mapping.

Newsletter



Dear Friends

May is usually a month dedicated to preparing several important events, meetings and actions. As you can see in this newsletter, in HER we are preparing for the upcoming General Assembly in Madrid. The GA has several side events, meeting with Spanish Institutions and Enterprises and attending the event organized by the Universidad Politécnica de Madrid.

We are supporting the preparation of the Hydrogen Week, proposing the involvement of Hydrogen Europe Research members in the programme topics, and planning to have an exhibition space for our association with several (ten) boots for our members. We aim at leveraging our visibility this year, and we look forward to increasing the impact of the week itself. Our Secretariat will be more than happy to provide you with information and guidance when interested. On our end, we are starting to promote the Hydrogen Week on several channels!

Regarding our support to the Clean Hydrogen Partnership. In this period a lot of our members are Involved in drafting the topics for the Annual Working Programme 2024. I'm thankful for the extraordinary effort in a constrained schedule. This year, it is of particular importance to prepare well-developed and mature topics, to allow a smooth negotiation meeting between our Technical Committee leaders and the whole group Involved from Hydrogen Europe, the Joint Undertaking, DG RTD, DG Ener and DG Move from the European Commission

Immediately after this effort. Roadman leaders, with the quidance of Technical Committee leaders and with the participation and support of many of you, will start the update of the roadmaps that will revise and update the Strategic Research and Innovation Agenda. This is a unique occasion to rediscuss the content and details of the SRIA and maybe agree on some poyel and promising directions to be considered there.

Finally, we are widening our alliances starting to interact with other partnerships and programmes of the European Commission, as well as platforms and other industrial initiatives. With the EIC we are co-organizing and sponsoring a workshop on seawater electrolysis, which is a topic of mutual interest.

Said this. I wish you a pleasant read of the newsletter, where you can find several interesting initiatives and information, and a full update on our recent and imminent attended events.

I look forward to seeing many of you at the next General Assembly in Madrid, where Fil announce some novelties about the Internal programme of Hydrogen Europe Research, with more participation for you in interesting initiatives that could give a significant impact in future perspectives of the European research in the hydrogen sector

Best wishes Luigi Crema President, Hydrogen Europe Research



The week will include:

- The High-Level Policy Conference and the B2B Forum: these two main content streams will provide participants with a new source of inspiration, new knowledge and peer-to-peer exchanges. Register here!

- An exhibition: based on the success of the past editions, this year the expo floor is expanded into two halls for a total of over 8000 sgm, ready to welcome more than 6000 attendees. Hydrogen Europe Research will be a proud exhibitor during the Hydrogen Week. Come see us at our Pavilion at booth C10, and get to know our 10 members, their research activities in the field of hydrogen and their projects!



The very first edition of the European PhD Hydrogen Conference (or short EPHyC2024) received more than 180 abstracts!

The conference, organised by the BE-HyFE team with the support of Hydrogen Europe Research, will take place on 20-22 March 2024 in Ghent, Belgium. It will serve as a platform for PhD researchers to present their groundbreaking work. share insights, and engage in stimulating discussions with fellow experts from across the continent.

Next to the many inspiring thematical PhD sessions, there will be plenty of ies during the three conference days to network with all the participants at lunch and coffee breaks. We also offer all participants a social program with an icebreaker event, a conference dinner, and final closing drinks. The conference i primarily academic based, but there will be one industry day where you will get to ow many interesting hydrogen(-related) companies and share your thoughts with the neople who work on real-life applications.

Follow us on Linkedin to discover more about our conference, the upcoming news and the amazing sponsors which will make everything possible!

CLEAN HYDROGEN PARTNERSHIP UPDATES The finalisation of Annual Work Plan 2024 is entering its final stage with fine-tuning of current topics and Clean Hydronen selection of the final list. The Governing Board of the



29 September, during an online event with the participation of speakers from the European Commission, Hydrogen Europe, Clean Hydrogen Partnership, IEA and other Observatory partners. More information can be found here.

The Clean Hydrogen Partnership recently launched a call for regional and national Managing Authorities from the EU-27 and Horizon Europe associated countries aiming to develop cooperation in relevant key areas for hydrogen development. The results can be found here.

MEMBERS' NEWS

WELCOME TO HYDROGEN EUROPE RESEARCH NEW MEMBERS!

We are happy to share that in October, Hydrogen Europe Research reached the ambitious goal of welcoming 150 members!

We are in great expansion: in 13 years, our membership basis and our geographic coverage have doubled! We welcome new members interested in joining the European research and innovation ecosystem focused on hydrogen and participating in the underlying discussions surrounding the development of our sector.

If you are not part of the Hydrogen Europe Research membership, and you would like to have more information on how to join us, contact us at secretariat/@hvdrogeneuroperesearch.eul

Click here to discover more about our membership criteria

ISINNOVA



consultancy firm supporting public and private policy makers in the formulation, monitoring and evaluation of energy, transport and environmental policies and decisions.



Barcolana Sea Summit, 4-6 October 2023, Trieste, Italy

The Barcolana Sea Summit is a unique opportunity to contribute to our shared effort towards sustainability and the protection of our planet, by promoting

DON'T MISS THE NEXT EVENTS!

#ReskillEU - new jobs for energy and transport in Europe, 8 November 2023, 9AM - 6PM | Room JDE62 | EESC, Rue Belliard 99, Brussels,



The European Economic and Social Committee (EESC) and DG Research & Innovation (DG RTD, European Commission) will organise a one-day conference, in Brussels on 8 November 2023, to discuss the need for new skills in the areas of clean energy and transport focusing on skills development through R&I activities. Horizon Europe supports skills development to make the EU's green and digital transitions successful, in line with the objectives set in the European Skills Agenda for 2025 and against the background of the European Year of Skills.

The conference will bring together relevant stakeholders, notably civil society organisations, education networks, academia, industry, research organisations and European institutions to discuss the contribution of research and innovation activities to the skills agenda for Europe.

Click here to discover more and to register

Screenshots from October's issue. We try to keep the same structure every month.





Newsletter

Subscribers are increasing:



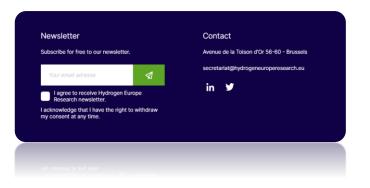
> The open rate is also going steady:

Campaign	Date Sent	Emails Delivered	Open Rate	Click Rate	■ CTOR	
<u>Hydrogen Europe Research Newsletter -</u> October 2023	Tue 31 Oct 2023	651	33.5% 218	4.9% 32	14.7% 32	_
<u>Hydrogen Europe Research Newsletter -</u> <u>September 2023</u>	Wed 27 Sep 2023	629	36.2% 228	8.4% 53	23.2% 53	
<u>Hydrogen Europe Research Newsletter -</u> July 2023	Mon 24 Jul 2023	607	27.5% 167	5.6% 34	20.4% 34	-

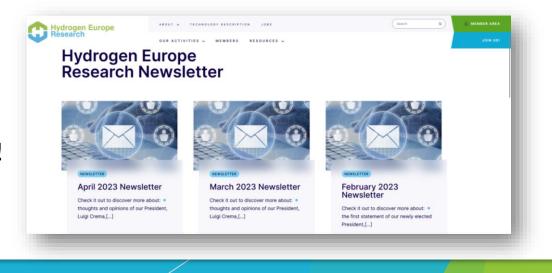
Newsletter

Ways to subscribe to our monthly newsletter:

- > Our LinkedIn page: we often publish the link to subscribe;
- Click <u>here;</u>
- > Our website:



You can read all the past issues on the website!





Promotional Video



In 2023, we decided to collaborate with a communication agency to create a short promotional video, with the objective of promoting our association, increase our membership, and reach a bigger audience.

The video is currently broadcasted in our Pavilion in Hall 11.

Find it <u>here</u>!





Events

Events with Board members/ Secretariat participation:

- Electrolyser Summit 26 June 2023, Brussels, Belgium
- European Hydrogen Forum 27 June 2023, Brussels, Belgium
- > Annual event of the European Federation of Corrosion (EUROCORR 2023), 27-31 August 2023, Brussels, Belgium
- European Fuel Cells and Hydrogen Piero Lunghi Conference 2023 (EFC), 13-15 September 2023
- The Role of Education in Advancing the Transition, Technical University of Madrid (UPM) ETSI of Civil Engineering, 21 September 2023, Madrid, Spain
- > CETPartnership Annual Conference, 24-25 October 2023, Online
- Barcolana Sea Summit, 4-6 October 2023, Trieste, Italy
- Storming project workshop, 27 September 2023, Online
- #ReskillEU new jobs for energy and transport in Europe, 8 November 2023, 9AM 6PM | Room JDE62 | EESC, Rue Belliard 99, Brussels, Belgium
- > EU Hydrogen Research Days 2023, 15 16 November 2023, Online

Future events:

- European Hydrogen Energy Conference (EHEC) 2024, 6-8 March 2024, Bilbao, Spain (media partner)
- > Hydrogen Days 2024, 20-22 March 2024, Prague, Czech Republic

EPHyC - European PhD Hydrogen Conference



Hydrogen Europe Research decided to join forces with <u>BE-HyFE</u> (a Belgian academic collaboration project, funded by the federal Energy Transition Fund) to co-organise a PHD conference in 2024. The idea behind this 3 days event is to allow young European hydrogen PHDs to take floor and present their work.

Next to the many inspiring thematical PhD sessions, there will be plenty of opportunities to network: there will be an ice-breaker event, a conference dinner, and one industry day where PHDs will get to know many interesting hydrogen-related companies.

When: 20-23 March 2024

Location: Ghent

180 abstracts were received to participate in the conference.



European PhD Hydrogen Conference

The scientific committee is currently reviewing the abstracts, and participants will be notified during the next weeks.

Young Scientist Award 2023



One young scientist (belonging to Hydrogen Europe Research member organisations) has been awarded in each pillar of the Clean Hydrogen Partnership, and one has been elected "Best Researcher of the Year", for a total of 5 awards:

Hydrogen production
 Hydrogen storage and distribution
 Hydrogen usages
 Cross-Cutting activities
 Best researcher of the year



All 5 winners are joining us in person for the award ceremony on Wednesday 22 November. They received a prize of 1000 EUR each, and they will also get a trophy.

14:00-14:30 Connection

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14:30-15:00 New members & Financial updates

- New Members
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HER INTERNATIONAL AFFAIRS

Activities of HER for fostering EU and Global Cooperation

- Participation of HER in the new SET Plan Hydrogen Implementation group (H2 IWG)
- EERA JP Fuel Cells and Hydrogen

HER GA | 21.11.2023 | Brussels

The European Strategic Energy Technology Plan

SET Plan key actions 13 implementation working groups Offshore wind Performant renewable technologies integrated in the system Ocean energy Nº1 in Photovoltaics renewables Concentrated solar power / 2 - Deep geothermal Solar thermal electricity Reduce costs of technologies (13) New technologies & services for consumers Energy Energy systems systems Positive energy districts #4 Resilience & security of energy system New materials & technologies for buildings Energy Energy efficiency in buildings efficiency Energy efficiency in industry Energy efficiency for industry (16) Competitive in global battery sector and e-mobility .7 Sustainable Batteries transport Renewable fuels and bioenergy 118 Renewable fuels and bioenergy - Carbon capture and storage Carbon capture storage / use CCS - CCU CO₂ Carbon capture and utilisation (CCS - CCU) Nuclear (#10 Nuclear safety safety

HER GA | 21.11.2023 | Brussels

Active participation of HER Organizations & Representatives

+

Strategic Research and Innovation Agenda

Agenda Process for the European Research and Innovation Initiative on Green Hydrogen

Final version 18th March 2022

> european research area

HER GA | 21.11.2023 Brussels

agenda process green hydrogen Agenda process Green Hydrogen

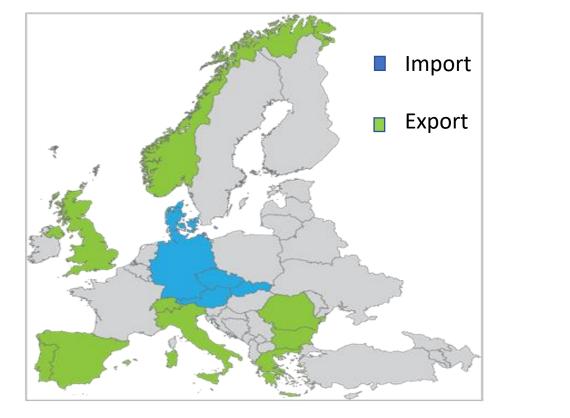
Joint Research and Innovation Initiative on Green Hydrogen: New ERA December 2020/ May 2022

 All member states (via Ministries of Science and Innovation)

- Task Force Group 2 representatives: Ministry; Scientific community
- Bottom-up Approach
 - Scientists
 - Research institutions
 - Industry
 - Public authorities
 - Civil Society (citizens)



FINDINGS and FUTURE FOALS





HER GA | 21.11.2023|Brussels



FINDINGS and FUTURE FOALS

To change the EU H2 map involving all member states and existing platforms



HER GA | 21.11.2023 | Brussels



Agenda process Green Hydrogen

Q: How to continue the implementation of the SRIA (end of September 2022)

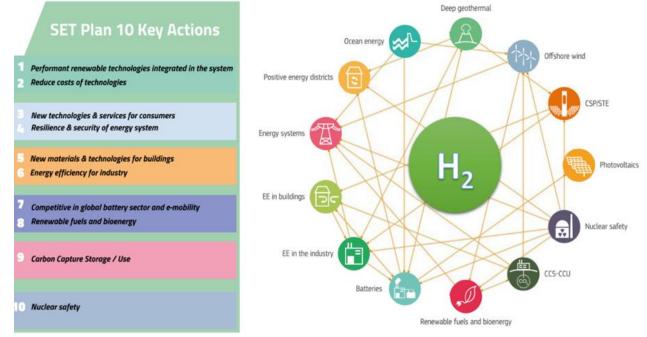
- Keeping the leading role of the Member States Governments
- Ensuring large scale collaboration of MSs and other EU Structures (CH JU, EERA, SET PLAN) without overlapping
- ANSWER: In the SET Plan where H2 participates, but without visibility



HER GA | 21.11.2023 | Brussels

Goals and ambitions of the New Implementation WG on Hydrogen":

- To contribute to the accelerated introduction of H2 through the whole value chain with a scope till 2050:
 - To involve a broad stakeholdes group from member states and associated countries
 - To ensure coordination in regulations introduction
 - To ensure coherent political decision making across countries
- To realize strong collaboration on 2 levels:
 - Cross border between member states
 - Integrated with other IWGs



Hydrogen cooperation potential

HER GA | 21.11.2023 | Brussels

CSA Project: Support to the SET Plan IWG on hydrogen (SET4H2) (applied)

- To update the SRIA of the Agenda Process and integrate it in the Implementation plan of the IWG
- To take into consideration the SRIAs of other programs (as CH JU) and countries in a collaborative way, building realistic H2 roadmap on EU level
- To perform analyses and ensure collaboration with other WG
- To ensure involvement and outreach of regions that need support
- To establish Advisory Board of high-level experts on risk assessment of hydrogen economy during its implementation

CSA Project: Support to the SET Plan IWG on hydrogen (SET4H2) (applied)

Participant No. *	Participant organisation name	Country
1 (Coordinator)	German Aero Space Center (DLR)	Germany
2	MUR (Ministero dell'Università e della Ricerca)	Italy
3	DGEG – Directorate General for Energy and Geology	Portugal
4	Bulgarian Hydrogen, Fuel Cell and Energy Storage Association (BGH2A)	Bulgaria
5	Österreichische Energieagentur – Austrian Energy Agency	Austria
6	EUREC	Belgium
7	Hydrogen Europe Research	Belgium



EERA JP Fuel Cells and Hydrogen

PROPOSAL for activation of the collaboration with EERA (JP "Fuel Cells and Hydrogen") with the aim:

- to foster the H2 research at Low TRL (in preparation of the next FP)
- To update the KPI (at low TRL)

ABOUT EERA https://www.eera-set.eu/



- EERA: Research pillar of the European Energy Technology Policy
- Mission
 - To support the member states and associates in the development and implementation of R&I agendas
 - To ensure synergy in the R&I activities
 - To foster cross-border collaboration

ABOUT EERA https://www.eera-set.eu/



- Structure 250 organizations
- Follows the structure of the SET plan activities – 18 Joint Programs



JP Fuel Cells and Hydrogen https://www.eera-fch.eu/

- Structure 34 organizations/14 counties
- Seven sub-programmes:.
 - SP 1 Electrolytes
 - SP 2 Catalysts & Electrodes
 - SP 3 Stack Materials and Design
 - SP 4 Systems
 - SP 5 Modelling, Validation and Diagnosis
 - SP 6 Non-electrolytic Hydrogen Production
 - SP 7 Hydrogen Handling and Storage
- For more information
 - Implementation Plan 2018-2030
 - R&I KIPs 2020-2030: done together with CH JU needs updating (together with HER??)





HER GA | 22.11.2023 | Brussels



GENERAL CONCLUSION: Stronger collaboration between HER, EERA (JP FCH) and SET Plan (H2 IWG) for defensing the role and presence of LOW TRL RESEARCH in the next FP.





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Policy update



The focus of EU legislative activities focuses on the finalisation of ongoing negotiations

- Finalisation of the Fit for 55 package
- Trilogue negotiations ongoing or starting on the Gas Package, the Electricity market reform, the Critical Raw Materials Act, and the Net Zero Industry Act and related Strategic Technologies for Europe Platform

New elements

- Updated SET Plan adopted in October and establishing a dedicated Implementation Working Group on hydrogen
- Changes in the college of Commissionners
- Upcoming launch of the Hydrogen Bank first auctions (D-2!)
- Accession of the UK to Horizon Europe
- Discussions initiated on the future framework programme to succeed to Horizon Europe

Our activities

- Inputs collected on hydrogen valleys objective to comment on the upcoming Roadmap on Hydrogen Valleys
- Answer to the consultation on the PFAS ban
- Answer to a consultation on CCUS and carbon removals

Don't hesitate to reach out to join the Working Group!

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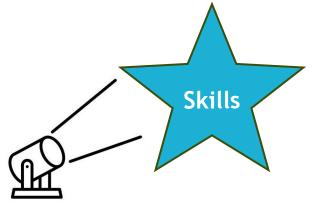
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- A lot of attention to « skills » in 2023 (EU Year of Skills, events,
- Net-Zero industry academy on hydrogen, etc.)
- HER continues to be active on the topic via: the Skills Working Group, projects and the IPHE platform.

Skills Working Group

- Meeting held in October on skills mappings for hydrogen activities in different EU countries.
- Finalisation of recommendations on how to enable the development of a skilled workforce for the hydrogen sector.
- Meeting scheduled this week with DG Grow & the Working Group co-chairs.
- Upcoming elections for the co-chair position to be scheduled in the first semester of 2024.







Green Skills for Hydrogen

Completed

• Hydrogen Skills Strategy deliverable completed.

Ongoing

- Urgent training taking place in Greece, the Netherlands and Bulgaria.
- Innovative VET curricula and training materials in design.

Upcoming

- Testing of the training materials with different target audiences across countries and update based on the feedback received.
- Encouraging the adoption of the training programme across Europe and disseminating the content developed.



Come visit our booth at the EU project pavillion!

Wed. 22 Nov at 3 pm



The European Hydrogen Observatory

European Hydrogen Observatory



/drogen Europe

The revamped Observatory was launched in September. It aims at becoming an essential data hub and a reference for the sector.

- HRS map
- Hydrogen pipelines
- Hydrogen production capacity and output by technology
- Hydrogen Trade
- Cost of hydrogen production
- Number of FCEVs

- Hydrogen demand
- Technology manufacturing (electrolysers, FC)
- Projects and Valleys
- Policy and legislative landscape (national and EU)
- Repertory of codes and standards
- Patents & Publications monitoring
- Financial Tools and Incentives (funding available)

And some tools: Interactive maps, LCOH calculator, simulator for scenarios on future H2 demand.

Hydrogen Europe Research is responsible for the data stream on training and educational materials.

The European Hydrogen Observatory

Objectives:

- Map out training offers in the field of hydrogen across Europe
- Collect publicly available educational • materials (e.g. from EU projects)

New elements:

- Simplified process to input information on ٠ training, accessible all year long
- Possibility to update a training displayed ٠
- Possibility to download the datasets •

Type of training Master Focus of the training - Any -Language - Any -Items per page 200 Vebtools + © EC-GISCO + Leaflet L© OpenStreetMap contributors | Disclaim

Your inputs are highly welcome! Feel free to share the information around.









The International Partnership for a Hydrogen Economy

- Involvement in the IPHE task force on Skills on behalf of the European Commission, since August 2023.
- The Task Force is co-led by South Africa and Costa Rica.
- **Objectives:**
 - To enable countries to streamline hydrogen skills development efforts through knowledge sharing,
 - To develop a database of hydrogen value chain skills and training,
 - To propose recommendations, in particular for new adopters, for building the foundation of a sustainable hydrogen workforce.
- International coordination could foster the development of **training standards** for the sector.

Join the IPHE side-event Wed. 22 Nov at 2:30 pm!





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New Working Groups



- > As announced during the last General Assembly, two new Working Groups have been created:
 - Low-TRL Research Working Group.
 - **Research and Technology Infrastructures** Working Group.
- > A kick-off webinar took place on Wednesday 27th of September slides and recording are available on the intranet.

Low TRL Research WG

- Internal consultation on the Clean Hydrogen Partnership and future beyond the Partnership launched (deadline: 29th of November);
- First meeting will take place on <u>Wednesday 6th of December from 10:00 to 11:30</u> to present the analysed data collected and present the activities for 2024.
- Research and Technology Infrastructures WG
 - First meeting will take place on <u>Tuesday 5th of December from 14:00 to 15:00</u> to present and discuss the current state of the mapping.
- Activities will enter full-swing in 2024 link to register: <u>https://forms.office.com/e/sh8EmGss4x</u>





New Working Groups

- Main activities foreseen the new Working Groups in 2024:
 - Low TRL Research WG
 - Internal reflections and discussions on what low TRL research activities (early stage & development actions) should be supported in the next years & decades this should build on the technical paper drafted in the past & would serve as a basis for discussions surrounding the future after the Clean Hydrogen JU;
 - Drafting of a low TRL research activities Roadmap/radar that can then be shared to the relevant EU stakeholders

 again this will serve as an argument for further support beyond the Clean Hydrogen JU;
 - Exploration of potential funding opportunities for low TRL research outside the Clean Hydrogen JU via the EIC, for example;
 - Collaboration with relevant EU stakeholders via thematic workshops (EIC, EERA, EARTO...).
 - Research and Technology Infrastructures WG
 - Creation of a small dedicated team of members interested in improving the current R&T infrastructures mapping
 - improvement of the questionnaire, data collection, etc.
 - Exploration of new data visualisation tools;
 - Exploration of potential collaboration opportunities at EU institutional level (ESFRI, EC...).





30 MINUTES BREAK

16:15 -17:15 Clean Hydrogen Partnership updates

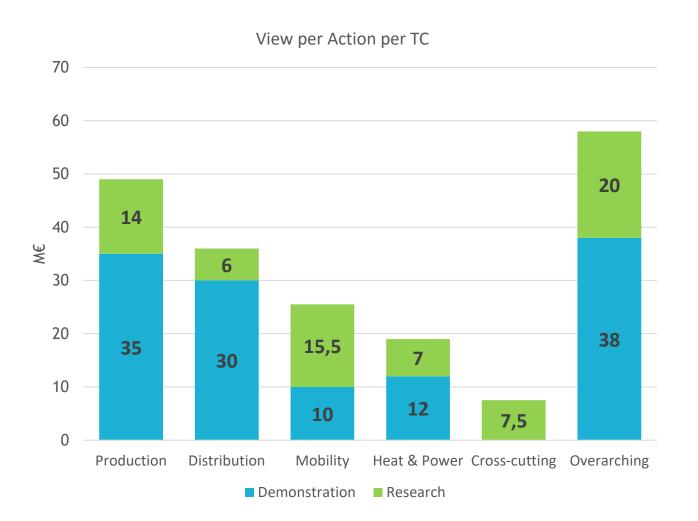
• 2023 Call for Proposals

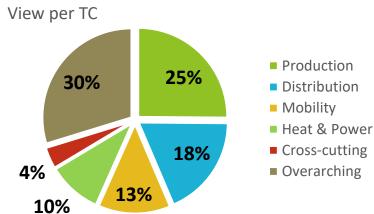
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- Future beyond the Clean Hydrogen Partnership

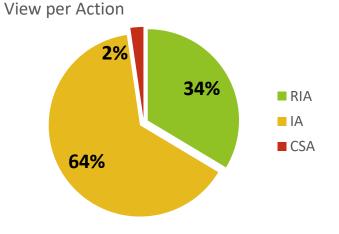
17:15-17:30 AOB

17:30 End of the General Assembly

Clean Hydrogen JU - 2023 Call for Proposals

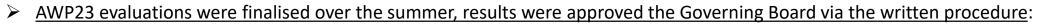






Hydrogen Europe Research

Clean Hydrogen JU - 2023 Call for Proposals



- 2 topics did not receive any or enough proposals & 2 topics received ineligible or poor proposals:
 - TC1-08: Valorisation of by-product O2 and/or heat from electrolysis no proposals;
 - TC1-09: Hydrogen use by an industrial cluster via a local pipeline network poor proposal.
 - TC3-01: Real environment demonstration of Non-Road Mobile Machinery (NRMM) 1 proposal for 2 projects available;

Hydrogen Europe Research

- TC3-03: Ultra-low NOx combustion system for aviation ineligible proposal;
- Approval of the reserve list projects (~38M€ of left-over budget + 11M€ from REPowerEU):
 - 3 projects for Innovative electrolysis cells for hydrogen production (9M€ total, RIA);
 - I project for Innovative Solid Oxide electrolysis cells for intermediate temperature hydrogen production (2,5M€, RIA);
 - I project for Large-scale demonstration of underground hydrogen storage (20M€, IA);
 - I project for Retrofitting of existing industrial sector natural gas turbomachinery cogeneration systems for hydrogen combustion (~*6M€, IA);
 - I small-scale Hydrogen Valley (9M€, IA) a second small-scale Hydrogen Valley will be funded with the remaining ~2M€ and the 2024 REPowerEU budget.
- Coordinators Day took place in Brussels on Wednesday 20th of September & projects will start in 2024.



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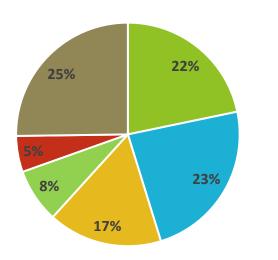
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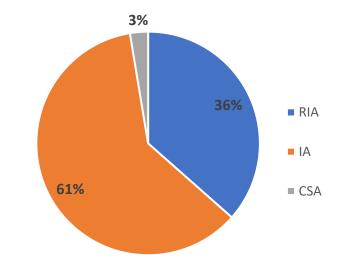


Bugdet repartition per TC



- Hydrogen production
- Hydrogen storage, transport & distribution
- Mobility end-uses
- Heat & power end-uses
- Cross-cutting
- Hydrogen Valleys

Repartition per type of action



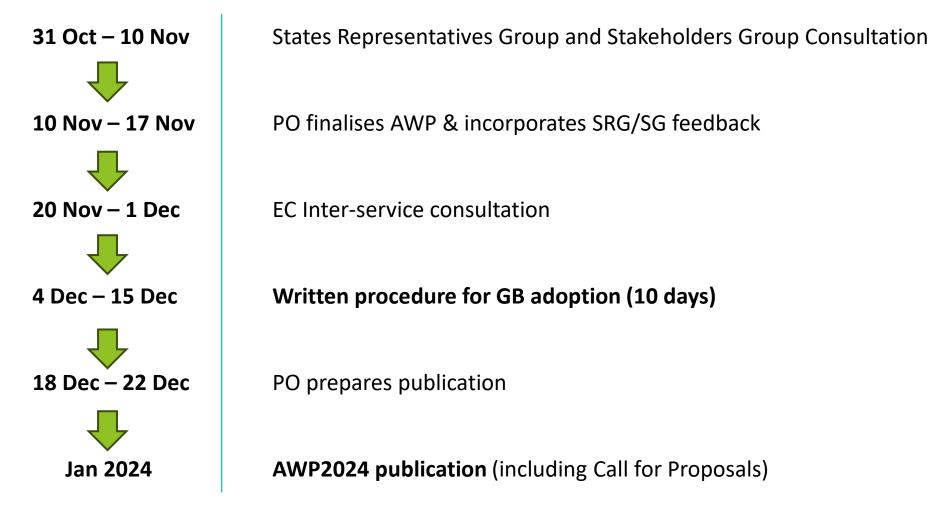
Total budget: **115M€**

+

60M€ for Hydrogen Valleys

(from REPowerEU funding)

Timeline







Deadline & conditions

	Lump sum approach used for all topics		
line 024 An inform webinar v organised by	vill be		
Specific conditions			
HE-HER AWP24 Outro Webinar	<u>Clean Hydrogen JU</u> <u>Info Days</u>		
29 November 2023 10:00-12:00	End-January 2024		
	2024 used for al An inform webinar v organised by <u>HE-HER AWP24</u> <u>Outro Webinar</u> 29 November 2023		



Private member contributions - Reminder

The overall amount of public funding for the Clean Hydrogen Partnership is of **1B€ (+ extra 200M€ for Hydrogen Valleys)**

- ~3,5% for administrative costs (30-35M)
- 96,5% for operations: grants and procurements (965-970M)

In exchange, the Private Partners have committed to match this amount in private contributions

- From whom: members of HE and HER
- <u>What types</u>:
 - 1. In kind contributions in projects (IKOP)
 - 2. In kind contributions in the form of additional activities (IKAA)
 - 3. Financial contributions for administrative costs: 3,5% of EU contribution for projects

IKAA - In Kind Additional Activities



Members are required to indicate **additional activities**, outside of European projects, fostering the development of the hydrogen sector. This exercise is voluntary for all, but <u>compulsory for those who benefit from Clean Hydrogen JU funding</u>.

Concretely, members have to indicate planned activity at end of year N-1 and can amend this report in year N via an Excel document.

□ Activities reported above 430 k€ are to be audited in year N+1.

As a member of the Clean Hydrogen Partnership, we are required to submit an estimated Annual Work Plan to the governing board in November each year for the following year. This is a requirement set by the European Commission and not just a preference of the JU.

The process and deadlines are not set by ourselves: we are following the reporting guidelines set by the European Commission and the JU. We cannot follow the procedures used by other JUs, but we understand that the timeline is not suitable for everyone. All we can ask is that you provide us with a best guess estimate of any activities that will be ongoing in 2024.

> A recording of a webinar organised by the Programme Office is available for members on our Intranet.



Project contribution

Members' obligations & actions

In our Statutes (article 48.4)

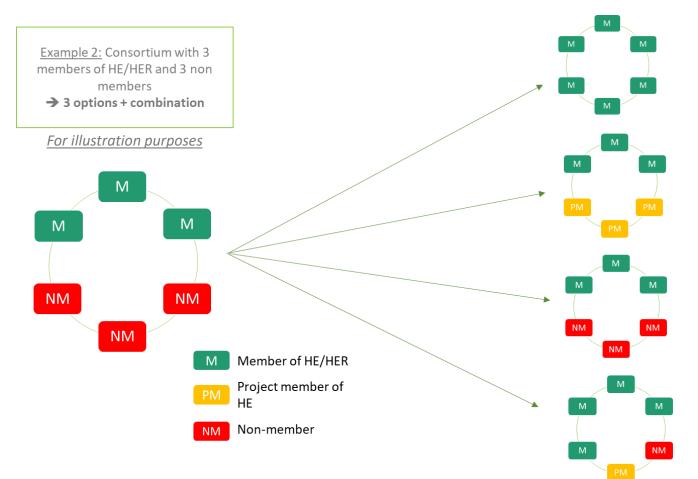
- **3,5% of the total grant received** by a successful consortium should be allocated to the **project contribution towards administrative costs** of the Clean Hydrogen JU
- Members in a project are jointly liable for the payment of the project contribution
- However, non-HE/HER members cannot directly or indirectly pay this project contribution

The members in a consortium face different options:

- 1. You build a consortium with members only
- 2. You convince non-members to become full members
- 3. You convince non-members to become "project members" (created by Hydrogen Europe no payment, limited rights to be defined but possibility to pay project contribution)
- 4. Only members pay (a higher amount)
- Remark: options 2,3, 4 can be combined.



Project contribution



If there is a strong will from members – a specific webinar will be organised



Combination of the 3 options



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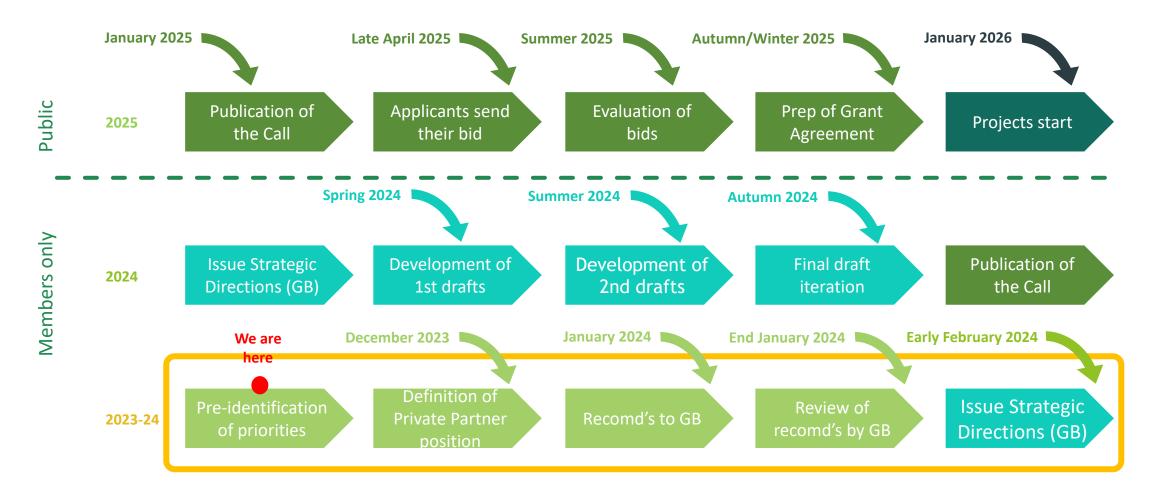
- ➤ There will be roughly 385M€ of budget remaining for the final three AWPs of the Clean Hydrogen Partnership. In light of this, we can anticipate an indicative budget in the region of 120M€ for AWP25.
- ➤ Taking into consideration that there is around 64M€ of postponed AWP24 topics and "auto-included" Hydrogen Valley topics, roughly 60M€ will be available for new topics.
- This would correspond to around 10 to 15 topics. Therefore, the number of priorities should be kept manageable as only around 3 to 4 topics will be drafted per TC.
- Pre-identification of priorities, based on past priorities, PO gap analysis and past projects has been undertaken by the Inno Team

 the list was shared to TC and RM leaders for feedback.



Hydrogen Europe Research

Process





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Clean Hydrogen JU - SRIA update



- Executive summary of main proposed modifications & updated Roadmaps were shared with the Programme Office and European Commission on 15th of September – <u>thank you to all members involved during the Summer</u>!
- Working level plenary meeting with PO and EC on Friday 22nd of September:
 - Constructive meeting, overall consensus on the main changes to be made.
 - Agreement that the current SRIA won't be modified however, an addendum of 20-30 pages will be drafted by the PO mentioning the agreed changes to the current SRIA;
 - The PO have shared a first draft on Friday 10th of November TC and RM leaders have the possibility to comment on the proposed addendum, if needed the RM group can be consulted;
 - Following sharing the HE-HER feedback on the 1st draft, a 2nd draft will be elaborated by the PO;
 - The third and final draft should be ready by the end of the year;
 - Approval of SRIA addendum will be undertaken via the written procedure ahead of the March 2024 Governing Board meeting.
- KPIs update: only KPIs needing an important update will be considered due to time constraints small groups will be created with the PO and EC in due course.



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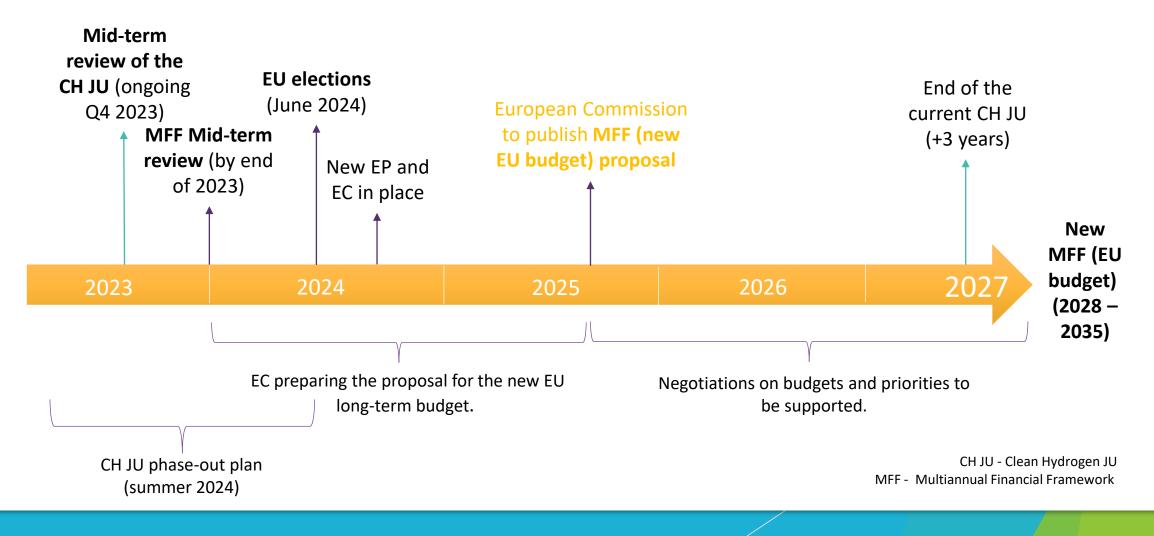
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Future beyond the Clean Hydrogen JU

Legislative calendar





Future beyond the Clean Hydrogen JU

- Discussions are happening at EC level on R&I for the next Framework Programme (FP10).
 - More discussions will likely take place until the end of the year and during 2024 – HE/HER and the Programme Office will advocate for further support to the hydrogen sector.
- > A narrative will be prepared as of 2024, both by HE and HER:
 - The outcomes of the internal consultation on the Clean Hydrogen JU will be used;
 - HER members will be consulted and involved in the elaboration of this narrative;
 - Via the Low TRL Research and Policy Working Groups;
 - Via internal communications and ad-hoc meetings.
 - The aim will be to create a position calling for further support to research on hydrogen technologies, providing solid arguments, & proposing an adequate support mechanism (Public-Private Partnership, other means...);
 - This position will be shared within the European Commission.
- Active advocacy will also be pursued along the year.





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AOB



SAVE THE DATE

Next General Assembly: June 2024 Budapest, Hungary



PHOTO TIME!

