

# Webinar



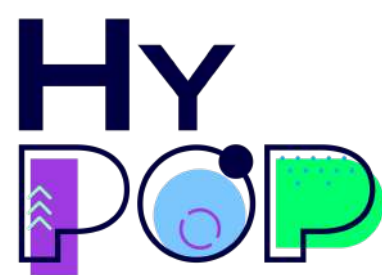
SUSTAINABLE  
ENERGY WEEK

# HYDROGEN INNOVATION

Showcasing Diverse  
and Promising  
Applications



**Clean Hydrogen  
Partnership**  
Antonio Aguilo-Rullan



**HYPOP**  
Marianna Franchino  
(Environment Park)



**CARMA-H2**  
Luca Ansaloni  
(SINTEF)



**H2tALENT**  
Hugo Gonçalves Silva  
(University of Évora)



**EVELIXIA**  
Oriol Galceran  
(Bluenrev)



**FEDECOM**  
Carlos Fuñez  
(Iberdrola)



**AndreaH**  
José Luis Viviente  
(Tecnalia)



**MECALO**  
Halvor Dalaker  
(SINTEF)



**28 May 2025**



**10:00 am – 12:00 pm**



More Info - Moderator  
Zia LENNARD - R2M Solution, France  
[zia.lennard@r2msolution.com](mailto:zia.lennard@r2msolution.com)



These projects have received funding from the European Union

# Webinar

## HYDROGEN INNOVATION

Showcasing Diverse and Promising Applications



28 May 2025



10:00 am – 12:00 pm

### About the Webinar

The Hydrogen Innovation Webinar will bring together seven EU-funded projects to showcase several diverse yet promising hydrogen technologies and applications. After a brief introduction from the Clean Hydrogen Partnership to present their governance and funding opportunities, each project will inform the audience of their respective hydrogen innovation and how best to follow their progress for subsequent updates. Finally, a cross-cutting roundtable discussion will enable dynamic interaction amongst the speakers and audience. We encourage all hydrogen stakeholders and the wider public to join us and connect with leading experts shaping the future of hydrogen energy.

- |               |   |
|---------------|---|
| 10:00 – 10:05 | Welcome and opening remarks – Zia Lennard, R2M Solution France  |
| 10:05 – 10:10 | <i>Funding 100+ hydrogen projects</i><br>Antonio Aguilo-Rullan, <b>Clean Hydrogen Partnership</b>               |
| 10:10 – 11:20 | EU project innovations  |
| 10:10 – 10:20 | <b>HYPOP</b> – <i>Raising Awareness for Hydrogen Technologies</i><br>Marianna Franchino (Environment Park)      |
| 10:20 – 10:30 | <b>CARMA-H2</b> – <i>Demonstrating Waste-to-Hydrogen Technologies</i><br>Luca Ansaloni (SINTEF)                 |
| 10:30 – 10:40 | <b>H2tALENT</b> – <i>Developing Hydrogen Valleys in Portugal</i><br>Hugo Gonçalves Silva (University of Évora)  |
| 10:40 – 10:50 | <b>EVELIXIA</b> – <i>Advancing Hydrogen-Based Power &amp; Storage Solutions</i><br>Oriol Galceran (Bluenrev)    |
| 10:50 – 11:00 | <b>FEDECOM</b> – <i>Integrating Hydrogen into Federated Energy Systems</i><br>Carlos Fuñez (Iberdrola)          |
| 11:00 – 11:10 | <b>AndreaH</b> – <i>Researching Ammonia Cracking for Hydrogen Applications</i><br>José Luis Viviente (Tecnalia) |
| 11:10 – 11:20 | <b>MECALO</b> – <i>Exploring New Hydrogen Innovations</i><br>Halvor Dalaker (SINTEF)                            |
| 11:20 – 11:50 | Cross-cutting roundtable discussion – all speakers and audience questions                                       |
| 11:20 – 11:50 | Conclusions and closure – Zia Lennard, R2M Solution France  |



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### PROJECT ABSTRACTS:

**HYPOP** (*HYdrogen Public Opinion and Acceptance*), is supporting the hydrogen deployment in Europe, enhancing the involvement of citizens and providing guidelines to increase trust in hydrogen implementation. A clean and clear communication will be key for hydrogen technological development with social acceptance. Alongside public acceptance, hydrogen perception of institutions and decision-makers involved in the technologies installations procedure is crucial for the overall hydrogen uptake.

**CARMA-H2** (*Carbon-negative pressurized hydrogen production from waste using an energy efficient protonic membrane reformer*) will enable climate positive hydrogen production from biogas through demonstration of a protonic membrane reformer (bioPMR) that integrates steam methane reforming and water-gas shift reactions, hydrogen separation, heat management, CO<sub>2</sub> capture and hydrogen compression in a single stage. The bioPMR integration with a CO<sub>2</sub> liquefaction unit enables direct delivery of purified and pressurized H<sub>2</sub> (30 bar) and food grade liquefied CO<sub>2</sub>, offering the next generation technology for creating carbon negative energy carrier generation.

**H2tALENT** (*Alentejo Green Hydrogen Valley delivering integrated full-chain sustainable hydrogen ecosystem with technical, economic, social and environmental benefits and superior upscaling/replicability*) is establishing a Hydrogen Valley in Alentejo, Portugal, integrating "green" hydrogen production, storage and distribution. The project fosters hydrogen adoption across industry, mobility and infrastructure, leveraging advanced technologies, workforce upskilling and international collaboration. It strengthens Europe's hydrogen transition by enhancing scalability, replicability and cross-border cooperation.

**EVELIXIA** (*Smart Grid-Efficient Interactive Buildings*) unites 36 high-profile organizations from 12 EU nations to transform buildings into Active Utility Nodes (BAUNs). Our goal is to make buildings smarter, energy-efficient, and flexible, enabling them to communicate with the grid, adapt to occupant needs, and support sustainability objectives. Bluenergy Revolution's contribution consists of a containerized power-to-hydrogen-to-power system capable of storing electricity as hydrogen in the form of metal hydrides.

**FEDECOM** (*Federated-system approach for flexible and interoperable energy communities*) is advancing hydrogen integration in decentralised energy systems. It focuses on sector coupling, cross-border energy exchange, and hydrogen-based flexibility solutions to enhance grid stability. Through innovative digital platforms and pilot demonstrations, FEDECOM enables seamless coordination between hydrogen production, storage, and utilisation, driving the clean energy transition.

**AndreaH** (*Ammonia based membrane reactor for green Hydrogen production*) aims to develop an advanced, environmentally friendly ammonia decomposition process leading to nearly 100 % pure hydrogen via use of a catalytic membrane reactor. Compared to conventional systems it will result in a decrease of CAPEX and OPEX, bringing a decrease of 22.5% on the decentralized cost of hydrogen.

**MECALO** (*CO<sub>2</sub> free production of critical raw materials using hydrogen*) proposes a new concept whereby carbon dioxide in off-gases from metallurgical plants are captured, reacted with hydrogen, and converted back into solid carbon feedstock that can be re-used in the metal producing processes. This allows for renewable hydrogen to transform European production of critical raw materials like silicon and manganese.



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