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THE HyEfRe NEWSLETTER

HYDROGEN INTEGRATION FOR EFFICIENT RENEWABLE ENERGY SYSTEMS



ABOUT THE PROJECT:

Sector-coupling is a promising approach to replace fossil fuels with renewables. However, this idea of "electrifying" the entire economy requires the rollout of new technologies and rules. The HyEfRe project helps with this by establishing green hydrogen ecosystems in eight regions.

The partners foster an investment-friendly environment for renewable energy and green hydrogen.

The partners foster an investment-friendly environment for renewable energy and green hydrogen technologies. They evaluate hydrogen potentials with a new model and develop and test a new tool to calculate ideal parameters for technical plants. Their action plan for policy actors will reduce regulatory barriers impeding a timely expansion of renewables and green hydrogen.

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START DATE: JUNE 2024

END DATE: NOVEMBER 2026

1. Strategy for social acceptance of hydrogen technologies

The transition to a climate-neutral economy in Central Europe will not be achieved by technology and policy alone - public support is equally vital. This is the guiding principle behind the Strategy for social acceptance of hydrogen technologies, developed within the HyEfRe project.

While the HyEfRe project focuses on technical modelling, regulatory frameworks, and infrastructure planning, it also recognises that societal acceptance will determine the real pace and scale of deployment. Drawing on surveys, stakeholder analyses, and sectoral assessments, the **Strategy for social acceptance of hydrogen technologies** highlights persistent challenges: limited public knowledge of hydrogen, misconceptions around safety and costs, uneven awareness between urban and rural areas, and a lack of transparent communication from institutions. The Strategy argues that without trust, inclusive dialogue, and clear local benefits, even well-designed projects may face resistance. To counter this, the Strategy sets five core objectives:

- Increase public awareness through campaigns, media stories, and educational outreach.
- Strengthen citizen participation in decision-making, embedding structured consultation in hydrogen infrastructure projects.
- Improve cooperation between key actors, from local governments to industry and academia, via forums and working groups.
- Enhance transparency and trust by publishing impact assessments early and creating standardised feedback channels
- Invest in education and skills, establishing hydrogen research hubs at universities and training thousands of workers for emerging jobs.





The Strategy translates these pillars into concrete measures - from promoting at least ten regional success stories by 2026, to ensuring all large-scale projects publish environmental and social assessments before consultation. It also recommends continuous monitoring of public perception, so policies can adapt to evolving expectations. Ultimately, the Strategy positions social acceptance not as an afterthought, but as a foundation for success. By embedding openness, participation, and education into hydrogen deployment, HyEfRe aims to ensure that Central Europe's hydrogen future is not only technologically advanced, but also fair, inclusive, and trusted by its citizens..

You can read the Strategy for social acceptance of hydrogen technologies <u>here</u>.







2. HyEfRe meeting in Padova sets path for the pilot stage

This September, the HyEfRe project team gathered in Padova, Italy, to shift gears from planning to action.

With the first phases of the project complete and on schedule, the focus has now turned to rolling out the powerful tools and strategies that will help build Central Europe's green hydrogen economy. The project is entering a critical stage, and the team took time to recognize its achievements so far, including the creation of detailed legal and economic assessments and a strategy for social acceptance of hydrogen for a deeper understanding of what it will take for communities to embrace the hydrogen technology.

The main buzz at the meeting was the upcoming release of the project's two flagship software tools. First is the Hydrogen Potential Model, a user-friendly platform that allows anyone to map out a region and instantly see its potential for producing clean hydrogen. This is paired with the powerful Decision Support Tool, an advanced simulator that designs the most efficient and profitable hydrogen "hub" for a given area. It calculates everything from the ideal equipment size to the best time of day to produce hydrogen, even taking advantage of moments when electricity prices are negative.

The first versions of these tools are set to be released for testing by mid-October, as the project launches pilot actions in Germany, Austria, Slovenia and Hungary to test them in the real world. At the same time, a series of **engaging national workshops and events** will be held across the partner countries in the comming months, designed to bring local stakeholders and communities into the conversation, showing them ways to get involved in the future of hydrogen development.







The ultimate goal of HyEfRe is to create a hydrogen network of cooperation that empowers regions to take more control of their energy future. The project will provide not just the technology (Hydrogen potential model and Decision support tool), but also policy recommendations and business blueprints needed to help build this ecosystem and make green hydrogen a key part of Central Europe's energy system. For now, the main takeaway from Padova is clear: HyEfRe is moving from the drawing board to the real world.









3. Co-designing sustainable hydrogen ecosystems

Outcomes of the co-design session held during the HyEfRe partner meeting.

Between mid-August and mid-September, the HyEfRe project reached a pivotal milestone in its mission to establish sustainable hydrogen ecosystems across Central Europe. Following four national co-design sessions held between August 6th and September 2nd—which engaged 47 participants from public utilities (12.8%), administrations (25.5%), private services (42.6%), and non-profit organizations (19.1%)—the entire partnership convened in Padova, Italy, from September 15th to 17th for an intensive cooperative workshop. This multi-layered participatory process, facilitated by WeEurope (PP11) through the innovative MOSAIC-Design Your Decision platform, brought together 31 representatives from Germany, Slovenia, Poland, Italy, Croatia, Czech Republic, and Hungary to transform national insights into actionable strategies for hydrogen ecosystem development.



The workshop's core objective was to build upon the strategic frameworks identified during the national sessions, where each country had defined its unique approach to addressing local hydrogen challenges. The four contexts adopted distinct strategies: Poland focused on preventing threats by leveraging strengths to ensure RFNBO hydrogen supplies priority applications; Czech Republic addressed market demand gaps by reframing hydrogen investments as developmental

opportunities rather than regulatory obligations; **Slovenia** concentrated on improving legislative quality and expanding subsidy mechanisms; while **Hungary** tackled the complex task of integrating diverse stakeholder interests amid the absence of demonstrator projects.

During the Padova session, participants engaged in alternating group and plenary phases, moving through brainstorming, solution development, and canvas creation. The hybrid format—combining face-to-face discussions with real-time digital feedback through participants' smartphones—proved particularly effective, with attendees describing the experience as both "interesting and engaging," appreciating how technology facilitated dynamic interaction without disrupting the collaborative atmosphere.

The workshop culminated in the development of four comprehensive canvases that map the strategic elements essential for establishing sustainable hydrogen ecosystems in each national context. These frameworks systematically connect identified needs, strategic objectives, stakeholder engagement plans, and implementation activities, forming the foundation for Guidelines for establishment of hydrogen ecosystems, that will be created in the HyEfRe project. These guidelines will translate theoretical models into concrete recommendations for municipalities, cities, and other stakeholders across Central Europe.

Through this co-creation process, the HyEfRe project is not only fostering the emergence of local hydrogen ecosystems but also building an integrated transnational network that enhances knowledge transfer, strengthens synergies, and accelerates the green energy transition throughout the region—ultimately informing the development of regional hydrogen transformation strategies that will shape Europe's renewable energy future.



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