



## H2eart for Europe Alliance

### Publication of H2eart for Europe new roadmap:

***“A European underground hydrogen storage roadmap: H2eart for Europe’s recommendations to secure the scale up of Underground Hydrogen storage.”***

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#### Official Press Release

[Brussels, 3<sup>rd</sup> of July 2024]

**H2eart for Europe** is an EU-wide, CEO-led alliance, composed of twelve Storage System Operators (SSOs) from across Europe, committed to accelerating the decarbonisation of the European energy system at the lowest cost to society by scaling up the deployment of Underground Hydrogen Storage (UHS). Today, the alliance published a comprehensive roadmap for the deployment of this technology.

The newly published roadmap discusses how UHS is pivotal for the future of Europe's energy system, providing a critical solution to balance the intermittency of renewable energy sources. The transition to a decarbonised energy system hinges on effective storage solutions, and UHS stands out due to its scalability, safety, and potential to leverage existing infrastructure.

H2eart for Europe’s roadmap contains a proposal for a series of measures needed to unlock the successful and timely investment decisions for development of UHS in Europe.

#### **Policy and Regulatory Landscape: UHS Ambitions as well as Clarification of Policy Ambiguities Needed**

The regulatory framework for UHS is evolving, with the Gas Decarbonisation Package marking a significant step forward. However, the current framework needs additional guidance on concrete measures to fully kick-start a robust and viable UHS market. The package introduces a phased approach to a regulated system but lacks detailed guidance for the transition period, which creates uncertainty. Furthermore, while it emphasises the need for coordinated network planning, it does not provide clear directives for integrating UHS into these plans.

This gap underscores the need for additional policy measures, including the establishment of EU and Member State UHS ambitions. Additionally, the development of clear and standardised guidelines for UHS is critical.

#### **Derisking the UHS Business Model: Financial Risk Mitigation Mechanisms Are Needed for UHS Kick-Off**

Economic uncertainties pose significant investment barriers to the scale-up of UHS. The nascent state of the hydrogen market means financial risks are high and rewards are uncertain. The report highlights the necessity of financial mechanisms to mitigate these risks and provide incentives for investment. Proposed mechanisms within the framework of a “toolbox” include Contracts-for-Difference, Revenue Floors and mechanisms that can distribute costs and risks over a longer period, effectively de-risking UHS project development as well as encouraging private investment.

Financial support instruments are especially essential during the ramp-up phase, where the market is not yet mature to overcome volume and price risks. In return, financial risk mitigation can ensure that UHS infrastructure is in place when demand grows starting from 2030 till 2050, aligning supply with market needs.

### **Implementation: Ambitious UHS Projects Testify to High Demand and Practical Barriers**

Despite regulatory and economic challenges, SSOs are advancing with ambitious UHS projects, demonstrating the feasibility and potential of this storage solution. However, they encounter several obstacles, particularly related to site screening and permitting procedures.

The lack of standardised guidelines would complicate speeded-up developments and slow down permitting, but leveraging learnings from pilot projects can provide valuable insights to streamline these processes. SSOs' proactive efforts in progressing UHS projects highlight the readiness of the industry, yet the role of policymakers remains crucial in creating an enabling environment for these initiatives to thrive.



*From left to right: Verena Friedl (RAG Energy Storage GmbH), Evelyn McKinnie (Guidehouse), Marco Gazzola (SNAM), Youssef Chekli (Terega), Thomas Engel (OMV Gas Storage GmbH), Andrej Kočibal (NAFTA), Mélisande Duhalde (Storengy), Pieter van Aartsen (Gasunie), Kitti Nyitrai (EU Commission), Carole Le Hénaff (Storengy), Michael Schmöltzer (Uniper Energy Storage), Georg Dorfleutner (RAG Energy Storage GmbH), Charlotte Roule (Storengy), Peter Schmidt (EWE Gasspeicher GmbH).*



## About H2eart for Europe

H2eart for Europe is an EU-wide, CEO-led alliance committed to accelerating the decarbonisation of the European energy system at the lowest cost to society by scaling up the deployment of underground hydrogen storage (UHS). Launched in Brussels on 23rd of January 2024, the alliance aims to provide fact-based reports and analysis that can serve policymakers as guidance, and that utilise and build on the experience of our members, leading companies paving the future of hydrogen storage across Europe. We are committed to invest in scaling up UHS infrastructure to meet the flexibility demand in a decarbonised energy system.

The organisations listed below are the members of H2eart for Europe.



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