



EUH2STARS

European Underground Hydrogen STorAge Reference System

Benedikt Hasibar





About EUH2STARS

Project Information

EUH2STARS

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EC signature date

29 November 2023

Start date

1 January 2024

End date

30 September 2029

Funded under

Climate, Energy and Mobility

Total cost

€ 27 228 904,25

EU contribution

€ 19 655 460,13



EUH2STARS is an ambitious, industry-driven flagship project supported by the Clean Hydrogen Partnership, demonstrating hydrogen storage in depleted porous natural gas reservoirs at TRL 8

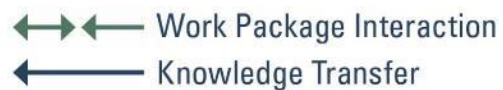
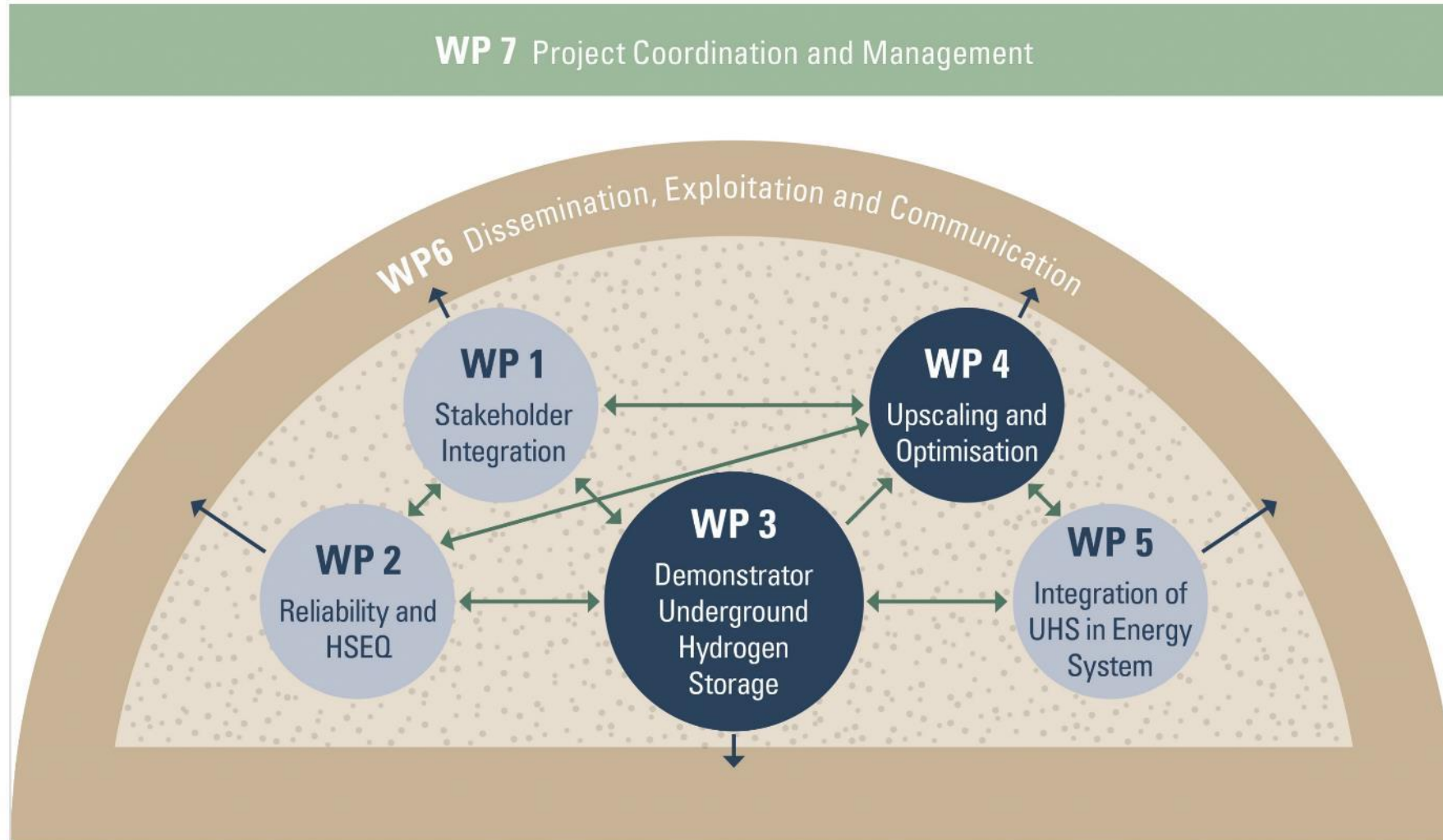


*Underground Hydrogen Storage Demonstrator,
RAG Austria AG, Rubensdorf*

Consortium



Project structure





Project structure

- (WP3) **Demonstration of Underground H₂ Storage** in depleted porous natural gas reservoirs
 - Four **seasonal storage cycles** at the RAG demonstration storage site
 - Two **storage cycles** at the HGS site
- (WP4) **Blueprint for replicators of the demonstration facility** for
 - existing natural gas storage sites and
 - newly developed UHS sites in Europe
- (WP2) Development of **guidelines and standards** for the **safe operation of UHS**
- (WP5) **Integration of UHS** into a future **renewable energy system**
- (WP1) Assessment and improvement of **public acceptance and visibility** (*Societal Embeddedness Level*)

Project results so far

- Operation of **demonstrator** in Rubensdorf started
 - First cycle: Injection completed in 09/2025, withdrawal starting 12/2025
- Basic engineering for **replicator sites** in Austria finished
 - existing natural gas storage site
 - newly developed UHS site
- **MMV plan** for UHS Rubensdorf published
- **Storage profiles** for UHS with local demands developed
- **SEL assessment** for UHS: First country-specific assessment finished





Published project results

← → ↺ 🏠 ⓘ euh2stars.eu/en/publications/project-results

Project results

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EUH2STARS Rubensdorf MMV Plan

📄 Request download here (pdf, 796,54 KB)

EUH2STARS
European Underground Hydrogen STorAge
Reference System

**Measurement Monitoring and Verification Plan
of RAG's Rubensdorf Site**

Prepared by: GREINL Mathias, RAG
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This report represents EUH2STARS project deliverable number 02.1

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Project impact

Scientific

- New insights on UHS system design
- Updated information on material integrity
- Publications and conference contributions

Industrial

- Demonstration and upscaling of a complete UHS system TRL 6 → 8
- Risk reduction through guidelines and safety standards for UHS
- Integration of UHS into energy system

Economic

- Cost models and revenue assessments
 - Informed investment decisions
 - Reduced financial risks.

Societal

- Best practices for societal embedding
- Legal and regulatory guidelines
- Public acceptance

Thank you!



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Disclaimer

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