

# H<sub>2</sub> storage in salt caverns – Project HyPSTER in Étrez (FR)

**Project HyPSTER:** Industrial-scale operation of **cyclic H<sub>2</sub> storage** in salt caverns to support the emergence of the hydrogen energy economy in Europe

- **1 MW electrolysis** and up to **44 tons storage** capacity in salt cavern (equivalent to the daily consumption of 1.760 buses)
- Supply H<sub>2</sub> to local customers via trailer: **industry and mobility**
- 3 main objectives:
  - Demonstration of **large-scale cyclic H<sub>2</sub> storage** in salt caverns for emerging European hydrogen regions
  - Evaluation of the **economic feasibility** for future replication across the EU
  - Assessment of risks and environmental impacts of H<sub>2</sub> storage in salt caverns and provision of guidelines for **safety, regulations** and **standards**
- Provide renewable **hydrogen back-up** for the territory
- FCHJU (Fuel Cells and Hydrogen Joint Undertaking) funding of **5 Mio. €**

**Project partners**











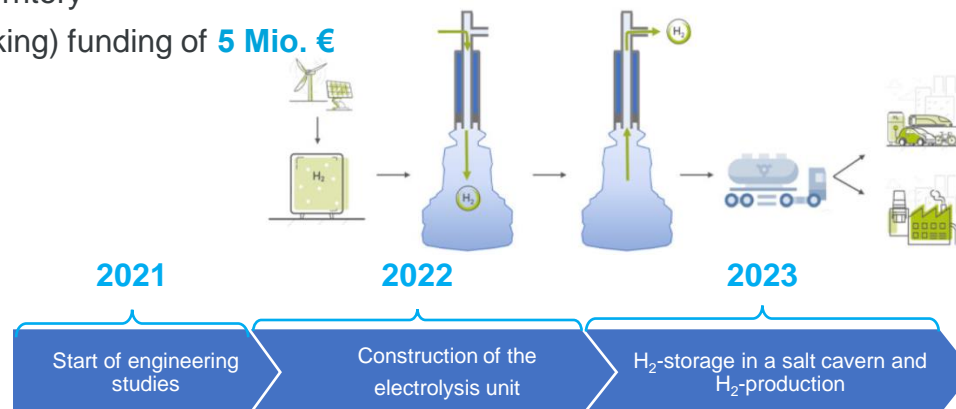










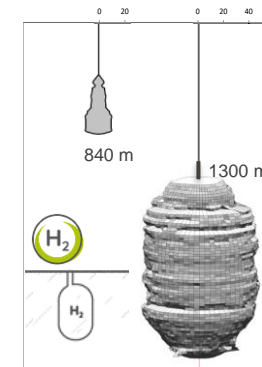


## Cavern EZ53 (higher salt level)

**Geometric volume :**  
- 7.000 m<sup>3</sup>

**Usable H<sub>2</sub> :**  
- 500.000 Nm<sup>3</sup>  
- 1,7 GWh  
- 44 t H<sub>2</sub>

**Pressure:**  
- P<sub>min</sub>: 60 bar  
- P<sub>max</sub>: 165 bar



## Cavern EZ21 (lower salt level)

**Geometric volume:**  
- 570.000 m<sup>3</sup>

**Usable H<sub>2</sub> :**  
- 70.000.000 Nm<sup>3</sup>  
- 250 GWh  
- 6.700 t H<sub>2</sub>

**Pressure:**  
- P<sub>min</sub>: 60 bar  
- P<sub>max</sub>: 240 bar

