

ENERG

GEOHERMAL
DHHC
Towards Decarbonized
Heating and Cooling!

 **Funded by
the European Union**



The Geological Surveys of Europe



2nd European Underground Energy Storage Workshop

Paris, 23 - 24 May 2023

This workshop is dedicated in the memory of our colleague from the Czech Geological Survey

Vit Hladik

Avalon



Program – Day 2

9:00	Registrations		
9:30 – 12:00	Session 3. Challenges for underground energy storage <i>Chairs: Kazbulat Shogenov, SHOGenergy & Alexandra Dudu, ENeRG president</i>		
10:30	<i>Coffee break & posters</i>		
12:00	<i>Lunch break & poster session</i>		
13:00 – 15:30	Session 4. Overview of the main technological aspects (COST session) <i>chairs: Jessica Maria Chicco, University of Torino & Vasiliki Gemeni, HAEE</i>		
15:30	<i>Coffee break & posters</i>		
16:00 – 17:15	Session 5: Challenges in the development of UES across Europe (COST session) <i>chair: Jessica Maria Chicco, University of Torino</i>		
17:15	Round table and closing remarks		
17:45	End of the workshop		

Program – Day 2 - Session 3

Time	Title	Speaker	Affiliation
9:00	Registrations		
9:30 – 12:00	Session 3. Challenges for underground energy storage <i>Chairs: Kazbulat Shogenov, SHOGenergy & Alexandra Dudu, ENeRG president</i>		
09:30	CO2-SPICER towards Pilot in Czech Republic	Roman Berenblyum	NORCE (Norway)
09:50	GSEU's Contribution to Advancing Energy Storage Solutions	Francesco Pizzocolo	EuroGeoSurveys
10:10	Finding Synergy between CCS and Large-scale Hydrogen Storage	Gang Wang	Heriot-Watt University (UK)
10:30	<i>Coffee break & posters</i>		
11:00	Mass Exchanges between the Phases of a Salt Cavern: Hydrogen Permeation in Rock Salt and Hydrogen Dissolution in the Brine	Murad Abuaisha	Paris School of Mines (France)
11:20	Numerical Modeling of the Complex Behavior of Salt Caverns	Benoit Brouard	Brouard Consulting SAS (France)
11:40	Laboratory Characterization of Rock Salt and Implications for Underground Facilities	Laura Blanco Martin	Paris School of Mines (France)
12:00	<i>Lunch break & poster session</i>		

Underground Thermal Energy Storage Systems (COST-GEOTHERMAL DHC)

13:00-15:30	Session 4. Overview of the main technological aspects <i>chairs: Jessica Maria Chicco, University of Torino & Vasiliki Gemeni, HAEE</i>		
13:00	The Role of the UTES Systems in the 5th Generation Technologies and DHC Grids	Saquib Javed & Marwan Abugabbara	Lund University (Sweden)
13:25	Drivers for Widespread Adoption of ATES Systems	Martin Bloemendal	TU Delft (The Netherlands)
13:50	Current Status of ATES in UK	Carl Jacquemyin	Imperial College London (UK)
14:15	Borehole Thermal Energy Storage (BTES): LT and HT BTES with Case Studies	Charles Maragna	BRGM (France)
14:40	BTES Case Studies in Scandinavian Countries	Saquib Javed	Lund University (Sweden)
15:05	Mine Thermal Energy Storage (MTES): Case Studies from Northern Germany	René Verhoeven	Fraunhofer IEG (Germany)
15:30	<i>Coffee break & posters</i>		

Underground Thermal Energy Storage Systems (COST-GEOTHERMAL DHC)

16:00-17:15	Session 5: Challenges in the development of UES across Europe <i>chair: Jessica Maria Chicco, University of Torino</i>		
16:00	Costs, Benefits and Potential of UTES	Giulia Conforto	e-Think Vienna (Austria)
16:25	The Role of the Communication: Raising Knowledge among Stakeholders and Non-scientific People	Vasiliki Gemeni	HAEE (Greece)
16:50	Facilitating the Development of UES to Fight Against Energy Poverty	Meltem Ş. Ucal	Khadir Has University (Türkiye)
17:15	<i>Round table and closing remarks</i>		
17:45	End of the workshop		

Posters

Title	Authors	Affiliation
Ranking of geological structures in deep aquifers for UHS	Leszek Lankof, Radoslaw Tarkowski, and Katarzyna Luboń	MEERI-PAS (Poland)
GIS-based analysis of rock salt deposits' suitability for underground hydrogen storage	Radoslaw Tarkowski, Leszek Lankof, and Katarzyna Luboń	MEERI-PAS (Poland)
New synergy concept of geothermal energy recovery, CO2 and green hydrogen geological storage in the Baltic offshore structure	Kazbulat Shogenov & Alla Shogenova	TalTech & SHOGenergy (Estonia)
Driven Geothermal Energy Pile: An innovative heating/cooling solution	Rao Martand Singh	NTNU (Norway)
Utilization of empty caverns in oil fields of Albania for the underground storage of natural gas arriving from TAP	Altin Maraj	Polytechnic University of Tirana (Albania)
A Successful ATES deployment in the UK Chalk Aquifer, London	Hayley Firth	Imperial College London (UK)