



CO₂ Storage Efficiency: Challenges with standards and consistency in capacity estimations

14 - 15 September 2023

Hybrid Conference – The Geological Society London, and Zoom

Updated Provisional Programme

Day One	
08.30	Registration
08.50	Welcome Tina Lohr, ERCE
08.55	Introduction Ellen Mitchell, ERCE
	Morning Session with Keynote talks: Experience and use of storage efficiency in describing and comparing CCS globally Session chairs: Tina Lohr, Adrian Topham
09.05	The journey from CS license award to storage permit Matteo Tazzi, UK North Sea Transition Authority (NSTA)
09.40 Virtual	NETL's Perspective on Storage Efficiency and CO₂-SCREEN Angela Goodman, US Department of Energy, NETL
10.20	Communicating readiness for CO₂ operations using Storage Readiness Levels, and its application to the UK national CO₂ storage resource Maxine Akhurst, British Geological Survey (BGS)
11.00	BREAK
11.30 Virtual	To “E” or not to “E”, that is the Question. Scott M. Frailey, US Geological Survey (USGS)
12.10	CO₂ storage efficiency: experiences and reflections Chick Wattenbarger, ExxonMobil
12.50	LUNCH
	Afternoon Session with mini-talks & Posters: Experience and use of storage efficiency in describing and comparing CCS globally Session chairs: Florian Doster, Clare Glover
13.50	P1 - Calculating a consistent storage resource across a growing portfolio Alison Isherwood, Storegga
13.58	P2 - What industry needs to estimate storage resource and why most published Storage Efficiency Coefficients don't help us Peter Zweigel, Equinor
14.06	P3 - E-mission, the quest to forecast E prior to injection of CO₂ for storage Susann Daniels, University of Durham, Geospatial Research Ltd, UK



14.14	P4 - Strengths and weaknesses of the SPE SRMS Xavier Troussaut, TotalEnergies
14.22	P5 - The Importance of Storage Efficiency in the Application of SRMS Gordon Taylor, RPS
14.30	P6 - Storage efficiency and reduced complexity modelling Hariharan Ramachandran, Heriot Watt University, UK
14.38	P7 - CO₂ storage resources in saline aquifers – pressure analytical methods and CO₂ migration challenges Sylvain Thibeau, TotalEnergies
14.46	P8 - Pressure-based Storage Capacity Mapping and Implications for Storage Efficiency Alex Bump, BEG University of Texas, USA
14.54	P9 - EASiTool 5.0 for CO₂ storage capacity estimation Seyyed Hosseini, BEG University of Texas, USA
15.00	BREAK
15.30	<p>Panel Session 1: Experience and use of storage efficiency in describing and comparing CCS globally Session chairs: Tina Lohr, Ellen Mitchell</p> <p><u>Panel session leader:</u> John Underhill, University Director for Energy Transition and Professor of Geoscience at Aberdeen University</p> <p><u>Panel speakers:</u> Angela Goodman (DoE-NETL), Adrian Topham (The Crown Estate), Peter Zweigel (Equinor), TBC</p> <ol style="list-style-type: none"> 1) Does the concept of total capacity have a place in evaluating and comparing storage potential? 2) How applicable are conventional or unconventional HC projects to CO₂ storage? 3) Is CO₂ storage efficiency calculation more useful as a project-based approach or rather using a generic approach? 4) How useful are comparisons between depleted gas fields and saline aquifers?
17.00	End of day one
17.00-18.00	Drinks reception

Day Two

08.40	Registration
08.50	Welcome
	<p>Morning Session with Keynote talks: Methodologies and applications of storage efficiency calculations Session chairs: Philip Ringrose, Ellen Mitchell</p>

09.00	Storage efficiency at opposite ends of scales of interest Sam Krevor, Imperial College London, UK
09.40	Storage capacity assessment techniques for gigatonne-scale CCS Sarah Gasda, NORCE Research
10.20	Geomechanical pressurization constraint development – Example from the Northern Lights project, offshore Norway Nic Thompson, Equinor
11.00	BREAK
11.30	How does the early 0.5 MT performance inform the calculation of an Efficiency Factor at the Aquistore Project, Canada Rick Chalaturnyk, University of Alberta, Canada
12.10	Using sand-tank experiments to visualize and quantify flow and saturation for predicting CO₂ storage efficiency in clastic materials Tip Meckel, BEG University of Texas, USA
12.50	LUNCH
	Afternoon Session with mini-talks & Posters: Methodologies and applications of storage efficiency calculations Session chairs: Florian Doster, Clare Glover
13.50	P10 - Screening for Open Saline Aquifers - Estimating Storage Efficiency based on Plume Shape Martin Neumaier, ArianeLogiX
13.58	P11 - Materiality of Plume size Calculations and storage efficiency Prasanna Krishnamurthy, ExxonMobil
14.06	P12 - Estimating the contacted pore space and CO₂ saturation using seismic data from the Sleipner CO₂ storage project Philip Ringrose, Equinor & NTNU
14.14	P13 - A proxy model for CO₂ injection during a typical storage project Lex Rijkels, ExploCrowd
14.22 Virtual	P14 - A Compositional Numerical Model Study on the Impacts of Aquifer Formation Geological and Geochemical Properties on CO₂ Injectivity and Storativity: A Case Study Cameroon Gulf of Guinea Gregory T. Mwenketishi, University of Bradford, UK
14.30	P15 - Utilizing Machine Learning Power to Predict the Performance of Carbon Dioxide Trapping in Saline Aquifers Mustafa Alkhowaildi, King Abdullah University, Saudi Arabia
14.38 Virtual	P16 - CO₂ Storage Efficiency for Capacity Estimation – Integrating Geological and Engineering Risks in a Clastic Saline Aquifer in Central Alberta, Canada Vicky Wang, GLJ, Canada
14.46	P17 - Title TBC Jules Reed, Premier Corex
15.55	BREAK

15.30	<p>Panel Session 2: Methodologies and applications of storage efficiency calculations Session chairs: Tina Lohr, Ellen Mitchell</p> <p><u>Panel session leader:</u> Chick Wattenbarger, Reservoir Engineer at ExxonMobil</p> <p><u>Panel speakers:</u> Sylvain Thibeau (TotalEnergies), Alex Bump (BEG Uni Texas), Elaine Campbell (Storegga), Rick Chalaturnyk (Uni Alberta)</p> <ol style="list-style-type: none"> 1) How do we ensure consistency of methodology across the evolving stage of site evaluation? 2) Do different project stages require different approaches, and if so which ones? 3) What appraisal processes need to be used to prove the efficiency calculation?
17.00	Closing Remarks
17.15	End of Convention

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