

# Improved Pore Space Utilisation

CSLF Task Force:

Leads: Australia & United Kingdom

Participants: IEAGHG, Canada, France, Japan, Norway, UAE

# Problem Statement

With straightforward CO<sub>2</sub> injection, in particular when storing in saline formations, a large portion of available pore space in a geological storage site is bypassed. Utilised storage capacity is typically about two orders of magnitude lower than the pore space resource, and the resulting large lateral spread of CO<sub>2</sub> requires costly monitoring relative to the volume stored. Being able to improve pore space utilisation may be very beneficial in terms of increased storage capacity, reduced monitoring costs, and increased ability for 'hub' style storage operations.

Many research bodies and some operators have investigated options to better utilise the pore space resource. This work is scattered and at varying levels of technical maturity. This CSLF study collates the various published options, and reviews the effectiveness and readiness of emerging novel techniques. An output from this study would be a (possibly ranked) set of options for stakeholders to develop into their storage projects.

# Task Force - Key Activities

Report Section	Title
3	Oil & Gas Literature Review
4	Non-Technical Issues Related to Improved Pore Space Utilisation
5	Pressure Management
6	Microbubble CO <sub>2</sub> Injection
7	CO <sub>2</sub> Saturated Water Injection and Geothermal Energy Production
8	Compositional & Temperature Swing Injection
9	Technique Effectiveness & Status
1, 2, 10	Executive Summary, Background, Conclusions

# Completion Plan

- Technique Effectiveness & Status to be undertaken over next couple of months
- Finalisation of report (draft) by August
- Final report presented to CSLF in Melbourne October 2018