





Newsletter

Meetings and engagement activities

We held two online discussion sessions in September and October. The first session focused on exploring the policy and regulatory gaps and challenges associated with offshore energy technologies and included presentations from Chris McClane (Centrica) and Jonathan Pearce (BGS). The second session had a more technical focus with presentations from Ed Hough and Maxine Akhurst (BGS) on how the hydrogen and carbon dioxide storage work is progressing. This was followed by a discussion on the key challenges linked to technology development and how the project might tailor project outputs.

Thank you very much to all those that attended for contributing to the discussions. The presentations and notes for both meetings are included with this newsletter.

 *Wishing you all a very Merry Christmas from the MOET project team!* 

Work Package 1 update - Optimal use of subsurface geological resources for storage of H₂ and CO₂

Area 1 Southern North Sea, deliverables, abstracts for recent presentations are now available on NERC Open Research Archive:

- Understanding the impact of regional structures on pressure communication within the Bunter Sandstone Formation, UK Southern North Sea. [Abel et al. 2024](#), presentation, Geological Society, and paper for publication is in progress.
- Small-strains and gentle uplift of the seabed: Modelling the regional geomechanical response to industrial-scale injection of carbon dioxide in the Bunter Sandstone. [Williams and Williams 2024](#) presentation, Geological Society
- The Röt Halite Member of the Southern North Sea – A critical top seal for carbon dioxide storage in the Bunter Sandstone Formation. [Morris et al. 2024](#) poster, Geological Society London.

Area 2 and Area 3, commencement of research for the second half of MOET Project, October 2024 to March 2027:

- Area 2 - Central North Sea, Outer Moray Firth: datasets have been prepared for interpretation of hydraulically connected, stacked Tertiary sandstones for porous rock storage: petrophysical well data assessed and selected; synthetic seismic profiles prepared; tying synthetic profiles to seismic data has been assessed. Interpretation to commence in the new calendar year
- Area 3 - East Irish Sea, research has commenced to assess the stratigraphy and structure, where thicknesses of salt formations for assessment of hydrogen cavern storage and as a cap rock for porous rock storage is determined by reactivation and reverse displacement across faults.

Work package 2 - Understanding the shallow subsurface, seeps and the marine environment

Jerry Blackford attended the recent GHGT-17 CCS conference in Calgary, Canada, and presented on the status of offshore measurement, monitoring and verification (MMV) for CCS.

Plymouth Marine Laboratory provided the Environment Agency with an overview of recent work on hypersaline release (see September 2024 newsletter).

Work Package 3 update - Societal consequences of the energy transition

Steve Watson and Lizzi Gabe-Thomas have been reviewing available GIS layers with a view to creating maps of the current and planned locations of the three technologies (offshore wind, H₂ and CO₂ storage) to inform their cultural ecosystem service work.

Discussions ongoing with work package 2 regarding focusing the main mental models work on hydrogen storage, potentially creating some communication materials addressing the gaps in public and expert/stakeholder understanding. The planned public survey will look at basic mental models/perceptions of all three technologies, with more in-depth work on hydrogen as this aligns nicely with the work package 2 work programme.