



Programme Area: Carbon Capture and Storage

Project: Storage Appraisal

Title: One Page Summary

Abstract:

The objective of the CCS UK Storage Appraisal Project (UKSAP) has been to provide a fully auditable and defensible overall estimate of UK CO₂ storage capacity in offshore geological formations, to inform future roll out of CCS in the UK.

Context:

This £4m project produced the UK's first carbon dioxide storage appraisal database enabling more informed decisions on the economics of CO₂ storage opportunities. It was delivered by a consortium of partners from across academia and industry - LR Senenergy Limited, BGS, the Scottish Centre for Carbon Storage (University of Edinburgh, Heriot-Watt University), Durham University, GeoPressure Technology Ltd, Geospatial Research Ltd, Imperial College London, RPS Energy and Element Energy Ltd. The outputs were licensed to The Crown Estate and the British Geological Survey (BGS) who have hosted and further developed an online database of mapped UK offshore carbon dioxide storage capacity. This is publically available under the name CO₂ Stored. It can be accessed via www.co2stored.co.uk.

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ETI Programme: Carbon Capture & Storage
Project Name: Storage Appraisal
Deliverable Reference: CC1001/MS6.1
Lead Coordinator: Senergy Alternative Energy

Context

The objective of the CCS UK Storage Appraisal Project (UKSAP) has been to provide a fully auditable and defensible overall estimate of UK CO₂ storage capacity in offshore geological formations, to inform future roll out of CCS in the UK.

Project

The project started in September 2009, and the project team (led by Senergy Alternative Energy) has populated almost 600 potential storage units in the North Sea, Western Channel and Eastern Irish Sea with geological data, security of storage and economic assessments. These units cover both depleted oil and gas reservoirs and saline aquifers. Comprehensive and consistent methodologies have been developed and peer reviewed within the team for calculating storage capacity for each unit. A probabilistic approach has been taken to provide a range of estimates. Security of storage assessments have been made for units across a range of potential risk factors. An assessment of the economics of each storage unit has been made.

The key project deliverables are a comprehensive technical report and a web-enabled database and GIS (WDG). The WDG is currently available through the Carbonstore website, via the developers (Senergy Survey & Geo-engineering).

Key Project Findings

The project has identified that the UK has more than sufficient storage capacity to meet its ambitions for CCS over the next 100 years. This will require use of both depleted oil and gas reservoirs and saline aquifers. To meet the rapid roll out expected in the 2020s, appraisal of aquifers needs to start in the near future.

Further Information

Full information on the results of the project is available to ETI Members in the confidential technical report and spreadsheet economic model.