DOE announces $4m for projects to accelerate CCUS technologies

By Molly Burgess | 5 November 2019

The US Department of Energy (DOE) has awarded $4m in federal funding for national laboratories to collaborate with international partners on seven projects as part of the Accelerating Carbon Capture and Storage Technologies (ACT) Initiative.

Consisting of the US and 10 European countries, the ACT Initiative along with the DOE is funding researchers in the participating countries to collaborate on projects which will accelerate and mature carbon capture, utilisation, and storage (CCUS) technologies globally.

The seven projects with US involvement and funding include three carbon capture projects and four carbon storage projects.

The three carbon capture projects selected as part of the ACT Initiative are:

**Lowering Absorption Process Uncertainty, Risks, and Costs by Predicting Controlling Amine Degradation:** Carried out by Los Alamos National Laboratory (LANL) and its subcontractor, the University of Texas at Austin, the project will work with partners to establish a fast-track, cost-effective, de-risking mechanism to predict and control degradation of carbon capture solvents.

**Innovative Membrane Systems for CO2 Capture and Storage at Sea (MemCCSea):** The carbon capture project sees the National Energy Technology Laboratory collaborate on the development of hyper compact membrane systems for maritime and offshore applications.

**Process-Informed Design of Tailor-Made Sorbent Materials for Energy Efficient Carbon Capture (PrISMa):** Lawrence Berkeley National Laboratory is partnering on a project to help bridge the gap between molecular science and process engineering by developing tailor-made materials for a wide range of carbon capture applications.
The four carbon storage projects selected are:

**Digital Monitoring of CO₂ Storage Projects (DigiMon):** For the project, Lawrence Livermore National Laboratory (LLNL) is collaborating on to integrate a broad range of monitoring technologies with data analytics to improve system cost and reliability for carbon storage projects.

**Re-Using Existing Wells for CO₂ Storage Operations (REX-CO₂):** A project which will develop a procedure and tool for evaluating the re-use potential of existing hydrocarbon wells for CO₂ storage.

**Assuring Integrity of CO₂ Storage Sites Through Ground Surface Monitoring (SENSE):** For this project, LLNL and project partners will demonstrate how ground surface movement detection can be used to provide information on pressure distribution of hydraulic behaviour of storage sites, resulting in improved reliability and lower costs of carbon storage sites.

**ACT on Offshore Monitoring (ACTOM):** The project will see LANL and its subcontractor, the University of Texas Bureau of Economic Geology, are part of a team that will build a web-based toolkit which will collect algorithms for designing optimal monitoring programmes for offshore geologic storage sites.

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