

Greensand project – transport and offshore storage of CO₂ in Denmark – status, outlook and challenges

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Accepted 17 August 2022

DOI <https://doi.org/10.21595/bcf.2022.22866>



Baltic Carbon Forum 2022 in Kaunas, Lithuania, October 13-14, 2022

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Abstract. The Greensand project includes, beside from safe and efficient geological offshore CO₂ storage, offshore transport by ship and/or pipeline of CO₂ from key side onshore facilities established to capture, liquefy, onshore transport and temporarily store the CO₂ before offloading to storage site. The Greensand project builds on the usage of the offshore Siri complex sandstone reservoirs no longer in use for oil and gas production. The storage sites, offloading and injection systems and transportation means are currently being technically matured. The target is to be able to offer customers safe and reliable transport and storage services from the start of 2026. Currently meanwhile maturing a technical concept, commercial and regulatory activities are ongoing in parallel. The Greensand partners INEOS Energy and Wintershall Dea have also decided to perform an offshore pilot test of injecting liquified CO₂ into a particular reservoir serving as candidate for future long terms storage of CO₂. Along the pilot testing offshore project, material testing and deployment of monitoring techniques are being matured. The Pilot testing offshore planned to take place late 2022 with a 3-months duration.

Keywords: CO₂ storage, pilot testing, ship transport, capacity of up to 8 MTPA, aquifers, oil reservoirs, Denmark, Offshore.