



INNOVATION FUND

Deploying innovative net-zero technologies for climate neutrality

**Greensand Future: Greensand Future:
contributing to EU's CO2 emissions reduction
target by establishing critical EU storage
capacity**

The Innovation Fund is 100% funded by the EU Emissions Trading System

| Project Factsheet

The project aims to permanently store 2.4 million tonnes of captured CO₂ by injecting 0.3 million tonnes per annum (mtpa) for eight years into a depleted oilfield in the Danish North Sea (Nini West). Biogenic CO₂ will be sourced from Danish and other European biogas producers and transported by truck to the port of Esbjerg for temporary storage, then by a dedicated CO₂-carrier vessel to Nini West for permanent storage. The project builds on its experience from the successful 2023 Greensand pilot, which demonstrated for the first time that CO₂ could be transported across borders to be injected safely in a depleted oil field. The project's ambition is to start Greensand Future's operations in early 2026 as one of the first carbon capture and storage (CCS) projects in the European Union to store CO₂ at an industrial scale. If further scaled up, Greensand has the potential to store up to 8 mtpa from 2030, which equals the yearly emissions of approximately 1.1 million Danish citizens and thus plays an important role in the ambitions to reduce Denmark's CO₂

COORDINATOR

INEOS E A/S

LOCATION

Denmark

CATEGORY

Carbon capture and geological storage (CCS)

SECTOR

other

AMOUNT OF INNOVATION FUND GRANT

EUR 41,041,661

EXPECTED GHG EMISSIONS AVOIDANCE

2,251,599 tonnes CO₂ equivalent

STARTING DATE

01 May, 2024

ENTRY INTO OPERATION DATE

31 December, 2025

FINANCIAL CLOSE DATE

31 July, 2025

** Calculated vs. the 2021-2025 ETS benchmark of 6.84 tCO₂e/tH₂, not taking into account additional carbon abatement due to substitution effects in the H₂ end use application, i.e. conservative estimate.*

emissions by 70% by 2030 compared to 1990 levels. The project contributes to a relative greenhouse gas (GHG) emission avoidance of 94% compared to the reference scenario where CO2 is vented into the atmosphere.

Given the absence of readily available storage capacity, Greensand Future will offer a very short time to market compared to other concepts and projects. It can act as an enabler for European CCS projects. The project aims to commercialise the “Port to Platform Injection” concept and enable the development of a CO2 carrier based on a multipurpose vessel that can be applied to newly built and refurbished vessels. The project will also introduce innovative ways to reuse existing oil and gas infrastructure and systems for CO2 storage. The project will contribute to an absolute net GHG emission avoidance of 2 251 599 tonnes of CO2 equivalent or the yearly emissions from approximately 330 000 Danish citizens.

Greensand Future focuses on demonstrating safe and efficient CO2 storage, building on the experience gained from its pilot, which is critical to building political and public support for CCS projects. By establishing a full CCS value chain and one of the first offshore CO2 storage facilities in Europe, the project will contribute to public acceptance of CCS and lead the way for other offshore and onshore projects and the development of a CCS market. Establishing one of the earliest operational storage capacities directly supports the Net-Zero Industry Act’s target of 50 million tonnes of annual CO2 injection capacity by 2030.

The project’s innovative approach combines efficient, sustainable, and effective repurposing of existing oil and gas infrastructure with maximising the reuse of end-of-life assets that would otherwise go to waste. Greensand Future’s implementation will also support transferring related knowledge and skills to the CCS sector and retaining offshore jobs.

| Participants

INEOS E A/S	Denmark
NORDSOFONDEN	Denmark
Wintershall Dea International GmbH	Germany