

INNOVATION FUND

Deploying innovative net-zero technologies for climate neutrality

STARFISH: Sequestration Technology and Reservoir: Floating Injection and Storage Havstjerne

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

| Project Factsheet

The project aims to develop a CO₂ storage facility comprising an innovative offshore injection unit that will receive CO₂ directly from shuttle tankers and inject it into a deep saline aquifer for permanent sequestration. The required injection wells are part of STARFISH's scope for developing the storage site. In the first quarter of 2023, the project partners were awarded the exploration licence for the Havstjerne reservoir (EXL006) on the Norwegian Continental Shelf. Phase 1 of the project will enable storing 42.75 million tonnes of CO₂e after its first ten years of operation, with an absolute greenhouse gas (GHG) emission avoidance of 42 million tonnes of CO₂e and a relative GHG avoidance potential of 98%.

The project will develop a novel offshore injection unit able to inject into the reservoir directly. This innovation enables greater flexibility and avoids the need for fixed pipeline infrastructure. STARFISH is innovating by offering CO₂ "storage-as-a-service", complementing the industrial development of carbon capture and storage (CCS).

COORDINATOR

HARBOUR ENERGY NORGE AS

LOCATION

Norway

CATEGORY

Carbon capture and geological storage (CCS)

SECTOR

other

AMOUNT OF INNOVATION FUND GRANT

EUR 225,000,000

EXPECTED GHG EMISSIONS AVOIDANCE

42,046,495 tonnes CO₂ equivalent

STARTING DATE

01 January, 2025

ENTRY INTO OPERATION DATE

30 June, 2029

FINANCIAL CLOSE DATE

31 May, 2026

* 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.

The project aligns with the Industrial Carbon Management Strategy and Net-Zero Industry Act (NZIA), European policies to develop cross-border transport and storage networks. STARFISH will strongly contribute to increasing options for storing CO2 geological in the EEA in addition to the target of capturing and storing at least 50 million tonnes (Mt) of CO2 annually by 2030 in the EU, as define in NZIA.

STARFISH is well positioned to create the first-of-its-kind offshore solution for CO2 storage in Europe, enable scalability through the future capacity

expansion of Phase 2, and pave the way for creating a pan-European CO2 transportation and storage network. With a planned lifespan of 25 years, the project will be a key contributor to achieving European climate targets and overcoming one of the most critical challenges of the CCS pathway as a strategic decarbonisation technology: access to CO2 storage sites.

| Participants

HARBOUR ENERGY NORGE AS

Norway

Stella Maris CCS AS

Norway

Havstjerne ANS

Norway