

INNOVATION FUND

Deploying innovative net-zero technologies for climate neutrality

GreenWave: Replicative Approach to e-Methanol Production Scaling

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

| Project Factsheet

GreenWave aims to build a green methanol production plant to provide a clean alternative fuel for the shipping sector. With a 100 000-tonnes/year production capacity, the project is expected to avoid almost 150 000 tonnes of greenhouse gas (GHG) emissions annually. The e-methanol will be produced entirely from green hydrogen and biogenic CO₂. Therefore, the project would lead to a 96% relative GHG emission avoidance compared to marine diesel.

The project's innovation lies in combining 150 MW Alkaline electrolyser technology, e-methanol conversion processing, balance of plant equipment, and upscaling of the integrated solution, resulting in the largest e-methanol plant in Europe. GreenWave's plant can also support local grid balance and enable additional renewable energy deployment. It will promote a circular economy by providing district heat and sourcing water for the electrolyser from the local wastewater facility.

COORDINATOR

EUROPEAN ENERGY A/S

LOCATION

Denmark

CATEGORY

Energy intensive industries (EII)

SECTOR

Refineries

AMOUNT OF INNOVATION FUND GRANT

EUR 55,800,000

EXPECTED GHG EMISSIONS AVOIDANCE

1,493,510 tonnes CO₂ equivalent

STARTING DATE

01 April, 2025

ENTRY INTO OPERATION DATE

31 December, 2028

FINANCIAL CLOSE DATE

30 June, 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.

GreenWave will strengthen the entire e-fuels production value chain by contributing to maturing Europe's manufacturing capabilities, from electrolyzers to other technologies and components needed to synthesise e-fuels. Therefore, the project will contribute to the stability of critical supply chains for the green transition, in line with the Green Deal Industrial Plan and the Net-Zero Industry Act.

The project's impact is expected to grow, with two more sites identified in Denmark and a pipeline of 23 international projects under development. The project will substantially strengthen the European e-fuel production chain by developing the industry's manufacturing capabilities. Additionally, GreenWave is expected to create 30-40 jobs and promote green electricity development, contributing to regional economic growth.

| Participants

AMMONGAS A/S	Denmark
EUROPEAN ENERGY A/S	Denmark
NAKSKOV PTX APS	Denmark
SOFT & TEKNIK A/S	Denmark