



# INNOVATION FUND

Deployment of net-zero and innovative technologies

## TRISKELION: Green Methanol manufacturing from CO2

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

### | Project Factsheet

TRISKELION: Green Methanol manufacturing from CO2

The TRISKELION project will build an innovative e-Methanol production plant in Mugardos (Galicia, Spain). This renewable product will be synthesised in an innovative single reactor from CO2 ( captured from the flue gas of a combined heat and power plant), and renewable hydrogen (produced from electrolyses). The relative greenhouse gas (GHG) emission avoidance is estimated to around 137%compared to the reference scenario.

The innovation of the project comes from the combination of different technologies with different degrees of technological maturity. The proposed capacity is significantly larger than any demonstration project in Europe, and will increase the System Readiness Level (SRL) and Technology Readiness Levels (TRL) of the plant, enabling it to

**COORDINATOR**

FORESTAL DEL ATLANTICO, S.A

**LOCATION**

Spain

**CATEGORY**

Energy intensive industries (EII)

**SECTOR**

Refineries

**AMOUNT OF INNOVATION FUND GRANT**

EUR 48,846,672

**EXPECTED GHG EMISSIONS AVOIDANCE**

860,282 tonnes CO2 equivalent

**STARTING DATE**

01 January, 2024

**ENTRY INTO OPERATION DATE**

31 December, 2027

**FINANCIAL CLOSE DATE**

30 June, 2025

reach a commercial level that allows its replication in different sectors.

The system has been designed to produce 40 000 tonnes per year of e-Methanol. It will also recover 59 643 tonnes per year of liquefied green oxygen from the electrolyzers, that will be later purified and liquified to ensure it is valuable. Electricity from renewable sources, through Power Purchased Agreements (PPAs), will be supplied to the entire system ensuring renewable and continuous power source during the 8 000 hours/year of operation. The excess water stream generated in the e-Methanol distillation will be reused directly in the electrolyser, minimising the total water quantity required. The project will avoid approximately 860 282 tonnes of CO<sub>2</sub> equivalent of absolute GHG emissions during the first ten years of operation.

## | Participants

FORESTAL DEL ATLANTICO, S.A

This project will develop solutions and products (e-Methanol and renewable oxygen) to be deployed in the market, integrating different technologies and systems, and avoiding the use of fossil-based raw materials by using secure (in time) and stable (in quality) renewable energy sources. In addition, the project will maximise energy integration throughout various process units.

TRISKELION will contribute to the European objectives set down in the REPowerEU communication, particularly by producing a synthetic fuel, e-Methanol, that will reduce fossil fuel consumption in industry and transport. The project will also have relevant regional socioeconomic impacts, creating 35 direct jobs and 70 indirect jobs, with a potential for scalability and replicability of the technology.

Spain