



MANUFACTURING OF COMPONENTS
FOR RENEWABLE ENERGY

INNOVATION FUND

Deploying innovative net-zero technologies for climate neutrality

PIVOT: Piloting and Validating the manufacturing and assembly of the most powerful Offshore wind Turbine generator

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

| Project Factsheet

The project aims to contribute to the large-scale deployment of offshore wind energy in Europe by optimising an offshore wind turbine's manufacturing and assembly processes. PIVOT's innovation involves advanced design elements, introducing new materials, and developing methods for manufacturing key components (blades, nacelles, and towers). The project builds on HIPPOW, a project previously awarded by the Innovation Fund, and aims to address technical challenges associated with scaling up, making this technology more efficient. By deploying offshore energy, the project supports sustainable production practices and significantly reduce greenhouse gas (GHG) emissions compared to conventional energy sources. The project's potential relative GHG emission avoidance during its first ten years of operation is calculated to be 99.94% compared to the reference scenario.

PIVOT will deploy innovative manufacturing processes that will result in a more efficient and scalable solution without compromising performance or

COORDINATOR

SIEMENS GAMESA RENEWABLE ENERGY GMBH CO KG

LOCATION

Denmark

CATEGORY

Renewable Energy (RES)

SECTOR

Manufacturing of components for renewable energy

AMOUNT OF INNOVATION FUND GRANT

EUR 40,000,000

EXPECTED GHG EMISSIONS AVOIDANCE

140,385 tonnes CO₂ equivalent

STARTING DATE

01 May, 2024

ENTRY INTO OPERATION DATE

31 December, 2025

FINANCIAL CLOSE DATE

30 September, 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.*

reliability. The offshore wind industry faces significant challenges as it shifts towards larger turbines, including the need for cost-efficient manufacturing and assembly methods. The project addresses these challenges by validating and optimizing the manufacturing and assembly processes of the advanced wind turbine, introducing new techniques that reduce production risks and lower the costs of deploying larger turbines. The equipment produced by the project will lead to sizeable renewable electricity production over its first ten years of operation, supplying enough green electricity to power over 8 500 average Danish households annually, avoiding approximately 140 385 tonnes of CO2 equivalent emissions during this period.

Europe's reliance on fossil fuels presents significant challenges, including dependency on imports from

third countries. PIVOT helps mitigate this dependency by securing access to net-zero technologies. By strengthening Europe's technological leadership in offshore wind energy, the project aligns with policy priorities such as the European Green Deal, reaching climate neutrality by 2050 and meeting renewable energy targets. Additionally, the project will directly contribute to the Net-Zero Industry Act benchmark of establishing at least 40% of domestic capacity in equipment manufacturing for wind power deployment by 2030.

The project reinforces the wind industry's value chain. PIVOT will help the offshore wind industry meet the growing electricity demand by testing and refining its processes. It will also create direct and indirect quality jobs and boost employment in related sectors such as manufacturing, logistics, and operational services for offshore wind farms.

| Participants

SIEMENS GAMESA RENEWABLE ENERGY GMBH CO KG	Germany
SIEMENS GAMESA RENEWABLE ENERGY AS	Denmark
SIEMENS ENERGY GLOBAL GMBH CO. KG	Germany