

## | Project Factsheet

The Saoirse Wave Energy Project

Saoirse is a first-of-a-kind 5 megawatt (MW) wave energy development located 4 kilometres offshore from County Clare, Ireland. The project will deploy and demonstrate the CorPack, a pre-commercial wave energy array using the CorPower Ocean wave energy converter (WEC) technology. Saoirse is a stepping-stone for proving the bankability of wave energy and kickstarting the development of larger projects in Ireland, the European Union (EU), and across the world. It will lead to a relative greenhouse gas (GHG) emissions avoidance of 96.6% compared to the business-as-usual scenario.

The CorPack design brings a breakthrough degree of innovation as a turnkey wave farm building block of 5-10 MW capacity, gathering several CorPower WECs in a cluster. The project will exceed

### COORDINATOR

ESB WIND DEVELOPMENT LIMITED

## **LOCATION**

Ireland

## CATEGORY

Renewable Energy (RES)

### **SECTOR**

Hydro/Ocean energy

## **AMOUNT OF INNOVATION FUND GRANT**

EUR 39,475,000

## **EXPECTED GHG EMISSIONS AVOIDANCE**

26.245 tonnes CO2 equivalent

### **STARTING DATE**

01 January, 2024

## **ENTRY INTO OPERATION DATE**

31 January, 2030

### **FINANCIAL CLOSE DATE**

31 October, 2027

the current state-of-the-art by overcoming the challenges that are preventing wave energy from evolving and upscaling commercially. The electricity from each CorPack is exported to the grid via subsea cables through a floating electrical collection hub. With 14 CorPower WECs, the 5 MW CorPack demonstrated in this project will validate, at farm level, the integration of all systems needed to generate electricity from ocean waves. The Saoirse project will generate 15 gigawatt hours (GWh) per annum of renewable electricity from ocean waves. This is equivalent to the annual demand of around 4 200 homes, displacing GHG emissions of 27 000 tonnes of CO2 equivalent in the first ten years of operation.

By accelerating wave energy roll out, Saoirse Wave Energy will enable others to implement wave energy farms, contributing to the delivery of the European Commission's Green Deal deployment targets for tidal and wave energy. It will demonstrate wave energy levelised-cost-of-energy (LCOE) reduction towards the EU SET Plan's target of EUR 150 per megawatt-hour.

Saoirse Wave Energy will demonstrate a reinforced, 100% European supply chain with engaged industrial suppliers, contributing to the European Green Deal's socially just transition. Parts of the system are manufactured in Ireland, including the composite hulls in a unique mobile factory. Ocean installation, wave farm management, and operation and maintenance rely on local Irish suppliers from the wave farm location. A technoeconomic analysis of a 10MW CorPack shows benefits in Gross Value Added, and 54.27 job-years supported, strengthening the local supply chain and helping create a new local wave energy industry. This project will create 5 local full-time jobs.

# | Participants

ESB WIND DEVELOPMENT LIMITED
SAOIRSE WAVE ENERGY LIMITED

Ireland

Ireland