

## Celtic Sea Power

### An Introduction

Celtic Sea Power is the trading name for Wave Hub Development Services Ltd, a wholly owned subsidiary of Cornwall Council.

The company has its genesis in the Wave Hub wave energy test site which was built in 2011. In response to changing market conditions, and in line with a strategic direction led by the Cornwall and Isle of Scilly Local Enterprise Partnership (CIOS LEP), the site has been re-purposed and consented as a Floating Offshore Wind farm. It is currently in the latter stages of a sale to the private sector for final development and construction. The Council has retained Wave Hub Development Services Ltd as an entity dedicated to leading the strategic development of the Celtic Sea for Floating Offshore Wind (FLOW). This is in recognition of the once-in-a-generation opportunity that this represents for the region.

Over the last two years, the team have played a pivotal role in informing policy and aligning investor appetite to develop a pipeline of industrial scale projects in the Celtic Sea which will come to fruition over the next ten years. The emphasis now shifts to accelerating the industrial response to this pipeline to ensure that;

- the UK achieves first move advantage in the industrialisation of Floating Offshore Wind,
- the knowledge, means, methods and systems are in place to strategically develop the Celtic Sea to drive that first mover advantage,
- the barriers and challenges created by ad hoc development and cumulative impact are overcome by strategic thinking and effective partnerships,
- sufficient capacity is developed within the supply chain to drive the critical mass needed to secure at least 60% of UK content in Celtic Sea farms and develop sustainable export opportunities for our regional businesses.

In order to achieve this, Celtic Sea Power has a pipeline of funded projects planned for the next four years. This includes;

- Leading the Cornwall FLOW Accelerator. This is a collaborative research project involving the University of Plymouth (UoP), University of Exeter (UoE) and the Offshore Renewable Energy Catapult (OREC) which is focussing on developing research tools and acquiring validation data which will form the basis of knowledge and technology exchange. This £6m project has been approved/ funded by ERDF, will run until June 2023 and is currently mobilising.
- Leading the Pembrokeshire Demonstration Zone project. This will consist of industrial research leading to a proof of concept multi-purpose electrical connector design with associated consents. This £4.6m project has been approved by the Welsh European Funding Office (WEFO) and (subject to contract) Swansea Bay City Deal. The project is being contracted now and will run until June 2023.
- Leading the South West FLOW Accelerator. This is collaborative research project involving UoP, UoE, OREC and the Falmouth Docks and Engineering Company (FDEC) was one of 17 projects shortlisted nationally. It received funding to develop a programme which is focussing

on developing better understanding of the Celtic Sea resource area seabed, habitats and metocean characteristics. It will also deliver primary RD&I focusing on technology cost reduction which will underpin knowledge and technology exchange. A final funding decision is currently pending and, if successful, the £60m budget will be met by the Strength in Place Fund and match funding. The project will run from mid-summer 2021 to June 2025.

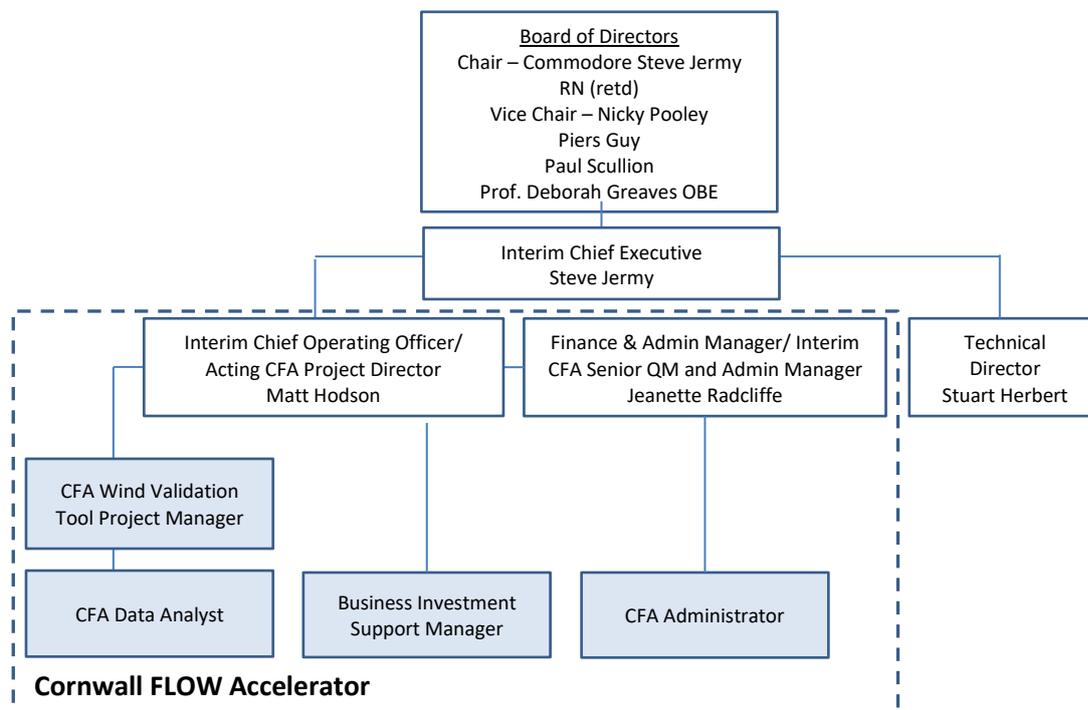
In addition to our primary research activities, we also are involved in;

- The operation one of Cornwall’s largest batteries, with a 1.5MW unit installed in Hayle supporting Smart Grid solutions.
- Developer Service Agreements – Contract services to support the private development of FLOW at the Wave Hub site.

## Organisation

Celtic Sea Power is the trading name for Wave Hub Development Services Ltd, a company limited by share, wholly owned by Cornwall Council. The current board of directors were appointed on the basis of their experience and track record in Offshore Wind, Marine Renewables, Offshore Operations, Research, Engineering, Finance and Compliancy. They ensure that this publicly funded organisation operates with a keen private sector focus, filling an essential role between the Public Sector, Institutional Investment and the Private Sector.

The Executive function of the company is carried out by a small, but experienced team. This is the foundation upon which we now intend to grow.



## Company Culture & Outlook

Recent work on brand values which involved the board and the current team crystallised a strapline which encapsulates Celtic Sea Power' outlook and goes some way to describing our culture.

### **LEADING, INNOVATING, INSPIRING**

This is best demonstrated in the strategy we are developing for ourselves which provides context for our planned activities over the coming years.

#### “LEADING”

Professional - We will build on the outstanding offshore renewable energy expertise and knowledge already present in the region and develop this in a way that sets new standards. Our management and decision-making will be driven by our long-term strategy and based on objective assessment of the latest data and evidence.

#### “INNOVATING”

Pioneering - We will pioneer a number of approaches, revolutionising and streamlining the consent process, accelerating RD&I so as to build supply chain capacity, and integrating business support and other resources across the region, in ways that accelerate innovation and enable first-mover advantage.

#### “INSPIRING”

Ambitious - We will challenge the fact that UK is not currently seen as a primary market for FLOW by the world's leading developers and change this perception, transforming the region into a FLOW world leader. We aim to redefine the potential scale of the FLOW opportunity at a more ambitious level than has so far been indicated by the UK Government.

## Cornwall FLOW Accelerator

The purpose of the Cornwall FLOW Accelerator can be summed up as;

- Deliver a novel industry zonal wind resource assessment tool, thereby accelerating the delivery of offshore floating wind energy in Cornish Offshore waters, significantly supporting increased production of renewable energy
- Build supply chain capacity capable of delivering low carbon footprint operations within the offshore floating wind sector
- Undertake research and development, innovation and supply chain work for low carbon technologies, linked to floating offshore wind
- Deliver knowledge transfer between higher education / further education institutions and businesses, with the Universities of Exeter and Plymouth involved as project partners and significant engagement with a broad variety of businesses from the offshore floating wind sector and its supply chain
- Undertake research, development and innovation with a particular focus on optimisation tools which will allow the virtual testing of multiple offshore operations which will reduce

costs of low carbon energy production and deliver sustainable operational methodologies for offshore floating wind technologies.

The project is being delivered collaboratively by Celtic Sea Power (WHDS), University of Exeter (UoE), University of Plymouth (UoP) and Offshore Renewable Energy Catapult (OREC). There are eight work packages, summarised in the following table, which are linked by a number of interdependencies. Celtic Sea Power is ultimately responsible for the successful and compliant delivery of the project.

Work Package	Title	Summary of Activities	Delivery Partner
1	Project Management	Monitoring, evaluation, claim management	WHDS
2	Lidar validation for low carbon Investment	Develop scope of campaign, Procure Lidar campaign, develop data sharing portal	WHDS
3	Low Carbon Offshore EIA strategies	Low carbon sensor technology, platforms and data concepts	UoP
4	Innovation in low carbon design and manufacturability	Review OWIC roadmaps, design and introduce LC manufacturing processes	OREC
5	Low carbon offshore processes	Modelling and simulation, logistic and O&M strategies, and vessel and energy vector integration	UoE
6	Low Carbon Simulator data platform	Establish requirements, set up data store, align with industry	OREC
7a	Low carbon FLOW simulator development	Programming of simulator elements and validation	UoE
7b		Procure DP simulator and integrate into complete FLOW sim offer	UoP
8	Dissemination	Dissemination of research outputs	WHDS

## Applying for a role

If you are interested in applying for a role, please read the relevant job description and this information paper carefully. Then, please submit by email to [jeanette.radcliffe@wavehub.co.uk](mailto:jeanette.radcliffe@wavehub.co.uk);

- An up to date CV highlighting experience relevant to the role you are applying for (Max 2 pages A4)
- A supporting statement (max 2 pages A4) describing;
  - Which role you wish to apply for,
  - How you meet the person specification outlined in the job description,
  - How you think your approach will be Leading, Innovating, Inspiring.