

# 'Towards 2030. Welcome to the Future' - A Position Paper

## Offshore Renewables and Marine Technology in Cornwall & Isles of Scilly

13<sup>th</sup> July 2018



### Introduction

The Cornwall & Isles of Scilly Marine Renewables Roadmap 2015-2025 (henceforth titled the MRE Roadmap 2015) was published in 2015 to provide a direction for the public-sector in targeting investment support that could catalyse the evolution of a successful marine renewable energy sector in Cornwall.

In mid-2017, work was initiated by the County Council (CC) to review the Roadmap, through the establishment of an ad-hoc working group, led by the newly established Marine Hub, a public sector funded organisation sitting within Cornwall Development Company (CDC) and Marine Offshore Renewables Group (MOR Group), the trade body representing the offshore renewable energy business operating in Cornwall and the South West, supported by public and private sector experts from the CIOSELP and marine technology sector (henceforth titled the Working Group).

This purpose of this position paper is to:

- first, set out the Working Group's interim findings and preliminary conclusions;
- second, make recommendations for the remaining actions needed to update the Roadmap and provide better strategic direction to ensure that the public-sector resources targeted at the sector are being efficiently and effectively used.
- third, take forward the work carried out by the LEP in relation to the sector, as outlined in the '10 Opportunities' document and Vision 2030.

### Background

UK is a world leader in marine renewables, with Cornwall one of the UK's three leading marine renewables regions, alongside Scotland and Wales. (*See industry definition as appendix to this paper.*)

The publication of the MRE Roadmap 2015 sought to leverage this position. With good progress made since then, an update is now called for.

Between 2015-2018, solid foundations have been laid to build on our world leadership and accelerate the growth of the sector. Meanwhile technologies have also progressed. For example, we have seen rapidly growing interest in tidal range and tidal stream (eg Swansea Bay, Maeygen) as well as other rapidly growing areas such as floating wind whilst some other marine technologies have progressed at a slower rate, as convergence is sought on the most effective and efficient system designs.

The renewables sector is the fastest growing sector worldwide, with most renewables offshore. As the sector matures, this is also a catalyst for the development of related marine technology areas,

such as autonomous vessels, robotics and advanced manufacturing as well as a wide range of other marine tech applications and services – all of which represent additional economic growth opportunities for Cornwall.

Skills and capability have begun to be enhanced through a series of initiatives, the Marine Enterprise Zone has been launched, funding and support has been made available through the ERDF funded Marine-i project, and there have been important advances towards closer partnership between the public and private sectors, including the establishment of Cornwall Marine Hub and the continued work of the Marine Offshore Renewables Group, the industry body that represents offshore renewables in Cornwall and the South West, and Cornwall Marine Network, which includes a wide range of organisations from across the Cornish marine and maritime sector.

This progress has helped position Cornwall and Isles of Scilly as world leaders in the sector. However, there is remaining work to be done to ensure that this position is secure for the long term and to generate the jobs growth and economic benefits that are within our grasp. This will be realised as marine energy deployments are enabled and global export opportunities are embraced.

In particular, whilst these developments described above have been promising, they have not been accompanied by the parallel development of a public-private sector governance mechanism to ensure that the resources allocated and public-sector work undertaken in the sector's support is properly directed, integrated and monitored.

A key issue is ownership, and the first finding of the work group is that the CIOS Marine Renewables Roadmap needs to be owned by an entity that is business-led and public-sector supported. This entity needs to have the wherewithal to: provide strategic direction for the public-sector resources being used by the sector, human, infrastructural and financial; ensure that the effort therein is properly directed and coordinated; hold to account those organisations and individuals responsible for delivery.

Local enterprise partnerships have been established for just this purpose, and the obvious entity to own the CIOS Marine Renewables Roadmap is the CIOS LEP.

This document provides a summary for the CIOS LEP of the work undertaken to date by the CIOS Marine Renewables work group and sets recommended actions to be undertaken over the next 6 months needed to complete the CIOS Marine Renewables Strategy.

### **Our Working Group's Ambition**

By 2030, Cornwall and the Isles of Scilly will be at the forefront of world markets in marine offshore renewables and marine tech, with a vibrant and growing private sector. This world-leading private sector will in turn be supported by a world leading public sector, the two working together in a highly productive collaboration with a deeply rooted culture that fosters innovation. The sector will create high value jobs bringing prosperity to the local economy, contribute to the UK's energy security and carbon reduction goals and export technologies and services worldwide, whilst also directly contributing to Cornwall's recently released energy vision for 2030.

## Offshore Renewables – Strategic Context

To create the right strategy for the development of Cornwall's growth in offshore renewables and marine tech, we need a clear understanding of the wider strategic context.

This includes but is not limited to:

**Global trends in Energy and Climate Change** – where there is increasing evidence not only of the impact of fossil fuels on the climate but also that these fossil fuels are at or around peak production and there will need to be a way to replace them as they become more scarce and expensive. This trend is being accelerated by legislation designed to reduce carbon emissions. Eg the European Commission 20-20-20 targets, the EU Renewable Energy Directive and the UK Climate Change Act.

**Global trends in the Offshore Renewables sector** – including Floating Offshore Wind and Wave, Tidal Stream Energy, Tidal Range Energy, Ocean Thermal Energy Conversion (OTEC) and Ocean Current Energy. The ocean energy resources therein represent, with geothermal, the last of the world's unexploited renewable sources capable of delivering power at grid and industrial scale.

**Global trends in the Marine Tech sector** – including Big Data, Robotics and Autonomous Vessels, Smart Ship Technology, Advanced Manufacturing, Sensor Technology, Hybrid Propulsion and Advanced Communications.

**The UK Industrial Strategy** – which highlights three of the four Grand Challenges facing the country as being growing the Artificial Intelligence and data driven economy, achieving clean growth, and becoming a world leader in mobility and transport.

**The BEIS Clean Growth Strategy** – which states that we will maximise the advantages for UK industry from the global shift to clean growth – through leading the world in the development, manufacture and use of low carbon technologies, systems and services that cost less than high carbon alternatives.

**National Marine Strategies**, including the National Shipbuilding Strategy, the National Maritime Strategy and the Future of the Sea Report – which considers the role that science and technology can play in understanding and providing solutions to the long-term issues affecting the sea. It outlines a number of recommendations to help the UK utilise its current expertise and technological strengths to foster trade links, build marine capacity across the world and collaborate to tackle climate change.

**Local Economic Strategies**, including the Cornwall Maritime Strategy, the Environmental Growth Strategy for Cornwall and The Local Enterprise Partnership vision for Cornwall – as laid out in '10 Opportunities' which highlights the marine sector as 'a marine superpower' contributing £500 million per annum to the region's annual GDP.

**Rapid Pace of change**– this can and does lead to uncertainty in many areas (eg Brexit, changes to Government policy framework for renewable energy and pricing) and means that we need a strategy and plan that is agile and flexible.

## CIOS Offshore Renewables Status – Strengths & Weaknesses

**County wide strength in renewable energy** - Cornwall is fast becoming one of the UK's exemplar regions for renewables. We have seen 550% growth since 2010 and with 32% of the region's electricity generated by local renewable sources in 2016. ( *Source: Local Enterprise Partnership for Cornwall and Isles of Scilly, 10 Opportunities, published 2018*).

This widespread understanding of the renewables opportunity in both the local private and public sectors is an ideal foundation for continued growth in the offshore renewable energy sector.

**The working group's review of the CIOS ORE Sector's status revealed both strengths and weaknesses:**

- **Strengths:**
  - **Ambitious and innovative private sector**– Cornwall is home to a significant number of innovative businesses in this sector, including offshore renewables and marine tech companies, many of which are exporting around the globe
  - **An outstanding infrastructure** - including the 15- hectare Marine Enterprise Zone, access to national and international grant funding and exceptional research facilities such as FabTest and Wave Hub, plus one of the world's largest natural harbours at Falmouth and a range of smaller but capable ports.
  - **Finance for RD&I** – including Cornwall and Isles of Scilly Development Fund (CIOSIF) – a £40m investment fund to support access to finance where barriers exist for SMEs and seek to address an equity gap in start-up, early stage and development capital and the Marine Challenge Fund
  - **Depth of expertise and know how**– this is embedded in the experience, knowhow and RD&I capabilities of the private sector, supported by leading local academic institutions including the Universities of Exeter and Plymouth.
  - **Established Community Energy sector** – an active and engaged local community energy sector supported by a revolving loan facility established with Cornwall Council to retain the financial benefits of renewable energy development within Cornwall. (The loan facility, managed by the Low Carbon Society, currently has an active loan book of £3.1 m)
  - **Talented skills base** – Although further skills development work is needed for the long term, there is support to skills development related to the Marine sector in Cornwall including Falmouth Marine School covering a comprehensive selection of courses from introductory to degree level including Marine Engineering, Science & Biology, whilst Cornwall Marine Network, an organisation dedicated to supporting the Marine sector in Cornwall offers access to a programme of training skills developed specifically for the Cornish Marine Sector.

- **Weaknesses:**

- **Private and public sector collaboration** – While some excellent work has been done over recent years, there is significant scope for improvement in this area. We need to ensure that the two sectors understand the overall strategy for the region and fully appreciate the benefits of working more closely together. When they operate at their best, private and public sector collaborations can become true creative alliances that can achieve exceptional results. We need to make sure that we have clearly identified our common goals and objectives, that the public and private interests have been balanced in our approach, and that there is clear, open and constructive dialogue between the private and public sectors as well as clear routes for the private sector to influence public sector at local and national policy level, especially on spatial planning.
- **Public sector support needs to continually improve its effectiveness** – In such a competitive and fast-moving industry, we need to ensure that the mechanisms for providing public sector support are working as efficiently and effectively as possible, and that the governance and decision-making processes allow the private sector to perform to its full potential. We need to make sure that the public sector are speaking the language of the private sector and that we understand their specific needs and challenges, including for example long term skill needs eg apprenticeships for practical skills. The private sector needs to be reassured that the public sector have a clear, rational and fair decision-making process and that they are being supported so far as possible. The public sector could for example provide support to the industry by working with the Duchy and Crown Estate on strategic planning, identifying MRE deployment areas.
- **Private businesses do not play a large enough role in building the sector** – The majority of businesses are focused on their own, individual commercial goals and do not understand the broader strategy for the sector or how they can play an important part in helping to develop the local marine industry. There are also barriers such as limited time and a degree of cynicism about the public sector. While the public sector can help to set the vision and provide vital infrastructure and support, it will be the creativity and entrepreneurship of the individual business that will build a truly sustainable industry for the future. Many of the local businesses we speak to have a strong commitment to Cornwall and want to see the wider industry flourish. Some are already working in partnership with other businesses to share resources and expertise or collaborate on larger projects. We have an important role to play in helping to nurture, inspire and lead the long-term growth of the industry.
- **We need clearer models of 'best practice'** – The way that public/private sector collaboration operates in our marine industry operates needs to be first class, in line with the demands of modern, innovative businesses, and reflecting best practice lessons learnt anywhere in the world. We need to ensure that we have clear, objective and transparent processes that are fully understood by the private sector. Roles and responsibilities must be tightly defined, so that it is clear what is expected of both parties on each project and there are clear goals and deadlines for delivery. We should also be regularly reviewing our processes to see if there is any way that they can be improved and fine-tuned.

- **Cornwall and the sector has to continually raise its profile** – We operate in a complex, global market with many competing players. Making clever use of the resources we have in order to communicate Cornwall’s proposition to a worldwide audience of businesses and inward investors is both a priority and a constant challenge. In order for a relatively small region to stand out in a crowded marketplace, Cornwall will need to punch significantly above its weight in the way that it communicates its message. This will require us to tightly target the specific kinds of high-value businesses that we want to attract and make it clear that we understand their particular needs and requirements. It will also require us to be clear about the unique strengths that Cornwall has in terms of skills, resources and infrastructure and to focus our communications around these assets, so that our message has the best possible chance of cutting through. In addition, the sector does not currently have a strong enough profile to attract the highest calibre young people into careers in the sector.

## Strategic Objectives

The Working Group agreed that the Roadmap had provided a key foundation and helped focus much of the public-investment being made in the sector, but that what was now needed was an explicit strategy, and resourced action plan, to help provide direction to the efforts now under way, termed for convenience the CIOS Offshore Renewable Energy Strategy 2018-2030 (ORE Strategy 2018).

The Working Group agreed that such a strategy would likely need to focus on the development of the sector, in three phases, short, medium and long term, and with clear objectives for each:

- **Short Term (2018-2020)** - to establish an efficient and effective working partnership between private and public sectors, including influencing the Cornwall supplementary planning policy, and providing high quality support to offshore renewables and marine tech businesses as they build capacity and experience and expand further into UK and international markets, in the process establishing the local sector's reputation, nationally and internationally.
- **Medium Term (2021- 2025)** - to continue to help businesses accelerate their exports through building capability across marine renewables and emerging marine tech areas as well as preparing the ground for significant offshore renewable deployments off the Cornish coast through infrastructure enhancement, including through pilot arrays.
- **Long term (2026-2030)** – to support the large-scale deployment of offshore renewables, to contribute to Cornwall Council's 2030 renewable energy targets and put Cornwall in a position to export energy to the rest of the UK. The delivery of these objectives will in turn stimulate the development of a range of innovative marine tech solutions which will help establish the Cornwall marine tech sector as a global centre of excellence for marine innovation.

The Working Group further agreed that this strategy would need to be owned by a business led entity with the wherewithal to first facilitate the formulation of the strategy and second direct, oversee and hold to account those organisations and individuals responsible for its implementation.

## Recommended Actions

A Five Point Strategic Action Plan has been developed to deliver these Aims and Objectives.

**ONE: To significantly improve collaboration between the private and public sectors.** This to be achieved through a thorough examination of those current partnership mechanisms and engagement, with the objective producing a series of industry led recommendations, which will improve the quality and comprehensiveness of collaboration. Examples for consideration include;

- Greater use of online technology to facilitate communications, enabling better informed engagement, better decision making and more coherent action in support of the private sector.
- Facilitating access to leading edge centralised market intelligence for the sector.
- An innovative approach to apprenticeship programmes to develop the labour pool for the long term
- Enhancing spatial planning activities to incorporate the marine space in line with the currently evolving South West Marine Plan. Activities to include resource and constraint mapping to guide the potential designation of strategic marine energy development areas. Alongside this action we will also seek to complete complimentary activities to expand the current Cornwall Renewable Energy supplementary planning documentation (SPD) to incorporate marine energy technologies. The goal here is to streamline required consenting and licensing processes whilst maximising stakeholder buy in. The action will also enable rationalised geographical targeting of investment support into services and infrastructure necessary to enable the successful deployment of marine renewable energy technologies.

**TWO: To carry out a comprehensive analyses of all aspects of current public sector support and governance for the sector with the objective of optimising performance.** The scope of this to cover business support, skills training, investment support and strategic infrastructure improvement, as well as to include a critical assessment of the current structure and effectiveness of the existing governance and decision making mechanisms that oversee the allocation of these resources. This would also cover analysis of resource and restrictions (eg shipping lanes, MoD radar coverage) so as to establish opportunities for MRE deployment across different MRE technologies. The goal of this action is to create an outstanding calibre of public sector support that empowers the private sector, promoting growth. Examples for consideration could include:

- Cornwall Council to work with the Duchy, Crown Estate and MMO to look at strategic development areas for different MRE technologies. This is especially pertinent in the intertidal area that could be utilised for tidal range generation and is under shared responsibility of Cornwall Council as the local planning authority and MMO.

**THREE: To stimulate private sector engagement in sector wide initiatives and activity designed to help build the sector overall.** To achieve this, private sector engagement mechanisms are to be appraised and improved mechanisms implemented. Time pressure is a key barrier to involvement, combined with low awareness and understanding of public sector strategies and activities. This is

essential to ensure that maximum private sector ideas are contributed to the process and to ensure that there is private sector buy in to the overall short, mid and long term strategy.

**FOUR: To become an exemplar region for 'best practice' public/ private sector collaboration.** The first step is to research and collate lessons that can be learned from outside the county. This to include a review of lessons learnt from comparable public/ private including collaborations and other tech sectors, as well as review of governance in other regions competing internationally in offshore renewables and marine technology. As well as looking at public/ private sector collaboration, this will include collaboration within the industry, for example with other regions.

**FIVE: To continue to establish an improved 'shop front' for the region and sector** through improved promotion of Marine Hub and the MOR group locally, nationally and internationally. This would entail a thorough evaluation of the sector's current marketing and PR resources and mechanisms.

#### **Outline timetable:**

**May 16<sup>th</sup> 2018: Agreement with LEP board - ✓**

**July/ August 2018: Public/ private consultation – In progress**

**September 2018: Any revisions to road map identified through consultation**

**October 2018: Commissioning of any consultancy resource required / allocation of tasks through Working Group**

**October 2018: Debrief of reviews and consultancy**

**November 2018: Working group to present Action Plan incorporating findings and recommendations from reviews**

**December 2018: Implementation work as required to put new systems and processes in places**

**January 2019: Launch of new Delivery Plan**

## Conclusions and Next Steps

Offshore renewables and marine technology offer huge potential for Cornwall & the Isles of Scilly and the region has already established an outstanding reputation, both nationally and internationally. This sector is poised for exceptional growth and will play a pivotal role in the health of the local economy, supporting the creation of high-value jobs and the continued development of vital inward investment and export business.

This Position Paper sets out the key challenges that need to be met in order to take the sector to the next level in Cornwall & the Isles of Scilly. We recommend this Position Paper to the CIOs LEP and trust that it meets with their full approval.

We believe that the way forward is for the LEP to take ownership of the creation of the new Action Plan for the sector and to ensure that all the necessary activities required to deliver this are allocated and resourced. This will ensure that we continue the powerful momentum that has been built up over recent years.

## Appendix: Industry definitions

Research into the MRE industry has highlighted some confusion around the categorical definition of 'non-onshore' renewable energy sources.

- Marine Renewables Energy (marine energy or marine power) relates specifically to those energy generating activities utilising the action of the seas' tides and/or waves.
- Offshore Renewables Energy relates to energy producing activities that do not take place onshore (ie on the land territory of the UK and dependencies) and includes wind.

For the sake of this document, all three renewable energy sources are referred to under the umbrella term 'Marine Renewable Energy' (MRE).