Submission by
Irish Wave Energy Developers Association
To
Department of Communications, Climate Action and Environment
In response to
OREDP Mid term review

Introduction

In February 2014 the Offshore Renewable Energy Development Plan (OREDP) was published, setting out a framework for the sustainable development of Ireland's offshore renewable energy (ORE) resource.

The OREDP plan states:
"With regard to Ireland's ocean energy potential, the strategy reiterates the Government's commitment to realizing the long term economic potential of Ireland's wave and tidal resources, with the objective of introducing ocean energy into the renewables portfolio over time, ***developing an indigenous ocean sector*** *and maximizing the wider economic benefits to be gained from the commercialisation and deployment of these technologies."*

The objective of ***'developing an indigenous ocean sector'*** clearly has not happened. There were more indigenous Irish companies operating in Ireland before the plan was introduced than currently. Many Irish companies have gone to Scotland and The United States to get the necessary support to develop their technologies, and consequently, have achieved significant international recognition. However, companies with great potential, still operating in Ireland are struggling due to a lack of adequate financial support, and the uncertainty over Ocean test sites.

The plan also states:
'Prototype Development Fund: The SEAI operates the Prototype Development Fund, the main focus of which is on ***stimulating industry-led projects for the development and deployment of Ocean Energy devices and systems.'***

The prototype development fund has clearly failed to ***'stimulate the development and deployment of Ocean Energy Devices'***. In particular, with regard to the Galway Bay Test Site, only one device has been deployed in the last 10 years, and sadly in this case, foreshore leasing issues resulted in this significant test program having to be curtailed.

This submission by The Irish Wave Energy Developers Association (IWEDA) will try and identify why the plan is not achieving its objectives

- ***developing an indigenous ocean sector'***
- ***stimulating industry-led projects for the development and deployment of Ocean Energy devices and systems***

and suggests ways to rescue the situation between now and the end of the plan in 2020

Background

There are 13 early stage wave energy developers in Ireland. This is way ahead of any other country in the world relative to our population. There is a prevailing academic snobbery which seems to look down on Wave Energy Entrepreneurs rather than seeing them as the base on which an industry can be built. These are people who are spending their own time and money to develop wave energy devices with no technical help from academia and a state funding system, which although well resourced, is not a suitable mechanism for Wave Energy Research & Development.

Most of these companies have successfully completed at least 5 stages of testing on a national and international basis and have detailed plans for next-stage projects mostly in the €100,000 to €1,000,000 bracket. Help in a number of ways is required to enable these projects to be realised. They are the backbone of the next stage of the development of the indigenous wave energy industry in Ireland.

Prototype Development Fund

The SEAI Prototype Development Fund (PDF) was established in 2009 to stimulate the development and deployment of ocean energy devices and systems. To date it has awarded in excess of €14m funding. Despite this expenditure the PDF has failed to stimulate the development of an indigenous Industry. IWEDA would be eager to see a breakdown of these allocated funds, in particular as to what extent this is reflective of funding awards to Irish wave energy developers. In the last 10 years there has been only 1 company that has made it to ¼ scale. Many companies are opting to go to Scotland and the United States.

IWEDA was formed in 2014 when 11 Irish Wave Energy Developers came together due to complete frustration with the operation of the PDF. The grants are administered alongside domestic home improvement grants. The bureaucratic constraints imposed are not at all suited to research and development. Discussions in 2014 / 15 between IWEDA and SEAI have led to some improvements but much more radical reform is needed.

During the last 4 years a high percentage of IWEDA members have been successful in achieving both funding and significant levels of recognition for their innovations in various international wave energy related competitions. Conversely, the same members have wasted significant amounts of time and resources drafting bids for SEAI funding which have achieved, in most cases absolutely nothing. It is difficult to understand how the same developers can be successful in (international) circumstances that would be considered significantly more competitive than here in Ireland.

In the few of cases where SEAI bids have managed to gain approval, the mandatory financial requirements imposed on the developer always prove to be exceedingly onerous, and in some cases, this has stopped the project in its tracks.

The most successful programme to date has been Marinet providing access to facilities for developers. This has been a success because wave energy development is highly dependent on access to approved facilities and when this is covered it allows the developer to proceed on the basis that the main expense is the model. With SEAI funding this expense has to be covered in such a way that the resulting cash flow requirements imposed make it exceptionally difficult. It must be noted also that the main bulk of most project costs are usually the access fees to the (Irish state funded) facility, surely this is a pointless, penal, "circular" exercise that could do with a more direct, transparent approach.

Early stage development funding, certainly below ¼ scale, should be more forthcoming than this because these types of innovation are noted to have an exceptionally long lead time to commerciality, while the benefits of a successful project could have wide ranging social and economic benefits that extend far beyond the benefits to the individual developer. Early developers need much greater support because of this, if a project is worth supporting up to 70% then it is worthy of being presented with that support in a manner that can actually make sense.

A WES type competition would be the ideal way to go, with 100% funding being the prize, the problem is that IWEDA would feel that given the SEAI ocean energy funding is not fit for purpose, similarly it would not be adequately resourced to manage such a competition without a significant boost of qualified human resources.

When a developer makes a bid for funding, of even moderate significance, it is well acknowledged that this can amount to a personal cost of labour and consultancy fees of in excess of €15,000. These applications therefore need to be treated with greater respect than of late, it is not acceptable to communicate with applicants in anything less than would be expected of a professional operating in the real commercial world. This has been sadly lacking on SEAI's part for a more than acceptable period of time.

It has been made clear to IWEDA members by SEAI that when EU funds have failed to be allocated to wave energy projects, for whatever reason, it seems perfectly acceptable, to SEAI, that they would be diverted off to other, non-related areas of spend. IWEDA would regard this as an all too convenient alternative which could lead to distraction from the core principles for which the funding was originally intended.

In February 2016 MRIA produced paper entitled *Funding the development of Ocean Energy Industry in Ireland.* which was commissioned by SEAI. The paper proposed the established of a *Pre-Commercial Technology Fund.* This is broadly based on the Wave Energy Scotland procurement model which allows for 100% funding. It also has some elements of the United States Wave Energy Prize. All

this can be archived within existing budgets. Although this report clearly indentified a gap in the funding of Ocean Energy there has been no action taken in nearly 2 years. In contrast: Wave Energy Scotland was set up, funded and put out 2 calls within a year.

IWEDA believe that the recommendations of this report should implemented immediately.

Benign Test Site

In 2013 IWEDA approached SEAI outlining the need for a benign test site to get developers ready for the Galway Bay Test Site, and follow other countrie's models that have worked i.e. UK , Denmark, Norway. SEAI arrogantly dismissed the idea and have consistently refused to listen to the views of the industry on this matter. IWEDA made a detailed submission to SEAI in September 2015 outlining the case for such a site on Technical, Commercial and Development Protocol grounds. **(Attached).** We never received a response to this submission.

Because of this refusal of SEAI to listen to the views of the stakeholders, IWEDA made a decision to develop the test site themselves. We have identified a suitable site near Blacksod Pier in County Mayo. We have obtained a licence to deploy a data collection buoy and have submitted a application for a foreshore lease. The site will be known as Blacksod Wave Energy Test Site or BWET.

We are not seeking any help from SEAI in developing the site but would like them to commit to funding projects using the site.

IWEDA have been processing the Foreshore application for over 2 years. Everyone is aware of the delays with the Galway Bay foreshore lease. IWEDA believe that the ORESG should liaise with the Foreshore Licensing Unit to see how this process can be made faster, for what could be considered strategic infrastructure.

MaREI

MaREI is the marine and renewable energy research, development and innovation centre supported by Science Foundation Ireland. It is coordinated by the Environmental Research Institute (ERI) at University College Cork and has over 200 researchers working across 6 academic institutions (UCC, NUIG, UL, MU, UCD, and CIT) collaborating with over 45 industry partners and a budget exceeding €35 million since its inception in June 2013.

Despite this MaREI has little or no involvement with Irish wave Companies despite the fact that these companies need technical support. MaREI seem to operate in academic ivory tower with little connection to the real world.

IWEDA propose a system of innovation vouchers to enable developers to engage MaREI to carry out research which would advance their technology development.

There are also IP issues which would need to be addressed for companies engaging with MaREI

Industry Consultation

When the Scottish Government established the highly successful Wave Energy Scotland the first thing they did was to set up an Industry advisory panel. The panel consists of 14 people. 13 of these are business people with strong technical backgrounds and 1 is an academic.

IWEDA believe that Wave Energy Policy in Ireland has been unduly influenced by academics. The views of Industry have never been sought and when they are expressed they are dismissed as troublesome.

- The Ocean Energy Development unit in SEAI has no formal mechanism for consultation with Industry. There have been meetings with IWEDA but these tend to be confrontational and in response to problems that have arisen

- Smart Bay have a Test Site Steering group that has no industry representation.

- MaREI has an industry advisory board but there's not one wave energy company on it.

- EMEC, who run test sites in the Orkney Islands, actively contact Irish developers to ask how things are progressing and offer support. Smart Bay on the other hand have no interaction with Developers.

- At the moment there is no clear business case for AMETS. Zero consultation with IWEDA in relation to its development. Spending approx 1 million of the PDF on a pier for what reason? The BWET 1:15 scale benign test site should be supported and immediately start consultation with IWEDA before more money is used which will not directly benefit Ocean Energy.

- IWEDA do appreciate that we have been given Stakeholder input to the ORESG and this is a most welcome development.

We recommend increased consultation by SEAI, Smart Bay and MaREI with IWEDA and other Industry stakeholders.

Recommendations

- The establishment of a *Pre-Commercial Technology fund* and implementation of the recommendations of the MRIA *Funding the development of Ocean Energy Industry in Ireland* report
- Introduce a system of Innovation vouchers for companies to engage with MaREI in research projects
- Sort out IP issues for companies engaging with MaREI
- Establish a structure for consultation by SEAI, Smart Bay and MaREI with IWEDA members and other Industry players.
- SEAI approve the BWET site for funding projects
- IWEDA should be consulted about the AMETS site
- ORESG liaise with the Foreshore Development unit to expedite the processing of foreshore lease applications.

Submitted By:
Irish Wave Energy Developers Association
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