

# ***Our Ocean Wealth***

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Towards an Integrated Marine Plan for Ireland

Submission by the Marine Renewables Industry  
Association

March 2012

## **Background**

The Minister for Agriculture, Food and Marine in the Republic of Ireland, Simon Coveney TD, published a paper entitled 'Our Ocean Wealth- Towards an Integrated Marine Plan for Ireland' on 2 February 2012. The Minister invited views on 'New Ways; New Approaches; New Thinking' in regard to developing our ocean wealth. This paper is the response of the Marine Renewables Industry Association (MRIA). It provides a general background to the marine renewables industry in Ireland, sets out the Association's concerns and suggestions and then addresses the specific questions posed in the Minister's paper

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## **1. The Changing World of Energy ...and Our Ocean Wealth**

The world faces a tectonic change in all aspects to energy over the next twenty years. The demand for electricity, transportation, etc will grow inexorably with the universal demand for improved living standards and the pressures of population growth. The rise of China and India, in particular, will impact on the supply and price of oil and gas, resources which are, in any event, being used up gradually. International agreements, including those within the EU, will place more and more demands on governments to reduce carbon emissions. Nations are, therefore, being pushed into developing new sources of energy. Ireland has the opportunity, arising from its uniquely bountiful ocean resources, to turn this burden into an opportunity by moving early to take a leadership position in ocean energy.

*This paper argues that the energy promise of Ireland's sea territory makes it potentially the key contributor to maximizing our 'Ocean Wealth'.*

## **2. The Prize for Ireland**

Ireland has one-third of all of North West Europe's renewable energy resources (source: *Siemens*), including the world's most energy intensive waves and Europe's highest wind speeds. This remarkable gift of nature is matched by some growth already in support services. We have developed a basic supply chain to support the most mature of the renewable technologies, onshore wind, including specialist engineers, operations and maintenance companies, etc; we have capable project developers ranging from small operators with just a few Mega Watts of onshore wind capacity to major utilities with an appetite to engage in all forms of renewables; Ireland is driving European initiatives to develop interconnectors across Europe which will facilitate Irish electricity exports; we have world class research and development facilities (in existence or at an advanced stage of planning) in the marine field; Eirgrid's strategic planning for offshore energy is internationally regarded; and Ireland is the source of a number of

the world's leading device developers in the emerging wave and tidal energy area.

Assuming that Government creates the right environment for marine renewable energy and actively supports its development, Ireland can transform its economic position in two key areas. First, Ireland could become an *energy secure* and *exporting* country, replacing almost €6bn<sup>1</sup> in imports with up to €10bn<sup>2</sup> in exports with significant potential to revive our stalled economy. The initial export market is likely to be the UK, which faces a massive investment deficit in energy to 2020. Second, we could develop a supply chain or *enterprise* dimension - R and D, finance, legal services, education and training, operations and maintenance, high value added component design and manufacture, device assembly....the list goes on - to support world markets. The natural consequence of this development will be substantial job creation.

Ireland is at a crossroads in ocean energy: much of the early lead has been taken by Scotland which has a lesser resource than Ireland. Ireland can position itself for success (e.g. job creation) if it takes the actions suggested at 5.1 and 5.2 below. These would enable us to take maximum advantage of our enormous wave resource when the technology matures, perhaps in five years time. Failure to take action will concede both the development and the exploitation phases to others, notably Scotland, with catastrophic results for job creation in Ireland.

### **3. Marine Renewables Industry Association**

The Marine Renewables Industry Association (MRIA) represents all of the main interests on the island of Ireland engaged in the wave and tidal sector of marine renewables energy, also known as ocean energy<sup>3</sup>. The

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<sup>1</sup> €5.57bn imports of energy products in 2010, CSO External Trade statistics, 31 March 2011 ([http://www.cso.ie/releasespublications/documents/external\\_trade/2010/extrade\\_dec2010.pdf](http://www.cso.ie/releasespublications/documents/external_trade/2010/extrade_dec2010.pdf))

<sup>2</sup> Minister Eamon Ryan, Joint Oireachtas Committee on Climate Change & Energy Security, 24th March 2010 (<http://debates.oireachtas.ie/CLJ/2010/03/24/printall.asp>)

<sup>3</sup> Wave + tidal energy = ocean energy (+ offshore wind) = marine renewables or marine energy

Association includes firms engaged in device development and manufacture (e.g. Ocean Energy, Open Hydro, Aquamarine Power and others), utilities and site developers (e.g. ESBI, Bord Gais and others), professional firms and consultants (e.g. Arup, Arthur Cox Solicitors), R & D businesses (e.g. IMERC), supply chain activities (e.g. B9 Energy, Port of Cork) and academic researchers. The Association is an all-island body. The relevant government agencies on the island sit on the Association's Council in an observer capacity.

## **4. Ocean Energy and Ireland**

### **4.1 Economic Impact**

Ireland is going through a period of serious economic difficulty with consequent loss of employment and income throughout all communities on the island. Ocean energy- energy derived from waves and tides- has the potential to make a significant jobs and income creation impact. A study commissioned by Sustainable Energy Authority of Ireland (SEAI), through its Ocean Energy Development Unit (OEDU), and Invest Northern Ireland on the potential economic impact of ocean energy (*Economic Study for Ocean Energy Development in Ireland SQW, 2010*) states that:

*There is currently sound quantitative evidence that by 2030 a fully developed island of Ireland OE sector providing a home market and feeding a global market for Renewable Energy could produce a total Net Present Value (NPV) of around €9billion and many thousands of jobs ....It is possible that an island of Ireland wave energy industry meeting the 500MW 2020 target could produce at least 1,431 additional FTE jobs and an NPV of €0.25bn, increasing to 17,000-52,000 jobs and an NPV of around €4-10bn by 2030.....Similarly a tidal industry providing 200MW of capacity by 2020 may deliver around 600 FTE jobs and an NPV of €111m, increasing to 8,500-17,000 jobs and an NPV of between 1.5-2.75bn by 2030 -SQW Executive Summary.*

The enterprise benefits alluded to in the SQW report are only achievable if Ireland gets 'early mover advantage' and is involved in the earliest stages of research, development, demonstration and pre-commercial deployment.

Technical and commercial risks are highest at these stages and development will only happen if both private and public funding is provided.

The national challenge is to convert our natural resource- we have the world's most energy rich waves- in ocean energy into jobs and income particularly as doing so will give energy security in an uncertain world. The Ocean Renewable Energy Development Plan (OREDP), scheduled by Government for publication this year, will be the foundation stone in this effort and must be marked by clear, deliberate and accountable actions for delivery, particularly in the next five years or so which is the period until the first planned review of the OREDP.

In addition, ocean energy could become an important source of revenue in the medium term for the Exchequer: developers will be required to pay for lease of seabed sites, VAT will arise as will corporate income tax.

The opportunity in Irish Ocean Energy has three elements- ENTERPRISE, ENERGY SECURITY and ELECTRICITY EXPORT.

#### ***4.2 Enterprise...and Lessons from Scotland***

The ENTERPRISE element ranges from research and development and device manufacture to operations and maintenance, finance and legal support. The 'supply chain' faces an immediate opportunity in offshore wind in the UK- 47GW of offshore wind capacity is either in operation or, for the most part, at the development stage at present, representing over six times the total electricity generating capacity on the island of Ireland! This prospect will both give early job and income benefits to Ireland and will also build companies, their experience and their skills to capitalise on the forthcoming wave and tidal opportunity. It needs to be promoted by the development agencies in the Republic.

There has been a strong move to create a centre of gravity for the world ocean energy industry in Scotland, where the First Minister has made it his key economic priority:

- Scotland has a foreshore consenting system which works; there is joined-up action between agencies to support the industry e.g. Marine Scotland deals with all aspects of offshore energy;
- there is a large team of civil servants (reportedly thirty in number compared to about three or four in the Republic of Ireland) to support the industry with policy work, etc;
- There is substantial funding available to support early stage development including the DECC fund (£20m) and the MEAD fund (£18m);
- Scotland has an emerging leadership position in R&D and demonstration. The offshore renewables 'Catapult Centre' in Glasgow has £10m in annual funding for industry-led R&D. The EMEC test centre in Orkney currently has every berth full while the Crown Estate will soon be leasing small nursery sites in Orkney. A new wave energy test tank is being built at the University of Edinburgh.
- Scotland's top political leaders have set tough targets for the industry – the equivalent of 100% of all electricity consumption from renewable sources plus the same amount again exported by 2020; replace the 120,000 jobs at risk in oil and gas as the North Sea fields run down.

Scotland has built a formidable international reputation in ocean energy and has already won significant investment e.g. from ABB, Rolls Royce, Vattenfall (the Swedish utility who moved to invest in our offshore renewables sector and after two years pronounced Ireland 'closed for business'), Siemens, etc.

***Scotland has a lesser resource than Ireland*** in wave energy (about one-third less) and level-pegs with Ireland in other resources. It is noteworthy too that other countries are also supporting ocean energy- for example, Sweden recently approved €15m for just one demonstration project.

It is by no means too late for the Republic of Ireland, with its natural advantages, to establish a leadership position in ocean energy and the OREDP and the Integrated Marine Plan (IMP) must be geared to this ambition. Incidentally, Northern Ireland has made remarkable strides in promoting and developing its limited ocean energy resource and is ahead of the Republic in terms of OREDP, consenting and initial leasing round.

An important requirement is that the relevant state agencies should evaluate synergies across the supply chains for all of the activities in the Integrated Marine Plan and have an integrated supply chain, enterprise development approach e.g. off shore oil and gas, wave, offshore wind have many potential synergies.

#### ***4.3 Energy Security...a National Priority***

Our ocean energy resource alone could meet all of our electricity needs many times over and when combined with wind energy (which operates to a different pattern of intermittency to wave energy) will go a long way to provide Ireland with a balanced and secure portfolio of energy inputs. ENERGY SECURITY, as the Economic and Social Research Institute (ESRI) points out in *'Aspects of Irish Energy Policy'* (2005), is a high priority:

*'Ensuring a secure energy supply for the foreseeable future is of crucial importance for the health and economic welfare of the country.....by 2010 the bulk of electricity generation will depend on gas. This means that any physical disruption of energy supply could have very serious consequences.....major price shocks (to energy supplies) could have serious economic consequences'*

#### ***4.4 Exporting Electricity... a Major Opportunity***

All of the stakeholders in ocean energy accept that the enormous scale of the resource in Wave potentially represents a huge opportunity for electricity export via Grid Interconnectors. The drivers for export include:

- EU targets for reductions in carbon emissions and for renewable energy may not be achievable (e.g. because of lack of renewable

resources) by all Member States so that there may be opportunities for Ireland to make deals with other Members to provide for their targets through the export of Irish electricity derived from renewables.

- The UK must make an enormous investment (£110bn + by 2020) in its electricity generation capacity to replace worn out plant, to provide for growth in demand and to meet renewable energy targets. It must do so in the face of significant public opposition in many cases to further significant investment in onshore wind. Government policy, moreover, shows limited enthusiasm for further nuclear investment (a trend which is likely to be strengthened in light of the recent events in Japan!)...and this policy requires c30% of electricity from renewable sources by 2020. Indeed, the EU mandated '*National Renewable Energy Action Plan for the United Kingdom*' implies the need for electricity imports and points out that the UK has a target of 15% of its energy consumption from Renewables by 2020- this compares to 1.5% in 2005 with only a small increase recorded since then.
- The UK has indicated its interest in making a long-term arrangement with the Republic for electricity supply and the UK government is about to seek views and submissions on the issue of electricity imports. Indeed, at the British Irish Council meeting on June 20<sup>th</sup> 2011, the UK Minister indicated that Irish renewables could play a role in meeting the UK's targets for renewable energy.
- The likely emergence of an EU Energy Market with market structures established and run at European level with a bias towards renewables. In those circumstances, it is possible that Member States may contribute to the overall network on the basis of their natural advantage e.g. Ireland and Scotland focus on the provision of ocean energy, Spain and Portugal on solar energy and so on.

- The development of ocean energy technology and its large-scale deployment will drive the cost of ocean energy down as ‘economies of scale’ and the ‘learning curve’ effects kick in.

We laud the involvement of Ireland in the various international initiatives to develop European interconnectors. Since there is good reason to believe that Ireland can realize substantial value from exported ocean energy, MRIA awaits with great interest the outcome of the feasibility study into electricity exports commissioned by SEAI-OEDU.

## **5. Actions to Maximize ‘Our Ocean Wealth’**

A strong, final version of the OREDP, a key element of the proposed Integrated Marine Plan, is vital in terms of setting out a development map for all of the stakeholders in Irish ocean energy and to give a strong signal of Government ambition and support to realise the jobs and income potential of the sector. It must play a key part in changing perceptions and show that the Government is committed to practical actions to give effect to its strategy for ocean energy. The scope for the creation of significant new job opportunities in ocean energy turns on the OREDP.

To provide a strong signal that the ocean energy strategy is being implemented, the MRIA recommends that the OREDP, and the Integrated Marine Plan, includes a statement of critical time-bound actions which may be grouped under two headings- *Presentation, Communication and Co-ordination Actions* and *Practical Support Actions*.

### ***5.1 Presentation, Communication and Co-ordination Actions***

There is an urgent need to present Ireland at home and abroad as ‘open for business’ (and easy to do business with) in ocean energy. One aspect to this is the ‘one stop shop’ model already employed (via IDA) in attracting ‘foreign direct investment’ with great success and now being used also to promote Scotland in ocean energy (‘Marine Scotland’).

### *5.1.1 Strengthen OEDU*

MRIA recommends that the resources of the Ocean Energy Development Unit in SEAI be increased and strengthened so that it can effectively:

- Act as a point of contact and onward reference for all potential interests, notably promoters and investors on both the Enterprise and the Energy planes
- Act as an ‘expeditor’ within the Government system for ocean energy similar to the role played by *Marine Scotland*
- Communicate the Irish opportunity at home and abroad with support and engagement from Enterprise Ireland and IDA.
- Champion, drive and, generally, act as a key delivery agent for the OREDP.

A real increase in resources is needed to enable the OEDU to fulfil the above role. Equally importantly, it will need significant ‘buy in’ by the many departments and agencies associated with ocean energy. The OEDU Advisory Group should be given strong terms of reference so that it can ‘drive’ the OREDP. The Department of Jobs, Innovation and Enterprise should be directly represented, for the first time, on the new body at a senior level. Its absence to date is the cause of genuine concern to the industry.

To be clear, we are not suggesting changes in the overall institutional framework at present, merely more effective methods of inter-Departmental working and involvement with external stakeholders.

### *5.1.2 Establish relevant targets*

The current national target of 500MW of wave and tidal capacity in operation by 2020 has been useful in terms of maintaining focus on the industry. The time has come, however, to adopt a series of targets which reflect the wider opportunities represented by ocean energy.

MRIA recommends that the targets set by the OREDP and reflected in the Integrated Marine Plan should include targets relating to:

- *MW in the water*: This could be based on a realistic, if 'stretch', target of 150MW of wave and tidal installed by 2020 and the National Renewable Energy Action Plan 'high scenario' level of 1500MW by 2030 as a *minimum*.
- *Export*: Exporting electricity is key to the future of ocean energy and milestones and targets for export should be set to galvanise and focus stakeholders
- *R and D*: Ireland has, or has planned, first rate facilities for R and D in ocean energy. Targets should be set for the completion of facilities at IMERC, AMETS and 'Smart Bay' with a view to establishing Ireland as the leading centre globally for R and D in this industry. The achievement of an eminent international position in R and D by Ireland (University College Cork already claims to house the largest concentration of ocean energy researchers in the world) would play a crucial role in attracting FDI and in ensuring an Irish lead in high value- added segments of the industry such as industry-led R and D, education, training and test facilities, specialist support services, etc.
- *Enterprise*: Targets should be set and plans drawn up by the development agencies, working in a co-ordinated fashion, to build Ireland's presence in high value added segments of ocean energy through FDI, local industry development and new start-ups.

Progress against the *job* and *income* opportunities highlighted in the SQW Report should have targets set in regard to the period from 2015 onwards as ocean energy starts to achieve technology maturity. Moreover, targets for *government revenue earnings* from the sector should be a feature sometime in the 2020s.

### *5.1.3 Improve Communications*

Ireland has a poor image in the international energy press for what is perceived as it's fragmented and, at times, unenthusiastic approach to ocean energy. In practice, Ireland has in some ways made a good start in ocean energy....but Government has failed to engage effectively with the international energy media to tell their story. The strength of the emerging Irish business base in this area has been outlined earlier in this paper e.g. the R and D facilities, the device developers, the strength in grid planning, plans to introduce a 'state of the art' consenting system (see below), etc.

The government must engage in a positive and promotional way with the international energy press and industry to promote Ireland's advantages and to attract investment and jobs. There is deep experience in IDA and in Enterprise Ireland (as well as in a number of the MRIA members) in international press relations and these are available to government to support a campaign to communicate the Irish 'offering' in ocean energy once key policy actions have been clarified e.g. OREDP, consenting regime, etc.

## **5.2 Practical Support Actions**

### *5.2.1 Provide Financial Support*

Ocean energy is in the development phase, one in which government support for R and D is normal in any sector, particularly one with the job creation, export, income creation and Exchequer revenue potential of ocean energy. This support would normally arise from two sources.

First, support for R and D. The key conduit for R and D support has been SEAI-OEDU and their funds have been vital to date in growing the sector- particularly in regard to device companies and R and D facilities. Arising from general government austerity measures, the funding for *new* projects has been severely curtailed in 2012 and this has already had a serious impact on the industry. If not corrected, it will inevitably lead to companies moving elsewhere (notably, Scotland) where funding is available.

The almost total lack of funds for new commitments is ironic in view of the priority given to marine energy in the recent National Research Prioritization Exercise (published by *Forfas, 2012*) and the substantial funds available to the Department of Jobs, Innovation and Enterprise for, seemingly, all industrial sectors. It underlines the urgent need to involve that Department in ocean energy, a sector which, in the medium term, should address to a significant extent all of the Departments key concerns: jobs, exports, income creation and the creation of high value-added sectors based on R and D.

Second, appropriate incentives are required to ‘pump prime’ the enormous capital expenditure involved in marine renewables. Forecast investment in devices alone is in the order of €1.5bn to meet the current 500MW target. It is essential that Ireland moves now to develop initial demonstration and pre-commercial projects in order to stimulate ocean energy in Ireland. While significant private sector capital investment will be required to deliver initial projects incorporating high levels of commercial risk, early projects will also require support from the State.

The key support that will unlock this unique opportunity is the *Renewable Energy Feed-In Tariff (REFIT)*. REFIT is paid by consumers via a public service obligation levy on their electricity bill and REFIT for marine renewables is currently set at €220 per MWhr. In order to limit the impact on the economy, MRIA has proposed that REFIT of €220/MWhr should be capped to the *first 150MW of marine renewables* projects and that a review should take place to determine the most appropriate level of support for projects beyond 150MW. MRIA regards ocean energy as an export opportunity but development of the industry here requires some engagement with the domestic market in the early stages.

In the first instance, an early, initial REFIT round of perhaps 20MW competed for by ocean energy interests in a public competition and focused on pre-commercial trials and experiments would make a significant impact on the industry over the next 5 years when taken in conjunction with capital grants. It would, of course, be important to give assurances to

participants in such a competition about 1) their entitlement to increase capacity on their initial site (subject to the usual processes) and 2) the availability of REFIT, within the capacity cap of 150MW suggested by the Association, for any such increase in capacity.

The MRIA also strongly support the WestWave project<sup>4</sup> proposal to develop an initial wave energy project by 2015 as a tangible way of demonstrating Ireland's ambition in marine renewables. The WestWave project could be one of the first wave energy projects in the world and would showcase the significant potential that Ireland has to offer in this emerging sector. It will require State financial aid.

### *5.2.2 Update Grid Development*

Grid 25 is Eirgrid's grid development plan to 2025. It is internationally regarded as an exemplar of grid planning. Nonetheless, new technologies (e.g. wave), new inter- governmental initiatives such as the ISLES project, amongst others, point to the need to accelerate and build on Grid 25. It needs an update to take account of these developments, to reorient it to a much larger, exporting industry. This work should be completed as a matter of urgency and may require the aid of international consultants. In the first instance, priority should be given to the Initial Development Zones initiative proposed by the Association and dealt with at 5.2.4 below

### *5.2.3 Introduce Modern Consenting System*

The Department of Environment, Community and Local Government (DECLG) has taken over responsibility for consenting the foreshore (permits to investigate sites as well as the provision of seabed leases) and has ambitious plans to provide a modern consenting system which has already been the subject of discussion with MRIA. It is likely that these plans will be launched shortly and will be followed by a period of consultation.

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<sup>4</sup> See [www.westwave.ie](http://www.westwave.ie)

#### *5.2.4 Initiate a Leasing Round*

The announcement of the new consenting system should be followed in short order by the announcement of plans for a 'leasing round'. Note that Northern Ireland has commenced its initial leasing round while Scotland has already concluded its equivalent exercise (in 2010) and now has a rolling programme with new rounds opening every six months. The Association has suggested that the most efficient way to move forward in this field would be to designate a number of initial development zones which would be the focal point for the early leasing rounds and it set out its view on the priorities in this area in its White Paper *Initial Development Zones to Focus on Realizing Ireland's Ocean Energy Potential*, published in August 2010 and available at [www.mria.ie](http://www.mria.ie)

#### *5.2.5 Ensure Physical Security of Developments*

Marine energy- wave, tidal and offshore wind- will be featured by huge capital costs- at least €2-3m + all-in installed cost per MW when the industry *matures*- and could become, within the next twenty years, a vital cog in the European electricity supply system. Ocean energy devices will be unmanned and in many instances located far offshore. Wave 'farms', in particular, will be vulnerable to unlawful activities. This will be taken into account by investors and insurers who undoubtedly will look for a robust security regime enforced by modern naval vessels able to operate in our deteriorating offshore weather regime and equipped both to observe devices in detail from close proximity and to take action to protect them.

Accordingly, the MRIA and the National Offshore Wind Association of Ireland ('NOW Ireland') have together urged the Department of Defence to take this into account in the Green and White Papers on Defence which are to be prepared for the period to 2020. The Associations see the Naval Service taking the lead position in providing surveillance and response services to offshore energy fields similar to the service provided in regard to our fish resources. In this regard, it would make sense to co-opt the Flag Officer Commanding the Naval Service on to the Marine Co-ordination Group which the Director of the Coast Guard, a non-security agency, already attends.

## **Responses to Questions posed by Minister**

### *1. What is a sufficiently ambitious target for our ocean economy by 2020?*

There is no simple number, no 'one size fits all' answer to this question and, obviously macro-economic factors will play an important role e.g. the timing and extent of the end of the 'Great Recession'. The MRIA favours, in our ocean energy domain, a series of targets – 'MW in the water; export, R and D facilities and enterprise' (see 5.1.2 above)

The key to Ireland's success or otherwise in ocean energy will be the actions taken by government over the next three to four years including the strengthening of OEDU, establishment of relevant targets, as outlined above, and vastly improved communication of the Irish opportunity, achievements, etc in ocean energy to the international energy media- all of these *presentation, communication and co-ordination actions* were dealt with at 5.1 earlier. In addition, *practical support actions* are required- see 5.2 above- and these include, first and foremost, financial support. The provision of funding for R and D which has almost totally disappeared from the sector in spite of, ironically, the government designation in recent weeks of marine energy as one of just thirteen areas of National Research Priority. In addition, support is needed for early stage, experimental and developmental wave and tidal farms in the form of REFIT (with a capacity cap) and grants. The impact on the Exchequer would be positive (lease payments, etc) in the medium term and the impact on the consumer would barely register. Other actions should include grid development, the introduction of a modern consenting system and the start of a series of leasing rounds.

Overall, MRIA believes that the ocean energy sector could become a major source of jobs, exports, enterprise and, indeed, government-income in the 2020s. The fulfilment of this promise requires the establishment of practical milestones, particularly in the next critical three to four years as this technology starts to mature and the battle for the lead position

internationally intensifies (principal contenders: Ireland and Scotland with the latter ahead at present despite its lesser resource and other weaknesses). Achievement of these milestones coupled with the potential to galvanise the government system presented by realistic but ambitious targets for 2020 could put Ireland on the road to success.

## 2. *What contributions can*

### *a. The private sector make to achieving growth potential in this area?*

The private sector is at the core of ocean energy- all of the device companies are privately owned as are the firms in the supply chain and most of the potential developers of ocean energy ‘farms’. It is remarkable that the local private firms in this industry, particularly the device developers, have raised in excess of €100m (estimate based on private discussions with MRIA members) which has all been spent on R and D in what is still an emerging, experimental technology. Indeed, a forthcoming MRIA study into R and D in ocean energy in Ireland will demonstrate that the public purse has met only a small proportion of this amount. It is likely that existing companies will need to raise further substantial sums in future to bring ocean energy devices to commercial readiness.

### *b. The public sector make to create an environment that provides the conditions needed for economic growth and job creation in the ocean economy?*

The public sector approach to this element of ‘Our Ocean Wealth’ has been marked by two distinguishing features. First, the outstanding contribution made by a small number of dedicated public servants. Second, the ‘silo effect’ which so bedevils Irish public administration is reflected in ocean energy where responsibility is fragmented between a number of Departments while the designated support and co-ordination group- OEDU- is under-resourced and under-staffed. Two quite extraordinary examples make the point. First, the Department responsible for jobs, exports and enterprise (*Jobs, Innovation and Enterprise*) play no direct role in ocean energy, an industry that is potentially rich in jobs, exports and enterprise! Second, the government correctly underpins its economic policy with a strong commitment to R and D except in regard to its

‘commitment’ to ocean energy, one of its thirteen recently announced priority areas, where support has almost ended, at least for 2012!

On a positive note, Government can contribute *presentation, communication and co-ordination* actions as well as *practical actions* – see 5.1 and 5.2 above.

*c. Our communities make to the achievement of our growth potential?*

There are two aspects of particular importance under this heading. First, our local coastal communities will benefit from the growth of ocean energy in the form of supply chain development locally, new jobs and extra incomes. It is important to recognise and engage with the fishing community in particular and such engagement must be marked by consultation, mutual respect and common sense on both sides.

The other major aspect to ocean energy and local communities is the issue of *community benefit*- the practice whereby, for example, renewable energy interests, at least in some cases ashore have reportedly contributed funding to community projects in the areas directly impacted by their wind farms.

The position in regard to wave, in particular, is entirely different. First, and foremost, it will take place offshore and the planning etc systems envisaged will ensure minimum disruption to local activities, landscapes, etc. Moreover, the further offshore that wave developments take place, the less, arguably, direct association they will have with local communities although they could provide significant local employment. It is worth bearing in mind also that the vast bulk of the electricity generated will have to be exported unlike onshore wind. Second, there will be a significant ‘tax’ on wave and tidal through lease payments etc to the State which indirectly benefit local communities and which do not apply to onshore renewable energy. Third, the capital- intensive nature of wave and tidal require that investors must have absolute certainty with regard to costs. Finally, for the next few years our aim is to attract (against fierce competition from Scotland and, indeed, other European locations) experimental deployments which will be enormously expensive (because of the development stage of the technology) and important to the long term attractiveness of Ireland as

a location for a global supply chain. Any attempt to impose ‘community benefit’ on these projects could be self-defeating and call in to question Ireland’s interest in becoming a serious ‘player’ in wave and tidal.

There is a danger in our view that community benefit provision could become an assumption, an automatic given in the final version of ‘Our Ocean Wealth’ whereas the issue needs very careful teasing out and consultation with the industry in advance of any policy position being adopted.

*d. Our higher education sector make to the achievement of our growth potential*

The higher education sector is an important part of the development ‘jigsaw’ for ocean energy. A number of our universities and institutes of technology have courses which are important to the industry and MRIA is working with six universities (including Queens University, Belfast) and institutes to develop a joint Masters in ocean energy. This arises from the MRIA’s Discussion Paper on *Third Level Education Needs of the Ocean Energy Industry* which is available at [www.mria.ie](http://www.mria.ie)

The third level education sector is also important to R and D in ocean energy. An MRIA discussion paper on R and D and ocean energy in the Republic of Ireland is being finalised and it will show that the six institutions engaged with ocean energy R and D have over 200 researchers in the field- one institution- University College Cork- claims to have the largest concentration of ocean energy researchers, in its Beaufort Laboratory group, in the world. The key issue affecting the third level and ocean energy is, of course, financial resources and funding to finalise the new Beaufort Laboratory at IMERC in Cork as well as the SMART Bay resource in Galway and the AMETS full-scale test site in Belmullet are a priority.

*3. What actions should be taken to strengthen our maritime awareness/identity?*

The highest priority in this area is to improve radically our communications and presentation to the international energy media- see 5.1.3- once initiatives (which are reportedly pending) such as consenting, etc are unveiled. Our image internationally for ocean energy is poor and stands in sorry contrast to that of Scotland, a country with a lesser ocean energy resource.

The tide may be turning in Irish ocean energy- new consenting legislation is imminent; the Ocean Energy Renewable Development Plan (OREDPA) is due in the summer.....and so on. The communications task is to get the message across to the media and to potential investors that 'Ireland is open for business'. Industry has offered to work with government in that regard.

*4. Is the draft vision for Our Ocean Wealth sufficiently ambitious and realistic or would you suggest an alternative?*

The vision is acceptable but it needs to be backed up by a statement of goals and targets...and who is accountable for their delivery ...and the provision of funding...across government

*5. How can we maximise the benefits of our ocean wealth and protect the marine ecosystem/environment?*

The actions to be taken in the next three/four years are critical to the development of ocean energy and the MRIA's views in this regard are set out at 5.1 and 5.2 above.

We believe- based on the indications so far from the Department of Environment, Community and Local Government- that the planned consenting system will be comprehensive and will be subject to a round of consultation before the legislation is enacted. We do not want to see ad hoc or local additions to the planned system. Such additions would breach a key development rule of thumb: set the law, make it transparent and consistent and then leave it alone. This approach has served us well. Our corporate tax

regime, introduced in the spring budget of 1956, has been a bed rock of Ireland's economy for fifty six years with only one change – tax on companies was changed, for EU legal reasons, from being calculated on export sales profits to a charge on profits as a whole- in all of that time

6. *How can the interests of competing sectors be balanced when it comes to planning the use of our ocean space and what criteria should be used to balance them?*

The various preparatory tasks undertaken by government to date in support of ocean energy e.g. the environmental assessment completed recently, the draft OREDP all recognise that competing sectors and many geographical areas have already been ruled out on environmental grounds. MRIA believes that the new consenting arrangements should be the cornerstone of the system to arbitrate between competing interests. Moreover, the Association has already made the case for Initial Development Zones- see *White Paper on Initial Development Zones* at [www.mria.ie](http://www.mria.ie) in which all early ocean energy development should be concentrated.

From an ocean energy industry perspective, it is important that the integrated planning approach under consultation will lead to an agreed approach for dealing with any conflicting requirements for uses of the marine environment. The idea in this regard would provide policy direction and clarity for planning authorities and would support effective and efficient decision making. It is important that the local and national planning authorities experience and expertise is brought to bear through engagement in all of the stages of this process to ensure we have a planning and consenting process that can work efficiently alongside and complimentary to the Integrated Marine Plan.

7. *To what extent could the development of a Maritime Spatial Plan assist in this balancing process?*

Put simply, there are areas which should be 'off limits' for development and the rest of the coast line should be dealt with under the new consenting legislation with priority being given to the initial development zones as suggested by the Association. MRIA is concerned that a fully blown marine spatial planning exercise as a precursor, a condition of even early

experimental ocean energy deployments would further and unnecessarily hold up Irish ocean energy at a time when we lie behind Scotland in the race for the great prize of world leadership (and massive job creation): there is a need for action now.

The new consenting arrangements- with ocean energy projects being dealt with as strategic projects for 'planning permission' purposes – should provide adequate safeguards for the next few years. It may be possible- as the early projects are consented and get underway- to provide in time for full marine spatial planning. But...the complexity and cost of such an exercise (in a field where there is relatively little data available and where property rights in the traditional land- based sense do not really exist) could be a major hindrance to ocean energy development in the next few years if not handled correctly. The MRIA is supportive of marine spatial planning provided that it is structured and operated as an open and positive contributor to development and not as a costly obstruction. The Minister's February 2012 document (p11) observes that:

'An Integrated Marine Plan needs to strike a balance between protecting our marine environment and its species and habitats and maximising the use of its resources as a source of economic growth.'

Exactly the same view could apply to marine spatial planning, in MRIA's view.

*8. Are the opportunities and constraints identified the right ones?*

MRIA has no objection to any of the opportunities and constraints identified but would suggest that, in addition, the factors suggested at 5.1 and 5.2 above should be taken into account e.g. the need for grid development, communications, a leasing round and so on

9. *How can we ensure appropriate governance in national maritime affairs for optimal results (at local, regional, national, European and international level)?*

The current arrangements for governance are not working e.g. one of the two most important departments in regard to ocean energy- Jobs, Innovation and Enterprise- play no direct part in the industry! Our view is that a broadly agreed Integrated Marine Plan should be implemented at three levels

- a. Cabinet sub-committee on the Marine which would help get political attention and support for the area
- b. The current Marine Co-ordination Group but with an obligation for the group to receive, collectively, presentations from relevant interest groups and generally to open dialogue with the interest groups. In addition, the Flag Officer Commanding the Naval Service should be appointed to the Group to ensure that the vital maritime security dimension is taken into account- see 5.2.5. It is noted (with approval) that the Director of the Coast Guard attends the Group but it is noted also that his agency has no security competence or role.

The relevant state enterprise agencies should evaluate synergies across the supply chains for all of the activities in the Integrated Marine Plan and have an integrated supply chain, enterprise development approach e.g. off shore oil and gas, wave, offshore wind have many potential synergies.

- c. In the ocean energy area, a revitalised OEDU Advisory Group with real engagement by the Department of Jobs, Innovation and Enterprise

10. *Suggest ways we can foster and/integrate marine policy and planning for Ireland? With less resources, how can we do it better?*

The arrangements suggested at 9 above would improve the situation particularly if implemented in conjunction with the actions suggested at 5.1. and at 5.2.

The 'elephant in the room' is resources. In the case of ocean energy, the principal need is support for R and D –to fill out our research infrastructure and to support prototype development in companies. The state spends hundreds of millions of Euro each year on R and D but, due to the 'silo effect' mentioned earlier, the scope to switch this funding around to ensure that the 'maximum bang for a buck' is being achieved and new needs and priorities addressed is, in practice, limited. Ocean energy's needs can be met by making a transfer of resources from other R and D areas, particularly those supported by Jobs, Enterprise and Innovation, to SEAI-OEDU.