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Joint Submission on the Green Paper on Defence

October 9th, 2013

1. The Changing World of Energy

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, on the other hand, will place more and more demands on Governments to reduce carbon emissions.

Nations are, therefore, being pushed into developing new sources of energy, ranging from 'fracked' oil and gas to renewables. Ireland, as Government policy developments outlined below reflects, has an enormous opportunity in marine renewable energy.

2. The Prize for Ireland

Ireland has one-third of all of North West Europe's renewable energy resources (Siemens), including the world's most energy intensive waves and Europe's highest wind speeds. This remarkable bounty 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 underwater electricity interconnectors –a key part of any future Euro Grid - across Europe which will facilitate Irish electricity exports. We have world class research and development facilities, particularly in the marine area. Finally, Ireland is the source of a number of the world's leading device developers in the emerging wave and tidal energy area.

The Government is working to create the environment for our energy industry to grow. Probably by the end of October, 2013, Government (the Minister for Communications, Energy and Natural Resources) will publish an *Ocean Renewable Energy Development Plan* which inter alia will involve a series of initiatives to establish our leadership in this new industry. At about the same time, Government (the Minister for Environment, Community and Local Government) will publish a Bill to introduce far-reaching reforms of the State's 'planning permission' processes and 'property rights' arrangements at sea. Perhaps most important of all, Government, again led by the Department of Communications, Energy and Natural Resources, is negotiating an Inter-Governmental Agreement for the export of renewable-generated, including offshore, electricity to the UK. Agreement is anticipated for early 2014 and the scale of this massive project is illustrated by just one feature: the UK is seeking an initial 5GW of capacity of generating capacity from Ireland by 2020: this is equal to over 75% of all generating capacity currently installed in the Republic of Ireland!

Ireland can transform its economic position in two key areas, arising from the new energy drive. First, Ireland could become an *energy secure* and *exporting* country, replacing almost

€6bn¹ in imports with up to c€10bn² in exports with significant potential to revive our stalled economy. The key export market will be the UK which faces a massive investment deficit in energy to 2020. Second, we could develop a *supply chain*- 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. One official study forecasts huge levels of job creation in Ireland in marine renewable energy e.g. up to 70,000 new jobs arising from wave and tidal alone³.

3. Our Members' Concerns

The three Associations who authored this submission represent all of the key interests involved in offshore wind, wave and tidal energy.

Marine Renewables – offshore wind farms, some tidal⁴ ‘arrays’ (farms) and extensive wave arrays – are on different development tracks. Offshore wind is a mature technology and offshore wind farms in the Irish Sea will feature before 2020 and represent a potentially important part of the Inter- Governmental Agreement mentioned earlier. Offshore wind farms off the West coast will certainly emerge in the 2020s, if not sooner. Tidal energy technology is likely to reach engineering maturity by 2020 but will not be a feature of Ireland’s energy mix. Wave energy technology is likely to mature by c2018 and will be a major aspect to Irish energy in the 2020s.

Offshore wind farms and wave arrays have several common characteristics. They are and will be very expensive at any level – the typical device investment cost projected at maturity of at least c€2+m per 1MW of wave energy is an example of this. Wind and wave devices will be unmanned and, as the technologies develop, will be located far offshore, over the horizon. They will operate in an extraordinarily hostile weather environment, particularly off the West coast. They will be open to damage by hostile parties and, consequently, our members, investors and insurers engaged in marine renewables will all seek to be satisfied by the security ‘ecosystem’ put in place by Government.

The potential threats range from low-level protestors with a ‘cause’ to terrorist attacks seeking to make a massive impact on major Irish and, indeed, European offshore electricity

¹ €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)

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

^{3 3} *Economic Study for Ocean Energy Development in Ireland SQW, 2010*, commissioned by Sustainable Energy Authority of Ireland and Invest Northern Ireland.

⁴ The Republic of Ireland has limited tidal resources (unlike Northern Ireland) but is home to the world’s leading tidal energy device company, Open Hydro Ltd

infrastructure and destroy jobs, income and infrastructure. The future offshore network is going to be uniquely vulnerable and will require protection ranging from the Gardai ashore to the Naval Service offshore as well as involving other agencies e.g. the Irish Coast Guard.

4. Green Paper on Defence

The Associations welcome the Green Paper on Defence, with special reference to its consultative element, and commend its effort to establish a framework against which policy can be formulated and a White Paper published in 2014.

The Paper deals briefly with the *Maritime Domain* (p33) and there are a number of other references to maritime matters elsewhere. However, it does not recognise or give a central position to the potential for serious maritime security issues (as outlined in the section above) to arise during the currency (2014-2024?) of the planned White Paper on Defence. For example, the key section on *Domestic Security* (p32) is land focused and makes no reference to the maritime sphere.

The recommendations made below are constructive and do not involve any immediate resource issues although we support the Department of Defence's ongoing programme of Naval Service fleet replacement – modern vessels with the ability to operate in our markedly deteriorating offshore weather system is critical to the security of offshore energy and there is an obvious need to prioritise the acquisition of at least one very large vessel capable of operating in all weather conditions.

5. Recommendations

The Associations, representing all of the interests engaged in offshore wind, wave and tidal energy, recommend that the 2014 White Paper on Defence should

1. Recognise, to a much fuller extent than prevailed in the Green Paper on Defence, the enormous opportunity that marine renewable energy offers for the next ten years and beyond,
2. Accept the concerns of the industry about the need for a security 'ecosystem'
3. Accept lead responsibility for formulating and leading the implementation over a number of years of such a system
4. Assign internal responsibility for this area to the Naval Service who have the expertise and experience (e.g. in fisheries protection) to deal with this area
5. Establish and institutionalise (via a Standing Consultative Committee) dialogue with the relevant interests including our Associations
6. Ensure that appropriate security arrangements for our offshore wealth are developed in line with the development of marine renewables and in consultation with the industry.

The Associations would welcome the opportunity to elaborate our views to the Department of Defence. In the first instance, please contact chairman@mrta.ie .