
AYRSHIRE JOINT PLANNING STEERING GROUP

16 December 2009

National Renewables Infrastructure Plan

PURPOSE OF REPORT

1. To inform the Ayrshire Joint Planning Steering Group of the preparation of a National Renewables Infrastructure Plan (N-RIP). The report identifies the need to engage with the process and develop and capture any opportunities emerging from it.

INTRODUCTION

2. The impetus for the National Renewable Infrastructure Plan (N-RIP) comes from the Climate Change (Scotland) Act, the Climate Change Delivery Plan (CCDP) and Renewables Action Plan (RAP) which were published in Summer 2009. The CCDP and RAP set out a framework of actions needed to meet the emissions reduction targets identified in the Climate Change (Scotland) Act. One of these actions is the N-RIP.

NATIONAL RENEWABLES INFRASTRUCTURE PLAN

3. A National Renewables Infrastructure Plan is currently in preparation and due for completion by end December 2009. The aim of N-RIP is to develop a clear spatial framework for port and port side land and landward infrastructure that can support the manufacturing, construction, operation and maintenance of marine renewable energy developments (offshore wind devices, wave and tidal machines), and to identify infrastructure dependencies.
4. N-RIP has linkage with a number of other key actions which are currently in hand and need to be considered together. In particular a supply chain study for the Marine Energy Group and the Marine Energy Road Map to “*Champion and coordinate the delivery of appropriate Scottish Regions as clusters for integrated innovation, manufacturing, port and grid infrastructure.*” Scottish Enterprise and Highlands and Islands Enterprise have been tasked to work with infrastructure owners to identify further need; identify any market failures requiring public sector investment; and to develop appropriate funding and delivery solutions.
5. In the first phase of N-RIP the remit is focussed on the infrastructure needed to support the offshore wind and marine energy sectors. The first output of N-RIP will be a map produced by Scottish Enterprise in consultation with the port and near port landowners which will show the Scottish Government's view of where the key developments may best take place. This will include potential integrated

manufacturing locations; sites where component manufacturing could take place, where maintenance and vessel support bases could be sited and where the clusters of the marine renewables sector could emerge.

ISSUES FOR CONSIDERATION

6. The UK and Scottish Government is committed to a significant offshore wind energy portfolio to help meet renewable targets. Off-shore wind and the marine energy sector is a major opportunity with 33GW (5,000 to 7,000 turbines) anticipated in UK waters by 2020. EU targets indicate 80GW and globally the potential is much larger but unquantified. The industry expects rapid growth with potential for up to 70,000 UK jobs in marine energy by 2020.
7. The N-RIP is a key piece of work which is likely to be a fundamental influence in shaping the location and form of future port and associated landward investment in relation to the rapidly developing marine energy sector. While N-RIP is looking specifically at marine port and ancillary infrastructure consideration should also be given to assessing aviation infrastructure in relation to personnel and in particular technical freight handling facilities and capacity at airports. Individual turbines and other generation equipment will require helicopter access and offshore accommodation platforms will require to be accessed by large numbers of personnel either by helicopter or ship.
8. With the possible exception of offshore wind, technologies are still very much in development and testing so are not yet known with precision. The sector will include not only technology development, planning, design, manufacture, fabrication and construction but also training and skills development, land and sea transport, logistics, storage and ongoing maintenance and servicing. Increased scale and standardisation of components will be key drivers and will necessitate very large scale facilities and sites capable of dealing with heavy loads. Ports will need 24 hour deep draughts as vessels become larger and to allow maximum flexibility and resilience of operations to respond round the clock to “weather windows”.
9. The resources and supply chains for off-shore wind and marine energy will be sourced at a global scale but at some stage and for some functions will have to be deployed locally on the ground in reasonable proximity and with good access to the energy production sites. Locations, facilities, and sites to accommodate these various aspects of the supply chain will need to be found.
10. The North Sea has large offshore wind and marine energy resources but there are also developments proposed and significant potential off the UK’s west coast, in the Irish Sea and off Scotland’s West Coast but also in Northern Irish and Irish waters. (eg Argyll Array up to 1.8GW). How far infrastructure facilities located on the west coast could service off-shore developments in the east and vice versa would need to be carefully considered.

11. Oil and gas experience and skills are expensive and are perceived as such by major players in the marine energy sector. The marine energy sector is looking to develop and invest in new long term lower cost solutions and partnership arrangements to secure their supply chain.

DEVELOPING AYRSHIRE'S CASE

12. The offshore wind and marine energy sector is a major opportunity and it will be vital to the future of the local economy that Ayrshire makes the strongest possible case and effort to position itself and capture a significant slice of this activity. To do this it will be essential to have a coherent and generally agreed view on what existing and potential resources and assets Ayrshire can offer to the marine energy sector and to summarise the pitch – (eg possibly as *Ayrshire: Scotland's Western Marine Energy Gateway*).
13. Ayrshire has an impressive list of specific advantages in relation to exploiting opportunities in the marine energy sector:
 - Coastal location, accessibility and port/airport infrastructure gives Ayrshire an acknowledged role as Scotland's Western Gateway and is a key development opportunity.
 - Ports with development potential and direct access to large scale sites for expansion and ancillary uses.
 - A range of ports (Hunterston, Ayr, Troon, Ardrossan) capable of servicing a very wide range of demands and scale and types of vessel together with the possibility of bespoke transport and other infrastructure to support offshore deployment.
 - Specifically Hunterston combines the advantages of a globally significant deep water terminal (draught of 19metres to 23metres) capable of taking the very largest vessels (eg next generation of jack up barges will require dredging and channel deepening at many other ports) with a major rail connected development site.
 - Location in close proximity to major urban centres, universities and the skills and knowledge and other resources necessary to support the sector.
 - Good connectivity and high capacity transportation infrastructure by sea, road, rail and air for both passengers and freight.
 - Good accessibility to Airports. Glasgow Prestwick in particular is ideally placed to service locations along the Ayrshire coast and has the spare capacity, resilience and all-weather record to develop and expand to provide a full range of services to meet the needs of the off-shore sector. – passenger, freight, helicopter and specialised handling and logistics.

- The aviation/aerospace cluster centred on Prestwick offers potential linkage with the marine energy sector.
 - A good supply of strategic industrial and business locations with large serviced sites readily available and generally spare capacity in its industrial and business infrastructure
 - An established location for a range of energy generation technologies (Nuclear, thermal, onshore wind and other renewables) and a key hub in the electricity grid networks for marine and land transmission.
 - A skilled workforce with an established tradition of manufacturing, heavy and marine engineering.
14. The Ayrshire Joint Structure Plan is supportive of port and airport and related infrastructure development through recognition of Hunterston, Glasgow Prestwick Airport and the ports of Ayr, Troon and Ardrossan as “Gateway Locations” and key drivers of the economy. This provides the framework for support, safeguarding and expansion including the safeguarding of land and surface access for port related development.

CONCLUSION

15. Ayrshire has a substantive case to present itself as a key location for the establishment of an integrated marine energy supply chain location for design, manufacturing, deployment and servicing, based on its ports and airport, ancillary infrastructure, sites, location, transport, skills and other assets. The Scottish Government will now be looking to identify such areas and it will be vital that Ayrshire considers how best to put the most effective partnership based case to become *Scotland’s Western Marine Energy Cluster and Offshore Gateway*. This case now needs to be fully developed and articulated, coordinating land, marine and air assets, identifying any strategic gaps which need to be addressed and key partners to engage in the process.

RECOMMENDATION

16. The Ayrshire Joint Planning Steering Group is asked to note the contents of this report and ask the AJPU manager to develop the Ayrshire case in conjunction with Councils.

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