

Alderney Renewable Energy

to develop major European tidal array

Energy generated from tides in Alderney's territorial waters will be an important source of renewables for the UK and France. The infamous Alderney Race and resultant tidal flows could provide 3GW of predictable renewable energy. The island of Alderney is located in the Channel Islands and its territorial waters contain one of the world's largest tidal energy resources which, once fully developed, is estimated to provide enough power for 1.5 million homes.

Alderney Renewable Energy Limited (ARE) with Joint Venture partner OpenHydro (OH), a DCNS company, are developing a 300MW tidal project. This project will see the deployment of around 150 16 meter diameter OpenHydro turbines and subsea bases at a depth of 40 metres. Grid connection will be via the FAB Link interconnector, which will be a regulated trading link between France and Britain, routed via Alderney. The link via Alderney will provide the connection point for the 300MW tidal project, as well as capacity for subsequent development within Alderney's territorial waters.

Tidal flows in the Alderney Race exceed four metres per second and with tidal generating capacity matching that of the interconnector, it is estimated tidal energy flows, via the link, will occur around 30% of the time. In the absence of tidal generation, when tidal velocity falls below generation levels, conventional energy will be traded via the interconnector, between the UK and French markets.

The Department of Energy and Climate Change recently highlighted the potential benefits of interconnectors in contributing to the UK's energy security, affordability and decarbonisation objectives. FAB Link will be capable of transmitting up to 1.4GW of power, equivalent to around 3.5% of the UK's average demand. In addition, Alderney tidal generation projects have the potential to deliver up to 1.4GW of tidal power to the UK and France, simultaneously.

ARE, a tidal development company, has an exclusive 65 year licence to develop tidal projects in Alderney's territorial waters. Its licence was issued in 2008 by the States of Alderney and the Alderney Commission for Renewable Energy (ACRE). And, subject to individual operating consents, provides access to an area of 48 square miles of Alderney's territorial waters permitting ARE to install turbines and infrastructure for tidal arrays.

ARE, with its partners, will develop tidal projects to secure operating consents, which will be granted by ACRE. These consented projects will be subcontracted to energy companies who will own, construct, operate and maintain the tidal projects. Providing 25 years of revenue generation after which, the project could be decommissioned or subcontracted for a further term.

ARE has selected 48 square nautical miles from a possible 96 as its licence area. A detailed development programme has been scheduled, which indicated that initial project deployment, for the first 300MW project, will commence in 2019. This milestone is dependent on the availability of FAB Link.

ARE and OH, have signed a joint venture which will see the two companies combine their expertise and resources to develop the first 300MW tidal array. The joint venture company is called Race Tidal Ltd (RTL). The formal agreement took place at a signing event held



at the Thetis Marine Renewable Energy conference in Cherbourg on 10 April 2014. Once completed, the array is expected to be 300MW of installed capacity, which could produce power for over 150,000 homes.

Turbine and subsea bases for the RTL 300MW project will be manufactured and supported from a DCNS turbine facility in Cherbourg. This facility will have sufficient industrial capacity to service turbine production and maintenance requirements for both the Alderney and French tidal resources.

RTL will now carry out project development activities including engagement with stakeholders, tidal resource evaluation, seabed characterisation and environmental impact assessment. The results of these studies will feed into the operating consent application that the company intends to submit during 2017.

RTL will benefit from the demonstration arrays planned within the French side of the Alderney Race (Raz Blanchard) in terms of environmental and performance feedback. This feedback will provide beneficial performance and environmental characteristic to assist the RTL 300MW project consenting process.

FAB Link Limited (FLL) is a joint venture between ARE and Transmission Investment LLP. FLL has already entered into arrangements with the French grid operator, Réseau de Transport d'Electricité, to be responsible for the development of the project's assets in France and French territorial waters. An agreement with National Grid for connection to the existing British onshore grid was signed in January of this year. Construction of FAB Link is due to begin in early 2018 and connection to the UK grid is scheduled for late 2020.

Speaking on behalf of ARE, Nick Horler, executive chairman said: "The economic development of Alderney's tidal power projects connected via FAB Link will provide Europe with a new source of predictable, clean, renewable energy and improve the security of energy supplies. The joint venture partnership that we now have in place with OpenHydro is a critical piece in the jigsaw as we move to now make significant progress towards creating one of the largest renewable energy projects in European coastal waters."

For further information please contact:

Nick Horler, chairman, Alderney Renewable Energy,
No. 1 The Crusher, Braye Harbour, Alderney,
Channel Islands, GY9 3XX
Email: info@are.gg | Tel: 01481 825555