

Proposal for Tidal Turbine Research Project in Strangford Lough

Marine Current Turbines Ltd. is proposing to install an experimental tidal turbine system in Strangford Lough Narrows in the spring in 2006. This is a research project involving a single monopile system tidal turbine to be installed for a period of between 2 and 5 years, it will then be removed.

Tidal turbine technology has been identified as one of the key renewable energy technologies that will help the UK achieve the CO₂ emission reduction targets in the coming years, and thus has an important role to play in meeting government targets for averting global warming as well as a clean, sustainable replacement for fossil fuels in future.

The Northern Ireland government has recognised the importance of this technology and is keen to support its development to a level where arrays of turbines can eventually be deployed in the open sea off the coast of Northern Ireland. It is hoped in this way to provide secure and sustainable renewable electricity supplies in the face of declining oil and gas. The UK government, through the Department of Trade and Industry, is financially supporting about half the cost of this project.

Marine Current Turbines Ltd is one of the worlds leading developers of tidal stream technology, and has successfully installed and operated a prototype experimental system near Lynmouth in North Devon for nearly two years. This proposed development project in the sheltered conditions of the Strangford Narrows with its unusually strong currents is an essential step towards the development of this world leading technology

The proposed tidal turbine system comprises two turbines mounted either side of a single monopile structure which work rather like under-water windmills, but in this case driven by the strong water currents rather than the wind. The turbines will generate approximately 1MW of electricity without causing any pollution, which approximately matches the energy requirements of Portaferry or Strangford villages.

Q: Why Strangford Lough?

A: MCT are developing tidal stream energy devices for installation in arrays in the open seas in areas with strong currents. These areas tend to be remote and exposed to severe weather which hinders access and thus the rate at which the technology can be developed. Strangford not only offers a unique location to develop the technology in a challenging flow regime without the high objective danger of severe weather conditions, but it also affords a the unique opportunity for an independent team of scientists to monitor the interaction of the system with the environment.

Q: Strangford Lough is an environmentally sensitive area and has several designations under the European Habitat's directive as well as being an Area of Outstanding Natural Beauty and Marine Nature Reserve, how will this proposal effect these features?

A: A fundamental premise of Marine Current Turbines Limited developing the technology is their commitment to the environment; the technology must be sustainable and have a very small environmental 'footprint'. Consequently, MCT have contracted Haskoning UK Ltd to fully evaluate these issues; copies of the documents will be placed in public areas within Strangford and Portaferry so that they can be reviewed. Clearly MCT is confident that the system will not have any significant negative effects on the local environment and it will be monitored throughout its operational period to ensure it is functioning in an environmentally satisfactory manner. Ensuring safe operation is a key part of the experimental programme.

Visual impact is also a key concern in such a sensitive area, and this has been a key driver of the design to ensure that this is minimised and sympathetic to the landscape.

Strangford is also noted as a breeding ground for Common Seals. This too is a prime concern and following extensive analysis and background work, it is believed that as the speed of the

rotors is very low, no more than 10 to 15 revolutions per minute, they are unlikely to pose a threat to marine wildlife.

The environmental monitoring is a vital element of the project scope, and to this end MCT are working closely with the Environment and Heritage Service, various conservation bodies, leading marine scientists and local stakeholders to ensure suitable safeguards and monitoring are in place to ensure the Lough's environment and ecology are protected.

Q: Are there any proposals for a permanent tidal power array installation in Strangford Lough?

A: MCT have no plans to install an array of tidal turbine systems in Strangford Lough.

Q: Who is funding the project?

A: The DTI are funding 50% of the project, the balance of the funding is from private and corporate investors who are keen to see the technology become a key element of any renewable energy projects around the UK in the future.

Q: Why are we being told about this project now?

A: Primarily, because it would have been premature to have done so earlier, as the plans and discussions were not adequately advanced. Secondly, on the 16th April a jack-up barge called the 'Excalibur' will arrive in the Narrows. This vessel will move into position on the 17th April to extract a core sample by drilling a small hole into the seabed on the 17th and 18th April, and then depart on the 19th. This work is required to confirm the ground conditions so that the foundation design can be completed. The presence of such a large vessel can be expected to cause a high level of public interest.

Q: What consultation has Marine Current Turbines Ltd undertaken to date?

A: There have been detailed consultations with all of the statutory consultees under the recognised consenting process; these include the Environmental and Heritage Service (EHS), Marine and Coastguard Agency (MCA), the Crown Estate. In addition the project has been discussed with DETI, NIE and the Office For the Regulation of Energy and Gas (OFREG).

Marine Current Turbines Ltd have also presented the project proposals to the Strangford Lough Management Advisory Group (SLMAC), the Northern Ireland Fisheries Protection Office (NIFPO), The National Trust, The Ulster Wildlife Trust, The Royal Society of Protection For Birds (RSPB), the Association of Strangford Lough Yacht Clubs (ASLYC) and the Strangford Lough Safety Committee.

Q: How will this impact Strangford and Portaferry?

A: If the project is approved, there will be significant benefits to the local communities for local services and support for the project. More widely, the project will involve a number of Northern Irish institutions and companies directly. The project is also likely to attract a high level of national and international media attention and can therefore be expected to increase the visibility of the Strangford Lough communities. It may also prove to be a local feature of interest to tourists.

Q: How can I find out more about this project and tidal stream technology?

A: Marine Current Turbines Ltd will be hosting a public exhibition relating to the proposed project on Saturday 16th April between 10:00 and 12:30 at the Market House, Portaferry and between 14:00 and 16:00 at the Cuan Restaurant, Strangford.

You can also visit the following websites for more information on renewable energy technologies.

www.marineturbines.com

Marine Current Turbines Ltd web site

www.detini.gov.uk

DETI NI web site

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