

SeaGen Project - Preliminary Works

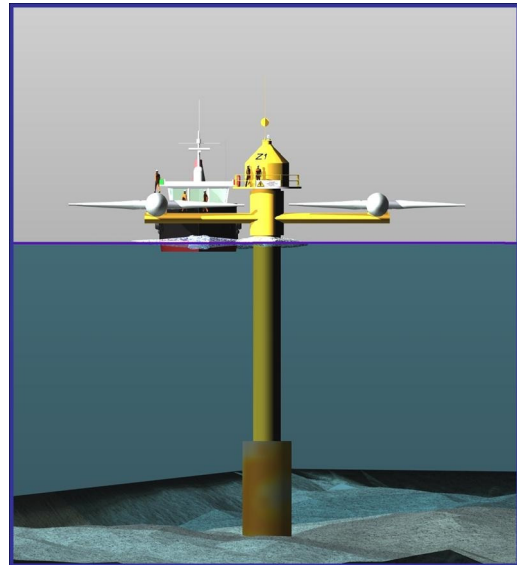
OBJECTIVES

- Identify suitable locations for installation of the SeaGen system.
- Conduct marine and geological surveys of the preferred location.
- Commence the consenting process and EIA for the proposed installation.
- Complete the concept design for the project and identify preferred component suppliers.
- Conduct additional testing on Seaflow to provide design input to Seagen.

SUMMARY

This project is the first phase of work for the SeaGen project, which is a wet renewable tidal turbine system for extracting energy from the sea's currents.

Tidal turbine systems are possibly the only wet renewable project concept that can generate electricity on a predictable basis, and therefore augments the variable power generation nature of other renewable technologies. With the UK government's



*SeaGen Concept (*courtesy of Marine Current Turbines Limited)*

objectives towards sustainable energy, the Seagen concept could provide a proportion of the government's renewable energy targets.

This "Preliminary Works" phase will identify the preferred location for the system deployment. The preferred location will then be surveyed using advance bathymetric and tidal velocity measuring techniques to quantify the tidal resource.

In addition the site geological conditions will be assessed to aid in the pile foundation design which will be conducted in the next phase of the project.

Furthermore, the consenting process will commence, with the intention of all of the applicable permissions and consents being achieved by the time the project has been completed. This will include the Environmental Impact Assessment and the Appropriate Assessment if required.

All variables associated with the system installation will be addressed and planned, these include the method of cable installation, the location of the sub-station and the jack up operations with respect to pile installation and system assembly.

The concept design will be completed to a satisfactory level so that all of the key concerns and technical difficulties are resolved and answered. In addition the suppliers of key components will have been identified.

The project also allows for further instrumentation and testing of the Seaflow system currently installed off Lynmouth in north Devon. This testing will include correlation of the turbine blade loads with the sea's current variations to verify the fatigue prediction techniques used for the Seagen system.

CONTRACTOR

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COST

The total cost of this project is £867,500, with the Department of Trade and Industry (DTI) contributing £420,751 and Marine Current Turbines Limited the balance.

DURATION

18 months – April 2004 to September 2005.

For further information about renewable energy please visit the DTI website at www.dti.gov.uk/renewables.

To obtain renewable energy publications from the DTI either visit www.dti.gov.uk/publications or telephone 0845 015 0010.