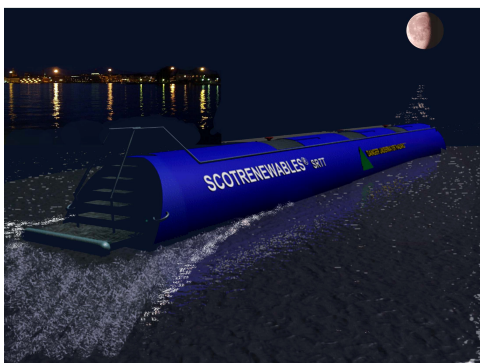


Development of a 5th Scale Tidal Turbine - *SRTT*

OBJECTIVES

- To design and construct a 5th scale engineering model of a free-floating tidal turbine.
- To test the system under both real and controlled conditions.
- To develop a numerical model of the system and calibrate from physical model test results.
- The overall objective is to acquire sufficient information to allow the development of a full scale demonstrator system.



Scotrenewables Tidal Turbine – SRTT

SUMMARY

This project aims to design and construct a 5th scale engineering model of a tidal turbine system. The system will be tested under

controlled and actual conditions and in doing so a numerical model will be developed. Ultimately enough information will be acquired to allow the future development of a full scale demonstrator system.

The *SRTT* is a surface-piercing free-floating tidal current energy converter primarily designed for survivability and cost effective maintenance.

The system is designed for maximum energy capture, low mooring loads and is structurally efficient in extreme hydrodynamic conditions. The design's inherent scalability and ease of mobility mean that the *SRTT* can be effectively installed and maintained on a wide range of sites.

The system makes use of existing technology transferred from the offshore oil and gas industry and from the wind turbine industry. This combined with its simplicity means the development time to commercial status will be relatively short and hence will accelerate the development of large-scale tidal farms in order to achieve developments targets for the renewable energy market.

CONTRACTOR

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(Contract Number:
T/06/00232/00/00)
URN Number: 05/1490

COST

The total cost of this project is
£120,000, with the Department of
Trade and Industry (DTI)
contributing £90,000, and
Scotrenewables (Marine Power)
Ltd the balance.

DURATION

12 months – May 2004 to June
2005.

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

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