

# Case Study

## Mulberry Deployment Vehicle (MDV)

### Introduction

With thousands of miles of coastline around Britain and Europe, it is clear that with the right technology, tidal power could play a significant role in our quest for renewable energy and reductions in carbon emissions,

However, most current tidal stream developments/prototypes rely on heavy-lifting cranes, both for their original installation and for their routine maintenance. The cost of these cranes can run to £60,000 per day, creating high installation and annual maintenance costs and making the financial payback very poor compared to other renewable technologies. A report published by the Carbon Trust in 2006 showed that the marine turbine and its support structure only accounted for 24% of the capital cost, whilst foundations, moorings, and installation accounted for 38%.

### The project

The Mulberry Deployment Vehicle (MDV) is an innovation designed to make the deployment and servicing of sea bed based tidal turbines both easier and more cost effective. The vehicle consists of a reinforced concrete caisson with built in buoyancy, with the tidal stream turbine mounted on top.

The deployment vehicle would be suitable for use with many types of marine turbines already under development and could be used to transfer the turbine from the surface of the sea to the sea bed, and back during deployment and subsequent servicing.

The MDV is currently at Technology Readiness Level 1 and 'proof of concept' for the MDV is now required.

### How the Energy Innovation Centre Helped

The MDV team initially approached the Energy Innovation Centre for help with securing funding, which was required to undertake a proof of concept, research technical issues and engage with other marine bladed turbine developers, oceanographic laboratories and government agencies.

However, MDV's inventor, Geoffrey Hunt, found the Centre to be much more than merely a funding facilitator.

"When you work on your own with an idea, you have no one to spark off. The Energy Innovation Centre fills that role," explains Geoffrey. "They are constantly checking you have done all that you need to have done to drive your project forwards. Without this kind of support, you can easily lose momentum and give up. They push you on and keep you going."

The MDV project has only recently joined the Energy Innovation Centre, however the expert team are already advising him step by step through the patent process and have arranged to introduce him to a venture capitalist.

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