Cambridge Consultants Making a Splash in the Innovative Marine Industry

Marine start-up Green-Tide Turbines (G-TT) has appointed Cambridge Consultants to help with the development of its tidal stream turbines. G-TT promises to revolutionize tidal energy in the same way that jet engines changed the face of aviation.

Their turbines use natural water movement to tap energy from the tidal stream, helping to bring more cost effective renewable energy to the world. Cambridge Consultants has been contracted to carry out G-TT's Computational Fluid Dynamic (CFD) analysis design - once again demonstrating its credentials at helping start-ups answer complex technical questions and offering vital support as they seek a route-to-market.

By 2020 the UK Government has committed to 20% of its total energy requirements coming from renewable sources. Of this, it is estimated that only 3% will be from a combination of tidal and wave devices, but G-TT believe marine renewables have the potential of providing 15% to 20% of the UK's energy needs if deployed correctly.

Current tidal stream technologies are still at an early stage of development and one of the main technical challenges developers are facing is how to best predict and plan how the underwater turbines will interact and work with the varying depths, strengths and directions of water flow.

To help overcome this challenge, G-TT called upon Cambridge Consultants to carry out CFD analysis, which is an essential part of the turbines design process. Green-Tide's turbine technology aims to achieve 30% capital cost savings relative to competing technologies by a means of an optimized innovative design that operates at a higher efficiency and uses less material.

"We find this type of analysis is essential in achieving good results on your R&D process. By the use of appropriate modeling, the development process can be shortened and risks reduced" commented Craig Webster, head of Cleantech at Cambridge Consultants. "It is important that start-ups have access to this level of technology. All too often, we find that financial restrictions coupled with a need to show hardware to investors encourages them to short circuit this process. However our experience is that it's much better to do the right thing early on, than to cut corners and bear the cost of dealing with any issues later on in the process. Our teams develop new technologies and deal with development challenges on a day to-day-basis. We know how to apply the right analytical techniques in an appropriate manner for the early stages of a project. As such, we are delighted to work with innovative start-ups, like G-TT, and are willing to tailor our services to their needs. Indeed some of today's most successful clients were start ups when we first met

them."

Source URL (retrieved on *03/11/2014 - 6:29am*):
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