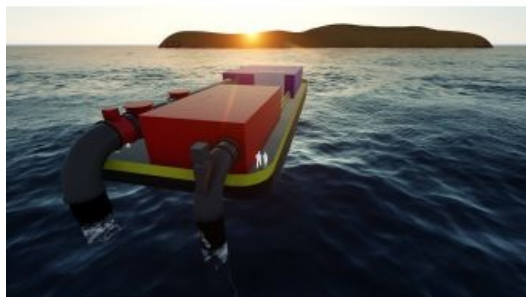


Innovative Ocean Thermal Energy Project Progresses



Global OTEC Resources has announced that it has successfully completed the initial designs and feasibility studies for its cutting-edge ocean thermal energy project. It is now progressing to the detailed design of the key components, all with the aid of a further £80,000 grant from Marine-i.

Part-funded by the European Regional Development Fund, Marine-i is designed to help the UK's marine tech sector in Cornwall and the Isles of Scilly grow through harnessing the full potential of research and innovation. Last September, Global OTEC Resources received a £140,000 grant from Marine-i which enabled the company to establish its operation in Cornwall. The plan is to use ocean thermal energy conversion (OTEC) technology to provide green energy to 'off-grid' islands across the tropics.

Preliminary Design

Dan Grech, MD of Global OTEC Resources, is delighted with how quickly the project is taking shape: "We now have a preliminary design for our floating Ocean Thermal Energy Conversion plant. This enables us to provide an accurate, on-budget cost model to meet the needs of our identified market. Our work has already attracted a letter of support from the Maldivian government, as well as a memorandum of understanding from a major, publicly listed hotel chain which owns 50 resorts across the tropics. This demonstrates the outstanding commercial potential of our technology."

Parallel with this, technical studies have been completed which examined seabed conditions and soil types in The Maldives, as well as wind speeds, current speeds and wave heights. For part of this, the Marine-i team enlisted the help of a research fellow at the University of Exeter, which has carried out pioneering work to support the project.

Tonnes of Seawater

Matt Hodson, marine hub operations director at Cornwall Development Company and a partner in Marine-i, says: "The biggest technical challenge for this next stage will be finalizing the detailed design of the seawater intake and outtake pipes which are of fundamental importance for the operation of the plant. The cold-water intake pipeline must transport tonnes of seawater every second, through a pipeline that is suspended almost a mile vertically from a floating barge. This is a highly ambitious project which could put Cornwall at the centre of an important marine technology of the future."

Dan Grech adds: "We are certain that successful completion of this stage will unlock significant private investment, which in turn will mean that we can scale up and transition into the final design phase – possibly as early as spring 2020."

Application of Solar Energy

OTEC is an application of solar energy that exploits the heat that the ocean captures from the sun's rays. It possesses huge environmental advantages over fossil fuels and nuclear power; avoids land-use problems associated with renewable energy technologies such as solar, wind, biomass, and hydroelectric power; and has the potential to produce far more useful and affordable energy that could be obtained from other renewable sources.