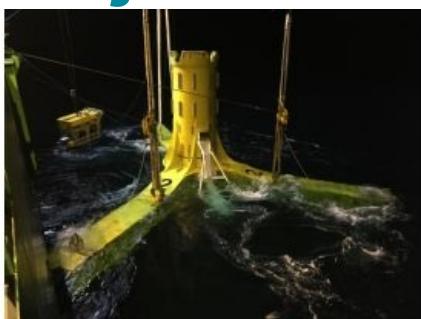


MARINE MAMMAL MONITORING EQUIPMENT UNDERGOES INTENSIVE SUBSEA TESTING

Largest Planned Tidal Stream Project in the World



Balmoral Subsea Test Centre in Aberdeen, Scotland, has carried out hydrostatic tests on equipment that will be used to monitor the interaction between tidal turbines and marine mammals in the Pentland Firth. This project is currently the largest planned tidal stream project in the world and is the only commercial multi-turbine array to have commenced construction, explains Steve Gibb, group

public relations manager at the Balmoral Subsea Test Centre.

The linear actuators that were tested form part of a marine mammal monitoring station anchored to the sea floor. Utilizing both passive and active acoustic tracking techniques, the station will collect data on the underwater movements of marine mammals around operating tidal turbines. This data will be used by the tidal energy industry and regulatory authorities to make informed decisions about the marine mammal collision risk for tidal energy developments.

Confidence in the Current Configuration

The wide range of test chambers available at the Balmoral Subsea Test Centre meant that the specific needs of the test could be easily accommodated, not to mention completed within the tight timeline. "The testing has given us confidence in the current configuration and helps us to narrow our focus in future designs," said Michael Oswald of the Scottish Oceans Institute at the University of St Andrews, who worked on the project.

Test house manager, Derek Weir, said: "We were delighted to work with St Andrews University in ensuring their equipment was fully trialled and fit for purpose." The test centre also carries out many different types of tests, also outside the oil and gas industry, and works closely with the academic, defence and oceanographic sectors.



Balmoral's senior test technician, Mike Royl, and Michael Oswald of the University of St Andrews: "The testing has given us confidence in the current configuration."

Accelerate Millions of Tonnes of Water

MeyGen is developing the 398MW tidal stream project which lies just two kilometres from Scotland's north-east tip. To the north of the site is the uninhabited island of Stroma, which creates a natural channel with the mainland to accelerate millions of tonnes of water flowing between the North Sea and the Atlantic Ocean every day.

This site was originally identified in 2007 following a global review of tidal resources which concluded that the high flows, medium water depths and proximity to the mainland rendered it a prime location for development.

The first phase of the project involves the deployment of four 1.5MW turbines installed on gravity turbine support structures and will act as a precursor to the development of the remaining consented 86MW project.

Sufficient Electricity

The project will demonstrate that the development of tidal array projects is both commercially viable and technically feasible, with the lessons drawn from the construction, installation, operation and maintenance feeding into subsequent phases.

The turbines connect to the onshore power conversion unit at the Ness of Quoyoys where the low voltage supply will be converted for export to the local distribution network. On completion, this phase of the tidal array will generate sufficient electricity to supply 2,600 homes.

The supply chain for this phase of the project is spread across the United Kingdom, Europe and North America, with 43% of the project's expenditure being in Scotland and includes companies in Caithness, Ross and Cromarty.

Only time will tell, but if the project reaches its maximum potential, it will be a huge win for the marine industry and everyone involved.



The first phase of the MeyGen project comprises the deployment of four 1.5MW turbines installed on gravity turbine support structures as part of MeyGen's "deploy and monitor strategy". (courtesy Simec Atlantis Energy).