

# experience

support services for the marine renewables industry



The European Marine Energy Centre (established in 2003) is the first centre of its kind to offer developers of both wave and tidal energy converters the opportunity to test in the world class conditions around Orkney, Scotland.

From world leading first-hand experience over the last eight years, EMEC has developed extensive knowledge which forms the basis of its wider service offering. EMEC's services and consultancy enable the rapid and effective utilization of this expertise for the purpose of furthering the marine renewables industry.

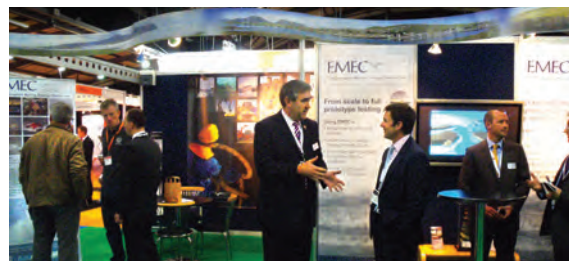
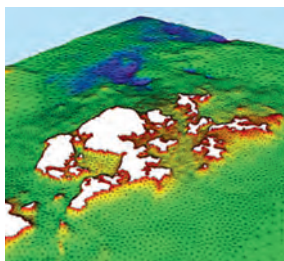
EMEC has already formed international alliances with Canada, China and Japan regarding the design, set up and operation of their own marine energy centres.

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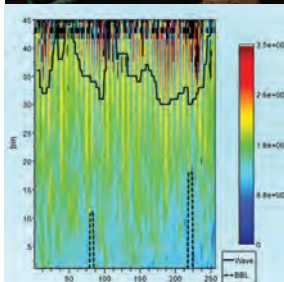
**The strong technical team at EMEC can provide innovative services customised to suit each individual client. The professional team are highly experienced in the marine renewable industry which allows them to adapt and integrate quickly providing proven solutions based on the following skill sets:**

- test centre design
- testing hardware procurement
- deployment methodologies and procedures
- operational management
- health and safety
- procedures and protocols
- consenting
- data collection and interpretation
- research methodologies



## Wave or tidal test centre support

- **business planning and cost analysis for future test centres**
- **design, development, set up and management of test centre delivery**
- **data collection for site selection including:**
  - surveys
  - environmental scoping
  - consenting issues support
  - data collection methodologies
- **cabling and electrical design, purchasing and management**
- **infrastructure installation and deployment methodologies**
- **test site operational management, procedures and protocols**



**EMEC office and data facilities**

## Provision of wave and tidal device testing (UKAS Accredited) outwith the EMEC Test Centre

- independent assessment and validation of devices' energy conversion capabilities, input/output validation
- independent verification of marine conditions
- test management and liaison with UKAS for certification of off-site testing

## Data gathering and provision

- marine resource surveys
- underwater acoustic surveys
- raw wave and meteorological data from Billia Croo (over 5 years)
- raw tidal stream and meteorological data from the Fall of Warness (20+ ADCP surveys)
- modelled data from Mike 21 Model for Pentland Firth & Orkney Waters
  - Wave – 20 year hindcast
  - Tidal – one year hindcast

## Equipment, component, or methodology testing

- utilisation of EMEC sites for testing the operational effectiveness of specific equipment or components in real sea environments
- development of unique methodologies for data collection and manipulation using experience of challenging environmental characteristics at EMEC sites

