

## setting the **standard**



**The European Marine Energy Centre has coordinated the development of a suite of standards and guides, on behalf of the marine renewables industry.**

**EMEC facilitated the development of a suite of 12 guidelines which range from setting out water depth, current and wave behaviour criteria, to power measurement instrumentation and reporting regimes. Each document was progressed by a working group representing a true cross-section of the marine energy industry.**

**More than 4,000 copies of the documents have been distributed worldwide and 6 of these are being progressed via the International Electrotechnical Commission (IEC) for global adoption as the first international standards for marine renewable energy.**

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## Development

Each document was written by an acknowledged expert and progressed by a working group with individuals representing technology developers, regulators, academia, utilities, and project developers.

The development of these guidelines was funded by the Scottish Government and the Department for Business, Enterprise and Regulatory Reform.

The International Electrotechnical Commission (IEC) formed the Technical Committee (TC) 114: Marine Energy - Wave and Tidal Energy Converters. Each participating nation has a National Mirror Committee - in the UK's case this is designated PEL 114 which EMEC is Chairing until September 2013. The first six guidelines marked (\*) below were submitted as starting drafts for the current work programme of TC 114.

## Further guidelines

EMEC has aspirations to add a guide for environmental appraisal in the marine renewable industry (to identify criteria to describe the environmental performance of a device), to simplify the consenting process.

EMEC also believes that a guide to installation and operations and maintenance would be a valuable addition to the suite of documents and will be seeking to progress these in the near future.

## EquiMar

The EquiMar project is funded by the European Commission to deliver a suite of protocols for the equitable evaluation of marine energy converters. EMEC is specifically involved within the work packages looking at: 'Physical Environmental Specification', and 'Environmental Impact Assessment'.



Guidelines **available to download free at**  
**[www.emec.org.uk/standards](http://www.emec.org.uk/standards)**

Six of these, marked (\*), are being progressed for global adoption as the first international standards for marine energy.

**Assessment of Wave Energy Resource\***

**Assessment of Performance of Wave Energy Conversion Systems\***

**Assessment of Tidal Energy Resource\***

**Assessment of Performance of Tidal Energy Conversion Systems\***

**Guidelines for Marine Energy Certification Schemes\***

**Guidelines for Design Basis of Marine Energy Conversion Systems\***

**Guidelines for Reliability, Maintainability and Survivability of Marine Energy Conversion Systems**

**Guidelines for Grid Connection of Marine Energy Conversion Systems**

**Tank Testing of Wave Energy Conversion Systems**

**Guidelines for Project Development in the Marine Energy Industry**

**Guidelines for Manufacturing, Assembly and Testing of Marine Energy Conversion Systems**

**Guidelines for Health & Safety in the Marine Energy Industry**  
(led by BWEA – now Renewable UK)