Advantages of IECRE

- Internationally recognized system
- Standardized, harmonized and transparent procedures for testing and reporting
- Use of international consensus based technical specifications
- Created by and for the sector
- Reciprocal acceptance between test labs and certification bodies
- Raises market exposure
- Opportunity for new market services
- First three years transitional self-assessment for test labs that are accredited under ISO
- Assurance of technical competence, integrity and quality

Next steps

- Visit www.iecre.org/sectors/marineenergy and read some of the operational documents for further information
- Contact your national member body about joining the IECRE ME OMC. You are welcome to join any of the working groups (WGs) drafting the operational documents and thus be part of the process
- Contact other test labs to find out more about how the system can be implemented at your test facility

IEC System for Certification to Standards Relating to Equipment for Use in Renewable Energy Applications

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Interreg 2 Seas Mers Zeéen
MET-CERTIFIED

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MET-CERTIFIED aims to increase the adoption of insurable and therefore bankable marine energy projects in the 2 seas region through the advancement of internationally recognized Standards and certification schemes under the umbrella of IEC and IECRE.

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A guide to conformity assessment for renewable energy test labs in the marine energy sector
The scope of certification covers areas such as design verification, safety and survivability, loads measurement, performance and resource assessment, electrical power quality, acoustic measurements. These areas are explained in the Standards and technical specifications issued by IEC Technical Committee (TC) 114 or within other internationally recognized reference documents.

Figure 1 shows the typical steps taken to reach a type certificate. At the end of each step a conformity statement is issued. RETLs work closely with the RECBs when issuing their test reports. Some steps are optional to reach type certification and based on the client’s wishes.

What are the benefits of IECRE for RETLs?

Open water test facilities for tidal and wave energy converters and labs for controlled testing have a critical role to play in the implementation of the IECRE ME OMC system. Collectively referred to as RETLs, these facilities can perform accredited tests to assess the performance, power quality, acoustics and loads in marine energy converters according to technical specifications published by IEC TC 114.

Becoming an accredited RETL will add value and generate new market opportunities. Gaining accreditation demonstrates the following to your clients:

- Assurance of technical competence
- Approved testing methods demonstrating procedures, data analyses and reporting which is aligned to international best practices
- Processes in place to ensure impartiality
- Test reports which are globally accepted, enhancing access to markets

Furthermore, gaining accreditation will have the following benefits for your organization:

- Independent assurance of technical competence demonstrating ISO/IEC 17025 criteria that have been met for integrity, technical competence and quality
- Assurance that your methods are standardized, harmonized and transparent to ensure efficiency
- Increase awareness of your organization’s capability, potential to identify opportunities to improve and expand

At present the system is operational for tidal stream energy converters only. From 2019 the system should also be operational for wave, OTEC and river current turbines. Tests performed according to IECRE requirements will be issued as a test report in an IECRE format. This test report forms one of the components required for type certification. The other components include a conformity statement, the basis of further conformity assessments and the issuance of a certificate by a certification body.

Let’s get started!

In order to participate, test labs need to be accredited under the IECRE System. The requirements for participation are described in the general rules of procedure applicable to all sectors, IECRE 01 and IECRE 02, and specific rules for the marine energy sector, IECRE 03.

The IECRE Secretariat in Geneva requires the following from test labs wishing to apply:

- Be endorsed by the member body in the IECRE participating country
- Pay annual membership fees to IECRE
- A review of a sample of historic test reports issued for the competence area. If this is not available, a representative test report which may contain fictitious data can be a substitute
- A review of results of a proficiency test for the competence area
- A review of the candidate RETL’s own processes and procedures related to the specific competence area
- Accreditation against ISO/IEC 17025 for the specific competence area
- Reassessment every three years
- Pay fees of peer assessment and accreditation
- An on-site peer assessment of a test and the related documentation

The IECRE Marine Energy Operational Management Committee (IECRE ME OMC) covers tidal stream converters, wave energy devices, ocean thermal energy conversion (OTEC) and energy generation in river currents.

* Tidal barrage systems and conventional hydropower systems are not covered under IECRE ME OMC.