



Tidal Energy & Standards Update

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EMEC Tidal Testing Status



Scotrenewables SR2000 – 2MW (2016-2018)
3GWh generation to date



Tocado TFS (2017) – Temporary Test Platform
– Single 200kW Turbine



Magallanes Renovables – 2MW (Sep 2018-
2019) – follow up from scale test in 2014

Why do we need standards?

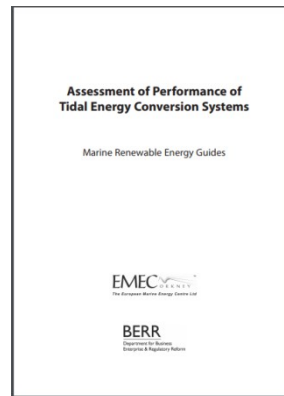
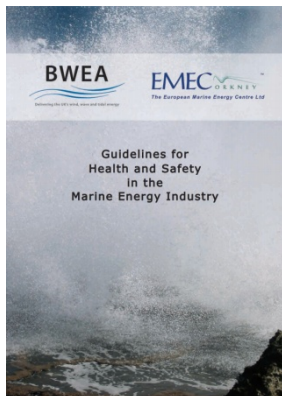


- All major industries rely on standards (e.g. aerospace)
- To show that the ocean energy industry is maturing & serious
- To facilitate mechanism to produce conformity statements for devices through IECRE
- To establish a common approach to testing and resource assessment world-wide
- To open up international markets to developers

EMEC Tidal Testing and Standards



- EMEC developed first guidelines in 2009
- Standards – IEC 62600-200 – Performance testing
 - IEC 62600-201 – Resource assessment
- EMEC – place where developers can prepare for formal tests against standards and then be tested
- Using tidal energy to manufacture hydrogen – power for ferry auxiliaries – new future hydrogen uses
- Involved in developing documentation for conformity assessment



MET-Certified Project



- EU funded (Interreg-2 Seas) project to carry out tidal device testing & device certification
- Test tank, dam-based & open sea locations
- Netherlands, France, Belgium and UK
- Certification bodies DNV GL and Lloyds Register
- Involves testing, reliability assessment, feedback to IEC standards teams



Objective



The key objectives are:

- Development of tidal energy specification and certification schemes by testing their practicality and providing feedback.
- Design, build and certify a state of the art Universal Floating System (UFS) for tidal turbines.
- Dissemination of results, and provision of recommendations to the European Commission.
- Collaboration between the Interreg 2 Seas region for tidal energy, with international outreach.

Project Details

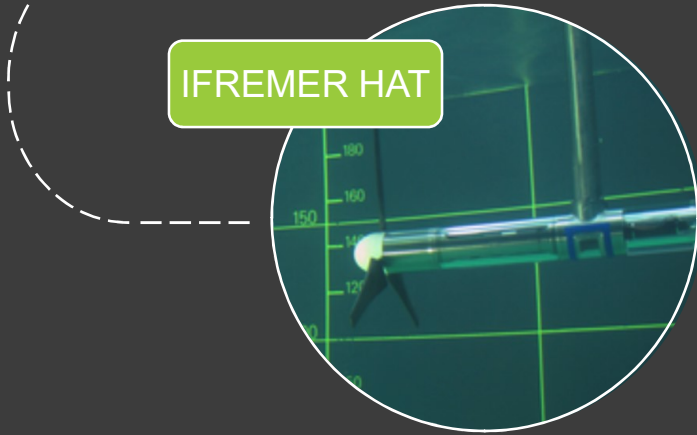
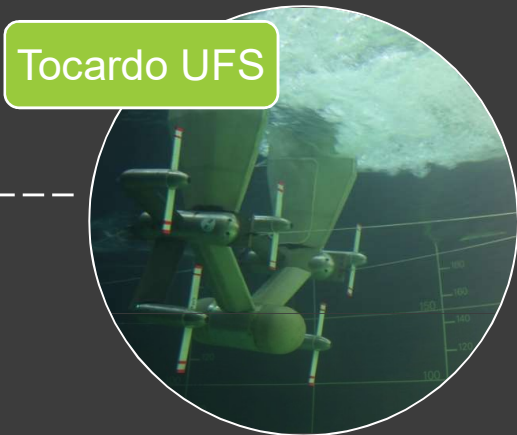
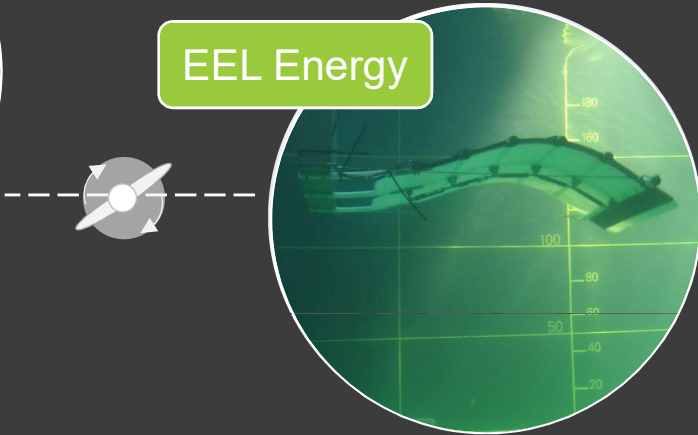
Project Manager: Peter Scheijgrond
peter@dutchmarineenergy.com

Partners	10
Observers	13
Budget	10m EUR
Duration	3 years (2017-2019)

Focus of activities in 2SEAS region but with International Outreach



4
Tests Cases
IFREMER
controlled
conditions

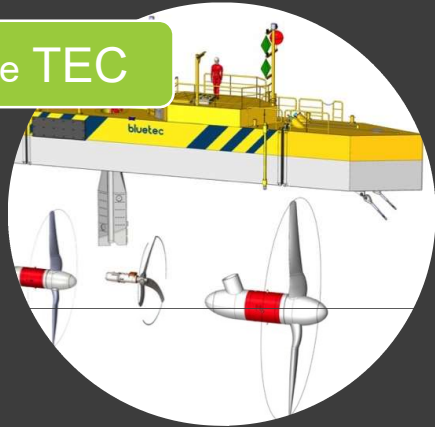


4th TBD

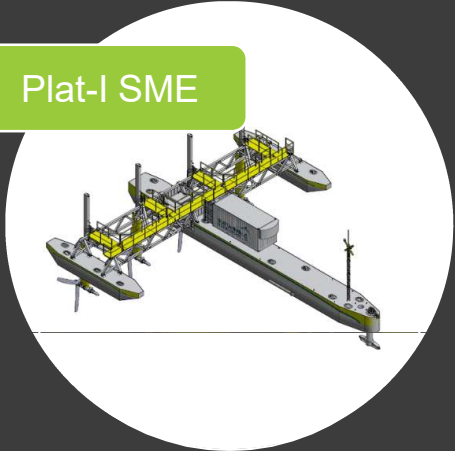
4th Model Tests
to be
Determined

4
Tests Cases
in Open
Water

Blue TEC



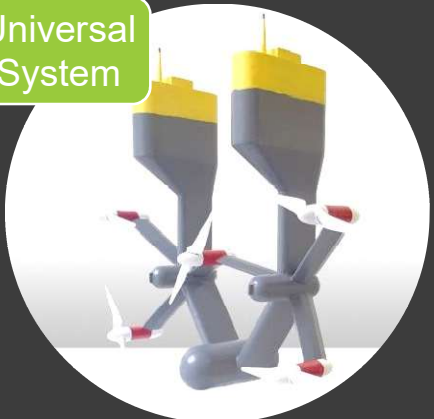
Plat-I SME



Oosterschelde
Project



Tocado Universal
Floating System





Tidal Stream Energy and Standards Update

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