- Magallanes Renovables

Ocean[®]energy certification

How to facilitate the use of already developed technical specifications for wave and tidal.

Cristina Martínez Lozano Site Manager – Magallanes Renovables Ltd.



• 2019-2023

- Marine energy test site in Orkney and RETL
- Accredited tests and inspections following IEC TC 114.
 Ex: IEC/TS 62600 200; Verdant Power Power Performance Assessment
- Since Jan 2023
- Spanish marine energy developer
- ATIR 1.0 1,5 MW TEC in EMEC site since 2018





RETL= Renewable Energy Test Lab TEC = Tidal Energy Converter





Next steps:

- ATIR 2.0 development
 - Design 2023
 - Construction 2024
- Certification 2023 2026

Certification in marine renewables

New sector

Like in more mature sectors like wind, there are standards and technical specifications

IEC: IEC TC 114– Marine energy - Wave, tidal and other water current converters

Purpose of TS is to collect and provide best practice for:

- Mooring inspection
- Power performance assessment
- Resource assessment...

Accreditation and certification bodies work with these TS-EMEC & LR



Technical specifications

- IEC/TS 62600 Parts:
 - -2 Design requirements
 - -3 Mechanical loads
 - -4 Technology Qualification
 - -10 Mooring inspection
 - -30 Electrical power quality
 - -40 Acoustics characterisation
 - -200 Tidal Energy Converter Power Performace Assesment
 - -201 Tidal Resource Assesment
 - -202 Tidal Energy Converter prototype testing

ATIR 2.0 certification steps:



Feedback into working groups

- TC 114 standards working group
- Works on improving standards:
 - Updating the state of art
 - Removing unuseful/inpractical parts
 - Making guidelines feasible:
 - Time wise
 - Economically viable
 - Technology wise

Example – Floating TECs







Floating TECs ADCP position

Initially TECs were mainly seabed mounted (fixed)

- Verdant Power, Andritz
- ADCP on the seabed (fixed)

Now there are **new floating TECs**

- Magallanes, Orbital
- TEC mounted ADCPs
- ADCP moves with the TEC

ADCP= Acoustic Current Doppler Profiler TEC= Tidal Energy Converter

Questions?