The role of WavEC & EnergyIN

Antonio Sarmento

Pólo da Competitividade e Tecnologia da Energia

A Fileira Estratégica do Offshore
ENERGYIN - Pole for Energy Competitiveness & Technology

- **Offshore Energy**
- **Rational:** to build internationally competitive industrial capabilities in less mature technologies by taking advantage of the natural and man-made conditions at the Portuguese coast and continental platform.
- **Anchor project:** creation of Institute of Offshore Energy based on the Wave Energy Centre
- **2011/2012** - Develop a Road-Map for Renewable Offshore Energy

- **Solar Energy**

- **Energy Efficiency**

- **Smart Grids**

- **Sustainable Mobility**
Plan for 2011 on Offshore Energy

- IEO creation
- Offshore Renewable Energy Observatory
  - Follow up of EU SET-PLAN, QREN, national targets and projects
  - Follow-up of national public policies

- Promotion of structural projects:
  - Development of prototype test site at the pilot zone
  - Portuguese offshore experimental platform
  - Offshore electrical connections and grid
Founded in 2003 as a private non-profit association
Devoted to the development & promotion of offshore renewable energy
14 Associates from different sectors
OUR GOAL

Implementation of **Offshore Renewable Energy Industry** through:

- Technical, logistic and strategic support to companies
- Identification and mitigation of main technological and non-technological barriers
- Cooperation with all relevant stakeholders
OUR BRAND VALUES

Independence

We provide impartial advice

We foster open, collaborative relationships built on trust

Transparence

We successfully deliver projects on time and strive for continuous improvement

Competence
SIX MAIN CORE AREAS

- Technologies Evaluation & Feasibility Studies
- Dissemination, Training & Public Outreach
- Monitoring & Operational Support
- Strategic Policy & Economy
- Numerical Modelling
- Environmental Strategy & Monitoring
OUR COMPETITIVE STRENGTHS

Multi-disciplinary team committed to bring solutions for clients with specific requirements

In simulation, monitoring, economics and environmental quality standards

Of the international situation, policies and perspectives on Offshore RE

A valuable asset: the 400 kW wave power plant owned and operated by WavEC

Cooperative relationships with companies, public authorities and organisations

Skilled Team

Deep Knowledge

Relationships

Good Perception

Field Experience
### Annual income and staff

- **Staff:** 14
- **Annual income**

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<tr>
<th></th>
<th>Amount</th>
<th>Percentage</th>
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<tr>
<td>Fees</td>
<td>61,576</td>
<td>8%</td>
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<td>Public funded projects</td>
<td>546,242</td>
<td>67%</td>
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<td>Services</td>
<td>204,042</td>
<td>25%</td>
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<tr>
<td>Other activities</td>
<td>4,650</td>
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<td><strong>TOTAL</strong></td>
<td>816,509</td>
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SERVICES

Typical work includes:

- Resource assessment
- Site selection and feasibility studies
- Benchmarking studies
- Technical due diligences
- Device design assistance

- Technology development support
- Tank testing support
- Real-scale project support (planning, logistics, O&M,...)
- Real-scale data analysis
- Independent performance evaluation

- Environmental assessment and monitoring
- Consenting activities
- Public awareness and education
- Strategic and policy advice
- Market studies

- Preparation of proposals / grant applications
- Specialized training courses
### KEEPING TRACK OF MULTIPLE PROJECTS

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<td>CORES - Components for Renewable Ocean Energy Systems</td>
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<td>EQUIMAR - Equitable testing and evaluation of marine energy extraction devices in terms of Performance, Cost and Envir. Impact</td>
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<td>WAVETRAIN2 - Multinational Initial Training Network on Wave Energy <em>(Coord: WavEC)</em></td>
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<td>AquaRET2 - Aquatic Renewable Energy Technologies</td>
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<td>SURGE - Simple Underwater RE Generation of Elect.</td>
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<td>WAVEPORT - Demo. &amp; Deployment of a Commercial Scale Wave Energy Converter with an innovative Real Time Wave by Wave Tuning System</td>
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<td>ORECCA - Off-shore Renewable Energy Conversion platforms</td>
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<td>SOWFIA - Streamlining of Ocean Wave Farm Impacts Assessment</td>
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<td>FAME - Future of the Atlantic Marine Ocean</td>
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<td>KIC Innoenergy Project ‘Offshore Test Station’</td>
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<td>DEMOWFLOAT - Demonstration of the WindFloat Technology</td>
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<td>MARINET - Marine Renewables Infrastructure Network for Emerging Energy Technologies</td>
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<td>TROPOS - Modular Multi-use Deep Water Offshore Platform Harnessing and Servicing Mediterranean, Subtropical and Tropical Marine and Maritime Resources</td>
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<td>WEAM - Wave Energy Acoustic Monitoring <em>(Coord: WavEC)</em></td>
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<td>Road-map - Roadmapping Offshore Renewables in Portugal</td>
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<td>Offshore RE Technologies Observatory</td>
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13 EU grants & 3 national grants
OUR NATIONAL STRATEGIC INITIATIVES

WavEC:

• Advocates for offshore RE development
• Raises awareness of the offshore RE potential economic benefits
• Creates strong links with industry leaders & public administration
• Develops media & community relations
• Encourages debates about the development of offshore RE
• Foster the responsible development of legislation

WavEC has been active in:

• Creation of a Wave Pilot Zone in Portugal
• POEM – Portuguese Maritime Spatial Planning
• National Roadmap for Offshore Marine RE
• PNAER 2020 - National Renewable Energy Action Plan
• Offshore RE Legislation, inc. Feed-in Tariffs schemes
INTERNATIONAL DIMENSION OF OUR WORK

WavEC is member of the EU-OEA and volunteers time to the EU-OEA's Board of Directors

The Ocean Energy Systems (OES) is an intergovernmental collaboration between countries, which operates under a framework established by the International Energy Agency (IEA)

Within the OES, WavEC is responsible for:

- Operational secretariat
- Budget control
- Communication
- Dissemination
IEO: expanding WavEC capabilities

- Field work (monitoring, surveillance, maintenance)
- Modelling (hydrodynamics, supply chain, economics)
- Pico plant (test centre, interpretation centre)

![Graph showing energy output from 2007 to 2010 in MWh]
To find out more:

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