Wave Energy Scotland:  
*Shaping the Future of Wave Energy Generation*  
David Langston  

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Wave Energy Scotland

• Funded by the Scottish Government
• Develop cost competitive wave technology
• 177 Organisations
• £30.9m committed expenditure
• 84 Contracts
• 13 countries
Technology Programmes

- Power Take-Off
- Novel Wave Energy Converter
- Structural Materials and Manufacturing Processes
- Control Systems
Pre-Commercial Procurement

Ref: The eafip Toolkit
Power Take-Off Programme

- Di-electric Generator
- Gearbox
- Ball Screw
- Electric
- Hydraulic
- Polymer Spring
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Power Take-Off Programme

Quantor

Power Electronic Controlled Magnet Gear (PECMAG)
Power Take Off Programme

EMERGE

Neptune
Power Take Off-Programme

HiDrive
Wave Device Programme

Advanced Wave Swing

Attenuator Cost of Energy Reduction (ACER)
Wave Device Programme

Mocean WEC

Anaconda
Materials Programme

NetBuoy

ARUP

CREATE

HydroComp
Controls Programme

- MaxSim with Quoceant Ltd, University of Edinburgh, CorPower, Mocean Energy, Caelulum, Wave Conundrums Consulting, Aquaharmonics, David Pizer, Heriot-Watt University, Marine Systems Modelling
- Queen Mary University with University of Exeter and Mocean Energy
- SgurrControl with K2 Management (Cruz Atcheson)
Landscaping Projects

• Very Large Scale Concepts
• Alternative Electrical Generation
• Moorings and Foundations
• Electrical Infrastructure
WES Library

Lessons Learnt from Real Sea Deployments
5 Reports
Guidance documents giving lessons learnt from real sea deployments of marine renewables at The European Marine Energy Test Centre in Orkney, Scotland.

Aquamarine Power Ltd
6 Reports
Reports from APL cover the development and installation of the Oyster 1 and Oyster 900 wave energy convertors, and include offshore operations, cathodic protection, supply chain experiences and site tank testing.

AWS Ocean Energy Ltd
7 Reports
The AWS Ocean energy reports cover the experience gained by AWS from a variety of wave energy projects, and discuss some of the drivers for technology decisions during their device development process.

Pelamis Wave Power Ltd
5 Reports
This project compiles information on Pelamis at the time it closed in 2014, covering topics such as R&D, moorings and scale model testing of the attenuator wave energy converter technology.
Thank you