



SuperGen Marine Energy Research

Royal Museum, Edinburgh – 12th October 2007

Prof. Robin Wallace
Institute for Energy Systems
University of Edinburgh



Event information

- Any fire alarm is real
- Toilets are along the corridor
- Please switch mobile 'phones to silent
- Lunch is upstairs in European Art Gallery
- Talks are in this lecture theatre
- All other areas are open and public



Programme - afternoon

- 2.00 Introduction and New Structure
Robin Wallace
- 2.20 Overview of Workstreams 1-9 and Plus 3
Ian Bryden
- 3.00 Doctoral Training Programme
David Ingram
- 3.15 Inreach, Outreach and Dissemination
Robin Wallace
- 3.30 Presentations close and thanks
Robin Wallace
- 3.30 Coffee, Poster Session and Collaboration
- 4.00 Event closes, networking can continue



SuperGen Marine Energy Research

Phase 2

Partners



EPSRC-funded 4 year collaborative project

- University of Edinburgh
- Queen's University Belfast
- Heriot Watt University
- University of Strathclyde
- Lancaster University





Affiliates

University of Durham

Southampton University

Robert Gordon's University

University of Manchester

University of Exeter

University of Highlands & Islands

Millennium Institute



Overseas Partners

HMRC Cork

TU - Delft

ECN - Nantes

Oregon State University

Universities of Osaka City and Hokkaido - Japan

Harbin Engineering University and

Dalian University of Technology - China



Operation

Executive Director and PI	Robin Wallace
Research Director	Ian Bryden
Postgraduate trainer manager	David Ingram

Co-directorate One CI from each core university

Supervisory Board Representatives from EPSRC/RCUK

Research Advisory Forum (RAF)
Representatives typically from
BERR, Carbon Trust, EMEC, NaREC,
2 Utilities,
2 wave and 2 tidal current developers



Influences

During Phase 1 a selection of developers moved to full-scale prototype, this has identified needs for further fundamental research.

UKERC & SuperGen Marine organised numerous national and international meetings of the stakeholder community and agreed an R&D roadmap

Phase 1 developed Protocols on behalf of the DTI for open sea testing and performance evaluation

Phase 2 builds on experience arising from early device tests, deployment of prototypes, the UKERC R&D road-mapping and DTI Protocol processes.



Aims and objectives

Generic research with long-term objectives to:

1. To increase knowledge and understanding of device-sea interactions of energy converters from model-scale in the laboratory to full size in the open sea.
2. Reduce risk and uncertainty for stakeholders in the development and deployment of technology;
3. Enable progression of marine technology and energy into true positions in future energy portfolios.



Work Streams

- WS1 Numerical and physical convergence
- WS2 Optimisation of collector form and response
- WS3 Combined wave and tidal effects
- WS4 Arrays, wakes and near field effects
- WS5 Power take-off and conditioning
- WS6 Moorings and positioning
- WS7 Advanced control and network integration
- WS8 Reliability
- WS9 Economic analysis of variability and penetration
- WS10 Inreach, dissemination and outreach

Doctoral Training Programme

Ecological Consequences of Tidal & Wave Energy Conversion