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Member
Scottish Renewables

REA WATTS 2009
Leasowe Castle, Wirral, Merseyside

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The Forum for Scotland's Renewable Energy Industry



What is Scottish Renewables?

The voice of the renewable energy industry in Scotland

- Member-led trade association
- Over 260 member organisations
- Includes developers, consultants, landowners, NGOs, government agencies...etc
- All sectors – wind, wave, tidal stream, hydro, biomass, micro-renewables...

Creating viable and sustainable markets for renewable technologies



Outline

Legislative and financial incentives for marine renewable energy

- **Innovative Scottish policies**
- **Outcomes for Scotland**
- **Still not got it cracked**

Innovative policies: finance

- **Marine Supply Obligation**
 - Discussed since 2006, introduced 2007
 - Obligation to provide ROCs from marine projects in Scotland
 - Higher buy-out prices: £105/MWh tidal, £175/MWh wave
- **Banding**
 - Introduced 2009
 - Level commensurate with MSO – 3 ROCs/MWh tidal, 5 ROCs/MWh wave

Innovative policies: finance

- **WATES**

- Launched late 2006
- £13.5 million to 10 projects
- Flexibility and simplicity

- **Saltire Prize**

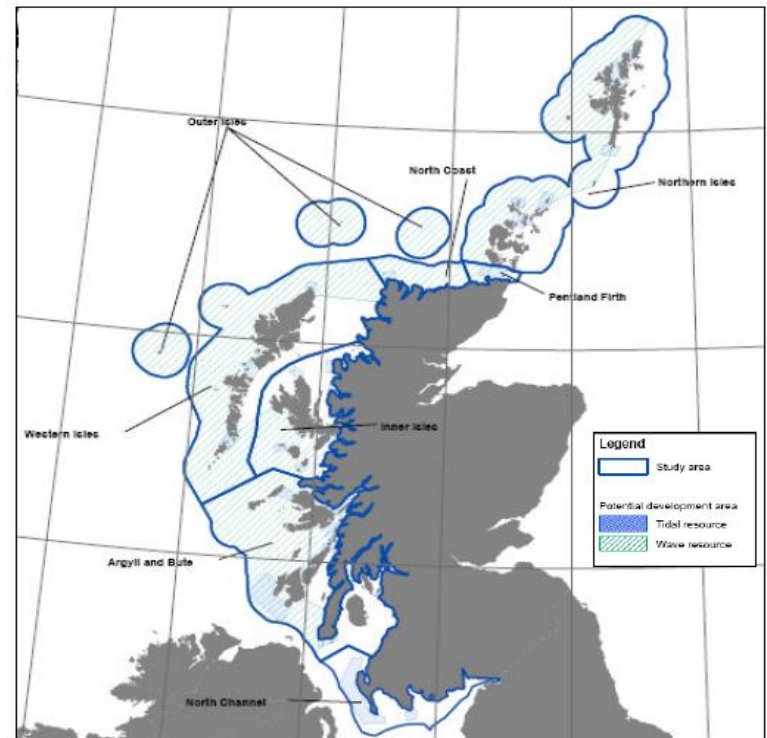
- £10m to organisation generating 100GWh over 2 years before 2014
- Publicity & official support



Innovative policies: planning

- **Strategic Environmental Assessment**
 - Scoping report 2006, ER 2007, post-adoption statement 2008.
 - 1 – 2.6 GW potential in study areas
 - Flagged many areas where information missing
- **Marine Energy Spatial Planning Group**
 - Formed in 2007 to carry forward SEA recommendations on:
 - Strategic locational guidance
 - Simplified consenting
 - Environmental data and research

Figure A: SEA Study Area and Development Areas

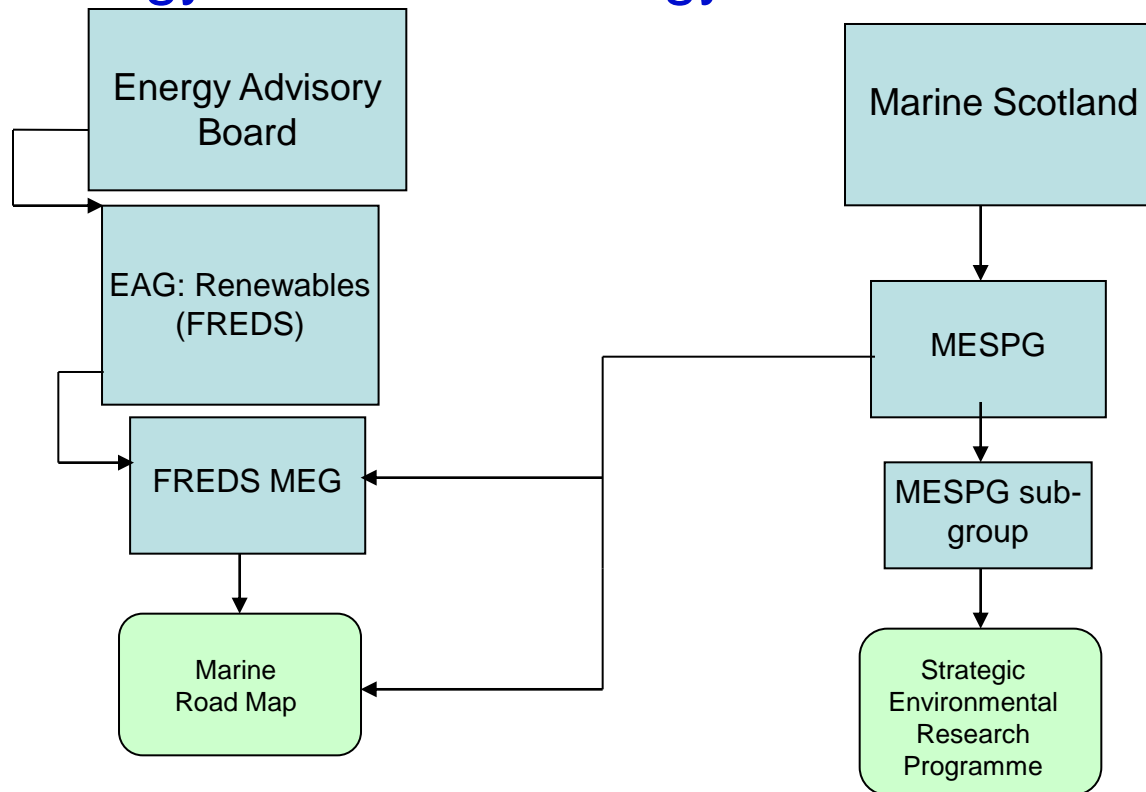


Innovative policies: supply chain

- **EMEC**
 - World's first open sea testing centre
 - Established in 2003
- **National Planning Framework 2**
 - Flags certain developments as nationally important for renewables development
 - Shetland, Orkney, Western Isles links and upgrades
- **National Renewables Infrastructure Project**
 - Scottish Enterprise/HIE defining requirements and solutions for targeting investment in those areas
 - Spatial framework for ports and port-side land infrastructure
 - Reporting to Energy Advisory Board in Oct 2009

Innovative policies: strategy

- Number of groups operating proactively to deliver strategy for marine energy in Scotland

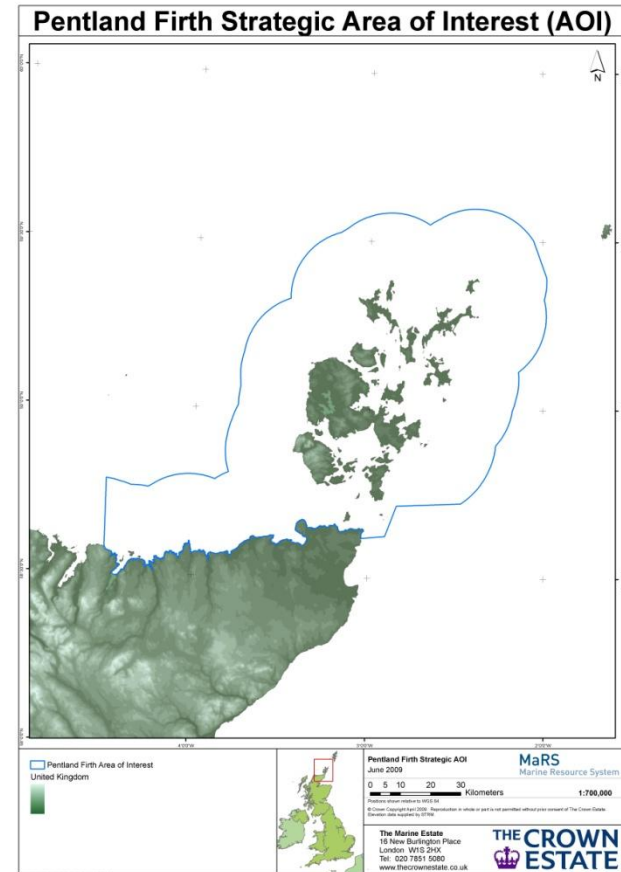


Outcomes: technology development

- Key technology developers based in Scotland: Pelamis Wave Power, Wavegen, Aquamarine Power, Lunar Energy etc
- Demand for EMEC high – wave:
 - Pelamis Wave Power (2004)
 - AW Energy (2005)
 - Aquamarine Power (2009)
 - Ocean Power Technologies (2010)
 - Pelamis Wave Power (2010)
- Demand for EMEC high - tidal stream:
 - OpenHydro (2006)
 - Tidal Generation Ltd (2009)
 - Hammerfest Strom Ltd (2010)

Outcomes: project development

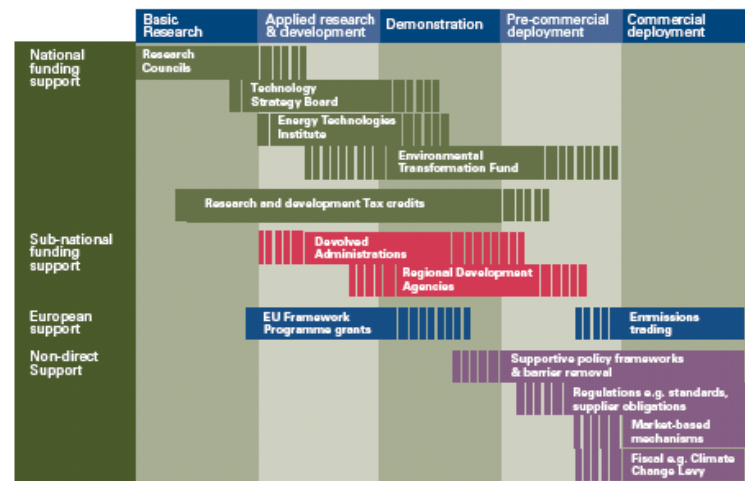
- UK's first marine energy leasing round
 - Announcements expected end 2009
- Attracting international attention for marine energy



But we've still not got it cracked

- Finance
 - Call for tidal stream to be banded up under the RO(S)
 - No replacement for WATES – Saltire Prize not substitute
 - Essential that solution is found quickly in order to progress technology proof/environmental monitoring before entering into larger projects under the leasing round

Figure 8.1: An overview of the main sources of funding support for energy technology development in the UK (both direct and indirect), categorised by the broad stage of technology development.²⁴²

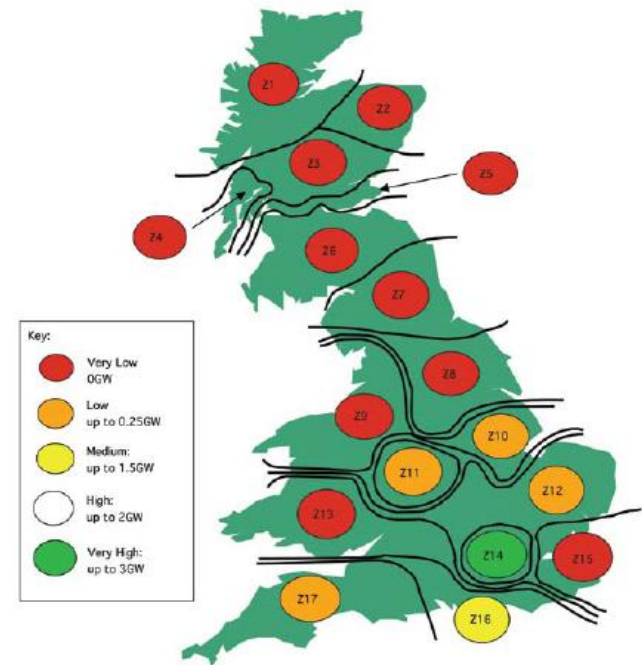


But we've still not got it cracked

- Grid

- Capacity is still very limited around Orkney/Pentland Firth and the Western Isles
- Grid companies encouraging applications, with assurance that connection dates may be found pre-2018
- However, application process presents financial challenges for smaller projects
- Even when capacity in place, charging regime for North/West Scotland may present its own challenges

Figure 3.7: Generation connection opportunities in Great Britain



Source: National Grid
[The key indicates the level of spare capacity on the system]

But we've still not got it cracked

- Supply chain
 - Need for investment in:
 - Ports
 - Manufacturing/fabrication facilities
 - Human resources
 - Vessels
 - Particularly in areas adjacent to resource
 - Need to ensure co-ordinate with/complement supply chain for offshore wind, rather than compete



Conclusions

- Early action by all Scottish parties – Government, industry, economic development agencies, academia – has given Scotland a head start on technology and project development
- Action is ongoing to maintain this lead, but may be constrained by lack of finance available for early projects

Conclusions

*The Government should focus on a range of renewable technologies to meet our renewables target and prioritise our resources to reduce our reliance on fossil fuels. In particular, I believe that marine energy - wave and tidal - has the potential to make a significant contribution to our longer-term energy needs, in the period 2020-2050. According to the Carbon Trust Marine Energy Challenge 2006, marine energy could provide up to 20 per cent of our energy needs. As a global centre for wave and tidal energy with many leading devices being developed by UK companies and many overseas device developers active in the UK, **I believe the Government should do everything it can to bring this technology to commercial deployment, unlocking any issues preventing deployment and providing the necessary leadership through action.***

Malcolm Wicks, MP, Prime Minister's Special Representative on International Energy Issues report into Energy Security

- Co-operation across the UK, Europe and internationally is vital!

Contacts

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