

innogy

Wave Energy Investment Experience

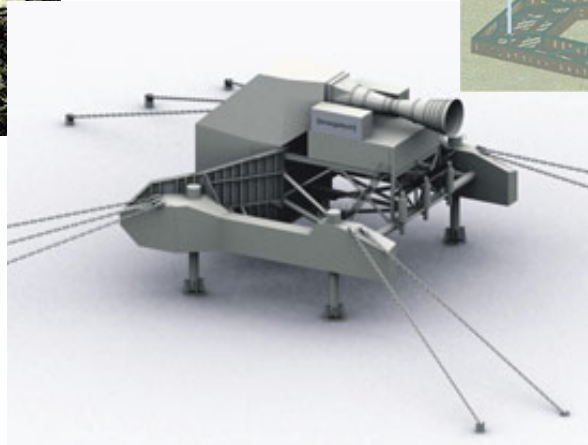
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innogy Renewables UK

Background

- Internal Marine Energy Opportunities Report 2005
 - 'Wave Resource -
 - Offshore - 53TWh; 17,000MW
 - Near shore - 14TWh; 4,000MW
 - Onshore 'hot spots' - 5TWh; 1,600MW
 - Prototype development ongoing, some possibly proven in 1 to two years time.
 - Tidal Stream and Wave demonstration projects now, for new funding mechanism. Online by 2008-10?
 - Commercial Projects could be by 2012.'
- Marine development team set up in 2006 to develop the marine energy opportunity.
- 4ROCs; Crown estate leasing rounds, Lots of public studies and govt support.

Wave power technologies under development



Siadar Wave Power Project, Isle of Lewis



- Collaboration with Wavegen (Voith). Active Breakwater Concrete caisson structure approx 240m long, ~10 caissons with 4 off 100kW Wells turbines each.
- Near-shore, not floating and out of the water, fixed link to shore, relatively proven technology – hence relatively low risk first step.
- Multifunctional Project at the gateway to the best wave resource in Europe



‘A real project which could begin construction in 2012; first of its kind, world show piece wave power station and test bed for OWC technology. Can lead to other similar projects and facilitate offshore OWC.

Consent granted January 2009; detailed procurement stage. If goes well then operational late 2012.’

But...

As prices came in the economics didn't stack up, despite 4 ROCs and £6m grant offer.

High risk and high cost (£50m plus) below hurdle rate.

Also no immediate follow on projects.

So project was shelved in late 2010.

Similar story with tidal stream and tidal range ventures, plus offshore wave.

Marine Development Team disbanded 2012.

