



**RETS**  
Renewable Energies Transfer System



# **Economic Opportunities and Funding for Renewable Energy**

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## Private and public sector approach

- Economic opportunities – international markets
- Funding opportunities from the EU



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## Economic opportunities

- Producing new products
- Producing new services
- Producing new marketing/branding
- Expanding into new markets



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## UK Renewable energy strategy 2009

- 15% of energy to come from renewables by 2020
- 30% of electricity from renewables (currently 5.5%), on and offshore wind, biomass, hydro, wave and tidal
- 12% of heat from renewables – biomass, biogas, solar and heat pumps
- 10% of transport energy from renewables (currently 2.6%)



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- £30 billion financial support between now and 2020
- Policies – Renewables Obligation, Renewable Transport Fuel Obligation, Renewable Heat Incentive, Feed in Tariffs



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## Introduction of Feed in Tariff

- To encourage small scale low carbon electricity generation
  - (up to 5MW) by non-energy professionals
- FITs support new anaerobic digestion, hydro, wind and solar PV schemes up to a maximum capacity of 5MW with tariff rates varying with technology and scale. Some examples:

500kW for anaerobic digestion.....'**farm scale**'

100kW – 2MW for hydro.....'**community scale**'

500kW – 1.5MW for wind.....'**community scale**'

- Less than 1 year – big impact already
- 6-8 % per annum, inflation linked guaranteed for 20 – 25 years depending on technology



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## Renewable Heat Initiative

- To encourage a radical change in the way we generate heat on domestic, commercial and industrial scale
- Unlike Feed-in tariffs there is very little experience of operating this kind of scheme.
- Like a feed-in tariff (FIT) in so much as renewable heat generator is paid according to generation (kWh)
- RHI available from April 2011 – PROPOSED



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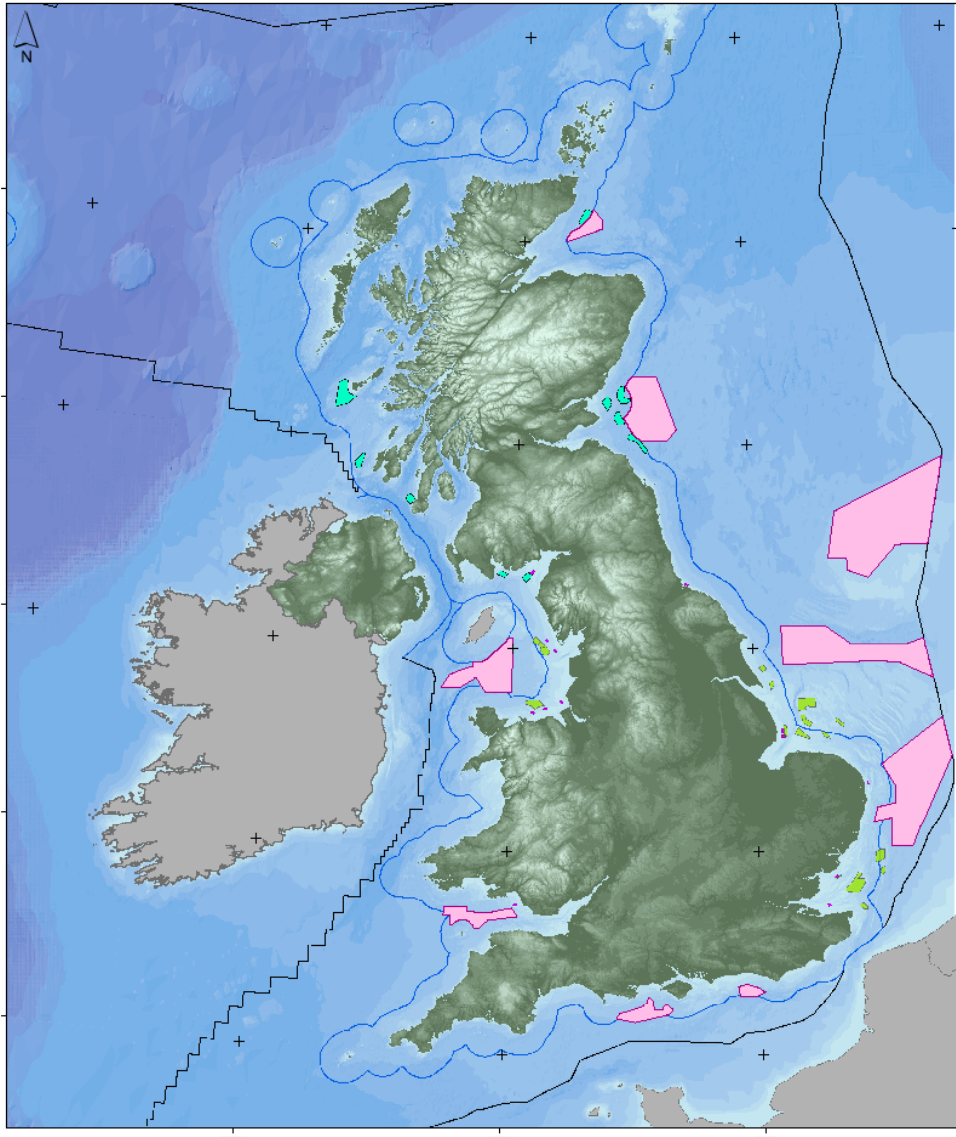
# Offshore and Onshore Wind.

## Marine and Tidal Energy

### Opportunities

- Component Manufacture,
- Turbines and Component
- Structural - Towers and Fabrications
- Marine Construction – Offshore and Ports
- Operation and Maintenance
- Planning and Legal Services
- EIA consultancy
- Wind / Wave modelling etc

# Wind Activity



- Round 1 Wind Farm Lease
- Round 2 Wind Farm Lease
- Round 3 Wind Farm Zone
- Scottish Windfarm Exclusivity Agreement
- Europe
- UK 12 nm Limit
- UK Continental Shelf

Bathymetry  
Shallow  
Deep



Wind Activity  
22 September 2009

MaRS  
Marine Resource System

0 35 70 140 210 Kilometers 1:3,750,000

Positions shown relative to WGS 84  
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Elevation data supplied by STN.  
Bathymetry Data supplied by IBCSW.

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# UK Offshore Wind

## Phases 1, 2 and 3 STW



# Main wind turbine components



Rotor  
Hub

Drive  
Train

Control  
Systems



Composites

Structural

Electrical



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## **Power and Transmission**

### **Definition**

- Grid Connection – Large and Small Scale
- Efficient Energy Transmission Technology
- Energy Conversion and Storage

### **•Opportunities and Markets**

- Grid Upgrade – Ofgem £300M project most recent
- Offshore Transmission Operators(OFTO) Tender process open – 33GW connections
- Small Scale Connections & Distributed energy schemes

**Key Markets – Component Supply, Technical Innovation**



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## Opportunities

- National shortage of skilled technicians/engineers and installers
- Big gaps in the supply chain
- Local authorities retro-fit programme especially for social housing
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## Renewable Energy Supply Chain Opportunities

<http://www.resco.org.uk>

- Run for the Regional Authority of the West Midlands
- Provides links to supply chain companies



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## Funding Opportunities - EU

In general

- About 1 year from start of process to grant
- Multiple partners usually needed
- Match funding varies
- Need to start early



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## Competitiveness and Innovation Framework Programme (CIP)

- The Entrepreneurship and Innovation Programme (EIP)
- The Information Communication Technologies Policy Support Programme (ICT-PSP)
- The Intelligent Energy Europe Programme (IEE)



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## Intelligent Energy Europe

- Open day likely to be Feb 2011 (register early)
- Local/regional authorities, academics
- ERRIN network very useful  
<http://www.errin.eu/>
- Staffs Uni will look to lead 1 bid.
- <http://ec.europa.eu/energy/intelligent/>



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## INTERREG IVC

- Likely to be end Jan/Feb 2011, closes end March/April
- Aim for projects to start early 2012 – 3 years
- £100 million euros available
- Go for a wide geographic spread ,must include 2 new member states as partners



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