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Ofgem Discussion Day

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Renewable Energy in the UK

- Policies, targets, challenges and delivery
- Creating a new industrial sector in the UK

Policies

- Energy White Paper (February 2003) reviewed future energy mix in the UK
- Government set ambitious environmental targets to reduce carbon – 60% by 2050
- Several policies advanced to achieve this
- Renewable energy one of the main delivery mechanisms
- Additional benefits – greater diversity of energy supply, associated industrial development
- Compliance with EU directive on renewable energy

Government mechanisms

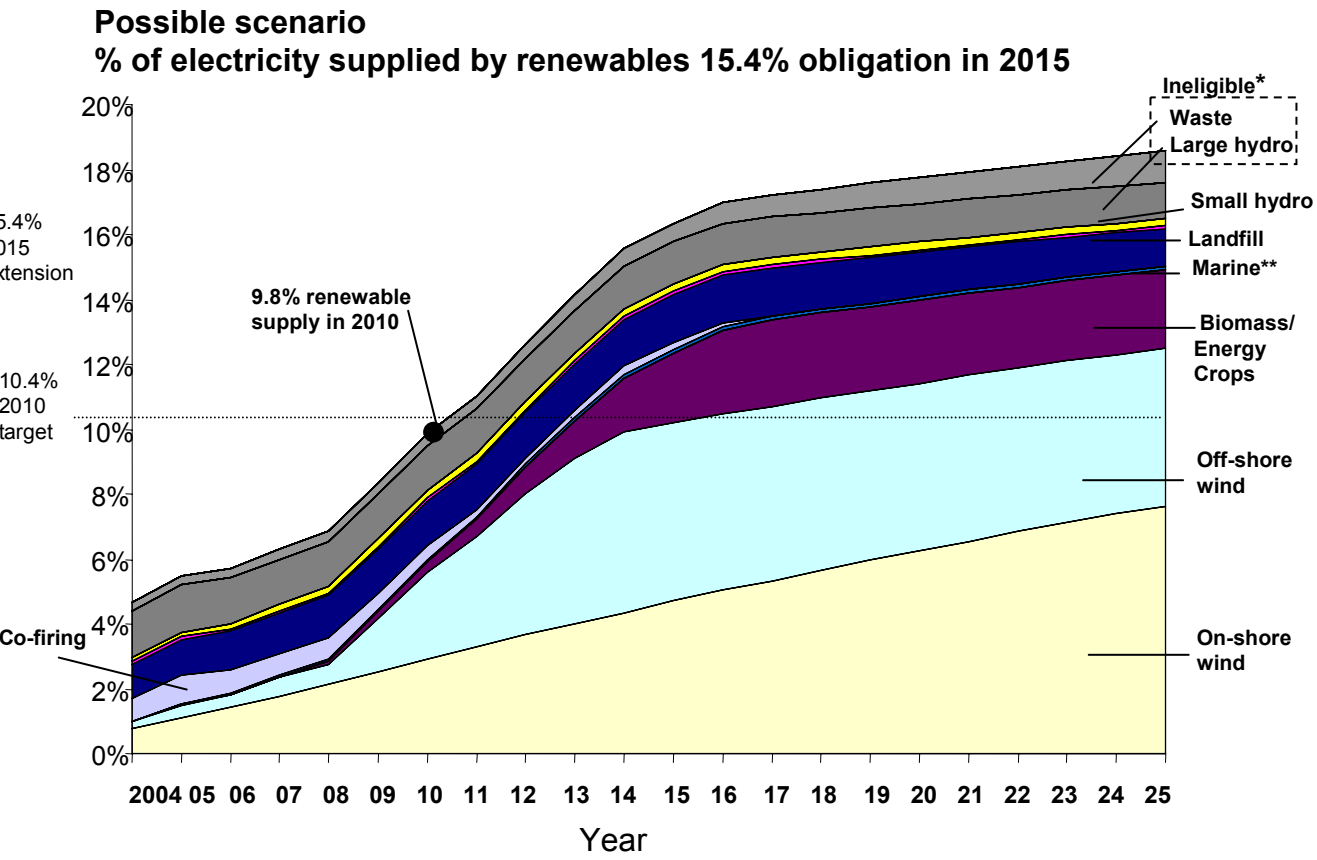
- Targets – 10% - 2010; (20% - 2020); regional
- Legal duty on suppliers – X% of electricity to be renewable
- Trading in renewable certificates – rewards and penalties
- Capital grants for near commercial technologies (£350m)
- Research/development grants for less-developed technologies
- Create offshore wind sector

Industry response

- Centrica - £500m for offshore wind, recently announced could increase to £750m
- Innogy - £400m of City investment
- Scottish Power - $700m bond issue in 2003, much renewable; currently £1b of wind projects
- Scottish and Southern – consents for 200Mw wind, and developing 100Mw hydro
- Powergen – plans £100m per year for rest of decade


The Future Offshore
Offshore Windfarms
EXISTING
ROUND ONE SITES
UNDER CONSTRUCTION
CONSENTED
UNDER APPLICATION
APPLICATION AWAITED
ROUND TWO APPLICATION AREAS
BLYTH
SOLWAY FIRTH
TEESSIDE
BARROW
NORTH WEST
SHELL FLAT
BURBO
RHYL FLATS
NORTH HOYLE
GREATER WASH
LYNN
INNER DOWSING
CROMER
SCROBY SANDS
THAMES ESTUARY
GUNFLEET SANDS
KENTISH FLATS
SCARWEATHER SANDS

Total electricity supplied by renewables is expected to reach 10% by 2010, of which 8% will be RO eligible – near-term growth is dominated by on and off-shore wind

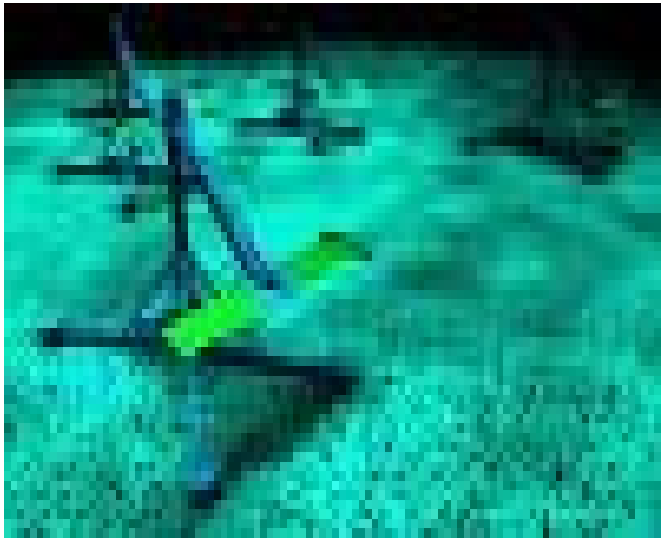


arge-scale hydro (>20MW) and ineligible waste provide 1.4% and 0.3% of supply in 2010
spectively
Wave and tidal stream

Basis / Comments

- Investment based on hurdle rate of returns and expected revenues over 20 years driven by forecast ROC prices
- Technology costs reduce in line with cumulative capacity due to learning effect
- On-shore wind build rate constrained in line with current planning consent rate
- Maximum off-shore wind build rate based on licensing rounds
- Extended co-firing eligibility rules
- If biomass does not develop then offshore wind will fill the gap at similar costs (2012 onwards)

RJ3 USe co-firing extend eligibi
Arwas, 23/01/2004



Stingray

Pelamis

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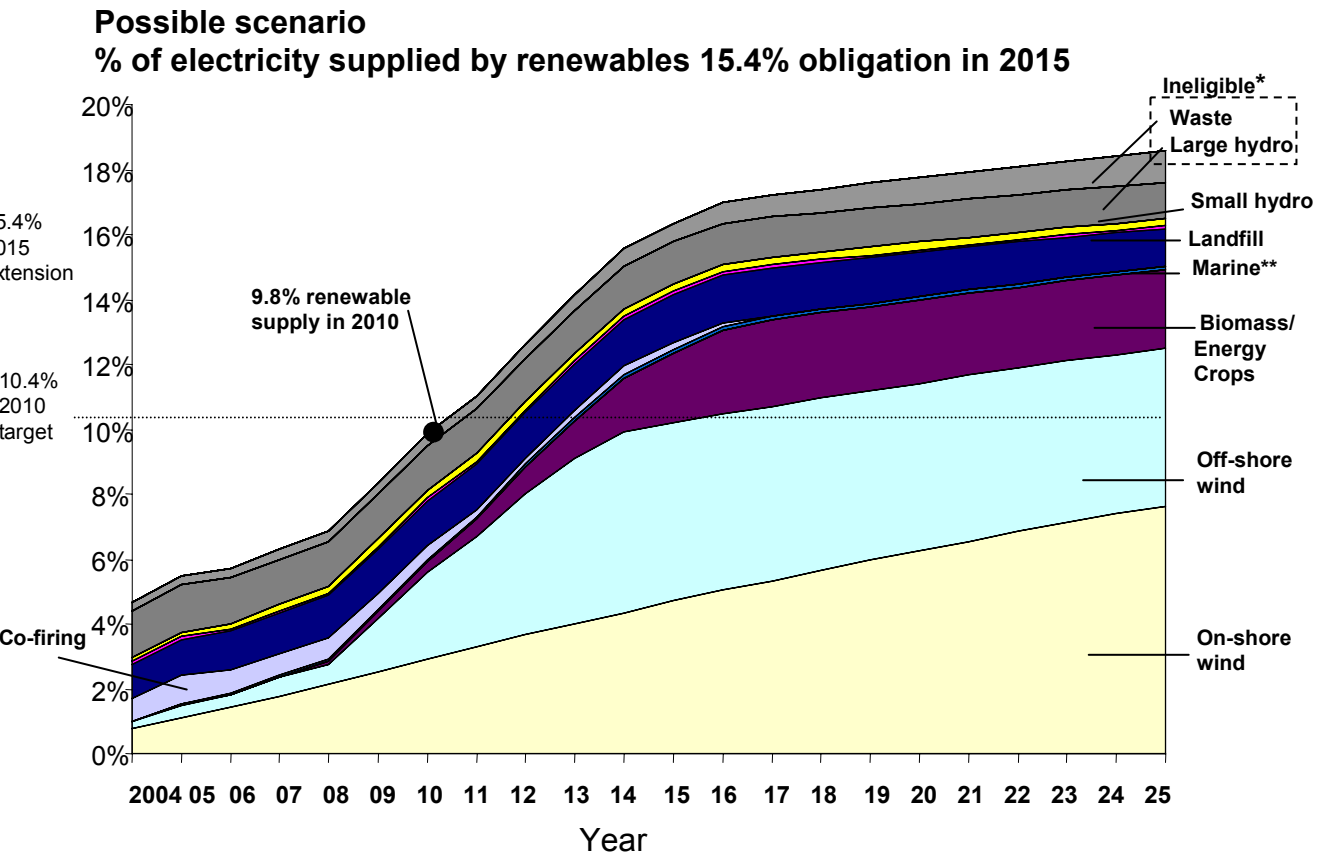

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Challenges

- confidence of financial sector
- planning
- grid connections
- communications
- regions and sub-regions

Employment

- currently 8000
- potentially 35,000 by 2020
- UK content
- turbines, blades, towers, marine

Scroby Sands

Conclusions

- Clear target of future direction
- Strong political support
- Huge task
- Working closely with industry and with others
- Some quite difficult issues and barriers
- Prospects of success


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