

British Offshore Wind Energy Round 3 Challenges & Opportunities

UK Trade & Investment

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Gijon - Marzo 2011

- **The Crown Estate**
 - **Offshore Wind Round 3**
 - **Business Opportunities**
 - **UK Trade & Investment**
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The Crown Estate

Is a landowner

Is not a regulator

Is a public body –The Crown Estate Act 1961

Is not part of Government –but works closely with
Government, statutory bodies *etc.*



The Crown Estate

A property portfolio worth over £6 billion.

A maritime portfolio including most of the UK seabed (out to 12 nautical miles) and more than 50% of the UK's foreshore

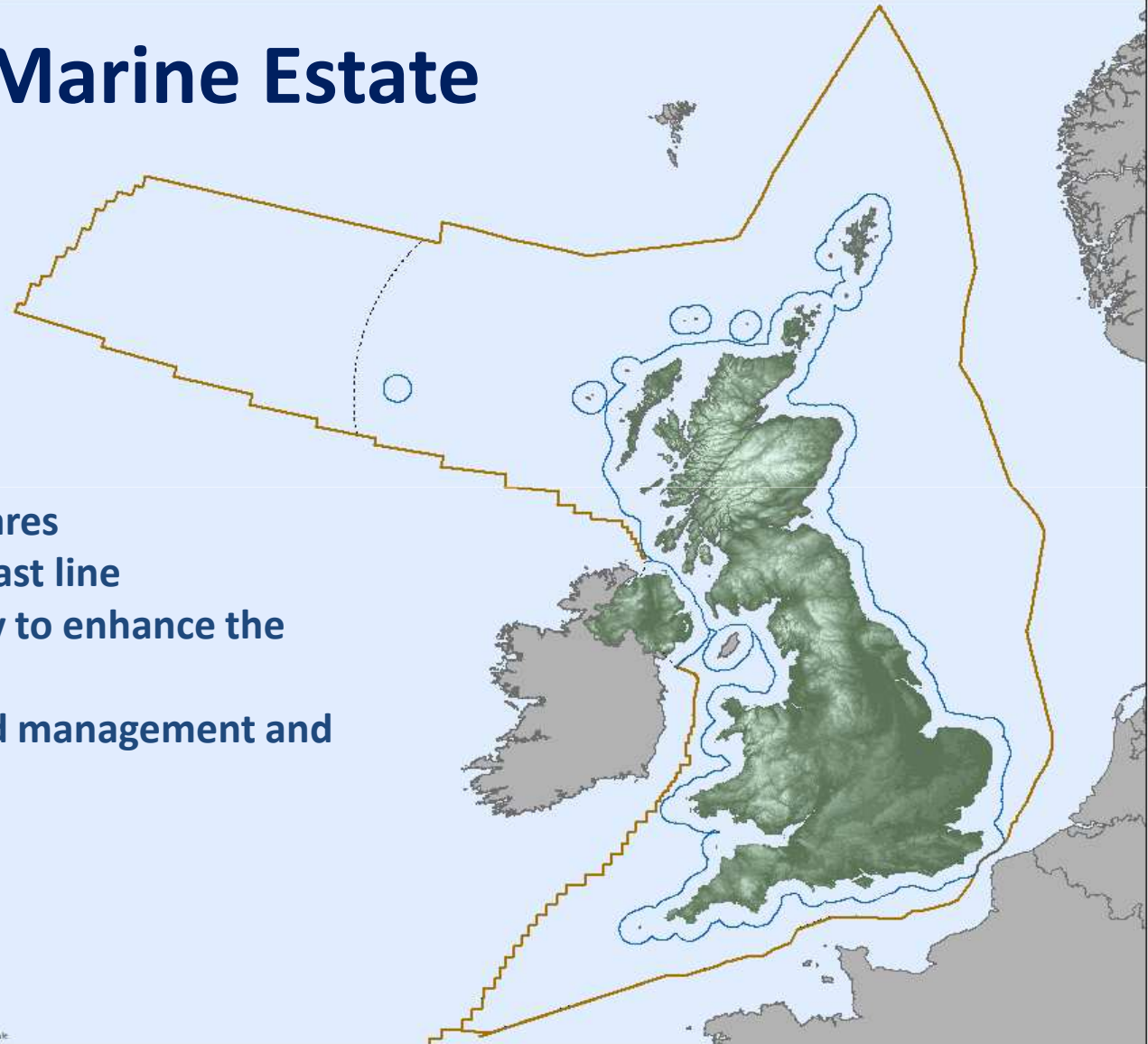
The Crown Estate authorisation is required to place structures on or pass cables over the seabed and foreshore

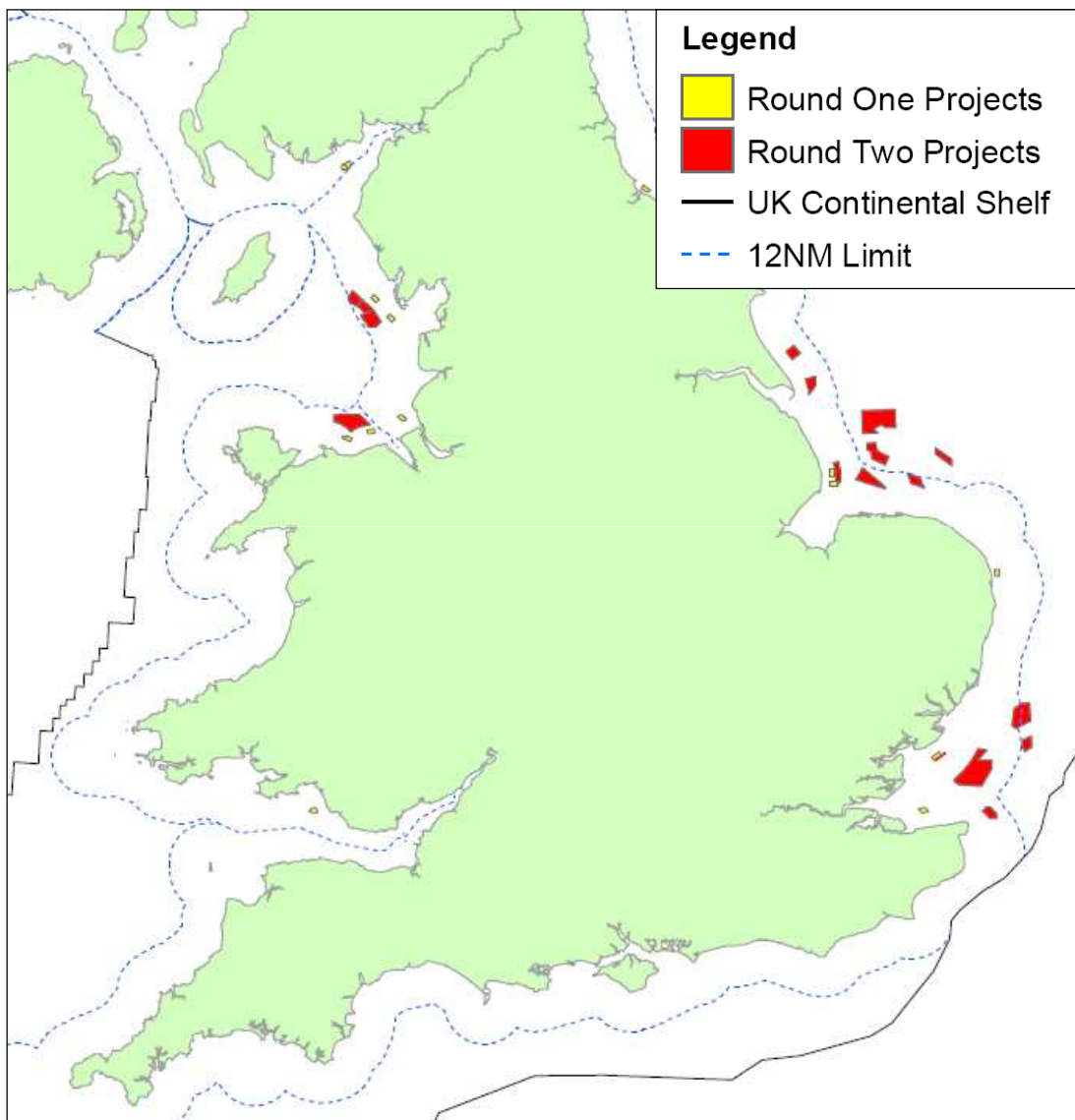
The Crown Estate is investing directly in Offshore Wind Round 3



The Marine Estate

- ?? 30million hectares
- ?? 22000km of coast line
- ?? A responsibility to enhance the estate's value
- ?? Subject to good management and stewardship





Round 1 and 2

UK is the world leader in offshore wind

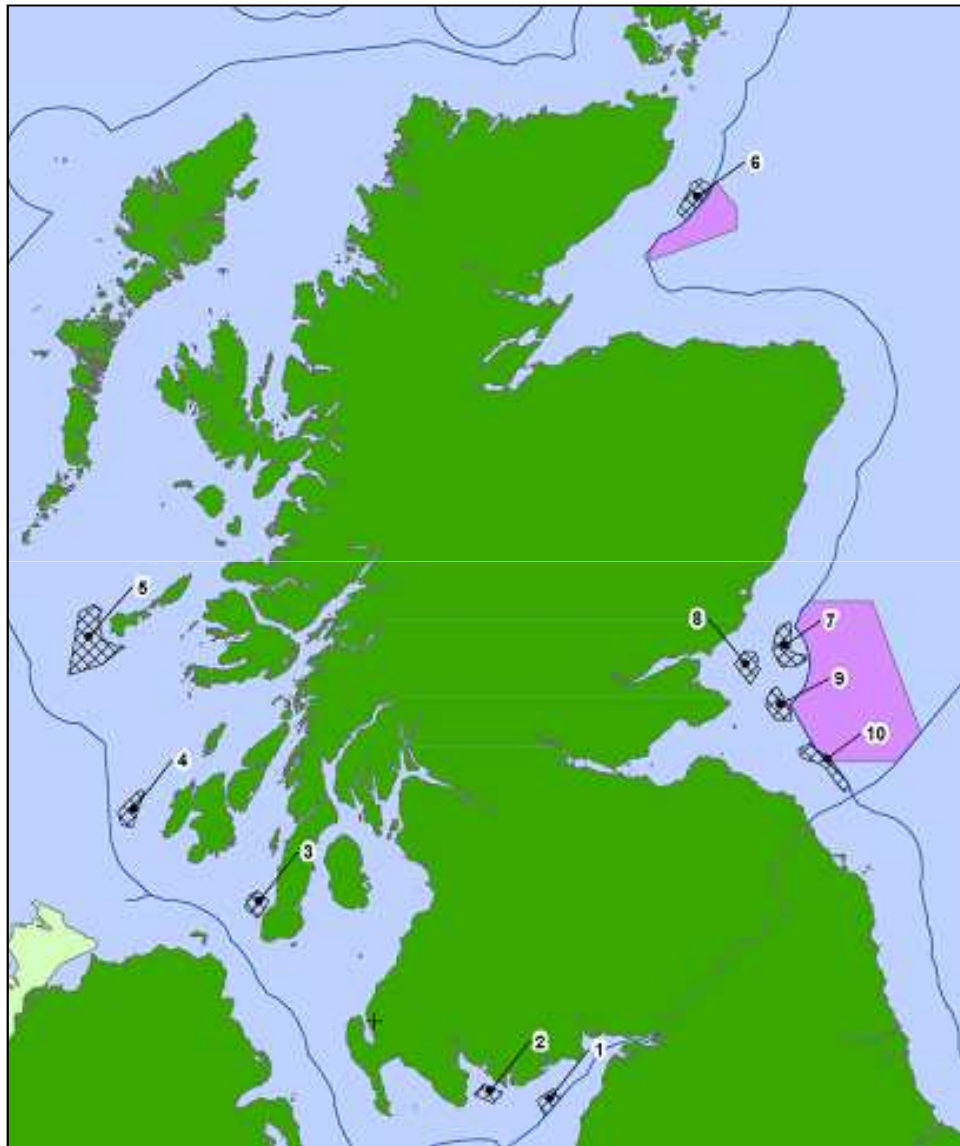
1.3 GW operational (15 projects)

2.2 GW under construction (6 projects)

1 GW consented, pre-construction (3 projects)

2.6 GW awaiting consent (6 projects)

2.7 GW pre-application (includes Extensions)



Scottish Territorial Waters

- 10 Sites awarded exclusivity agreements early 2009
- Total 5.3GW under development
- Scottish Government currently carrying out an Strategic Environmental Assessment

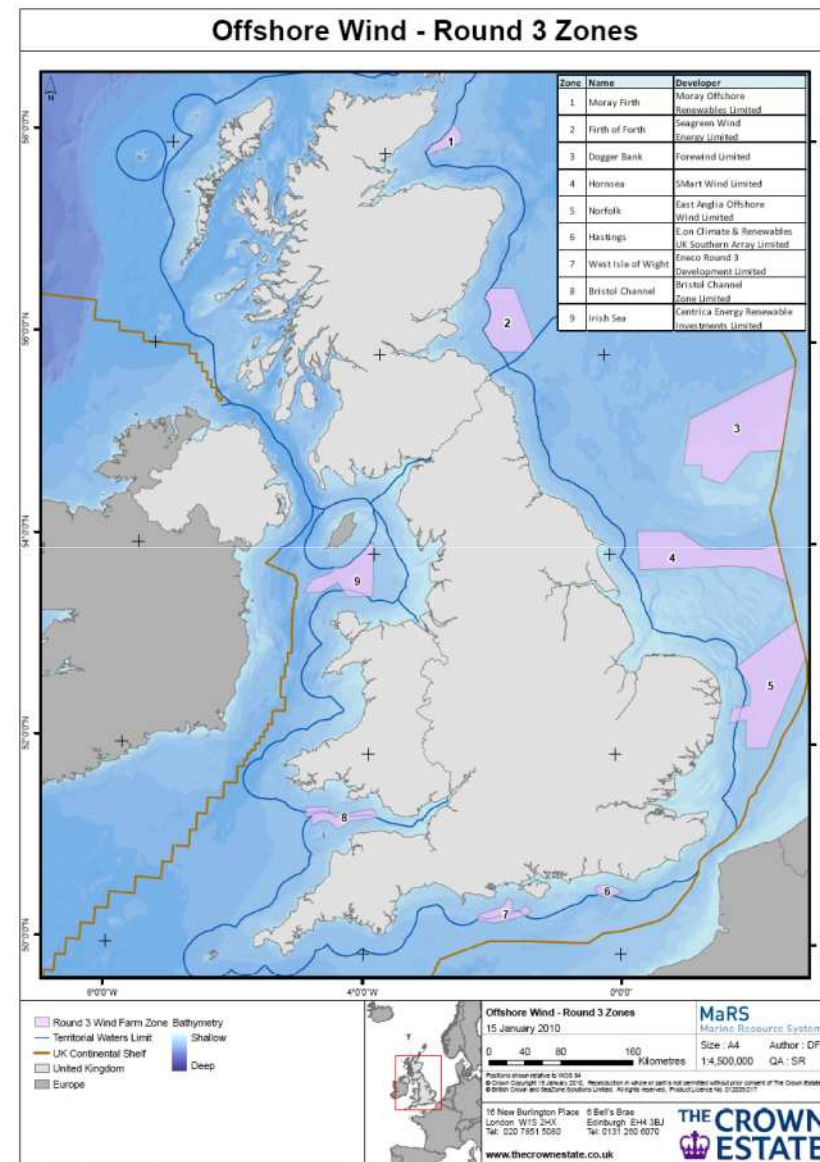
Round 3

UK target of 15% energy from renewables by 2020

- + Climate change mitigation
- + Security of supply
- + Jobs

In response, The Crown Estate launched the Round 3 competition for 9 development zones – awards made Dec 2009

32 GW pipeline now under active development



Round 3 Zones

Zone	Proposed Capacity (MW)	Total Area (km²)	Developer
1 Moray Firth	1,300	520	EDP Renovaveis & SeaEnergy Renewables
2 Firth of Forth	3,500	2,852	SSE Renewables and Fluor
3 Dogger Bank	9,000	8,660	SSE, RWE, Statoil and Statkraft
4 Hornsea	4,000	4,735	Mainstream Renewable and Siemens
5 Norfolk Bank	7,200	6,037	Scottish Power and Vattenfall Vindkraft
6 Hastings	600	270	E.ON Climate and Renewables UK
7 W. of Isle of Wight	900	724	Eneco New Energy
8 Bristol Channel	1,500	950	RWE Npower Renewables
9 Irish Sea	4,200	2,200	Centrica Renewable Energy

SUPPLY CHAIN OPPORTUNITIES

- **The Government estimates that the UK offshore wind industry could be worth £100 billion and create 70,000 jobs by 2020**
 - **Combined total for Rounds 1, 2 and 3 + STW could reach over 47GW by 2020**
 - **Delivery of Round 3 will require over 10,000 turbines installed on the seabed and up to 200 km offshore**
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SUPPLY CHAIN OPPORTUNITIES

- **Development of a strong domestic offshore wind supply chain, particularly manufacturing is a priority**
 - **DECC (Department of Energy & Climate Change) have allocated £120 million of its Environmental Transformation Fund for offshore wind**
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SUPPLY CHAIN OPPORTUNITIES

- **The British Government, following the CSR, announced a £200 million commitment to investing in manufacturing facilities at Port sites and technology for offshore wind and energy efficiency (£60 million for ports)**
 - **The Scottish Government announced, its commitment of £70 million for ports improvement**
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SUPPLY CHAIN OPPORTUNITIES

- **A small number of suppliers dominate the top level of the supply chain**
 - **Wind Turbines**
Siemens and Vestas in Rounds 1 & 2
 - **Foundations**
All UK installations to date have monopile foundations
– MT Hojgaard dominated Round 1
 - **Multi-member foundations expected to increase as turbine sizes increase and move to deeper waters**
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SUPPLY CHAIN OPPORTUNITIES

- **Electrical**

Substation suppliers include AREVA, T&D, Bladt, Future Energy, KBR, Ramboll, Siemens

- **Subsea Power Cables**

Rounds 1&2 main suppliers have been ABB, AEI Cables, JDR Cable Systems, Nexans, Partner Scanrope and Prysmian

- **Installation Vessels**

Specialist vessels required - supply will fall short of demand

SUPPLY CHAIN OPPORTUNITIES

- **With increasing demand opportunities for Tier 1, 2 and 3 suppliers will grow**
 - **Tier 1**
Blades, gearboxes, generators, control systems, towers and transformers
 - **Tier 2 & 3**
Mechanical parts, flanges, fixings, electrical components, bearings, castings, forgings, carbon fibre and rolled steel
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INFRASTRUCTURE OPPORTUNITIES

Transmission Network

- **HV transmission network will require £5 billion investment in 10 years**
- **Offshore transmission network connecting windfarms to onshore grid will require £15 billion worth of investment**

Port facilities

- **Major investments to ensure port facilities capable of supporting the industry**
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OTHER OPPORTUNITIES

- **Skills**
 - **Maintenance services**
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UK Trade & Investment

- **What we do**
 - **How we help**
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Information



http://www.thecrownestate.co.uk/our_portfolio/marine/offshore_wind_energy/supply-chain.htm

Thank You

Muchas Gracias

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