Oriel Windfarm

Job Opportunity and the Supply Chain Perspective

Presentation to EUFORES

Brian Britton, Managing Director, Oriel Windfarm Ltd / Secretary General, National Offshore Wind Association of Ireland

21st June 2013

The EU Economy

Deployment of Offshore Turbines

Oriel Windfarm

TOTAL CUMULATIVE OFFSHORE TURBINES, WIND FARMS AND MW INSTALLED BY END 2012

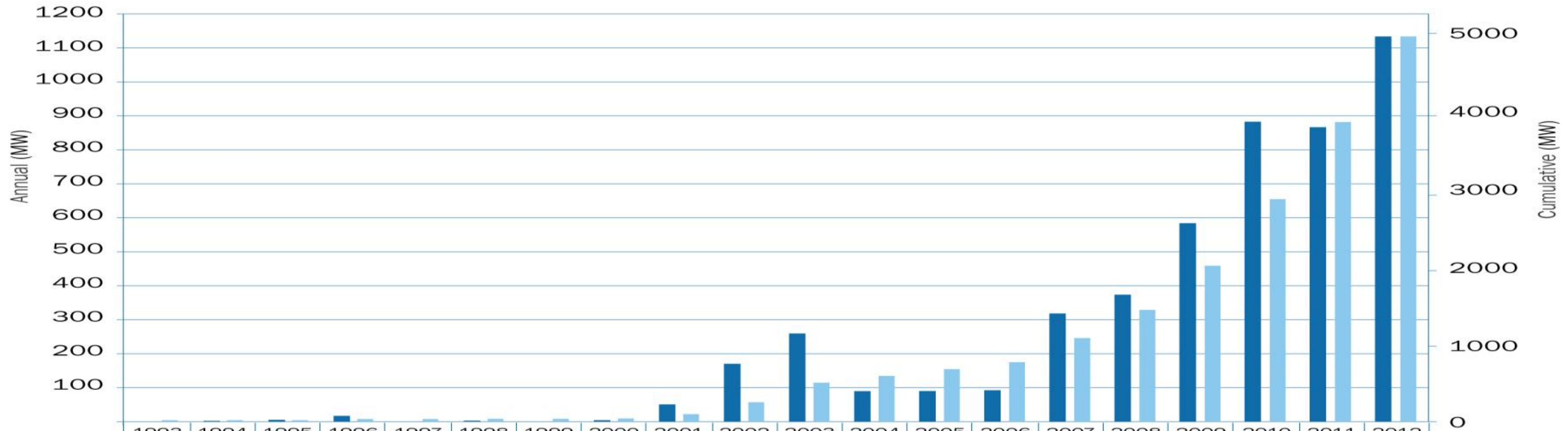
Country	UK	DK	BE	DE	NL	SE	FI	IE	NO	PT	Total
No. of farms	20	12	2	6	4	6	2	1	1	1	**55**
No. of turbines	870	416	91	68	124	75	9	7	1	1	**1,662**
Capacity installed (MW)	2,947.9	921	379.5	280.3	246.8	163.7	26.3	25.2	2.3	2	**4,995**

Source: EWEA

We Have Lift Off!

Oriel Windfarm

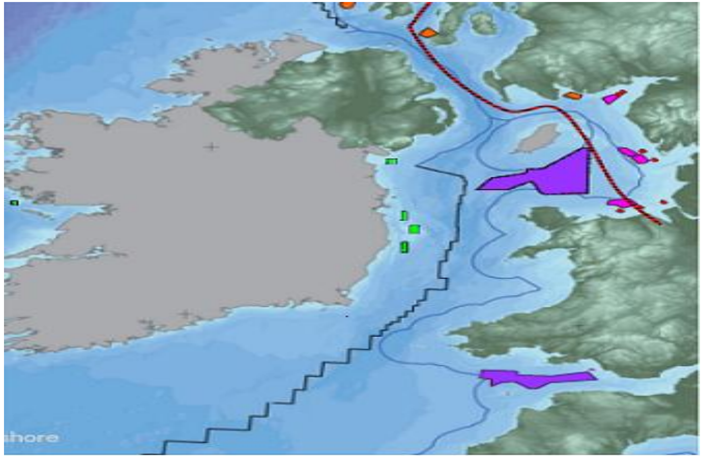
CUMULATIVE AND ANNUAL OFFSHORE WIND INSTALLATIONS (MW).



	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Annual	0	2	5	17	0	3	0	4	51	170	276	90	90	93	318	373	577	883	874	1,166
Cumulative	5	7	12	29	29	32	32	36	86	256	532	622	712	804	1,123	1,496	2,073	2,956	3,829	4,995

Source: EWEA

Export Opportunity - Supply Chain €60bn



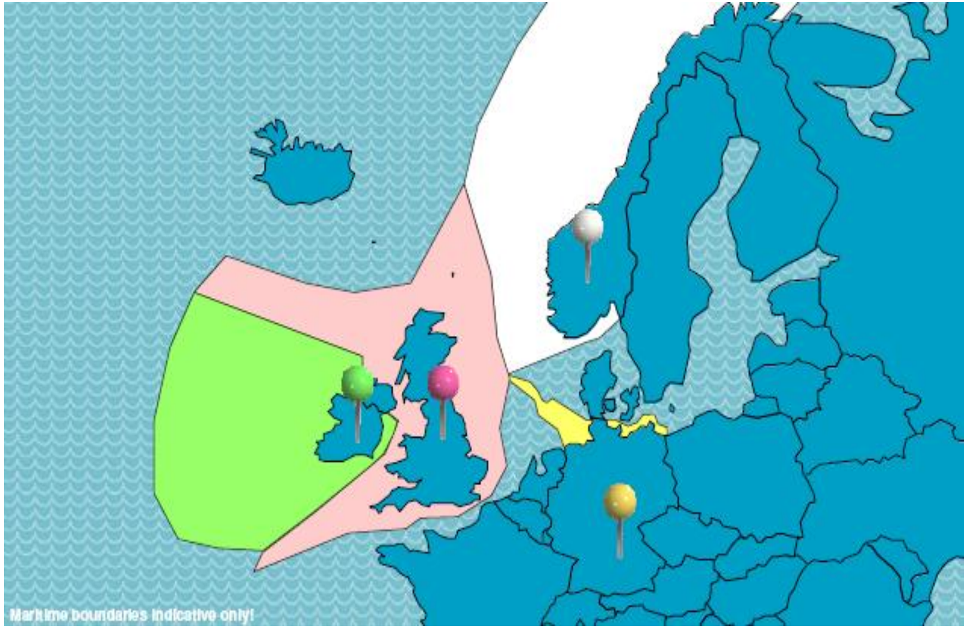
	Location/Name	Status	Capacity MW's	No. of Turbines	Developer
Offshore Windfarm Developments in the Irish Sea					
Round 1			**660**		
1	North Hoyle	Operating (Dec 2003)	60	30	RWE-npower renewables
2	Barrow	Operating (Sept 2006)	90	30	Centrica/DONG Energy
3	Rhyl Flats	Operating (Dec 2009)	90	25	RWE-npower renewables
4	Burbo Bank	Operational (Oct 2007)	90	25	DONG Energy
5	Ormonde	Approved	150	30	Vattenfall
6	Robin Rigg	Under Construction	180	60	E.ON UK Renewables
Round 2			**1620**		
7	Walney	Construction 2010-2012	370	102	DONG Energy
8	Gwynt y Mor	Approved	750	250	RWE-npower renewables
9	West Duddon	Approved	500	139	ScottishPower / DONG Energy
Round 1&2 Extensions			**984**		
10	Burbo Bank	Pre application investigations	234	65	DONG Energy
11	Walney	Pre application investigations	750	150	DONG Energy
Round 3			**5500**		
12	Irish Sea Zone	Pre application investigations	4000	800	Centrica/RES Group
13	Bristol Channel	Pre application investigations	1500	300	RWE-Npower Renewables
Western Scottish Territorial Waters			**3138**		
14	Solway Firth	Pre application investigations	300	60	E.ON Renewables UK
15	Wigtown Bay	Pre application investigations	280	56	Dong Wind (UK) Ltd
16	Kintyre	Pre application investigations	378	76	SSE Renewables
17	Islay	Pre application investigations	680	136	SSE Renewables
18	Argyll Array	Pre application investigations	1500	300	Scottish Power Renewables
NI Territorial Waters 600 to 900 MW expected to be developed on completion of SEA					
19	TBC	TBC	750	150	TBC
Irish Territorial Waters			**2680**		
20	Oriel Windfarm	Approval Pending - Gate 3	330	55	Oriel Windfarm
21	Dublin Array	Application submitted - Gate 3	725	175	Saorgus Energy
22	Codling Wind Park 1	Approved - non Gate 3	1100	220	Fred Olsen /Treasury Holdings
23	Arklow Bank	Approved - non Gate 3	525	200	SSE Renewables
Further Irish sea Capacity			4000	800	TBC
Irish Sea totals			**19,368 MW**	**4200 turbines**	**Circa €60bn**

The biggest supply chain market for offshore wind in the world is on our backdoor in the Irish Sea Zone, a supply chain opportunity of over €60bn.

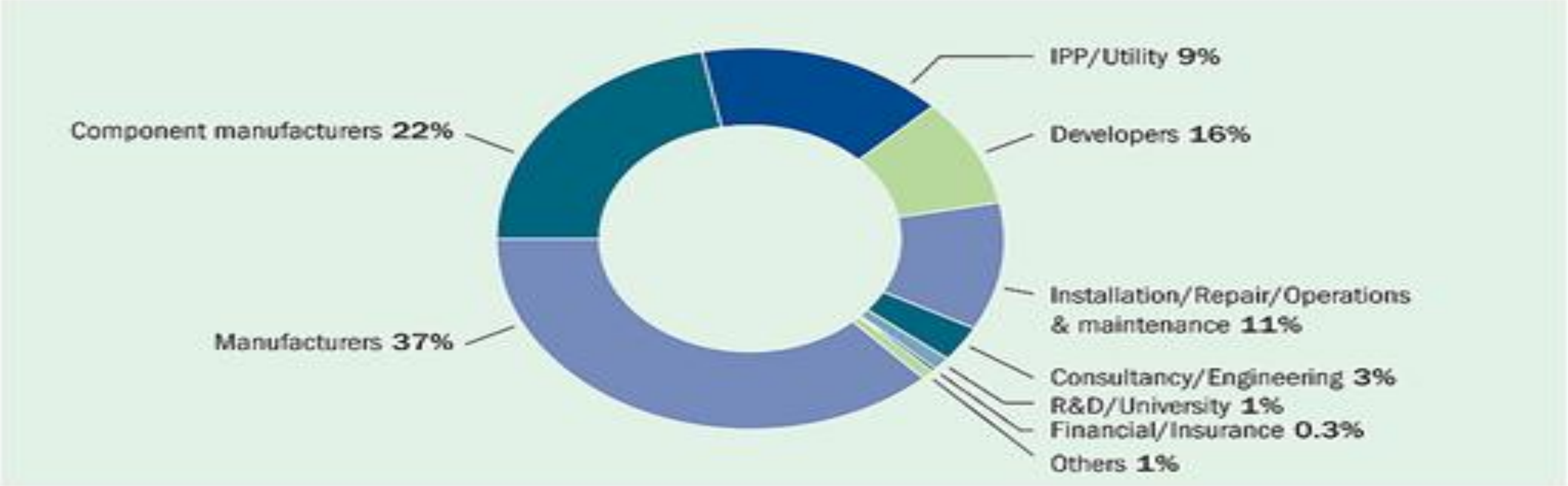
Offshore Resources in Irish Waters

Oriel Windfarm

- Ireland potentially has the best offshore wind resource in the world.
- Ireland has 10 times its land mass in territorial waters.
- 2680 MW in planning. A further 5000 MW feasible within Irish Sea Zone, including 600MW in Northern Irish Waters
- The potential in Atlantic Waters off the South and West is unlimited when turbine technology develops, i.e. Floating turbines, co-location. .

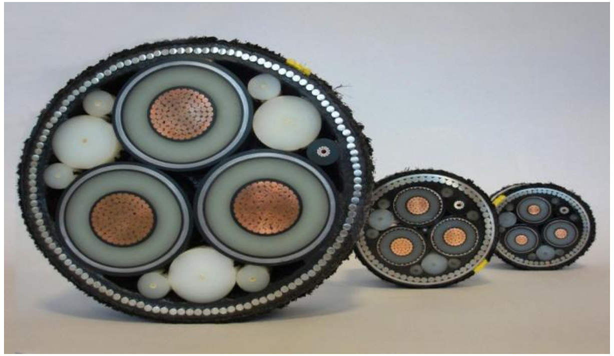


Job Opportunities – EWEA Predictions



170,000 offshore wind jobs in the EU by 2020
300,000 offshore wind jobs in the EU by 2030

Elements of the Supply Chain



Belfast Port

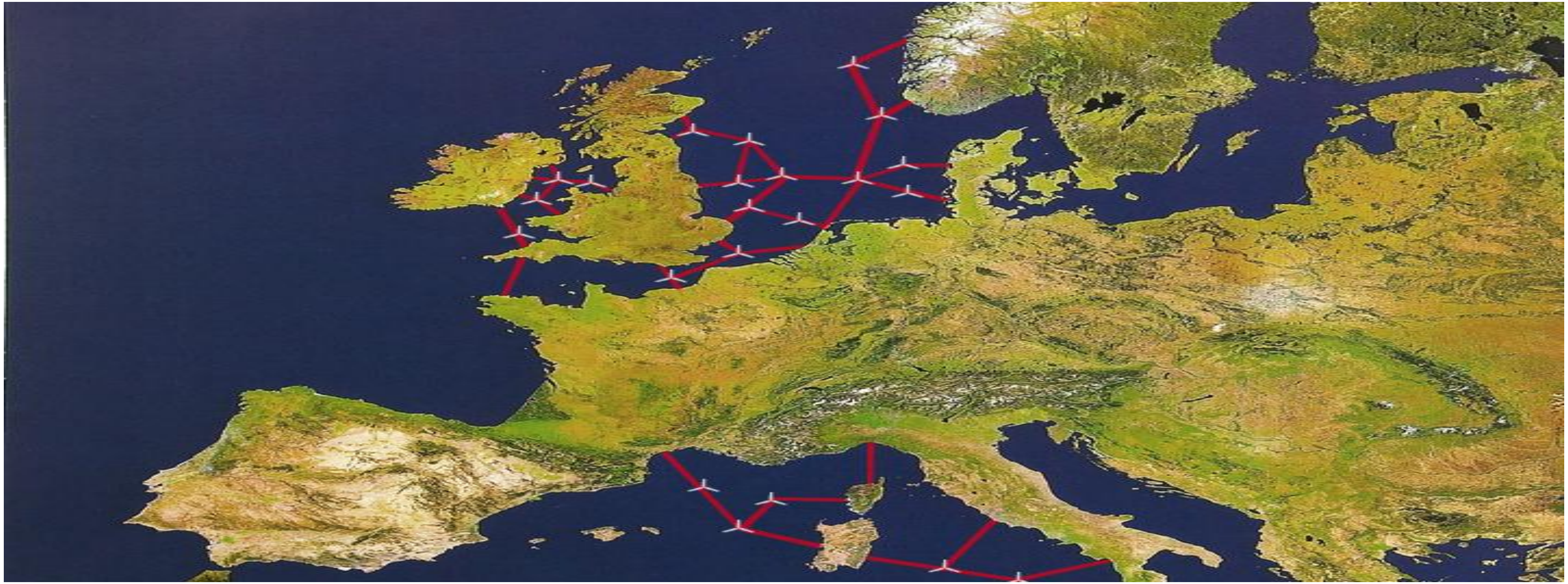
Oriel Windfarm

The Challenges Ahead

- Certainty, Certainty, Certainty
- Bringing down the cost of the supply chain
- Implications of back loading of development

The (r)Evolution of European Energy

Oriel Windfarm



Co – operation is Key

Delivering on our Opportunity

- Working together – A Win Win.
- Look beyond our shores for the opportunity which exists
- Ensure our European and National policies support our industry objectives.
- Be the leaders of the change Europe wants and needs

Oriel Windfarm Contact Details

Contact: **Brian Britton**
Managing Director

Address: **Oriel Windfarm Limited**
2 Marine Court
Blackrock
Co. Louth
Tel: 00353 42 9322952
Fax: 00353 42 9322995
Email: bb@orielwind.com
www.orielwind.com