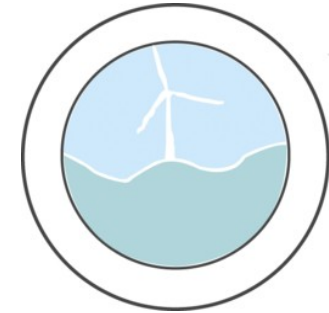


ORIEL WINDFARM LIMITED

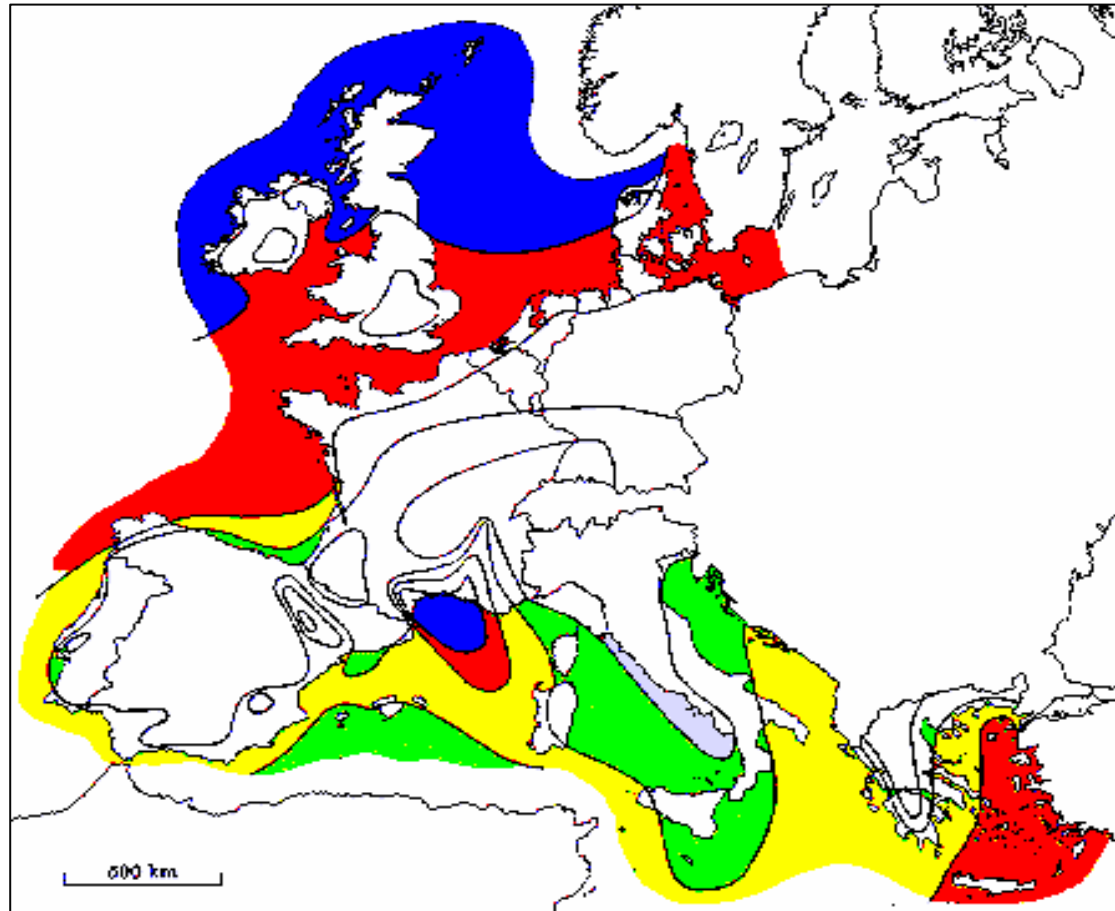
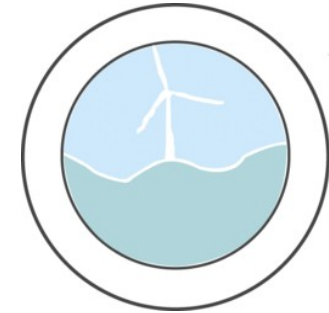


Capacity Capacity Capacity
Offshore Wind Energy

Brian Britton

IWEA Conference
18th April 2008

Europe's Offshore Wind Resource



> 10 m/sec

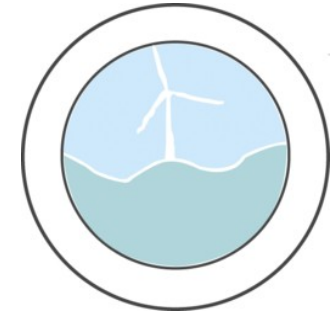
8.5 – 10 m/sec

7.5 – 8.5 m/sec

6.0 – 7.5 m/sec

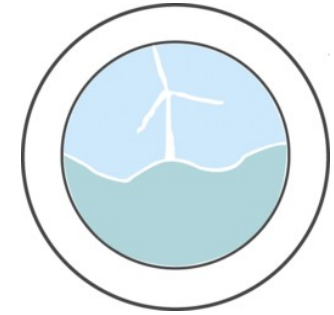
*At 100m above
sea level*

Genesis of Irish Offshore Wind Energy



- Survey of offshore 1995 by Hannevig Brothers
- Potential identified - Interest heightened
- Airtricity build Arklow Wind Bank 2002
- Nothing Built since – Why?

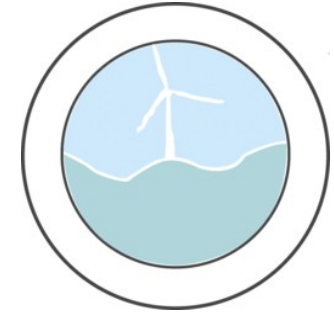
Technical Barriers to Development



- Turbine supply
- Supply chain constraints
- Adaptation to physical conditions

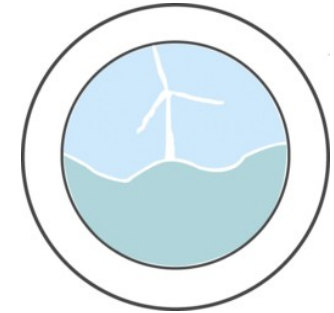


Policy Barriers to Development



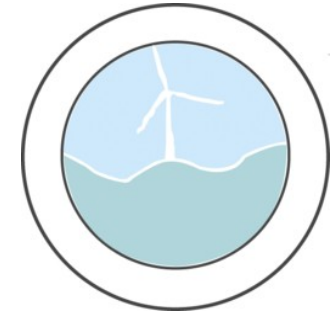
- Framework for offshore ✓
- Certainty for investors ✓
- A flexible grid meeting needs of offshore
- Robust level of interconnection
- Streamlined consenting process

Oriel & The Consenting Process



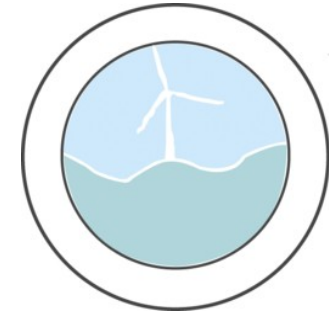
- Most challenging consenting process in Europe
- Community consultation was critical
- Lessons learned

The Outcome of Our Experience



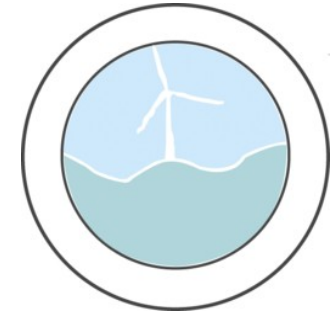
- Need for greater clarity in the process
- Need for a balanced approach which meets the needs of project promoters and ordinary citizens
- Streamlining of planning process

What can we achieve



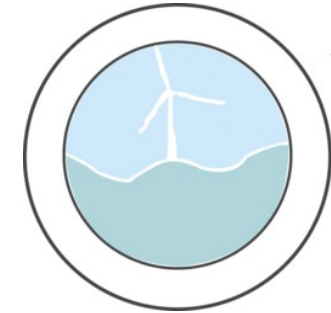
- 2000MW from existing lease areas
- 5000MW from eastern and southern waters
- Atlantic development

The Bigger Picture



- FDI vs FSC
- Flexible approach needed
- The natural resources for a new sector
- The lessons from Agri-industry and tourism
- Playing to our strengths

When is Government expenditure really a subsidy

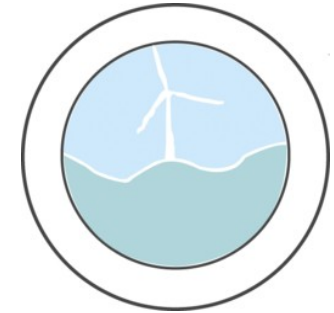


	Solid Fuels	Oil and Gas	Renewables	Total
Off Budget	6.4	0.2	0.6	7.2
On Budget	6.6	8.5	4.7	19.8
Total	13	8.7	5.3	27

EU Government support by energy type (billions)

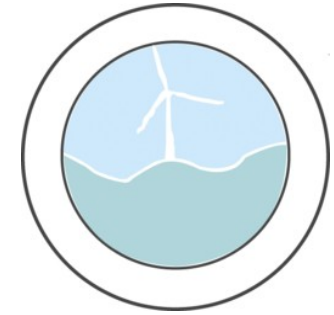
- **Government expenditure on an industry which will not provide a long term solution to our energy needs is a subsidy**
- **Government expenditure on an industry which will contribute to long term energy security and climate change objectives is an investment in our future**

What is needed



- A change of mindset – Learn lessons from the past
- Understanding the full potential of our resources
- Interconnection - Celtic and Pan European grids
- Develop our R & D capability

CREDIT - Energy in Action

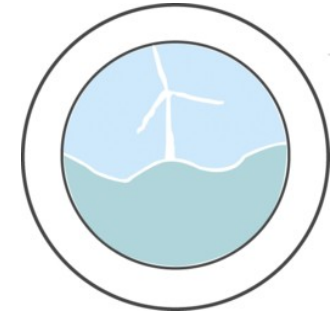


- A world leader in research

Centres of Excellence the Overseas Experience

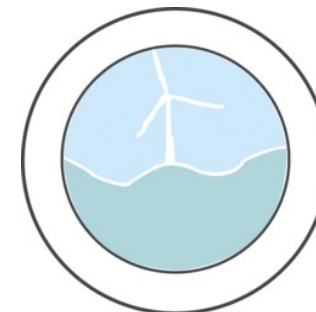


The German Experience



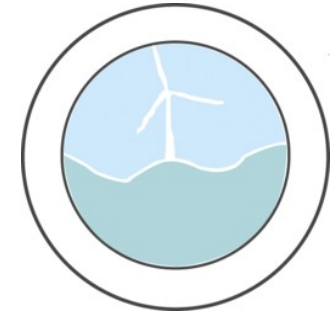
- 80,000 wind energy jobs
11,000 in Emden Ost cluster
- Energy > Automobile Industry
- €5bn return on renewables investment

Costs and Benefits of the German Renewable Energy Act



•	Costs of the Renewable Energy Act	
	- Additional costs of feed in tariffs	€3.5bn
	- Transaction and system costs	<u>€0.3bn</u>
		<u>€3.8bn</u>
•	Benefits	
	- Reduced energy imports	€0.9bn
	- Reduced external costs	<u>€3.4bn</u>
		€4.3bn
	- Electricity price saving due to the “Merit-Order-Effect” (price reduction through crowding of expensive conventional electricity when renewables enter the system)	
		€3bn -€5bn
•	Total Return on Renewables Investment	
		<hr/>
		€7.3bn - €9.3bn
		=====

Job Opportunities in Ireland

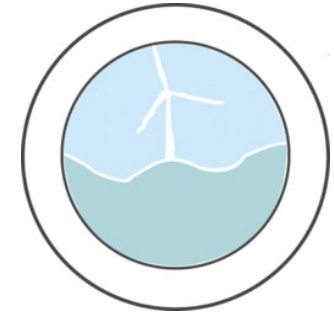


- Turbine design
- Foundation technology
- Energy storage
- Installation
- Servicing
- Training
- High skill, high quality jobs in a growing sector
- Interest has been shown by a number of European regions in offshore projects

Rosslare 2012?



Time For A New Formula



Government delivers infrastructure

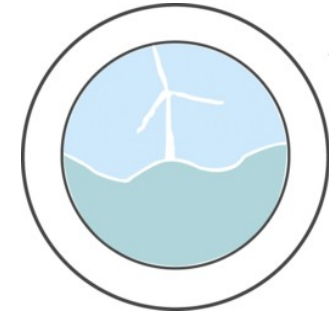
+

Industry delivers capacity

=

Ireland Inc wins

ORIEL WINDFARM LIMITED



Capacity Capacity Capacity
Offshore Wind Energy

Brian Britton

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