

# **ORIEL WINDFARM LIMITED**



## **GRID CONNECTION PRESENTATION**

**Thursday, 4 October, 2007**

***Dan Hannevig, Technical Director***

# Agenda

1. Overview Oriel Offshore Windfarm
2. Irelands Offshore Wind Resource
3. Timeline for the Oriel Windfarm Project
4. Grid Connection Strategy

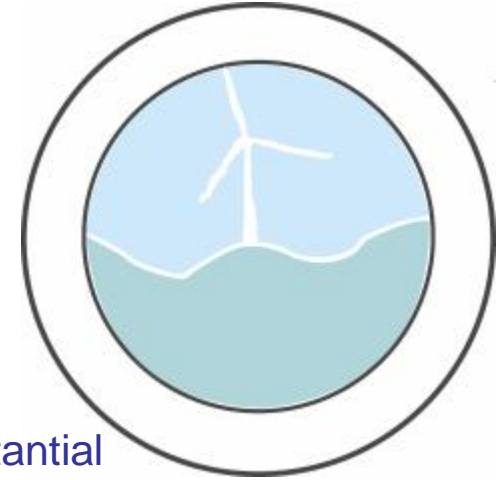


# Overview Oriel Offshore Wind



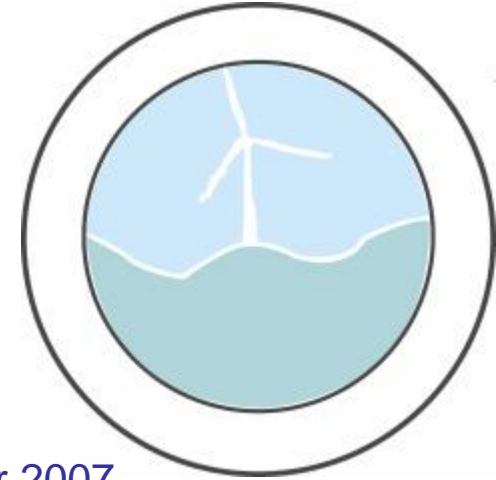
- A sustainable and renewable energy company set up to develop an offshore wind farm in the North Irish Sea, 22km S.E. of Dundalk and 24km North of Drogheda
- Wind farm Capacity:
  - § Capacity up to 330MW
  - § 55 Turbines
  - § Sufficient energy to provide for 250,000 homes
  - § Grid Connection into Republic of Ireland and Northern Ireland
  - § Construction Cost Estimate €623m

# Ireland's Offshore Wind Resource



- Ireland potentially has the best offshore wind resource in the world.
- Offshore offers the capacity and greatest potential for substantial increase in indigenous sources of all power generation thereby increasing “Security of Supply.”
- The only form of renewable energy with the potential to meet Irelands renewable energy commitments.
- East Coast is the place to be; good sea bed conditions, low wave loads, tidal streams. 10-15yrs for technology to develop for the West Coast.
- Load factors for offshore wind turbines average 40% compared to less than 30% for onshore turbines, while conventional fossil fuel power stations in Ireland have an average load factor of 55%

# Timeline for the Oriel Windfarm Project



- Foreshore Licence October 2005/October 2007
- Fund raising December 2005
- Lease Consent January 2006/December 2007
- Grid Connection July 2007/Autumn 2009
- Turbine Supply November 2006/January 2009
- Construction Autumn 2009/2013-2016
- Operation Commencing 2011

# Grid Connection Strategy



- Landfall opportunities
- Interconnection Opportunities:
  - § East-West
  - § North-South
- Ongoing Technology Developments:
  - § Energy Storage
  - § Peaking Plant
  - § Research & Development
- Oriel Windfarm grid application as a power plant

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