

How RenewableUK sees the future of marine cables

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Marine Cables Seminar

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Offshore wind underway



Totals
49 GW
of projects

Rounds 1&2

- 1.3 GW installed
- 1.1 GW under construction
- 2.6 GW consented
- 3.5 GW in planning

Round 1&2 Extensions

- 2 GW

Scottish Territorial Waters

- 5.7 GW

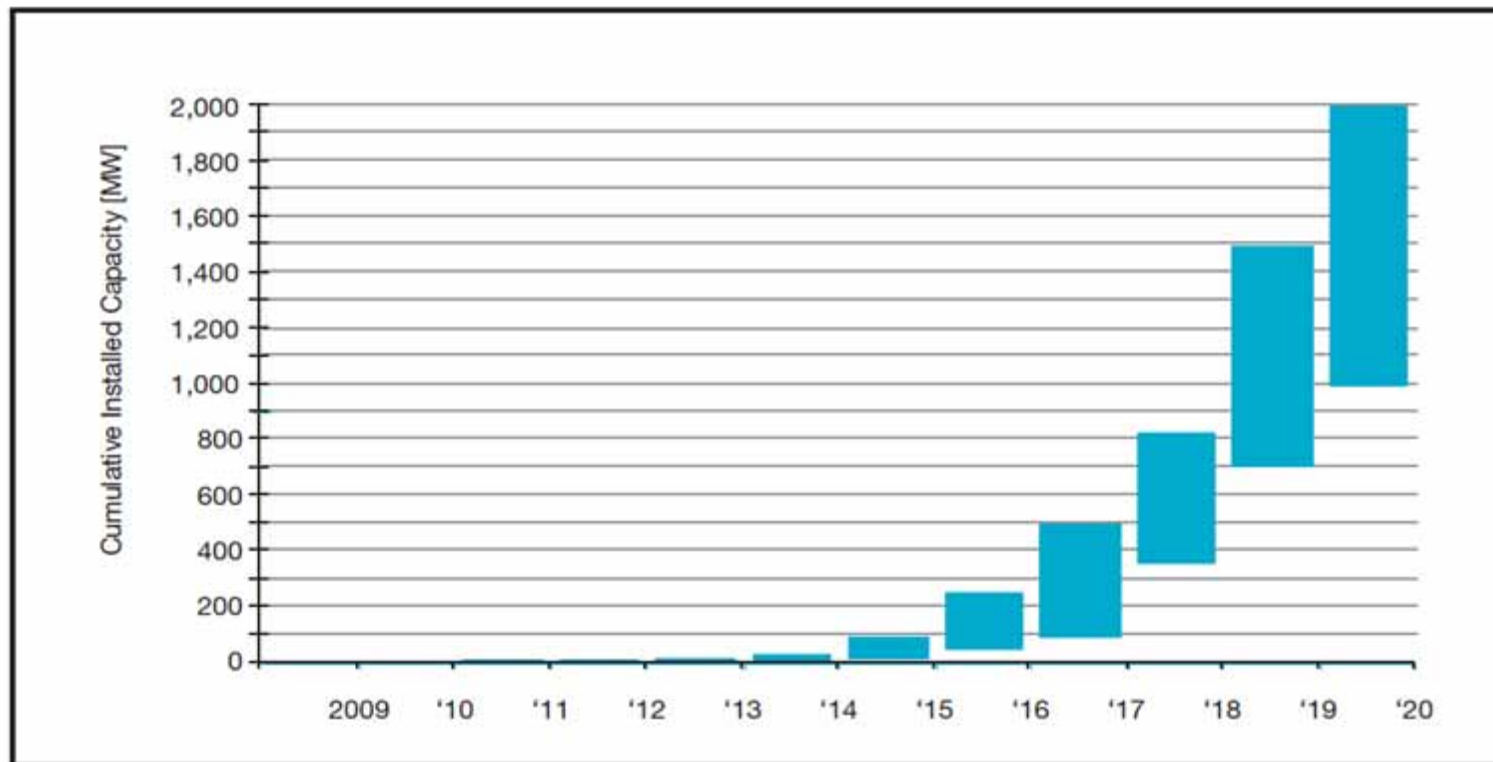
Round 3

- 32GW Developer Commitment

Wave and tidal

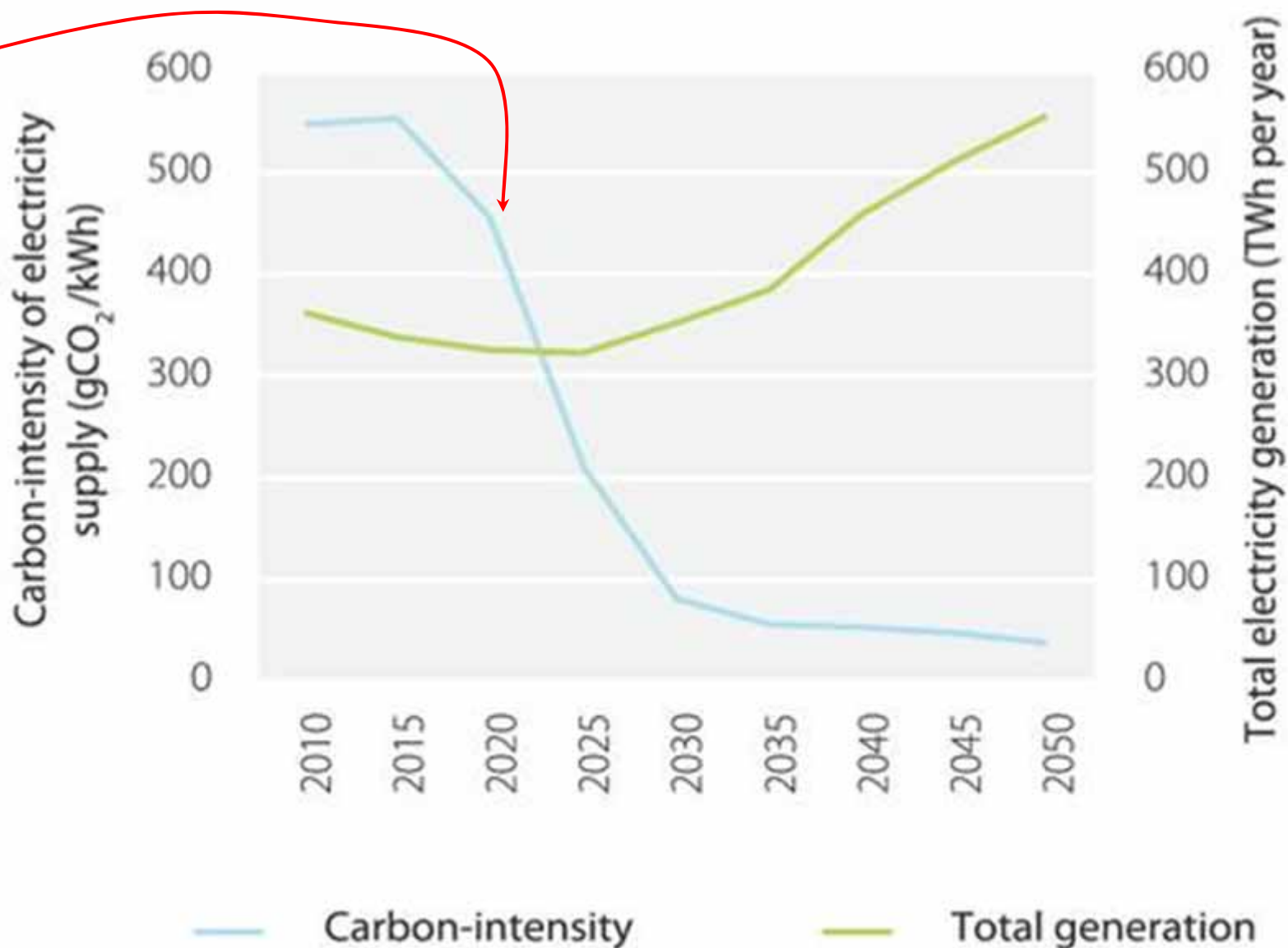
Installed 3.4MW
Generated over 1600MWh
Awarded 1.2GW

Figure 1. Potential UK Cumulative Installed Capacity of Marine Energy Projects to 2020 ⁷



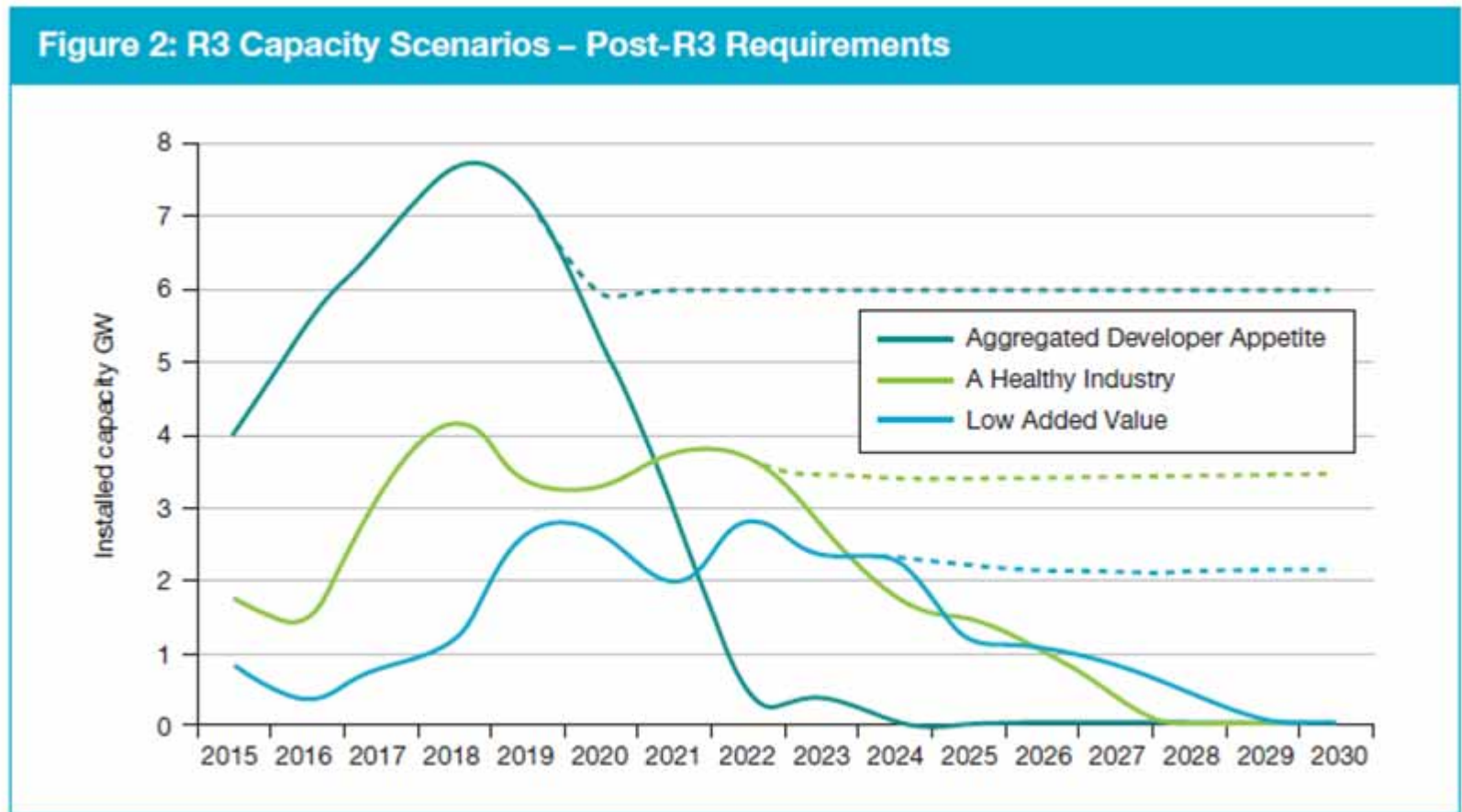
Decarbonisation of electricity

**2020
renewable
energy target
- is only the
first step**



Capacity Scenarios

- Aggregate Developer Appetite
- Healthy Industry
- Low Added Value



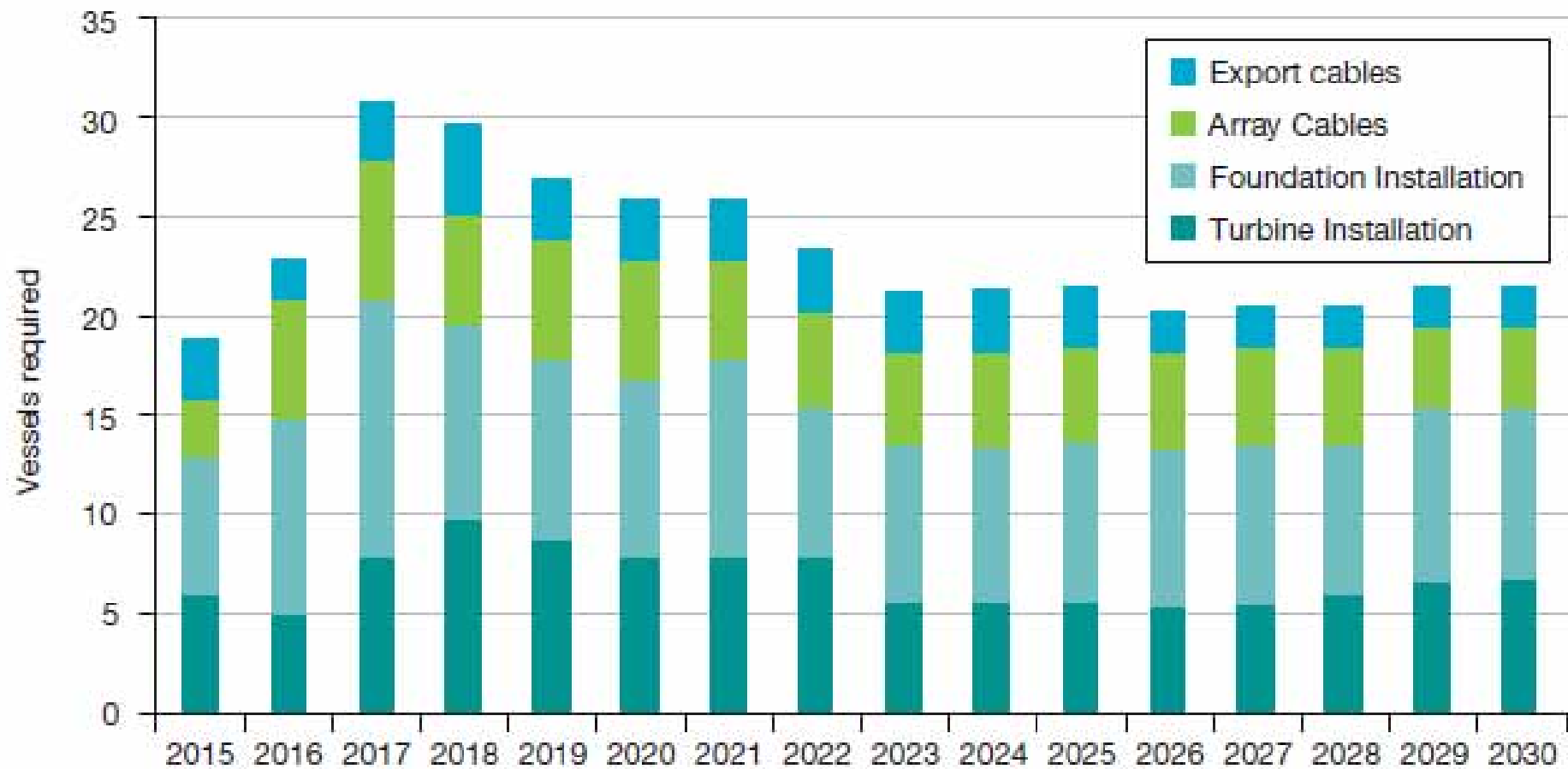
Source: Douglas-Westwood

The Offshore Wind Opportunity

- ‘Healthy industry’ scenario where 23 GW is delivered by 2020, requires:
 - 15–20 installation vessels,
 - ~15 cable laying vessels,
 - and 300–500 operation vessels
- 45,000 direct jobs created by 2020* (Bain&Co, 2008)
- Round 3 requires over £100 bn pounds of private investment

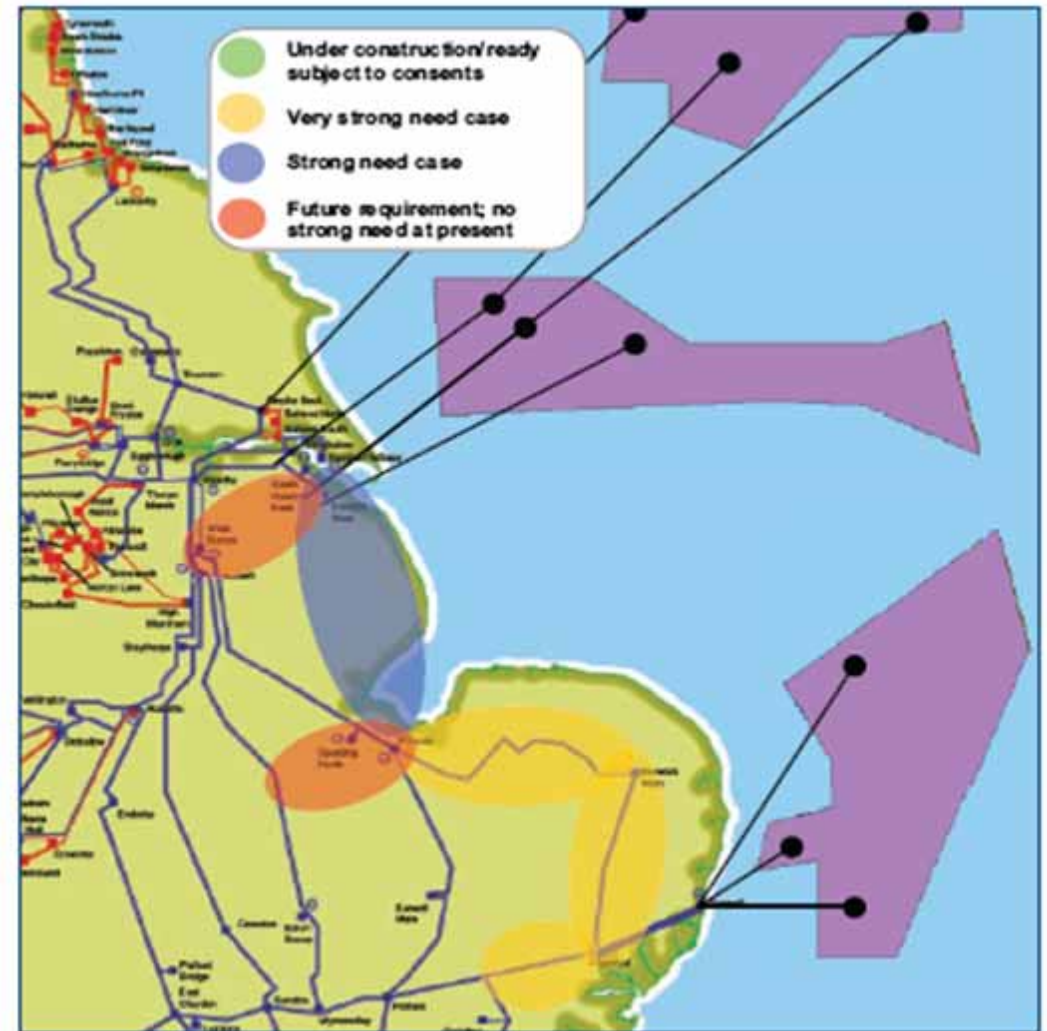
The Offshore Wind Opportunity

Figure 26: A Healthy Industry – Installation Vessels 2015-2030 by Installation Date



The future of marine cables?

- Electricity Networks Strategy Group - Our Electricity Transmission Network: A Vision for 2020
- Offshore Development Information Statement



From ENSG

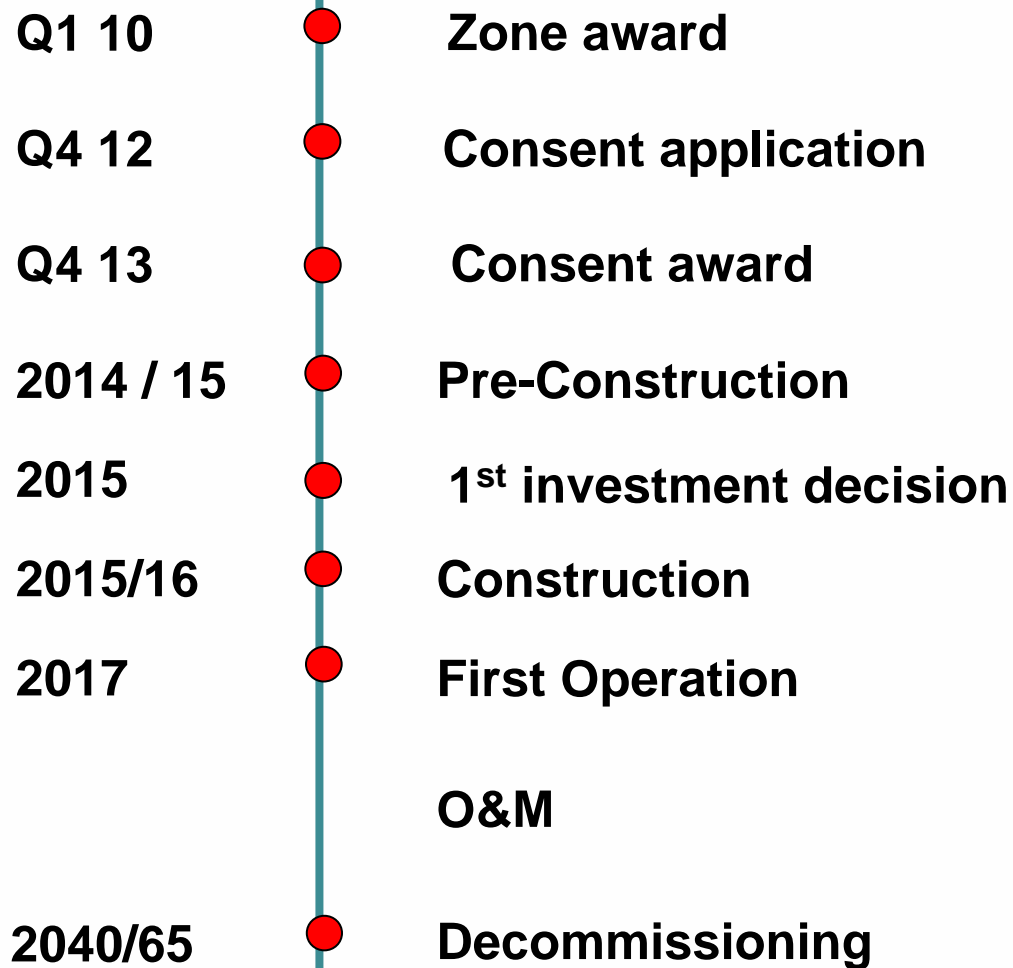
Grid constraints and flexibility

- There is a limitation of points onshore where cables can be connected
- Sensitive coastal areas and seabed conditions may require rerouting and micro-siting
- Principle of 'Cable Corridors' until final project scheme is known



Source: National Grid Website

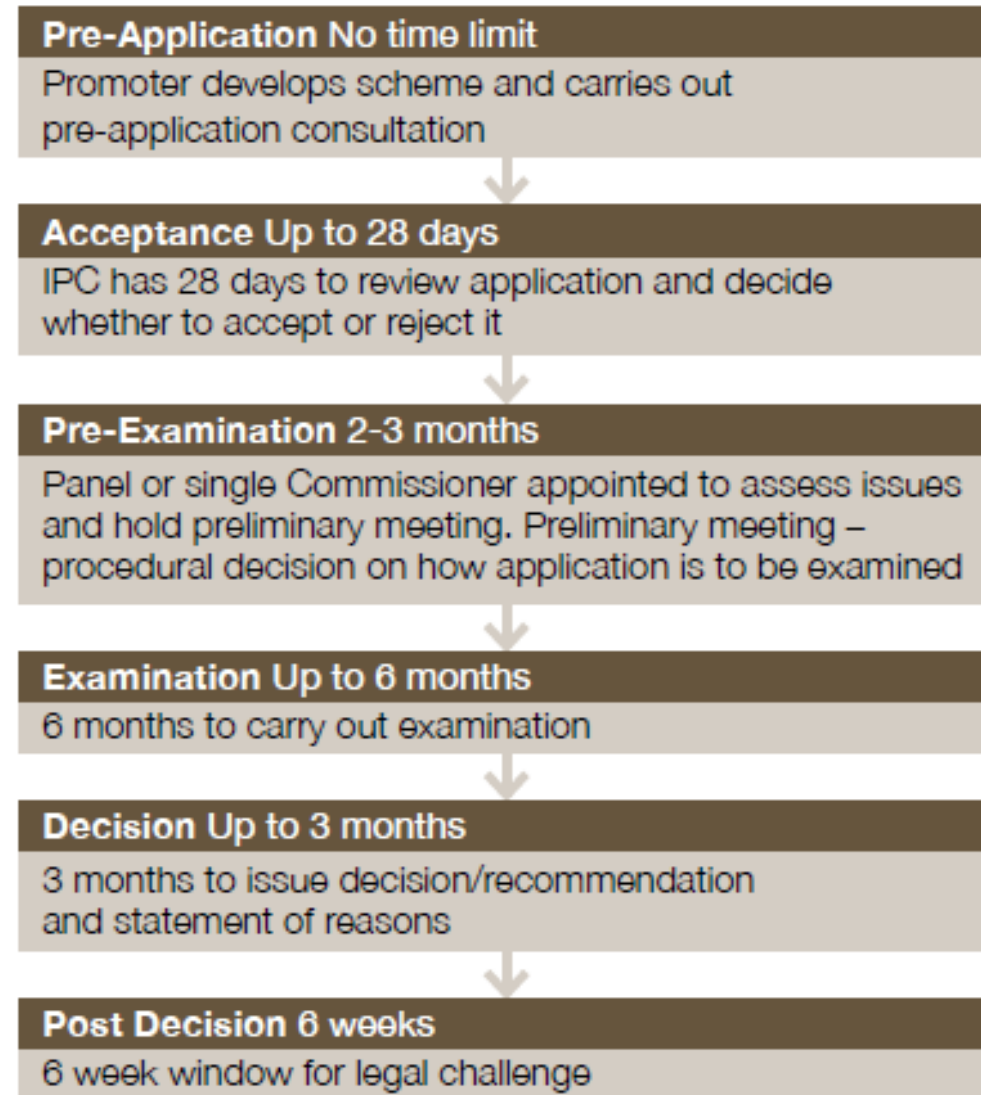
Potential Delivery Programme



IPC

- Infrastructure Planning Commission, decision making body < 100 MW
- Pre-application Process
Requires proof of early engagement and how responses were considered
- IPC timetable
- Associated development
- Applies to E&W only.
Transboundary issues

Figure 1 The IPC Process



Safety zones

- The Energy Act 2004 makes provision for the Secretary of State to grant safety zones
- Based on application
- 500 m during construction phase and major maintenance
- 50m during operation

Maritime safety guidance



- MGN 371
Guidance on UK Navigational Practice, Safety and Emergency Response Issues
- MGN 372
Guidance to Mariners Operating in the Vicinity of UK OREIs
- RenewableUK Guidelines for Wind Health and Safety

Conclusion

- More communication channels
- Early engagement
- Pre-application process
- Project by project approach, requirements vary by conditions



Thank you

RenewableUK 2010 Annual Conference

2nd - 4th November 2010, Glasgow

www.renewable-uk.com/events/annual-conference/index.html

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