



## 1. Key project milestones, to date

### 2010-11: Formulating draft proposals

- Engineering & environmental surveys and environmental impact assessment inform early draft proposals for statutory and community consultation

### 2012: Consultation

- Combined total of 20 weeks, 14 public exhibitions, 4,700 people, 1,500 responses

### 2013: DCO submission and examination

- Onshore and offshore design changes following consultation responses
- March: DCO submission
- July 2013 - January 2014: DCO Examination including 14 public hearings

### 2014: Consent granted

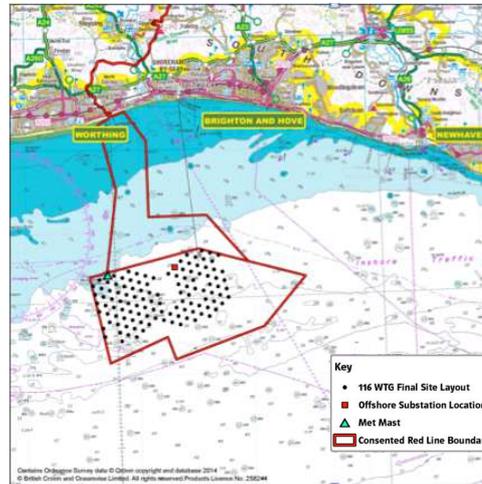
**The Secretary of State for Energy & Climate Change granted consent for Rampion, the first wind farm of the south coast of England, 16<sup>th</sup> July 2014**

## 2. Final project design - offshore

- 116 turbines
- Hub height 84m / Tip height 140m
- 13-20km off Sussex coast
- 400MW installed electrical capacity
- 72km<sup>2</sup> wind farm site area
- Inter array cables to one substation
- Export cable route being finalised

Each year in numbers:

- Generate 1,366GWh power output
- Offset almost 600,000 tonnes of CO<sub>2</sub>
- Supply equivalent of over 290,000 homes, more than 4 in 10 homes in East & West Sussex, Brighton & Hove



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## Final project design - onshore

- Landfall at Brooklands, East Worthing
- 27km long cable route
- Buried underground for entire route
- Ducting & HDD methods of installation
- 2 x 132/150kV circuits
- 30m working width / 15m easement requiring haul road, topsoil and subsoil storage, and distance between circuits
- New substation at Bolney connecting to 400kV National Transmission Grid
- Active engagement with Local Liaison Group on final layout design, seeking to reduce site area, size and scale of buildings and protect hedges and trees



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### 3. Construction - Offshore

- Up to 3 year construction period commencing Q4 2015 / Q1 2016
- 250-300 jobs in the workforce during offshore construction

#### Project Management Facility for construction located at Newhaven Port:

- Provides portside availability, flexibility of space and ease of access to site
- Offers continuity throughout construction into operation
- Temporary portakabins until O&M base is complete
- Newhaven hub of activity creating up to 40 jobs and utilising local vessels



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### Construction - onshore

#### Cable route

- 2 year construction commencing Q2 2015
- 60-100 in workforce during onshore construction
- Ducting installation method
- Horizontal Directional Drill (HDD) roads & railway
- Tailored construction methodology for Tottington Mt



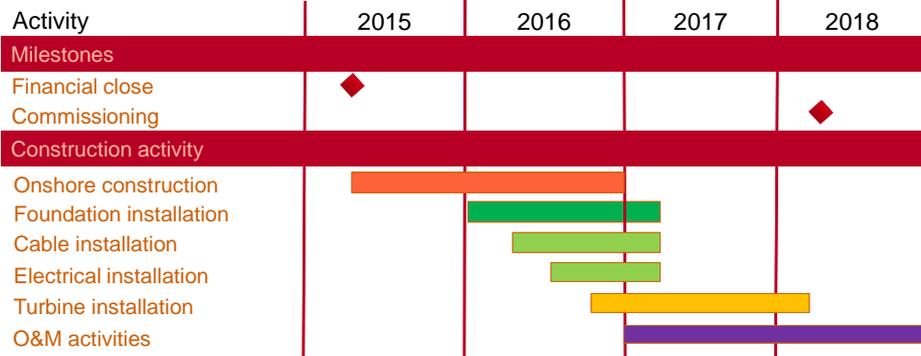
#### Onshore substation

- 2 year construction commencing spring 2015
- 40-60 in workforce during construction
- Civil/enabling, electrical build & commissioning
- Transforms power up to 400kV and conditions power prior to entry into transmission system
- Max height (transformers) 10.5m tall

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## Construction programme overview



## The Supply Chain Project

- Eon Rampion Project
  - Optimising procurement by using local expertise
- Local authorities
  - Maximising local employment benefit and economic impact from the project
- Marine South East
  - Responsible for implementing this supply chain project
  - Maximising supplier capacity for wider O&W market



# Building Local Supply Chain

Map marine companies onto future procurement needs

6 awareness events & workshops in 2012

Grow database of registered suppliers

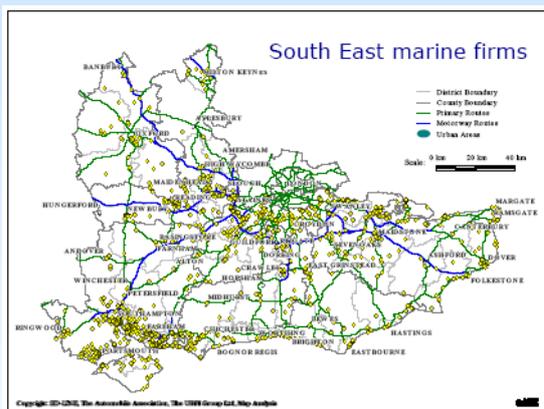
Meet the Buyer event Feb 2014: defined priorities

3 focused Meet the Buyer events in 2015

- Coordinated with project consenting & contracting timeline
- Supported by a procurement portal
  - Recently refurbished
  - All registrations carried over (but check)



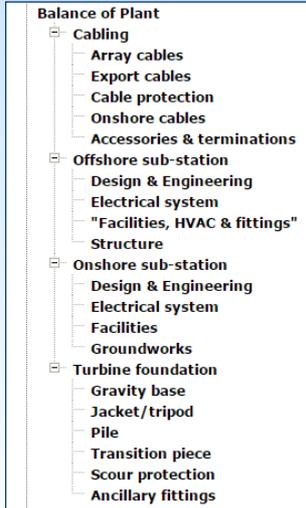
# SE Marine & Maritime Economy



- ~ 20% of UK maritime economy
- £12B sales
- ~ 4,000 businesses



# Supply Chain Categories



- Procurement grouped under six main 'Tier 0' headings:
  - Project development
  - Port development
  - Turbine
  - Balance of plant
  - Installation & commissioning
  - Operations & maintenance
- 22 Tier 1 categories
  - Eg Balance of plant split into:
    - Cabling
    - Offshore sub-station
    - Onshore sub-station
    - Accessories & terminations
- 87 Tier 2 categories
  - Eg Onshore sub-station split into:
    - Design & engineering
    - Electrical system
    - Facilities
    - Groundworks



# Major Potential for Local & Regional Suppliers

- Balance of Plant
  - Offshore cabling components & sub-systems
  - Onshore cabling components & sub-systems
  - Onshore sub-station, equipment & related services
  - Design & engineering services
  - Installation & commissioning
- Operations & Maintenance
  - Servicing
  - Repair
  - Port logistics
  - Training
  - O&M port development
- Based on Eon's Robin Rigg wind farm, local suppliers could secure contracts worth:
  - £25m in BoP
  - £10/year in O&M



# Procurement Portal

- Suppliers can register capabilities against procurement categories
- Highlight where suppliers should focus their interest
- Contractors can search for specific capabilities to identify firms for ITT



- [www.sussexwindenergy.org.uk](http://www.sussexwindenergy.org.uk)



# Finding Potential Suppliers

**Search for a company**

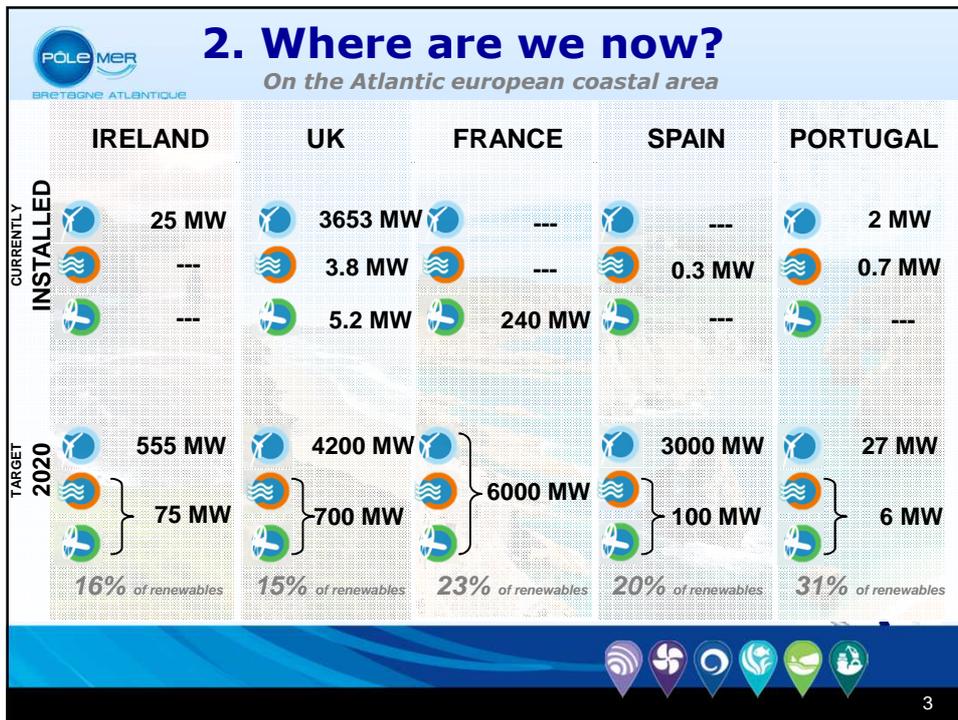
You may choose search criteria to narrow down your search, or to view all, use no criteria.

Company description	Company name	Postcode	Category / Subcategory
<input type="text"/>	<input type="text"/>	<input type="text"/>	Onshore sub-station Design & Engineering (6)

4 of 6 results shown.

Map | List





## Technology Innovation Needs Analysis

Sub-area	Type	Foreseeable innovation impact potential <sup>1</sup> (by ~2020)	Innovation impact potential by 2050 (levelised cost)
Turbine	High yield / reliability turbines	8% yield increase	c.50%
	High Yield arrays	4% yield increase	
Foundation	<30m	40% capex reduction	c.70%
	30-60m	40% capex reduction	
	60-100m	60% capex reduction	
Collection & Transmission	Intra-array and to-shore connections	2% yield increase	c.50%
Installation		40% increase in installation rate	c.60%
Operation & Maintenance	Access	4% yield increase	c.55%
	O&M planning	1.5% yield increase	

- The Low Carbon Innovation Coordination Group has performed TINAs for all renewable energy sectors
  - Offshore wind TINA extract shown left
- Foundation designs, installation, and O&M are major priorities
- Variety of funding options for innovation projects, eg
  - Atlantic Area programme
  - Energy Catalyst programme



## Key Conclusions

- Significant opportunity for local suppliers
  - Existing marine firms diversifying into the new offshore wind market, with innovation potential
  - Particular strengths across the Solent cluster
- Procurement portal helps potential suppliers pin-point where they could win business
  - Overall structure of procurement & main contractors
- Procurement portal also helps contractors identify suitable suppliers for their ITTs
- Meet the Buyer events and workshops vital
  - To motivate suppliers to register on the portal
- Plan to extend reach of portal
  - Wider range of suppliers (to maximise capability offer)
  - Use across more offshore wind farm projects

