



## Irish Offshore Wind Supply Chain Study

- IWEA Autumn Conference 2019

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# Our mission is to accelerate the move to a sustainable, low carbon economy

## We work with governments, multilateral organisations, businesses and the public sector, helping them contribute to and benefit from a more sustainable future



Programme Design and Delivery

**Advice** 

**Assurance and Certification** 

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## **Market Insights and Training**

Experience delivering market insights to established European developers and international companies to aid in their strategic expansion plans

## **Technology Advice**

We deliver insights into technology progress and support to help understand market gaps and evaluate solutions – subcontracting technical consultants where necessary



## **Programme Management**

We are global leading experts in delivering large scale RD&D and collaboration programmes, with a track record of delivering real cost reductions





## **Energy Systems and Storage**

We are at the forefront of the current energy system advancement, and leading a number of transformational projects to facilitate the move to a more dynamic, versatile system

## **Cost Modelling**

Our in-house LCOE model allows for the cost benefits of innovation to be evaluated, the assessing of market impacts and review technology impacts across a wide range of markets





- 1. Assess the supply chain for offshore wind in Ireland
  - Working with Enterprise Ireland to identify companies with experience in offshore wind or show potential to become involved
- 2. Determine the offshore wind industry needs and the opportunities for Irish businesses
  - Identify supply chain weaknesses to outline opportunity
- 3. Identify the gaps and areas likely to be met by international businesses and other markets
  - > The areas Irish/ Irish based companies unlikely to service the supply chain
- 4. List policies and signals needed to materialise the opportunities and incentivise offshore wind investment in Ireland
  - > Recommendations across the sector to address various market risks including policy, supply chain & skills











#### Development



Construction



Transport & Installation (T&I)



Operation & Maintenance (O&M) Activity Scope Skills Infrastructure Cost Synergies w/ other industries Suppliers (non-exhaustive) Contracts Case for Ireland Relevant capacity<sup>1</sup>

Irish supply chain market

Current competitiveness Potential competitiveness The framework will be the basis for activity-specific and market-wide insights – both in a generic level and regarding the Irish supply chain market.

**Outcome** – a clear framework to understand the industry and the

One of its uses will be to allow us to map the level of competitiveness of the Irish supply chain against the typical project lifetime spend (see figure).





## Supply Chain Growth Scenarios

- Currently Ireland's offshore wind supply chain could capture ~22% of total project value but market conditions will impact figure.
- In the near term Ireland's offshore wind supply chain could grow to capture **31-36%** of total project value.
- In the long term Ireland's offshore wind supply chain could grow to capture 48-53% of the total project value.
- **Floating Wind**
- In the long term Ireland's offshore wind supply chain could grow to capture 39-43% of the total floating wind project value







## Conclusions

#### **Market Overview**

- 12.3GW in development, 9.4GW fixed/2.9GW floating
- •3.5GW fixed to 2030, Investment worth €8.6 billion
- •5.9GW fixed beyond 2030, Investment totaling €14.45 billion
- •2.9GW floating, Investment totaling €12 billion
- •Cost will reduce further especially for floating

### **Supply Chain**

Current 22% Capability
Near Term 31 – 36% Capability (~€1.3 billion)
Long Term 48 – 53% Capability (~€2.6 billion to 2030/ ~7.7 billion beyond 2030)

Long Term Floating Wind 39 – 43% Capability (~5.2 billion)

### Employment

•3.5GW during construction/operation = 11.5 million person-days
•O&M stage = ~405 permeant local jobs for 3.5GW
•Shortages identified within engineering, financial services, logistics, technical skills (welders, technicians etc)

#### **Ports Investment**

- •1 port technically capable of acting as staging port now with minor investment/strategic planning with a further 4 capable with significant investment/strategic planning
- •14 ports technically capable to serve O&M phase of current development portfolio
- •Commercial opportunity during installation: 3.5GW to 2030 = €70 million, beyond 2030 = €176 million
- •Commercial opportunity during operations: 3.5GW to 2030 over 25 years = €350 million, beyond 2030 over 25 years = €880 million

#### **Community Investment**

•3.5GW will amount to €4.4m of community investment annually or €767m over the life time of the projects based on RESS requirements





## **Top 6 Key Recommendations**

- Ensure a transitionary protocol in brought in by end of 2019 to deliver at least 1.5GW of legacy projects from 2023
- 2. Assess how much additional offshore wind is required to deliver a net zero emissions reduction target by 2040 (earlier?)
- 3. Enterprise Ireland to continue their Offshore Wind Forum work to ensure capacity building with Irish Companies
- 4. Create offshore wind hubs at a ports under a Freezone/Enterprise Zone model
- 5. Include requirements for Supply Chain Plan in RESS to promote & monitor local content growth
- 6. Strategically invest in a port on east coast



## Thank you

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