BUSINESS BREAKFASTS

North Queensferry • Musselburgh • Dundee • Aberdeen

FORTH & TAY OFFSHORE

Powering Scotland's East Coast

www.forthandtayoffshore.co.uk

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North Queensferry • Musselburgh • Dundee • Aberdeen

Ross Mackenzie
Invest in Fife Manager, Fife Council
Thursday 26th September 2019

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HOUSEKEEPING

- Fire Alarms
- If the Fire Alarms do sound and it is not a test, please evacuate using the clearly signposted exits
- Mobile phones on silent. BUT feel free to contribute to social media

#ForthTayOffshore #FTOBusinessBreakfasts

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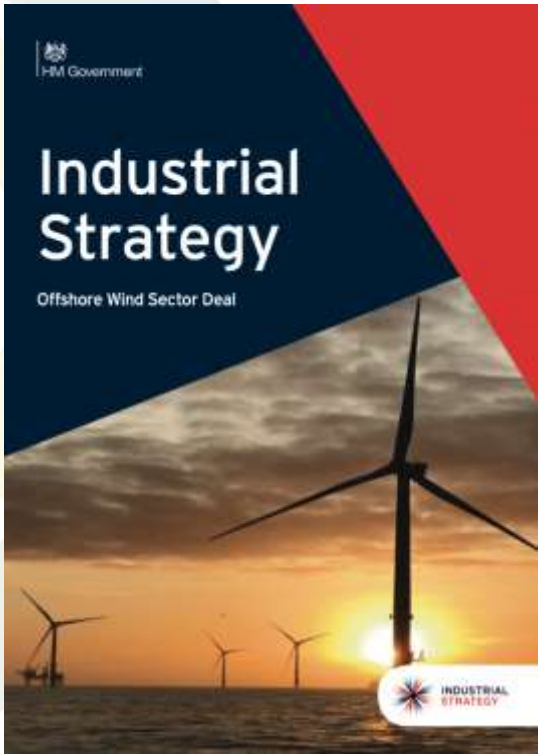
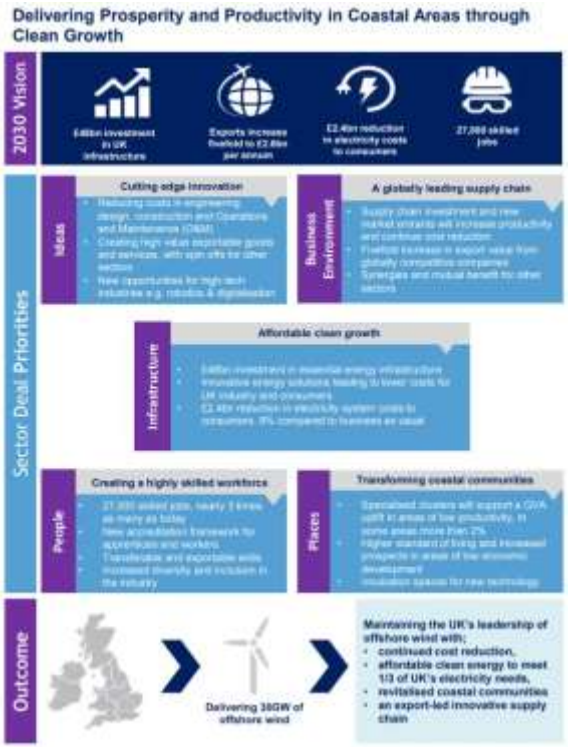
PROGRAMME

08:00	Registration	
08:45	Welcome & Event Intro	Ross Mackenzie, Fife Council
09:00	Offshore Wind Industry Update	Alan Duncan, EDF Energy
09:20	Business Perspectives	Patrick Crawford, Utility ROV
09:40	ORE Catapult	Hugh Riddell, OREC
09:55	Skills Development Scotland Support	Roddy Scott, ESP
10:05	Floating Offshore Wind Competition	Hannah Evans, Carbon Trust
10:15	Services to Support your Business	Isla Robb, Scottish Enterprise
10:25	Q & A	Ross Mackenzie & Isla Robb
10:40	Closing Remarks	Isla Robb, Scottish Enterprise
10:45	Networking	
11:15	Close	

Why a Cluster approach to Offshore Wind?





Place: Transforming coastal communities

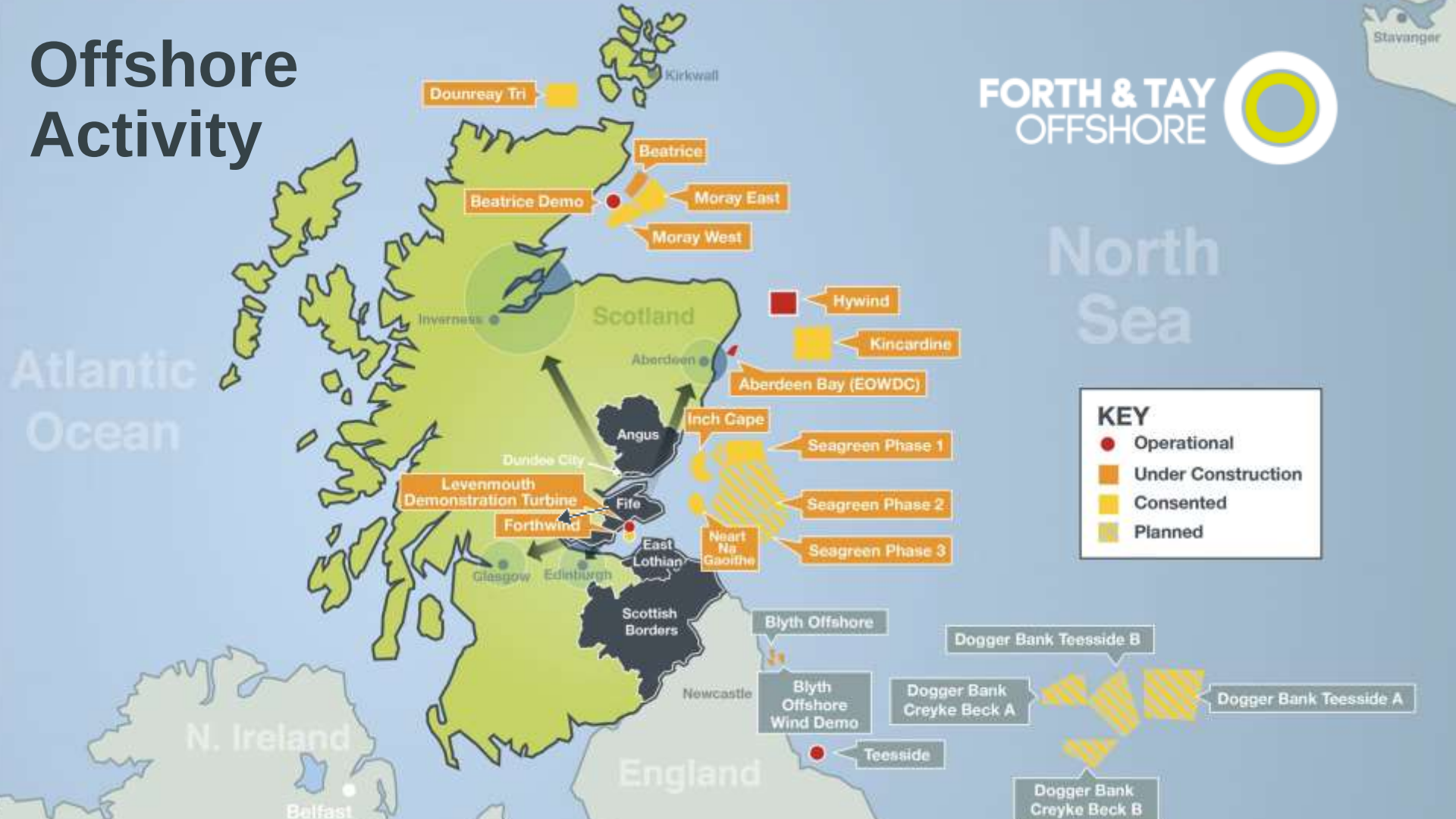
- Regional hubs attracting new industries
- Synergies of collaboration between business & academia
- Higher standard of living and increased prospects in areas of low employment
- Incubation spaces for new technology

Cluster Approach – Why Forth & Tay?

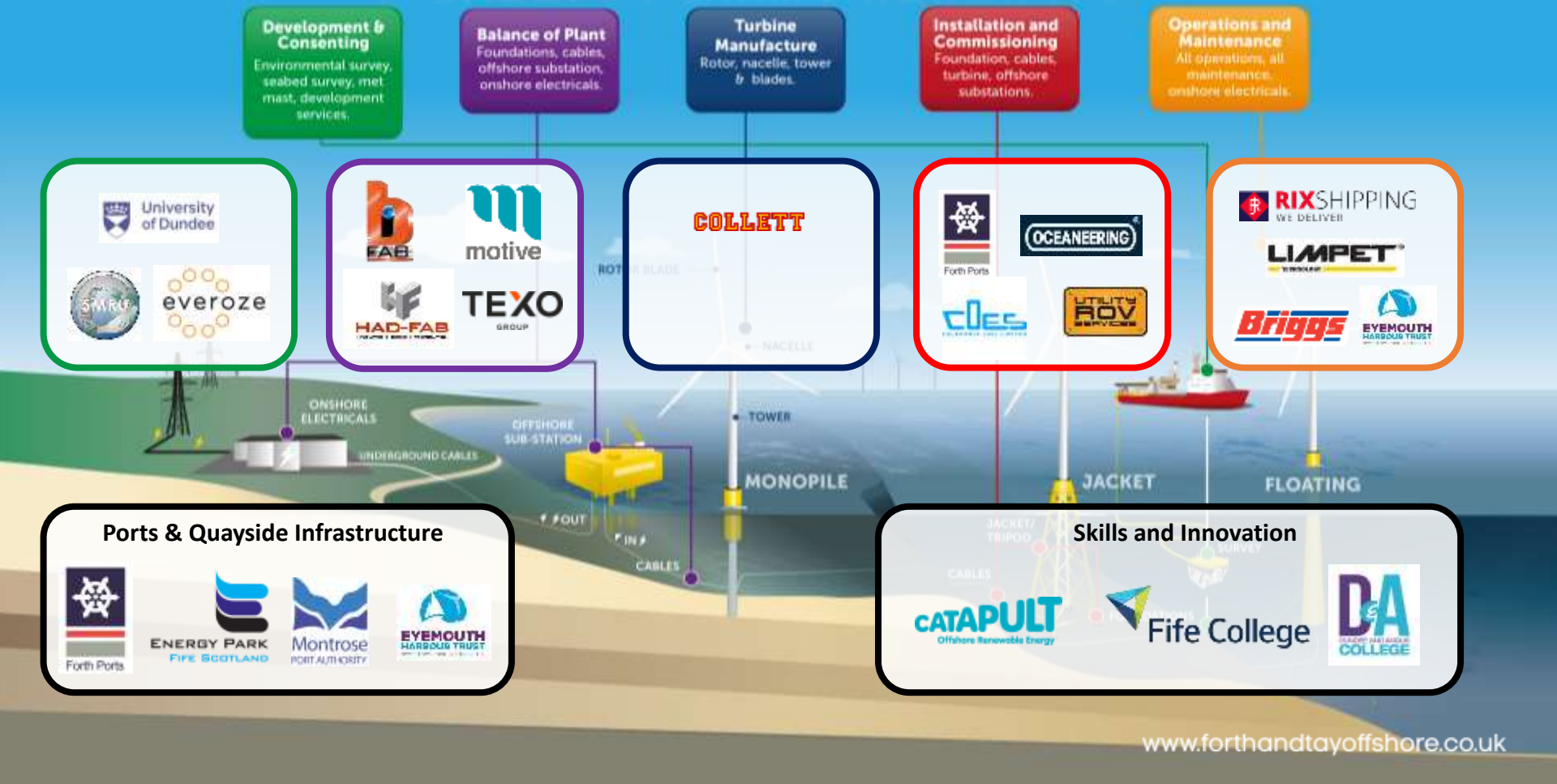
- 1 of 2 Clusters agreed in Scotland (8 in UK)
- **c3.75GW capacity** by 2030 (12% of UK capacity) / 2GW consented / 450MW moving into construction
- Playbook - Established capability – **Balance of Plant** (cabling, foundations and substations), **Operations, Maintenance & Service** and **Skills** (including R & D and training)
- Track record of **working together** in this space – East Coast Renewables
- Regional Strategic Drivers:
  - **Tay Cities Deal** - greater regional working / ambition to create a world-class renewable energy & decommissioning capability.
  - **Edinburgh & South East Scotland City Deal**


ORE CATAPULT LEVENMOUTH DEMONSTRATION TURBINE

Offshore Activity



SUPPLY CHAIN CAPABILITY



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Forth & Tay Offshore: Steering Group

FORTH & TAY OFFSHORE

Angus Council

Dundee City Council – Changing for the Future

Fife Council

East Lothian Council

Scottish Borders Council

Perth & Kinross Council

SDIC Red Rock Power Limited

EDF renewables

sse

Scottish Enterprise

Our cluster is not geographically exclusive, as we take in key areas across the central belt, covering developers and innovative institutions ensuring all parts of the industry are represented; playing a part in advancing the sector for Scotland.

Our Aims

- Promote the regional supply chain to prospective customers in the Offshore Wind Sector and develop collaborative working across the industry
- Promoting the area as a destination of choice for new investments in the UK offshore energy supply chain
- Work with our world renowned colleges and universities to deliver innovative new solutions within the sector, while continuing to develop and promote the skills required to meet the sector's needs
- Invest in infrastructure investment which will enhance establish the cluster's offshore proposition as one of the UK's prominent renewable energy hubs.

Activity to date

Cluster formation & Industry events

Working with Developers & Other Clusters

Promoting Supply Chain Capability

Why should my business get involved?

- **Information and updates** on local, national & international offshore wind industry including contract and funding opportunities and support services
- **Promotion** of your company through the FTO and Scotland Offshore Wind Supply Chain database
- **One-to-one meetings** with offshore wind developers and their main suppliers to discuss contract opportunities at relevant events
- **Case studies** of other companies which have successfully entered the offshore wind market
- **Networking opportunities** to meet with potential partners or customers

WORKING WITH AND FOR YOU. The more you put in, the more you get out

Port of Dundee – Construction of Kincardine Offshore Windfarm Ltd

FORTH & TAY OFFSHORE

Powering Scotland's East Coast

Forth and Tay Offshore Roadshow

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Powering Scotland's East Coast

Industry Update

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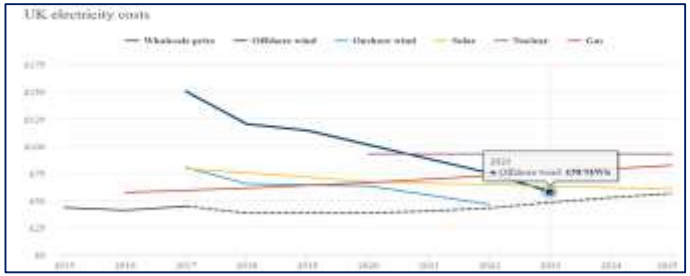
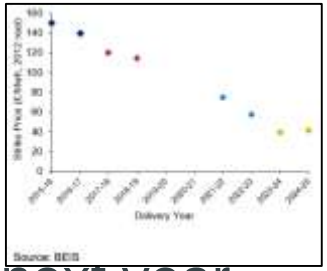
Powering Scotland's East Coast

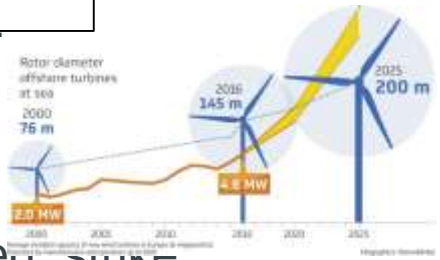
Objectives:

- **Size of the prize**
- **Here today – here tomorrow**
- **Latest industry trends**

UK - 2019







- 8.5GW across UK
- 7,200 direct jobs
- On track to generate 10% of UK electricity next year
- Major part of energy sector
- Contract for Difference Allocation Round 3
  - Results just announced – 5.5GW of offshore wind awarded, strike prices of £39.65 & £41.61 mean zero of £65m budget spent; green light for Seagreen and Forthwind in the Forth & Tay Estuaries!
  - Gone from projects receiving ~300% of wholesale price, to ~3% ‘top up’, to ‘subsidy free in a decade….

Context - Scotland

Scotland - 2019

- Scotland is home to leading international developers:
  - SSE Renewables; ScottishPower Renewables; EDPR Renewables; EDF Renewables; Red Rock Power
- And key parts of supply chain:
  - SeaWay7; Wood; Shepherd and Wedderburn; CS Wind; Foundocean; Global Energy; Windhoist; Briggs Marine; Oceaneering
- Limited growth for the Scottish supply chain, understandable given only 10% (891MW) of deployment to date is in Scottish waters:
  - Robin Rigg (E.ON) 180MW - 2010
  - EOWDC (Vattenfall) 93MW - 2018
  - Hywind 2 Floating Demonstrator (Equinor) 30MW - 2018
  - Beatrice (SSE/RRP) 588MW - 2019

Scotland to 2025

FORTH & TAY OFFSHORE

Kincardine

Developer: KOWL

Capacity: 50MW (6 turbines)

Distance to shore: 15km

Status: Site prep / Component manufacturing / Post-FiD

Known contractors:

Turbine ~ MVOW (9.5MW)

Foundations ~ Navantia (Floating)

Array cables: Prysmian

Export cables: Prysmian

Forecast online: 2020

Moray East

Developer: EDP Renewables

Capacity: 950MW (100 turbines)

Distance to shore: 22km

Status: Site prep / Component manufacturing / Post-FiD

Known contractors:

Turbine ~ MVOW (9.5MW)

Foundations ~ Geosea (Jackets)

Array cables: Boskalis

Export cables: NKT

Substation: Siemens / Smulders

Forecast online: 2022

Developer: EDF Renewables

Capacity: 450MW (max 54 turbines)

Distance to shore: 16km

Status: Site prep / Contracting / Pre-FiD

Known contractors:

To be announced Q4 2019

Forecast online: 2023

Neart na Gaoithe

2.3GW by ’23 (16% of UK 14.1GW)

In Construction

Consented Pre-Construction

2.8GW by ‘25 (14% of UK 19.6GW)

Moray West

Developer: EDP Renewables

Capacity: 800MW (max 85 turbines)

Distance to shore: 23km

Status: Pre-CfD

Forecast online: TBC (unsuccessful in 2019 CfD round, CfD4 auction in 2021)

Inch Cape

Developer: Red Rock Power

Capacity: 784MW (max 72 turbines)

Distance to shore: 15km

Status: TBC (Did not secure CfD allocation in 2019 round)

Seagreen A&B

Developer: SSE

Capacity: 454MW of 1500MW (max 150 turbines) successful in 2019 CfD 3 auction

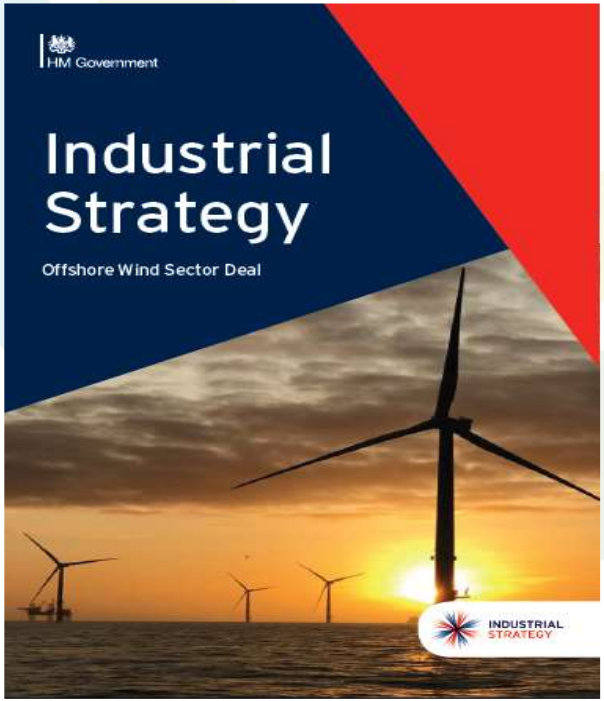
Distance to shore: 27km

Status: Pre-CfD

Forecast online: 2024/5

Tomorrow – Sector Deal

- Bi-annual Contract for Difference rounds – delivery of 1-2GW pa
- By 2030:
  - 30GW in operation = 30% UK power needs
  - 60 per cent UK content
  - 30% women in workforce
  - Increase exports x5 to £2.6bn
- £250m supply chain development fund

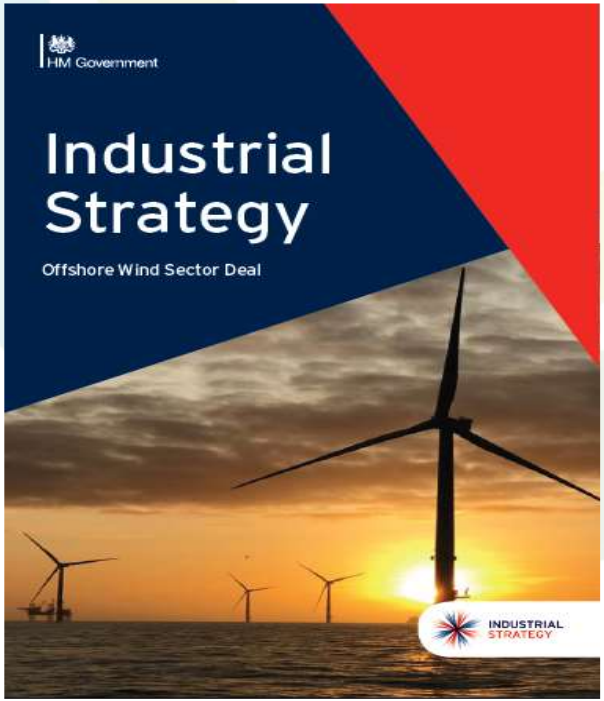


Sector Deal (2)

Key conclusions:

- Industry-Govt Compact - avoid stop-start
- £40bn to be invested to 2030
- Support for firms to grow/enter sector
- Stimulation of coastal communities via clusters concept
- Developers part of industrial strategy
- Structures to hold to account!

Scottish Offshore Wind Energy Council(SOWEC) seeking to maximise benefits in Scotland



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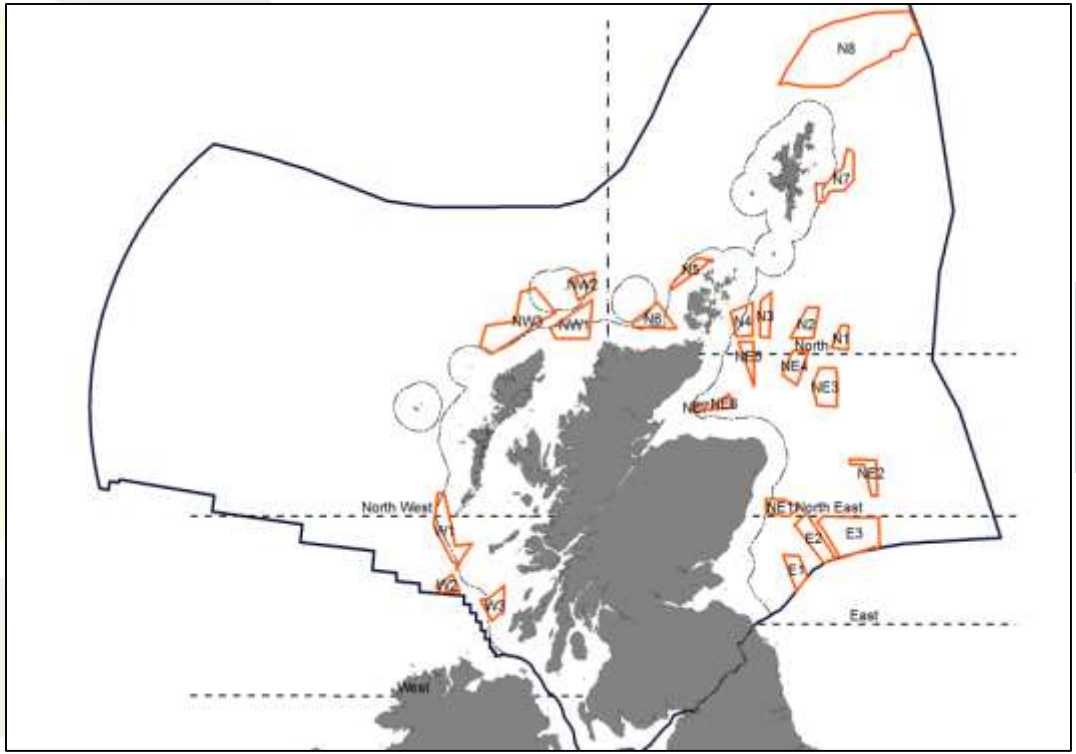
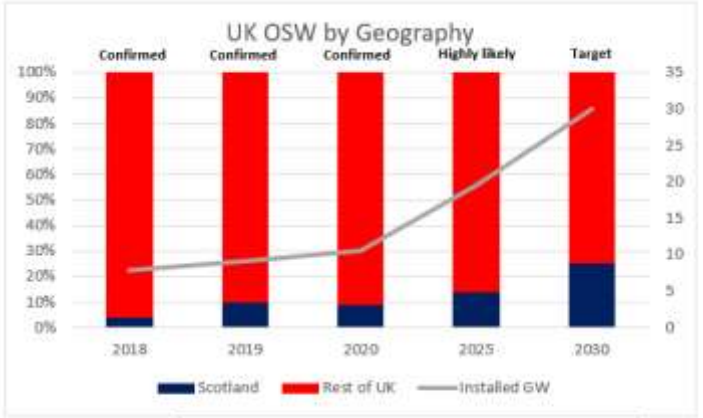
Looking Further Out…

ScotWind and Round 4





	2018	2019	2020	2025	2030
Scotland	4%	10%	9%	14%	25%
Rest of UK	96%	90%	91%	86%	75%
Installed GW	7.9	9.2	10.5	19.6	30

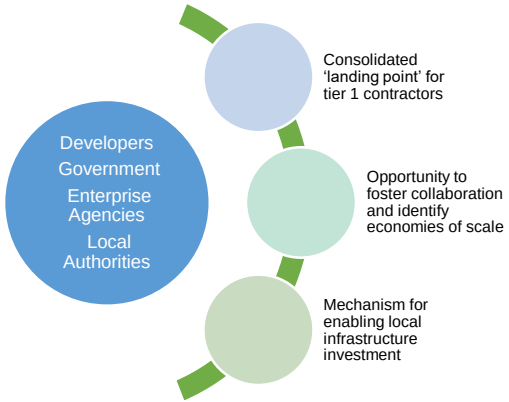
Policy Context

- Net Zero enshrined in law by UK and Scottish Governments
- Need to de-carbonise heat and transport through either:
  - Electrification
  - Hydrogen

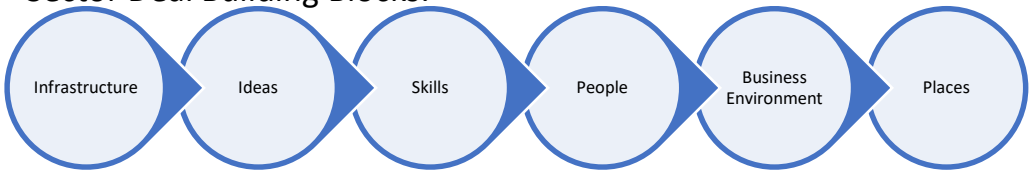
=> Significantly more offshore wind!

- 75GW offshore wind by 2050…?!

Developers: Purpose of Clusters



Sector Deal Building Blocks:



Conclusions

- Significant local, national and international opportunities – now and in future
- Cluster here to support you take those
- Want your views on how we best do that

FORTH & TAY OFFSHORE

Powering Scotland's East Coast

Thank You!

Company Presentation

Forth & Tay Cluster

The Evolution of the UTROV System

Pre - UTROV

Pre - UTROV

Pre - UTROV

Pre - UTROV

UTROV Gen 1

1985

2016

ROBUST - RELIABLE - VERSITILE

Utility ROV Services

- URS was established in November 2013
- Based in Fife, Scotland
- Up to 20 full time employees in base
- In house design & engineering capability
- ISO 9001:2015, ISO 14001:2015 & OHSAS 18001:2007
- FPAL / Achilles registered

Our Clients

Contractors

Briggs

MORAY EAST OFFSHORE WINDFARM

NKT

SIEM

James Fisher Marine Services

HUGHES

orange

subsea 7

Adwen AN AREVA GAMESA COMPANY

ECOSSE Subsea Systems

Seaway Heavy Lifting

DEME Dredging, Environmental & Marine Engineering

SEA

Global Offshore

Tideway Offshore Solutions

Boskalis

RED 7 MARINE

Operators

edp

e·on Climate & Renewables

IBERDROLA RENEWABLES

elia

Shell

EDF

TRIANEL WINDPARK BORKUM II

SSE

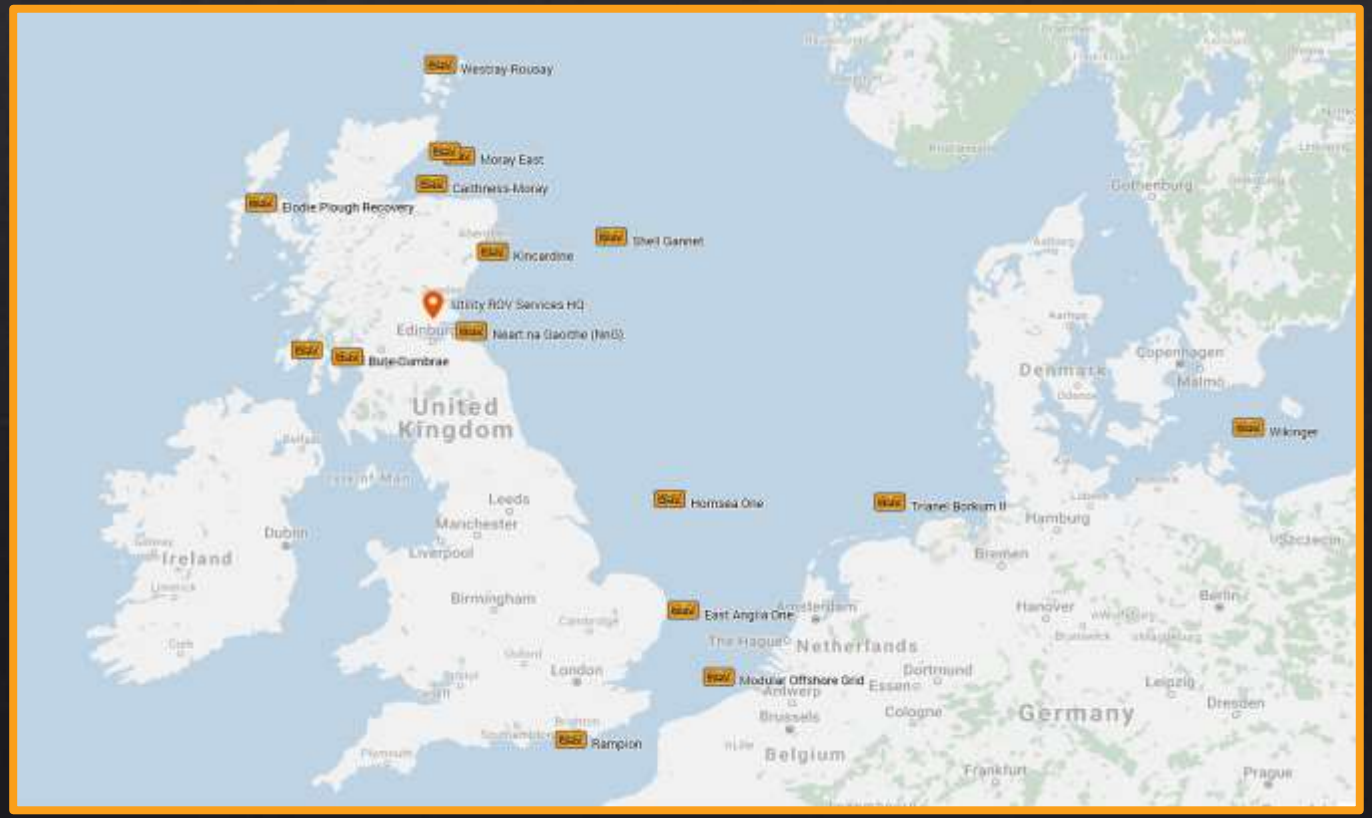
SHETLAND Decommissioning

DONG energy

Ørsted

Beatrice Offshore Windfarm Ltd

Project - Locations



- East Anglia One
- Wikinger
- Modular Offshore Grid
- Neart na Gaoithe
- Trianel Borkum II
- Bute-Cumbrae
- Moray East OWF
- Caithness-Moray
- Kincardine OWF
- Westray-Rousay
- Hornsea One
- Rampion OWF
- Shell Gannet
- Beatrice OWF
- Jura
- Elodie Plough Recovery

The Utility ROV

Technical

Depth Rating (MSW)	3000
Dimensions (mm)	2030 x 2030 x 1780
Weight in Air (T)	4
Weight in Water (T)	3.2
Through-Frame Lift (T)	55 (including dynamics)* DNV Certified
System Power Requirements	280kVA, 3-phase, 380 to 480VAC, 50/60Hz
Oil Volume (L)	45 L

UTROV - Tooling

Mattress Lay

Pipe Recovery

Route clearance / debris removal

Mattress Recovery

Rock bag installation

Excavation

Survey

De Burial

Cutting

One UTROV provides multi-phase capability

Support Services

Support from:

- Fife Council
- Business Gateway
- Scottish Enterprise
- Scottish Development International
- Skills Development Scotland
- Opportunity North East

Support Areas:

- Company – Business plan
- Marketing – Materials & website
- Team – Professional development
- Team – People Skills Action Plan
- Marketing – Trade stands, local and international + materials
- Patents – Funding
- Employment – Graduates for R&D projects
- Analysis – Markets, port services

Impact

Provides URS with invaluable business opportunities, focussing on long-term growth rather than short-term success

- Ensure we have a sound business
- Develop the people & skills
- Marketing & business development
- Investment in innovation & protecting it
- Encouragement & advice

URS perspective on Opportunities & Challenges

Opportunities

- Growing market on our door step
- Extend offering by building more tooling to get more utilisation
- UK is a Global leader – ongoing opportunity to export technology & services
- Smaller business to work together to provide complete solutions – risk management

Challenges

- Lumpy business – All or nothing
- Work scopes often moved to the right – impossible to plan
- Strike rates as low as £39.65MWh will ultimately put pressure on the supply chain to reduce cost
- Some offshore players operating at a loss – being competitive against this
- Payment terms – 90days +

Fourth & Tay Cluster Interest

URS have the benefit of not being fixed geographically

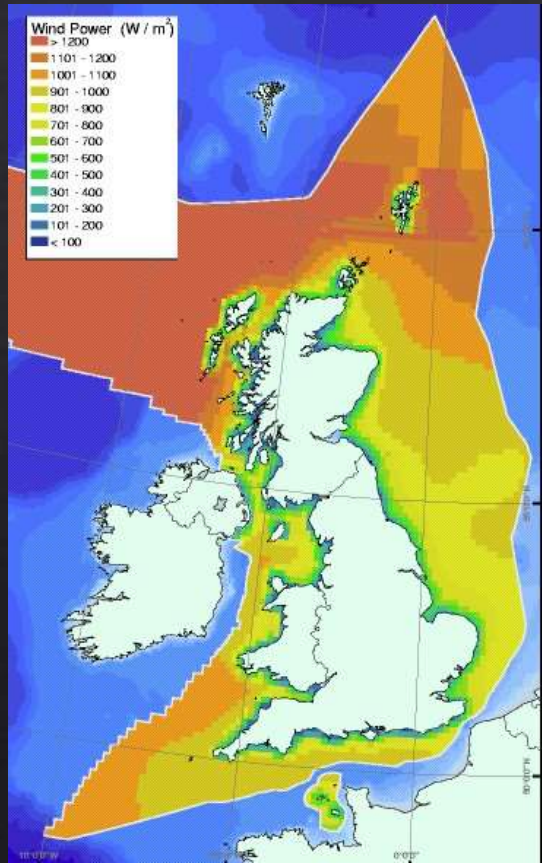
- I am a passionate Fifer & want to see the area prosper
- Based in Glenrothes, the area has many companies with a lot to offer
- Would like to see greater utilisation of all local companies
- Use Montrose as base for EDT Kennedy
- Actively pushed to use Dundee Port for a decom project – will push for future projects to!

SOW Developments to Reach Potential

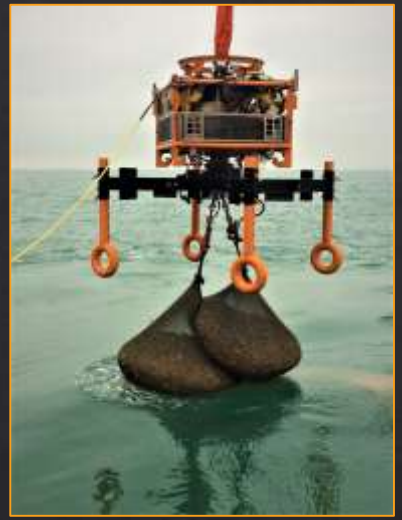
- We have various technical challenges to overcome but the greatest potential – Highest wind power density in Europe
- Social demand (therefore political) for renewable power is greater than ever
- Technology is developed or under development

I think that the question should be:

"*How do we maximise the return on investment to our economy?*"










UTROV®

Forth and Tay Offshore Wind Briefing Event

26/9/19 | Hugh Riddell, Regional Partnership Manger

CATAPULT Offshore Renewable Energy

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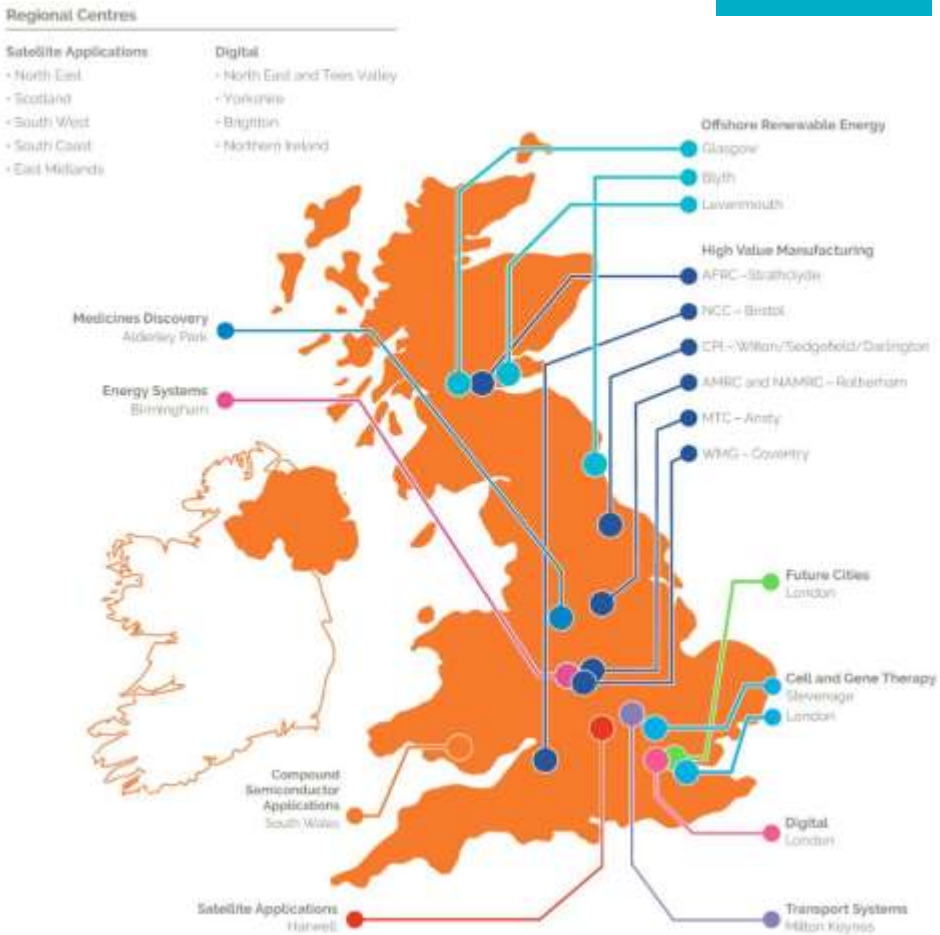
Innovate UK

Designed to transform the UK's capability for innovation

Core grant leveraged with industry and other public funding



Our Mission and Vision

Our mission

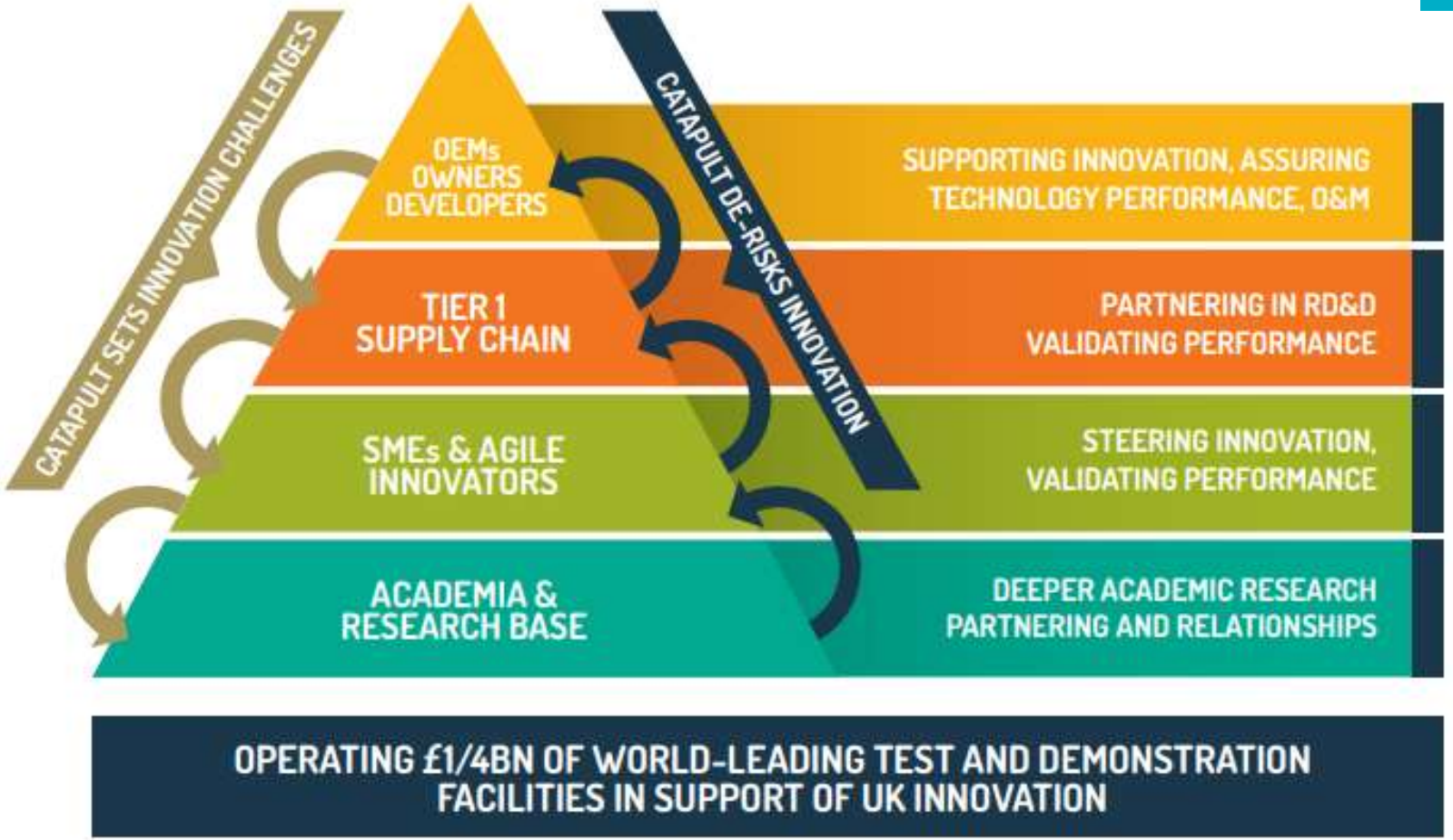
To accelerate the creation and growth of UK companies in the ORE sector

Our vision

By 2023, ORE Catapult will be the world's leading offshore renewables technology centre

- **Centres of Excellence**
- **Academic Research Hubs**
  in partnership with leading universities
- **Expanding our assets in Blyth and Levenmouth**
  the world's foremost open-access facilities

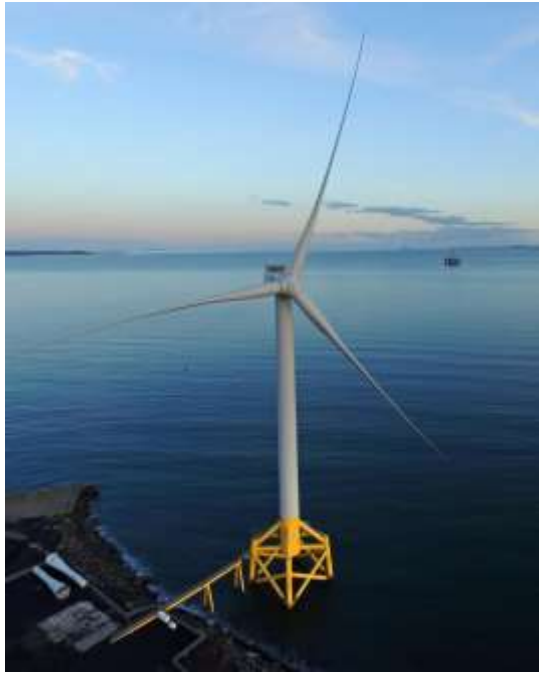
The Role of ORE Catapult

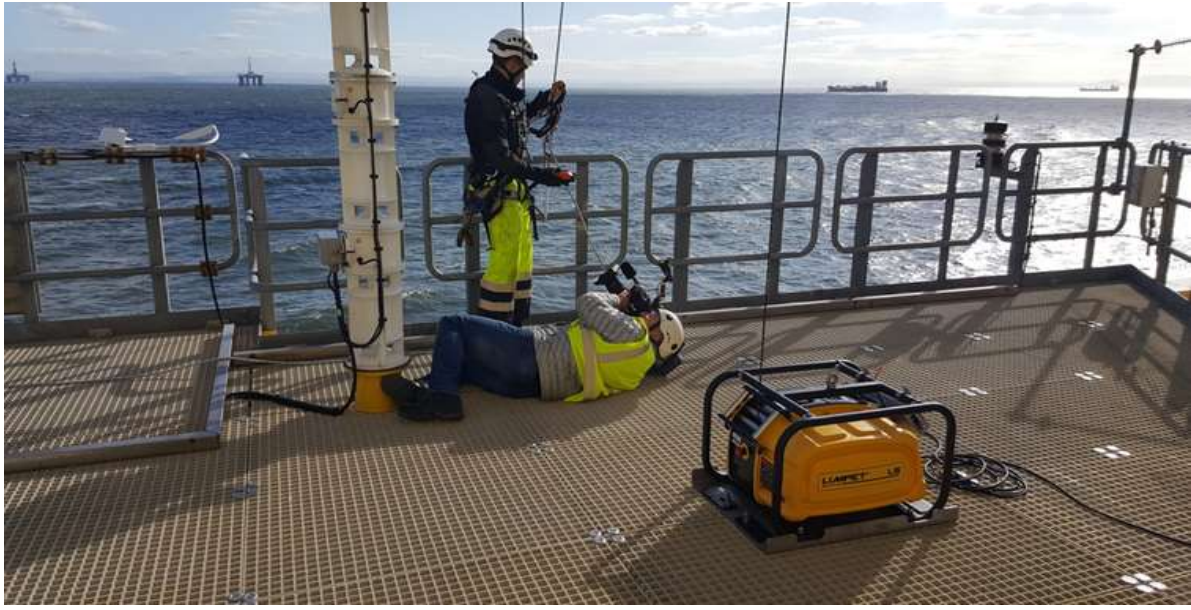


Impact Stats 18/19

Levenmouth Demonstration Turbine

- The largest open access demonstration turbine in the world
- SME technology demonstration access to Levenmouth offshore wind turbine to prove and commercialise innovative new sensing technologies.
- SMEs, such as Limpet Technology, gain access to a full-scale operational turbine





Limpet Technology Demonstration

Test & Validation - Blyth

BLADES

- Test & validate next generation 100m+ offshore wind turbine blades
- Develop and test innovative solutions for rain erosion (e.g. composite materials)
- Accelerate innovative blade designs and materials

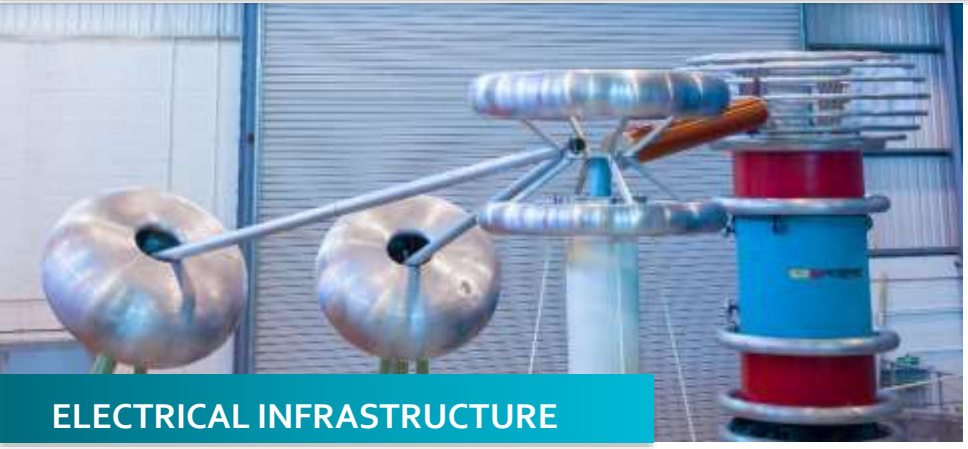
FACILITIES: 100m and 50m Blade Test Halls
Blade Erosion Test Rig
Wind Turbine Blade Test Facility

POWERTRAINS

- Test & validate next generation 10MW+ offshore wind turbine powertrains
- Accelerate innovative powertrain technology, from Sub-1MW to 3MW
- Support development of critical powertrain components: bearings, gearbox, generator

FACILITIES: 1MW, 3MW, 15MW Powertrain Facilities
Wind Turbine Bearing Test Facility

Test & Validation - Blyth



ELECTRICAL INFRASTRUCTURE

- Test & validate the market's largest cables - 66kV - through ageing, insulation breakdown and failure analysis
- Dynamic cable fatigue testing - for the future development of floating wind

FACILITIES: HV and Materials Labs
Pre-qualification bays
Dynamic cable rig

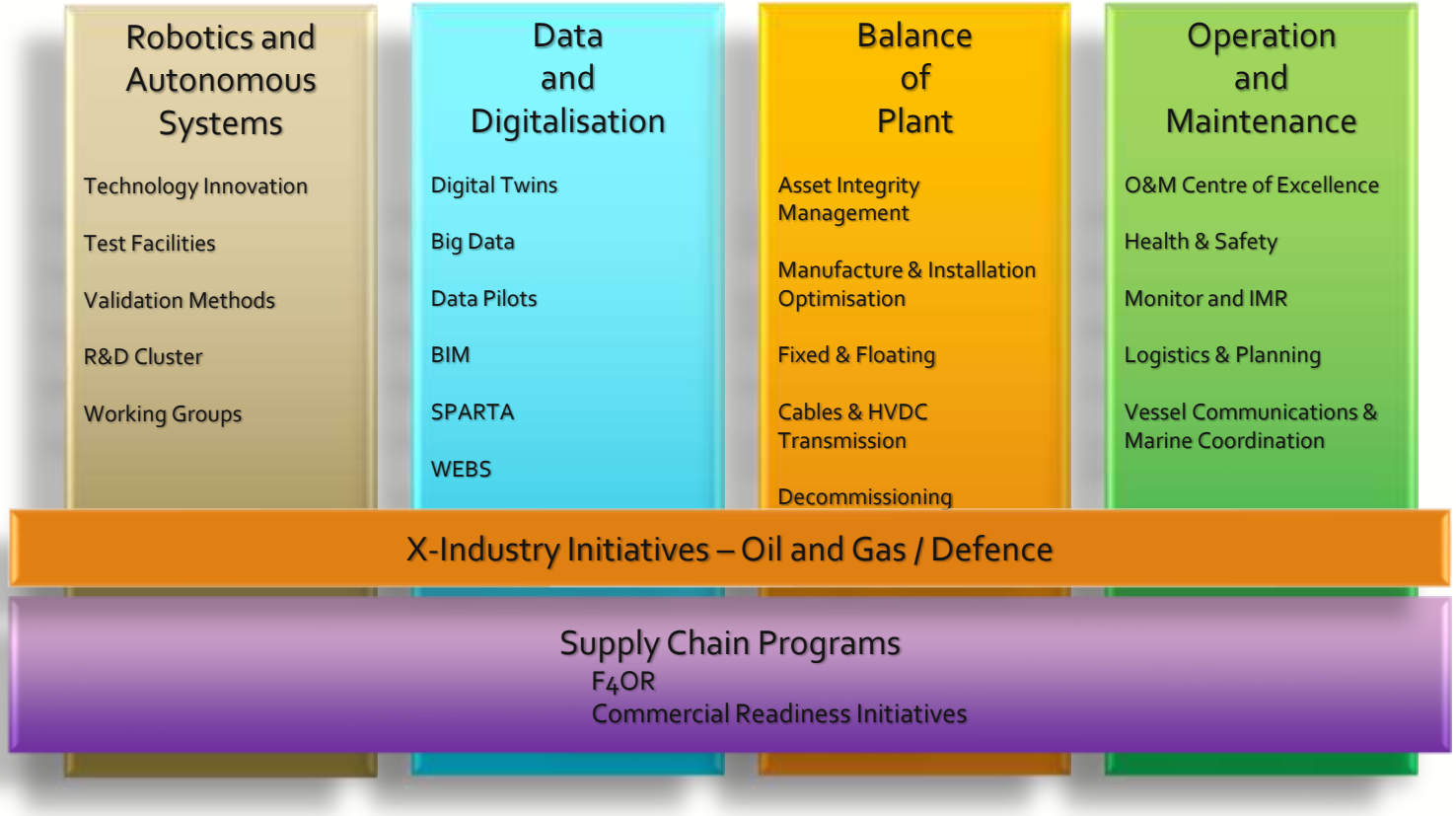
O&M TECHNOLOGY TEST & VALIDATION

- Test robotics & autonomous systems (RAS) using controlled subsea dock environment, training tower (drones) and blades (blade inspection)
- Wet and dry controlled dock environment testing:
  - Cable inspection, protection and connection systems
  - Subsea & topside balance of plant

FACILITIES: Subsea docks
Training tower
Blade sections

Operational Performance – Focus Areas

The Four 'Pillars' of Operational Performance



Aberdeen Bay Project

Vattenfall – EOWDC (Aberdeen Bay)

- 11 turbine array 2.5km from beach (2 x 8.8MW & 9 x 8.4MW)
- Unique opportunity for UK Innovators to work with ORE Catapult to bring new technologies to the market through testing in a real-world environment
- Collaboration to advance cost reduction and improve safety in offshore wind.
- ORE Catapult submit innovation concepts for selection, demonstration and review annually

8

Technology demonstrations approved by Vattenfall

ORE Catapult Power Available Hackathon

£10,000
Prize Pot

"Provide an accurate wind farm Power Available (PA) measurement using data that is already available at operational wind farms"

- Teams of up to six
- Any background: data, wind, researchers, businesses
- Registrations open till 18th October
- Opportunity to pitch technologies to ScottishPower Renewables

https://ore.catapult.org.uk/stories/offshore-wind-hackathon/

Offshore wind technical issues

OEMs and utility companies have:

- Confidential engineering challenges to solve with no time to explore markets
- Low exposure to companies outside the offshore wind supply chain

OWiX
Offshore Wind Innovation Exchange

A platform for solving industry challenges

Technical solutions from other sectors

Solution providers find it difficult to:

- Find the right person within a target customer's organisation
- Prove the value proposition of products
- Understand customer's time constraints

OWiX – Impact and get involved

TURBINES

Developing the next generation of offshore wind turbines, incorporating all the technology that forms the structural and operational elements of the wind turbine generator.

SUBSTRUCTURES

Innovations in fixed and floating wind turbine foundations and substructures, including transition pieces.

ELECTRICAL INFRASTRUCTURE

Moving to next generation electrical infrastructure including array cabling, power transmission, grid integration, and onshore & offshore substations.

O&M AND WINDFARM LIFECYCLE

Optimising and future-proofing all services associated with offshore wind, including site development, installation, wind farm O&M, condition monitoring, and decommissioning.

69 Applications across seven challenges in two competitions

→ **20** UK Companies given the opportunity to pitch their ideas to and OEM and utility company

→ **6** Companies progressing with demonstration projects with OEM and utility company (further two pending)

→ **5** Businesses now developing technology funding applications (four with ORE Catapult)

https://offshorewindinnovationhub.com/get-involved/

Current Challenges: GE Robotics Challenge

CATAPULTS

KTN iX Challenge: Generator Pole Shoe Inspection and Tightening

The generator pole shoe bolt connection on the GE Haliade-X units need to be inspected within an interval of 36 months after commissioning is complete. Companies are required to develop a semi or fully autonomous device that is capable to perform the inspection of the pole shoe connection.

KTN iX Challenge: Blade Inspections & Repairs

The harsh environmental conditions that apply to an offshore wind turbine create the need for regular inspections, maintenance and repair of the blades and its subcomponents. GE seeks an inspection method that eases the job by eliminating human resource exposure to rope climbing.

VIEW >

Lightning Protection System Inspection

Develop an innovative, cost-effective solution for inspecting blade lightning protection systems.

VIEW >

https://ore.catapult.org.uk/work-with-us/smes/innovation-challenges/

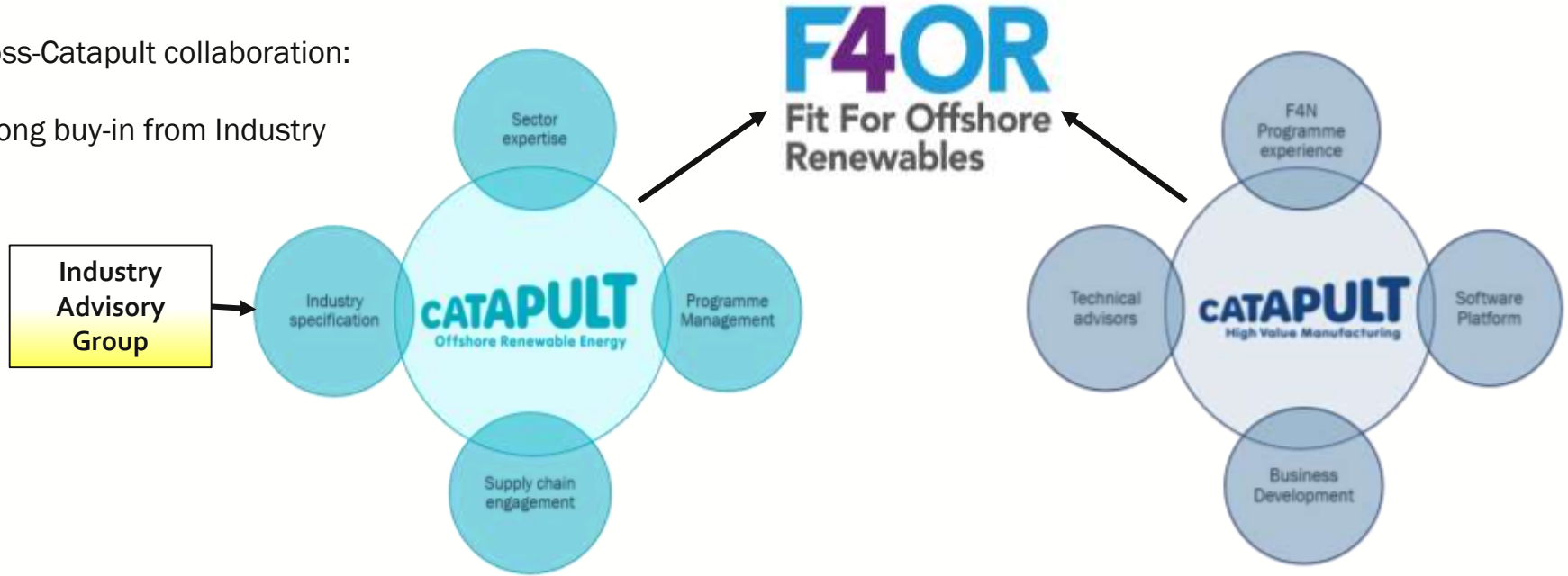
What is the Launch Academy

Partners:

SCOTTISHPOWER RENEWABLES · SIEMENS Gamesa · CATAPULT Offshore Renewable Energy · BARCLAYS · BDO · SHEPHERD+WEDDERBURN · m:

Fit 4 Offshore Renewables – National Programme

- The National F4OR programme is currently under development (building on the success of the Scottish Pilot)
- National Programme Launch is planned for Oct/Nov 2019
- Cross-Catapult collaboration:
- Strong buy-in from Industry



Offshore Wind Growth Partnership (OWGP)

Objectives

Increased competitiveness of UK supply chain leading to:

- Increased UK content in UK projects.
- Increased exports to global markets.

Funding

- OWIC (offshore wind developers) are funding OWGP.

Delivery

Budget of £100m over ten years to provide:

- Analysis – strategic capability assessments
- Services – expert advisory services to supply chain
- Grants – for innovation and prototypes

Funded by OffshoreWind IndustryCouncil

Offshore Wind Growth Partnership

Delivered by CATAPULT Offshore Renewable Energy

Targeting high growth potential companies

Offshore Wind Growth Partnership

Who?

- ✓work in offshore wind sector
- ✓create new sustainable jobs
- ✓increase exports to global markets
- ✓develop UK owned IP
- ✓bring cross-sector skills and experience

What?

- Support to participants through a series of interventions

How?

- National programme with reach via clusters
- Engagement with OWIC members

Four core strands of activity

Offshore Wind Growth Partnership

Enhanced engagement between developers and supply chain.

Developer-led activity

A

Collaborating for Growth

Business Competitiveness

An intensive structured business improvement programme.

B

Increasing the breadth of the UK supply chain by attracting cross-sector companies.

C

Building New Capacity

Supply Chain Futures

Developing growth based on new UK intellectual property.

D

B D Pilot calls launch in September 2019

Offshore Wind Growth Partnership

Business Competitiveness

- **Target:** **Innovation in manufacturing/fabrication**
- Objective 1: Encourage companies to explore new ways of working
- Objective 2: Build ecosystem of delivery partners
- Delivery: Access to manufacturing advisory services*

Supply Chain Futures

- **Target:** **Next generation products and services**
- Objective 1: Enable technology development planning
- Objective 2: Engage with developers and Tier 1s at early stage
- Delivery: Grant funding for feasibility studies

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Scotland's colleges - delivering skills for the energy, engineering and construction sectors

Wind and Marine Training Network
24 April 2019

Jim Brown

Director ESP

Roddy Scott

Sector Manager: Engineering

Offshore Wind and Skills

Offshore Wind Sector Deal	Investment in Talent Group HR Forum Etc
Scottish Offshore Wind Energy Council	Supply chain / Offshore Wind Growth Partnership (Clusters) Skills Barriers/Opportunities to growth Innovation Future leasing / technology (Developers)
Skills Group	Understand Skills Demand Skills Supply Sector Recruitment and Attractiveness and STEM Diversity in the Workforce Engage with the UK Investment in Talent Group

SOWEC Vision and Strategic Goals (draft)

SOWEC
Scottish Offshore Wind Energy Council

Vision:

An offshore wind sector which plays to Scotland's strengths, delivering jobs, investment and export opportunities in line with the UK Sector Deal as a key part of the path to net-zero.

Goals:

1. Deliver at least 8 GW of offshore wind in Scottish waters by 2030.

2. Create a competitive, commercially-attractive offshore wind sector in Scotland which can deliver both domestically and in the global offshore wind market, with a focus on project development, deeper water capability and innovative technology solutions.

3. Work to increase local content in line with the ambitions set out in the UK Sector Deal, developing sustainable, world-class supply chain in Scotland.

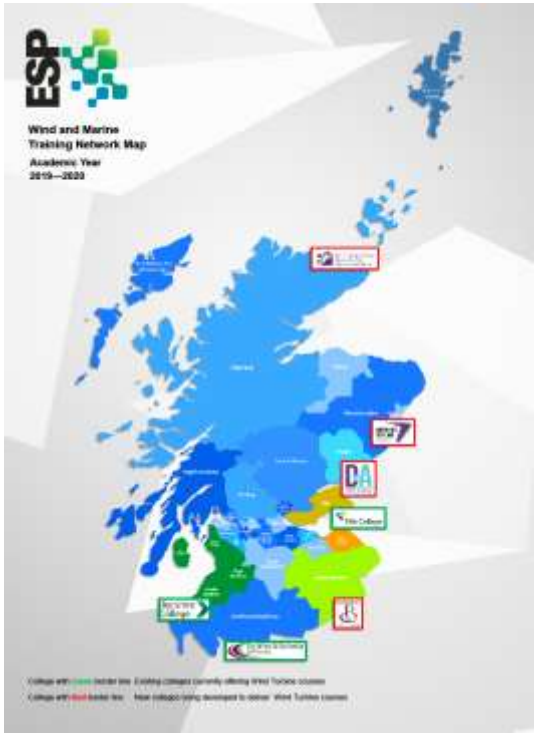
4. The number of offshore wind jobs in Scotland will increase to more than 6,000: an increase of 75% on 2019 figures.

ESP is a collaboration of Scotland's colleges and industry partners established to increase Scotland's capability and capacity to deliver the right skills for the energy, engineering and construction sectors to meet industry demand.

Aims

- Develop and deliver demand led skills programmes
- Promote careers in the energy, engineering and construction sectors
- Develop pathways through schools to college to university
- Build capability and capacity across Scotland's colleges
- Promote and support innovation in education
- Support economic development
- Interface with government and its agencies
- Influence and support developments across Scotland's colleges

College Training Networks in Support of Offshore Wind



ESP – Wind & Marine Training Network Action Plan

Key actions:

- Expand current network from 3 colleges to 7 to support O/S Wind
  - Develop capability and capacity – CPD

- Increase shared resources and capital equipment for training

- GWO accreditation for Basic Technician Training delivery

- Revise curriculum –
  - C & G Diploma
  - PEO L2
  - Marine awareness

- Scottish Government funding to support the above.

Questions?

Scotland's colleges - delivering skills for the energy, engineering and construction sectors

FORTH & TAY OFFSHORE

Powering Scotland's East Coast

Floating Wind Technology Accelerator

Hannah Evans
Carbon Trust

Floating Wind Technology Acceleration Competition

£1m
Scottish Gov't Grant Funding

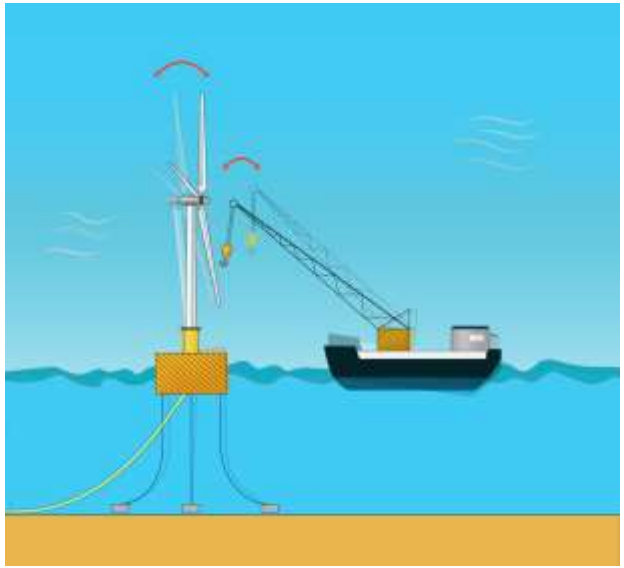
3-7
TRL eligible

£250k
Max. grant per project

12-14 months
Project duration

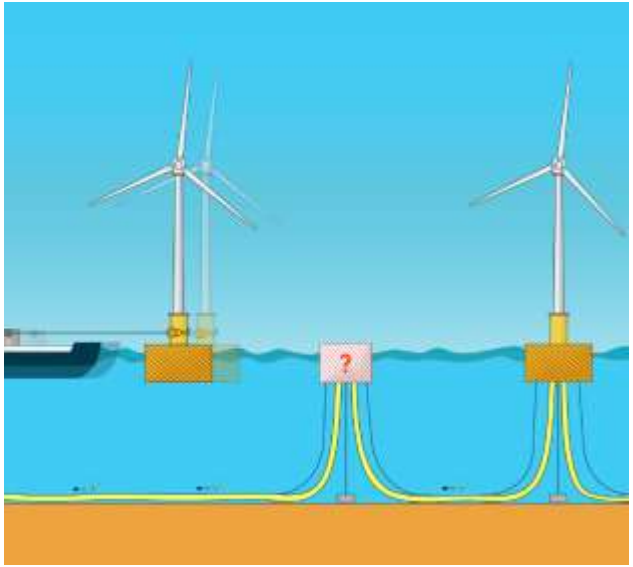
- Objective is to support the development of technologies which will accelerate the deployment of floating offshore wind in Scotland.
- Project is supported by the Floating Wind JIP: 14 leading offshore wind developers & Carbon Trust, supported by Scottish Government.
- Looking to address four main challenges but also open to other technology ideas under 'Miscellaneous' category.

Floating Wind Technology Acceleration Competition

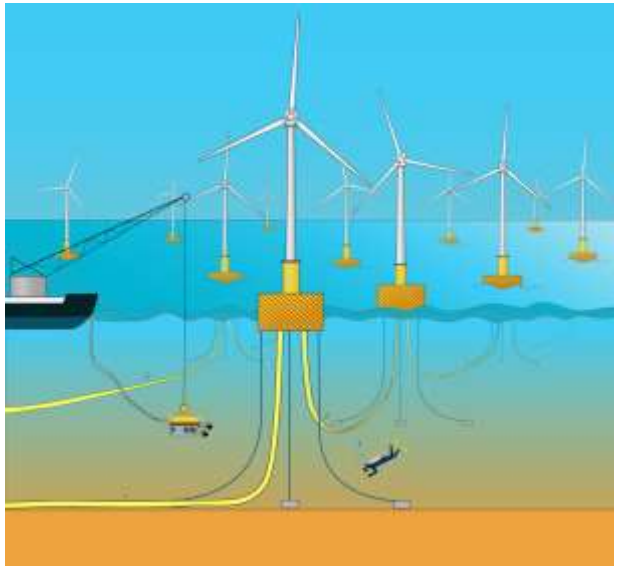


1. Safe and cost-effective exchange of large turbine components offshore

2. Safe and cost-effective disconnection and re-connection of offshore foundation structures

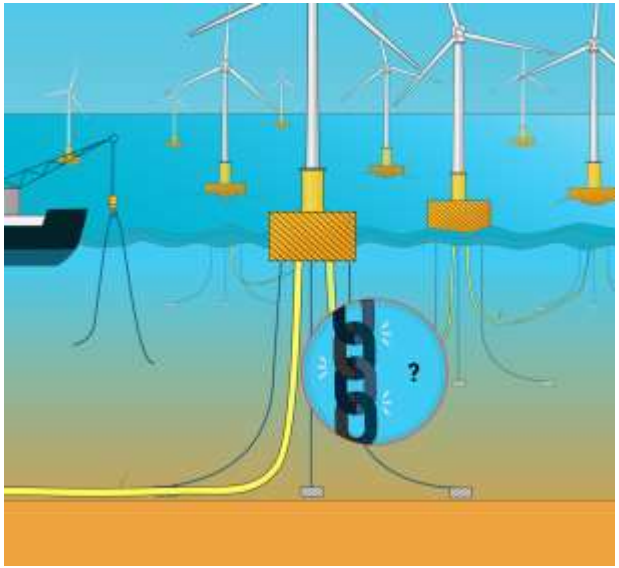


Floating Wind Technology Acceleration Competition



3. Cost-effective monitoring and inspection of large numbers of mooring lines, cables and foundation structures

4. Cost effective manufacturing, installation and maintenance of mooring lines and anchors



Floating Wind Technology Acceleration Competition

- Deadline for Applications is 09:00 on **Tuesday 5th November**
- Shortlisted applications will be invited to present to Floating Wind JIP Developers in London between **3rd and 5th December**
- Successful projects will be expected to start by early January 2020 and be completed by end January 2021.
- For further information and to apply please visit: https://www.carbontrust.com/about-us/tenders/floating-wind-technology-acceleration-competition/
- Please send any questions to floatingwind@carbontrust.com

BUSINESS BREAKFASTS

North Queensferry • Musselburgh • Dundee • Aberdeen

FORTH & TAY OFFSHORE

Powering Scotland's East Coast

Support for the supply chain

Isla Robb

Scottish Enterprise

Scottish Enterprise offshore wind support

FORTH & TAY OFFSHORE

- **Supply Chain Workshops** - Exploring specific supply chain opportunities

- **Meet the Buyer Events** - Tailored events with leading OEMs and developers

- **Energy Markets Expert Support Programme** - Up to two days of FREE one-to-one support on market and technology appraisal, plus 4 days 50% funded
  - Offshore wind
  - Heat
  - Water
  - Energy Systems
  - O&G decomm
  - Nuclear decomm
  - Low carbon Transport

- **Technical Solutions Workshops** - Sessions focussing on specific industry challenges and potential solutions

- **Supply Chain Database**

Scottish Development International

FORTH & TAY OFFSHORE

Overseas staff in **30+** offices in **23** countries, providing trade support to companies identifying trade development opportunities

Trade specialists in Scotland providing 1-2-1 support and strategic challenge to companies in key sector portfolios

ENERGY ACTIVITY PLAN

July	Angola Mission (with EIC and DIT)	Ian Ross ANGOLA	ian.ross@scotent.co.uk 0141 468 5506
Sep	Offshore Europe Aberdeen	Denise Addie SCOTLAND	denise.addie@scotent.co.uk 0141 468 5298
	Nuclear Decommissioning Japan (with DIT)	TBC JAPAN	edward.friel@scotent.co.uk 0141 468 5992
	Nigeria/ Ghana Mission	Ian Ross NIGERIA	ian.ross@scotent.co.uk 0141 468 5506
Oct	Asia Offshore Wind Taiwan (with DIT)	TBC TAIWAN	edward.friel@scotent.co.uk 0141 468 5321
	East Africa mission (showcase in hotel)	Ian Ross MOZAMBIQUE	ian.ross@scotent.co.uk 0141 468 5506
	Mission to AWEA and key US offshore wind states (with partner)	John McGinnes USA	john.mcginnes@scotent.co.uk 0141 468 5618
	Offshore Technology Days Show (with DIT)	Phil Stirling NORWAY	phil.stirling@scotent.co.uk 0141 468 6009
	China Wind Power Expo (with Renewable UK)	TBC CHINA	edward.friel@scotent.co.uk 0141 468 5321
	OTC Brazil (with DIT)	Marion Murray BRAZIL	marion.murray@scotent.co.uk 0141 468 5865

Nov		Offshore Wind Europe Copenhagen (With Renewable UK)	Adam Swainbank DENMARK	adam.swainbank@scotent.co.uk 0141 343 7928
		Africa Oil Week Capetown	Ian Ross SOUTH AFRICA	ian.ross@scotent.co.uk 0141 468 5506
		ADIPEC Exhibition (with EIC)	Hadi Fawzy ABU DHABI	hadi.fawzy@scotent.co.uk 0141 468 5467
Jan		Guyana (DITled)	Marion Murray GUYANA	marion.murray@scotent.co.uk 0141 468 5865
Feb		India Petrotech (with DIT led by EIC)	TBC INDIA	edward.friel@scotent.co.uk 0141 468 5506
		EGYPS	Hadi Fawzy EGYPT	hadi.fawzy@scotent.co.uk 0141 468 5467
		Mexico Mission (DITled)	Marion Murray MEXICO	marion.murray@scotent.co.uk 0141 468 5865
		Wind Energy Expo (with EIC)	TBC JAPAN	edward.friel@scotent.co.uk 0141 468 5992
Mar		Brazil Mission (DITled)	Marion Murray BRAZIL	marion.murray@scotent.co.uk 0141 468 5865
		CHINA OPPE (led by partners)	Ian Ross CHINA	ian.ross@scotent.co.uk 0141 468 5506
		Australia Oil and Gas (with EIC)	TBC AUSTRALIA	edward.friel@scotent.co.uk 0141 343 7951
		Energy Systems Mission to California (TBC)	John McGinnes USA	john.mcginnes@scotent.co.uk 0141 468 5618
		Algeria Trade Mission	Hadi Fawzy ALGERIA	hadi.fawzy@scotent.co.uk 0141 468 5467

Support

Scottish Investment Bank helps SMEs access finance and invests alongside private sector partners from across the globe

Brexit support service with PrepareForBrexit.scot

R&D Grant supports

RSA for creating jobs in specific locations

R&D Tax Credits for new products and services

£20 million for innovative energy projects (EIF)

SMAS Scottish Manufacturing Advisory Service

Scottish Cyber Voucher

Digital Development Loan

[Offshore Renewable Energy Catapult]

[PNDC]

[ETP]

[National HVDC Centre]

[NSRI]

[Edinburgh centre for Robotics]

[Renewable Engine]

Stay in touch

Stay connected

www.forthandtayoffshore.co.uk

www.offshorewindscotland.org.uk

Questions…

Questions, questions, questions…..

….Answers, answers, answers

FORTH & TAY OFFSHORE

Thank you