Careers in the offshore wind industry

Presenter Name: Sue Vincent

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Location: Tees Valley Virtual Careers Expo

SOFIA OFFSHORE WIND FARM | RWE

My career and educational background

- **Role:** Senior Communications & Stakeholder Engagement Manager
- **Education:** Bachelor of Arts (Journalism) / Master of Business Administration
- **Pathway:** PR consultancies (various), corporate PR (energy, industrial), limited company director (various clients), project communications (offshore wind)
- **Duties:** Managing all external communications around the project including strategy, production and engagement
- **Working in offshore wind:** Even when you are having a tough day you can always feel you are helping the world even if just in a small way.

Offshore wind and UK's next zero ambition

- The UK has an ambition for the national to have net zero greenhouse gas emission by 2050
- Offshore wind has a key role to play in meeting the ambition
- It is cheaper than alternative forms of power generation and can be deployed at scale to meet increased electricity demand in 2050.
- UK Government has set a target to reach 40GW installed capacity by 2030.
- People will be needed to plan, construct and run the wind farms – an estimated additional 11,000 skilled jobs.

RWE's* UK offshore wind fleet

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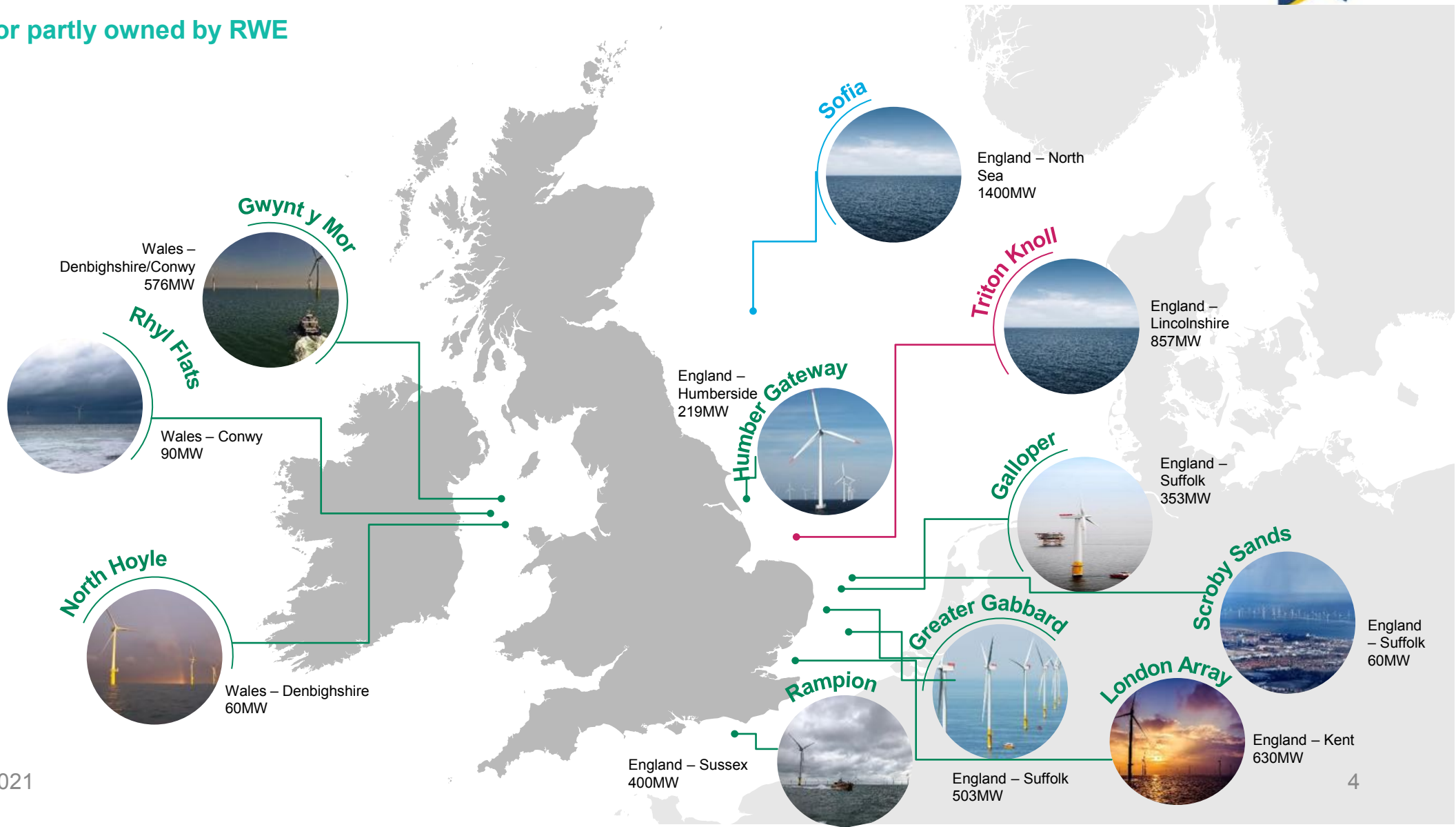
*** Operated, fully or partly owned by RWE**



Sofia – sited on Dogger Bank in the North Sea

Key facts and figures	
Location and size	195 kilometres off the UK's North East coast on a 593 km^2 site on Dogger Bank
Capacity	Consent for up to 1400 MW
Number and size of turbines	100 turbines Maximum tip elevation - 262 metres Blade length – 108 metres
Water depths	21 to 36 metres on site Up to 80 metres along export cable route
Landfall	Between Redcar and Marske-by-the-Sea, Teesside
Grid connection	Located at Lackenby, Teesside
Generation	Potential to power more than 1.2 million average UK homes with electricity each year

Sofia – working with education providers

- Teesside University Memorandum of Understanding - interns, placements, talks
- Outwood Academy Byedales - Enterprise Adviser, Careers days, presentations
- Tees Valley Careers - STEM days, school visits, online resources

Offshore wind needs people to make it happen

- More than 100 different types of jobs are required during development, construction and operations and maintenance
- Different skill sets and levels
- Worker are required for both onshore and offshore roles
- There are jobs based locally in the UK, but as it's a growing global industry, also international opportunities
- There are numerous routes into the sector: apprenticeships, technical qualifications and University degrees or post-graduate study

The offshore wind sector is DIVERSE with opportunities for different types of people with all types of skills.

Development: planning the wind farm






Engineering skills to design and plan:
Civil
Electrical
Mechanical
Aeronautical
Structural

Consultation and stakeholder engagement:
Consents managers
Communications
Project planners
Developers

Surveying the site and assessing impacts:
Geologists
Geographers
Scientists
Marine biologists
Ornithologists
Archaeologists

Legal, commercial and financial teams:
Lawyers
Land agents
Document controllers
Accountants
Commercial managers

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Construction: Building the wind farm

Skilled trades
Welders
Scaffolders
Coating technicians
Electricians
Mechanics
Cable jointing
Drivers

Offshore expertise
Divers
Health & safety
Onboard reps
Vessel operators
Navigators
Accommodation support
Catering
Drones/ ROVs

Project management
Construction & contract managers
Engineers
Procurement
Planners
Logistics
Consents

Onshore expertise
Civils workers
Builders
Cable laying
Land management
Roadworks
Community liaison

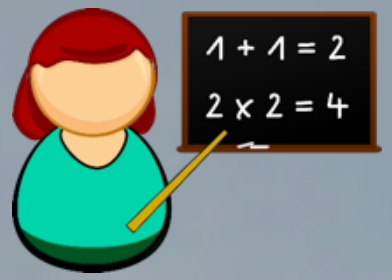
Operations & maintenance: Keeping the wind farm running

Vessel operation
Skippers
Offshore crew
Port management
Cleaning & catering

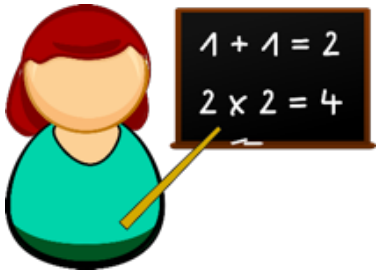
Maintenance teams
Planners
Wind turbine technicians
Control room operators
Health and safety

Operations management
Plant manager
Engineers
Monitoring and planning
Administration
Finances
Community liaison

What is the relevance of the subjects you study to the jobs you may get in offshore wind?



Mathematics



- Number
- Ratio, proportion and rates of change

- Algebra – understanding and appliance of formulas/ calculations
- Geometry and measures – understanding of shape, form, angles, structures

- Probability – predicting outcomes/risks etc
- Statistics – crucial for data collection, analysis, finance

Data Control

Finance/ accounting

Marine Engineer

Quality Manager / Engineer

Sciences - Biology

Your studies may include:

- Cell biology
- Bioenergetics
- Homeostasis & response
- Inheritance, variation & evolution

Ecologist – onshore or offshore

Environmental adviser

Ornithologist

Horticulturalist

Marine biologist

Sciences – Chemistry

Your studies may include:

- Bonding, structure, and the properties of matter
- Energy changes
- Chemistry of the atmosphere

Unexploded ordnance coordinator

Coatings specialist

Waste management / pollution control

Sciences – Physics

$$E = mc^2$$

Your studies may include:

- Energy generation
- Electricity
- Forces in structures

Electrical engineer

Structural monitoring engineer

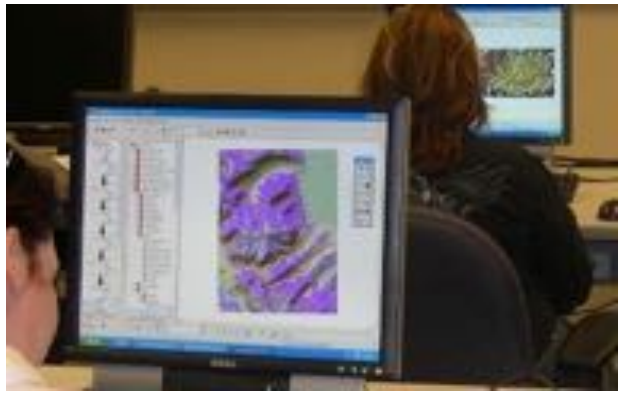
Civil / mechanical engineer

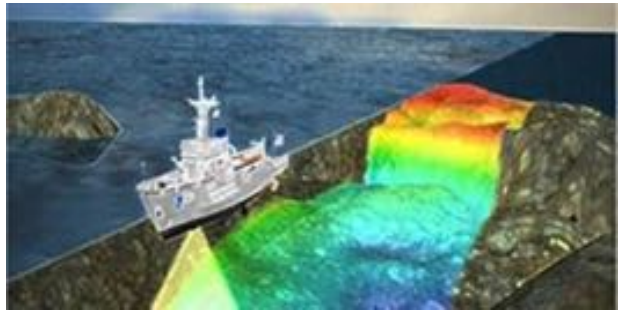
Welder / cable installer

Geography

Your studies may include:

- ***Living with the physical environment*** - physical processes/ natural hazards/ weather & climate change/ ecosystems
- ***Challenges in the human environment*** - urban living/ resource management/ economic development
- ***Geographical skills & applications*** - Critical thinking, problem solving and applying knowledge





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- Meteorologist
- Oceanographer
- Geophysical specialist
- Planner
- Consenting manager
- Geographical information systems analyst

Design & Technology

Your studies may include:

- New and emerging technologies
- Energy generation and storage
- Developments in new materials
- Forces and stresses
- Ecological and social footprint
- Prototypes and intended use

Cable design engineer

Turbine component design – tower, blade

Architect & landscape designer

Industrial designer

Personal qualities – what might employers want from you?

- Personal interest in your chosen career route (inquisitive)
- Work experience is useful
- **Reliability**
- Certain roles require you to be fit and healthy – with physical attributes such as an affinity for the sea.
- Demonstration of personal skills
  - Planning, resilience – Duke of Edinburgh Award
  - Community-minded - National Citizen Service / volunteering
  - Teamwork, specialist skills – Scouts / Guides

Post-GCSE pathways into offshore wind

BTEC

- Specialist work-related qualifications, such as business, engineering and ICT
- BTEC First – Level 2
- BTEC National – Level 3
- BTEC Higher – Level 4 or 5

Apprenticeships

- Get paid and train (at least 20% of time) in off the job training
- Train to be competent in your chosen occupation
- You're on a career path - with lots of future potential
- Apprenticeships can take between one and six years to complete

A Levels

- Most popular and an effective route for anyone wanting to go to university.
- Can be studied in various settings (schools, sixth form centres, further education colleges, or through distance learning providers)
- Most pupils study three A Level subjects, specialise in subjects of interest
- Link to desirable university courses

Apprenticeships

- Apprenticeships are available throughout the offshore wind supply chain.
- Sofia will engage apprentices as the project enters its operations phase.
- Wind turbine apprenticeships will be offered through the existing RWE apprenticeship programme

Wind turbine technician apprenticeship programme

- Specially designed by RWE Renewables, Energy and Utility Skills and National Skills Academy for Power
- Highly-sought after and transferable engineering skills for the future
- Small batch of new apprentices each year, deployed at RWE's fleet of wind farms across the UK
- Three-year programme, utilising state of the art facilities; get paid while you learn.

Post A-Levels – University

- **Huge selection of degree courses, including higher education apprenticeships, and post-graduate courses such as Masters and PhDs that are relevant to offshore wind**

University faculty / subject	Future related job roles
Engineering **Mathematics**	Marine engineer Civil engineer Electrical Engineer
Science - Physics, Chemistry, Biology **Life Sciences, Geography,** **Renewable energy**	Marine data manager Surveyor / researcher Consents manager
Business **Economics, Law, Policy, Planning,** **Sustainability, Accounting**	Lawyer Procurement manager Commercial planner
Arts & Humanities **Archaeology, Languages, Environment**	Archaeologist Environmental consultant Communications

For more information:

- Sofia Offshore Wind Farm:
  - www.sofiawindfarm.com
- Tees Valley Careers:
  - www.teesvalleycareers.com
- Offshore Wind Industry Council:
  - www.offshorewindcareers.co.uk
- Renewable UK careers:
  - www.renewableuk.com/page/Careers

Thank you
Are there any questions?