

Agenda

1. Executive Summary: why Floating Offshore Wind?

Carl Dill – Swiss Re Corporate Solutions

2. Key differences: how floating is different from fixed-foundation offshore wind

Igor Silence – RiskPoint

3. Coverage & Claims

Franco D'Andrea – Clyde & Co



IMIA WORKING GROUP WGP 131 (23) FLOATING OFFSHORE WIND: RISK MANAGEMENT & INSURANCE



Source: DNV

Contributors

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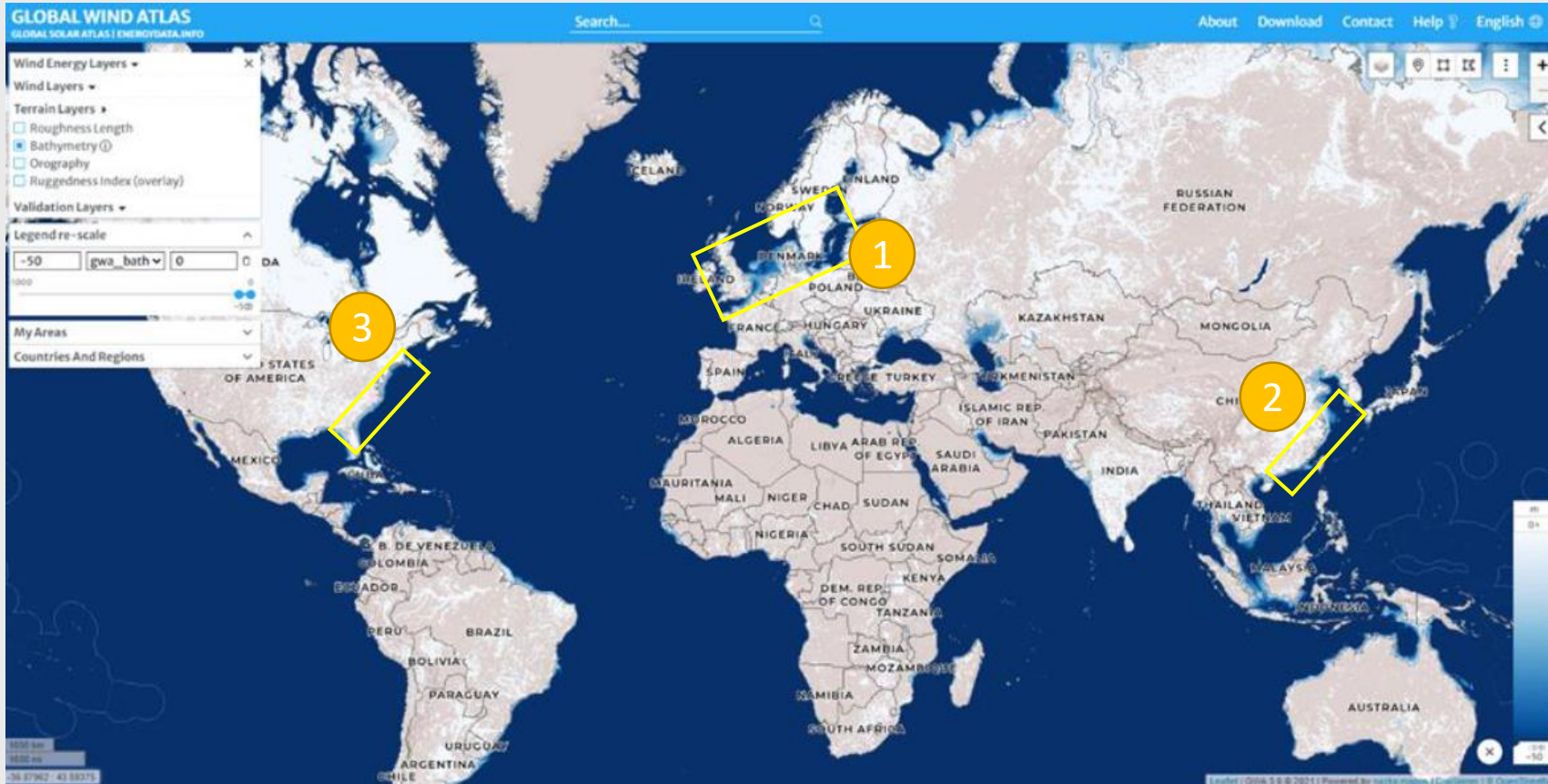
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IMIA EC Sponsor - Paul Lowrie - Clyde & Co, UK

Why Floating Offshore Wind?



- Few suitable regions in the world for fixed offshore wind
- Few key regions:
 - (1) Europe
 - (2) Asia (China, Taiwan, Korea)
 - (3) US (mainly East Coast)
- How to explore other coastal areas ?

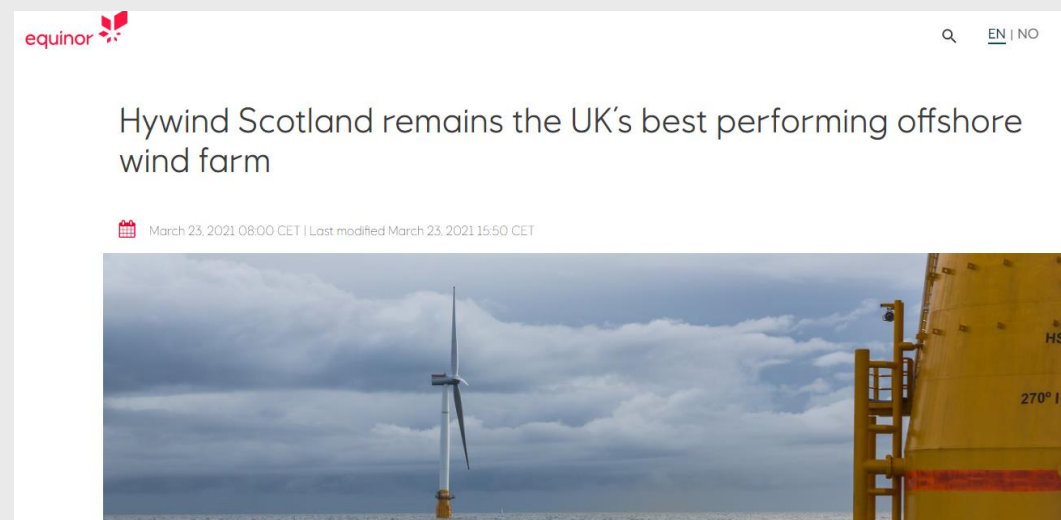
Floating Wind Potential



Figure 4: Top 30 Floating Wind Markets

North & South America	Northwestern Europe	Southern & Eastern Europe	Africa	Asia & Oceania
US Pacific	Ireland	Croatia	Kenya	New Zealand
US (Rest)	Norway	Bulgaria	Morocco	Philippines
Costa Rica	Sweden	Greece	Egypt	Australia
Dominican Rep.		Portugal	South Africa	Vietnam
Colombia		Romania	Tunisia	
Chile		Spain		
Mexico		Italy		
Brazil		Turkey		
Canada		Russia		

Source: Global Wind Energy Council (2022): Floating Offshore Wind - a Global Opportunity



- Floating offshore wind could be a global opportunity (e.g. Pacific, Mediterranean)
- And help expand mature markets (UK, IRL)

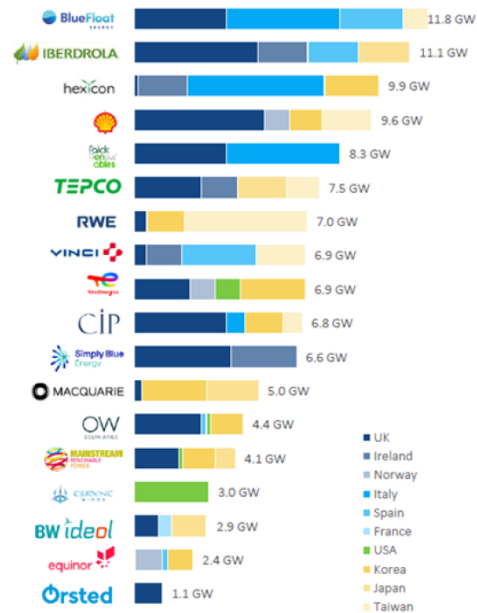
- Floating can enable better wind locations
- Higher capacity factors (actual output vs. theoretical peak) → record ~57% (fixed: ~40%)

Big visions to face a perfect storm ?

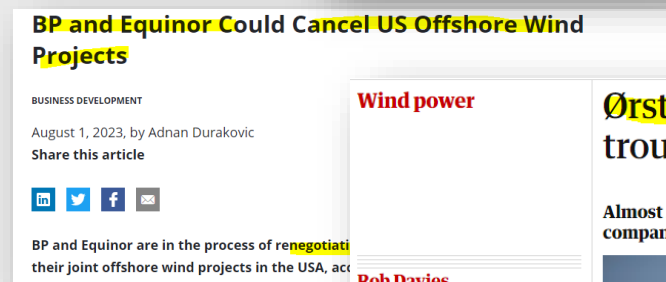
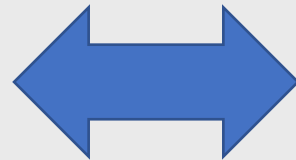


Figure 5: BlueFloat, Iberdrola and Hexicon taking the lead in 10 major markets

BlueFloat, Iberdrola and Hexicon taking the lead in 10 major markets
Pipeline (gross) of the major players excluding minor markets (e.g., Colombia, Sweden, Australia, NZ)



Source: 4COffshore (2022): Floating Wind Progress Update: H2 2022



- Big growth plans & new players
- DNV: from ~0.2GW today to 250 GW over the next 30 years

- Inflation, Supply Chain Issues, QA/QC
- Offshore wind faces challenges → floating likely to become even more risky

Time for Insurers & Risk Managers to act ?



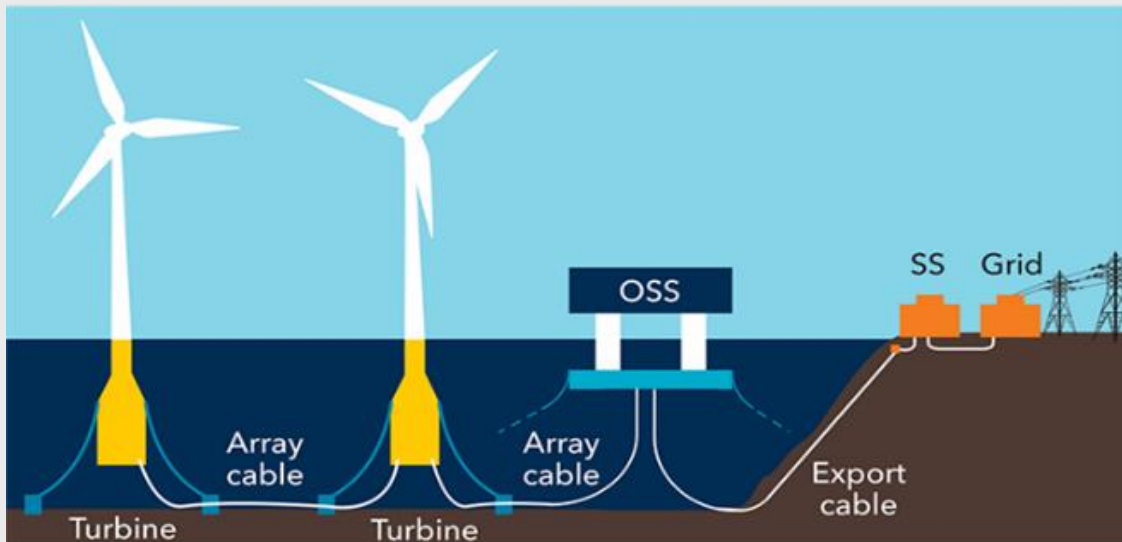
Our Mission: start the discussion

- Explore the industry and technological background of floating wind
- Support assessment of emerging technical risks
- Enable educated decisions concerning underwriting and claims management
- Create awareness and support risk management best practices
- Initiate risk management discussions to ensure long-term insurability and bankability
- Contribute to the growing community of risk management professionals in floating offshore wind

Main Components / Main Floater Concepts



Main components of a floating offshore windfarm



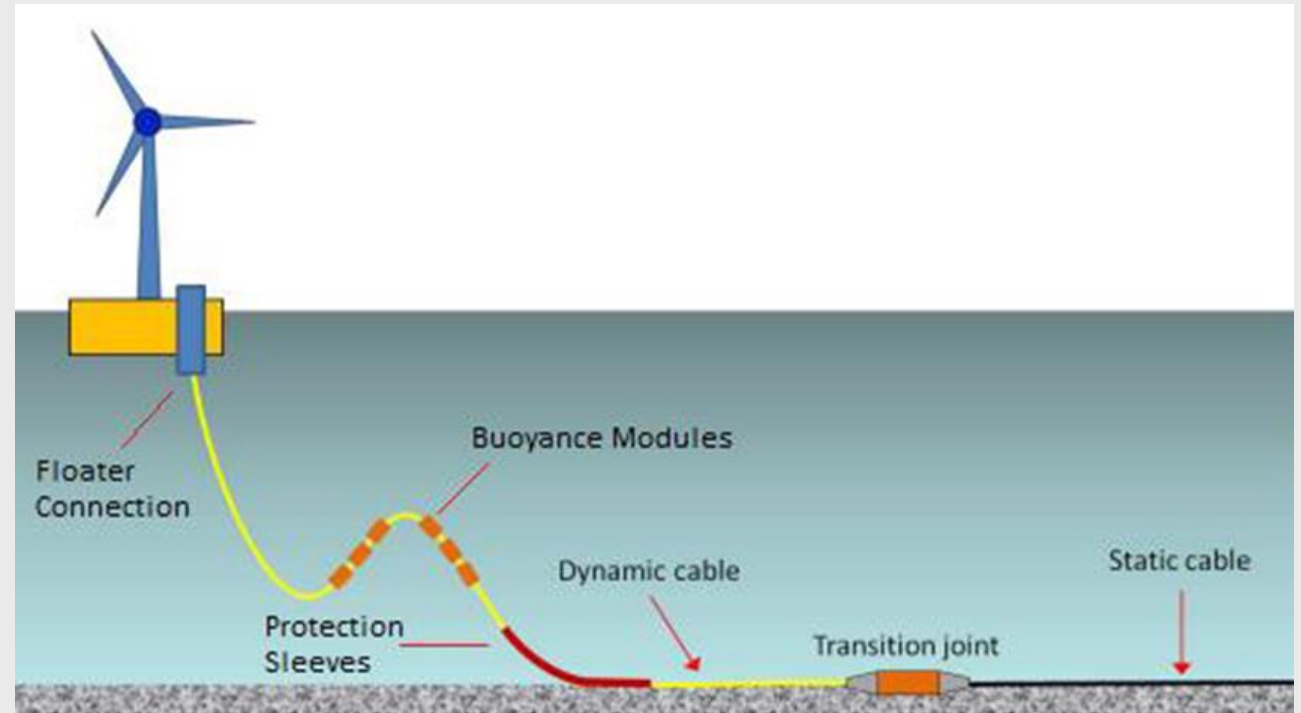
Main Floater Concepts



Main differences versus bottom-fixed projects (Underwriting considerations)



- Different components : floater, dynamic cables & mooring lines
- Design Maturity : Innovation versus prototypical
- Site conditions
- Manufacture, Assembly and Installation
- Repair and Maintenance
- Logistics and supply chain
- Grid Connection



Risk Mitigation & Risk Management



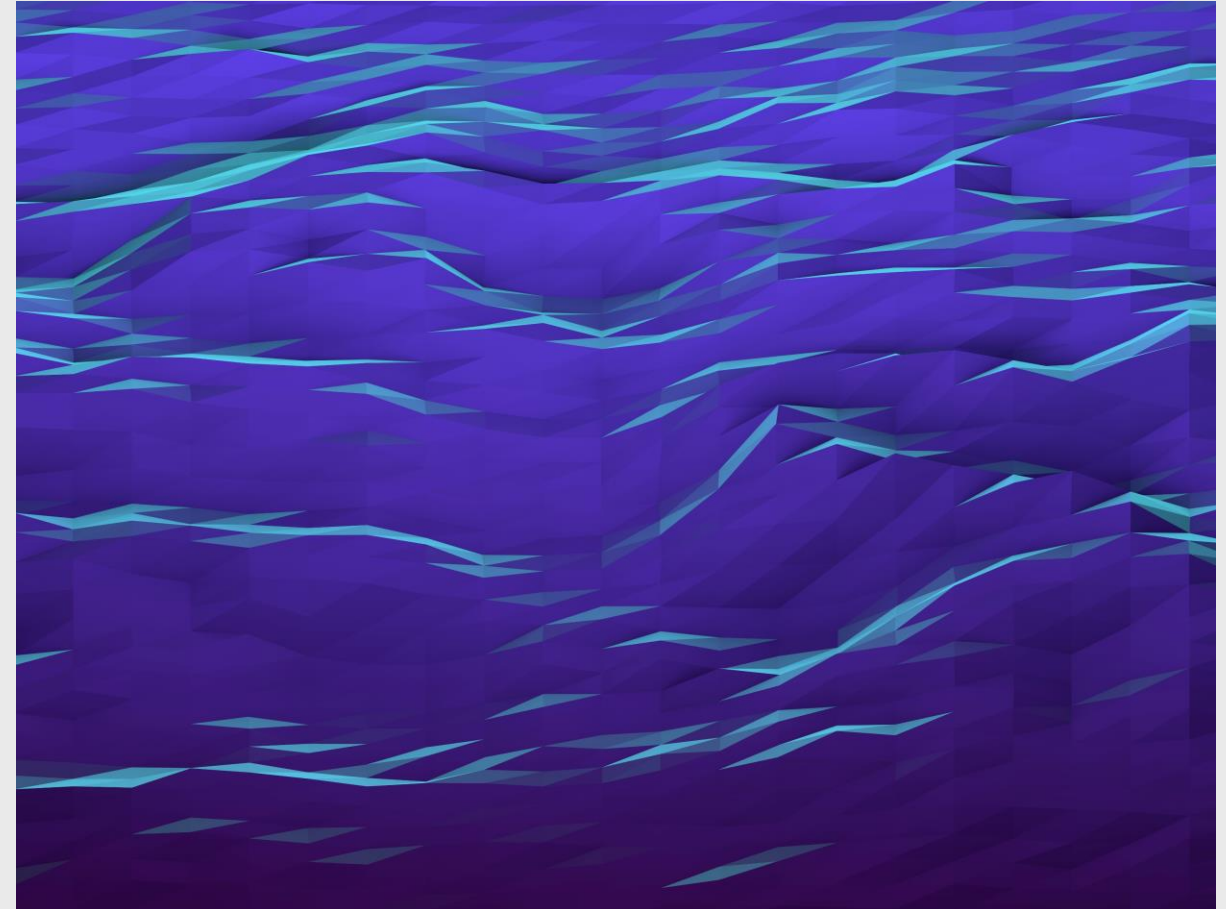
- Standardization
- Project Certification
- Marine Warranty Surveyor (MWS)
- Strict underwriting discipline & underwriting best practice
- Develop in depth technical expertise across the insurance industry



Coverage & Claims – issues identified



- Novel design concepts
 - component availability
 - manufacturer viability
 - suitability / availability of repair locations
- Inspection protocols
- Towage and other marine risks
- Protection & Indemnity (P&I) risks



Coverage & claims – what next?



- Emergency response protocols
- Increased cost of repairs?
- Increased BI exposures?
- Traditional exclusions likely to be tested
- Feedback loops will be critical for lessons learnt

