### **E** IMLA

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



#### Contributors

Franco D'Andrea - Clyde & Co, UK Kimon Argyriadis - DNV, Germany Bin Wang - Norwegian Hull Club, Norway Igor Silence - RiskPoint, Denmark Li Li - Munich Re, Germany Olaf Anhalt - Munich Re, Germany Paul Latimer - Integra, UK Szen Ong - Integra, UK Georg Englert - HDI Global, Germany Cher How Teo - Allianz Commercial, Singapore Guangquan Xu - SCOR, UK

Chairman - Carl Dill - Swiss Re Corporate Solutions, Germany IMIA EC Sponsor - Paul Lowrie - Clyde & Co, UK

### 1. Executive Summary: why Floating Offshore Wind?

Agenda

Carl Dill – Swiss Re Corporate Solutions

### 2. Key differences: how floating is different from fixedfoundation offshore wind

*Igor Silence – RiskPoint* 

**3. Coverage & Claims** Franco D'Andrea – Clyde & Co

### 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 US (Rest) Costa Rica Dominican Rep. Colombia Chile Mexico Brazil Canada	Ireland Norway Sweden	Croatia Bulgaria Greece Portugal Romania Spain Italy Turkey Russia	Kenya Morocco Egypt South Africa Tunisia	New Zealand Philippines Australia Vietnam

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)

#### equinor 🤽

Q ENINO N

Hywind Scotland remains the UK's best performing offshore wind farm

March 23, 2021 08:00 CET | Last modified March 23, 2021 15:50 CET



- 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 ?





- 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
- $\rightarrow$  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

The International Association of Engineering Insures

- 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

