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Academy



Floating Wind & Hydrogen Masterclass

Explore the remarkable surge in wind power, particularly offshore wind, in this floating offshore wind and hydrogen course. Learn the crucial role that wind energy in its various forms, along with hydrogen, is set to play worldwide.

LIVE ONLINE TRAINING

19 - 20 September 2024



Live Digital

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Course Information

LIVE ONLINE TRAINING

September 2024

Part 1

19 September

Part 2

20 September

3pm - 6pm AEST

Key Learning Objectives

- Floating offshore wind and how it works
- In-depth exploration of the fundamental aspects of seabed characteristics, the availability of supply chain and infrastructure
- Case studies, including Projects PosHYdon and DolPHyn
- Business opportunities
- Supply chain engagement and regeneration options around the coast and beyond
- Innovations helping bring down the LCOE and look at future leasing rounds for the alternatives available
- Business strategies for effective positioning in a decarbonized industry

Who Will Benefit

- Companies and organisations seeking to enter the wind and hydrogen energy arena with its myriad opportunities in a market valued in one scenario by the Bank of America at \$11 trillion.
- Existing energy companies, particularly those who are already part of the oil and gas supply chain and those looking to future-proof their capabilities.
- Particularly relevant to engineering companies, those involved in storage compression equipment and shipping.



Course Information

About the Course

This hydrogen and floating offshore wind masterclass provides participants with a clear understanding of the key issues around wind and hydrogen and further investigates possible scenarios and their pivotal role in decarbonisation and reaching net zero. Participants will be equipped with the necessary insight and skills to face future challenges in the wind, offshore wind and hydrogen industries and to put in place effective strategies for quantum growth in the interconnected industries as they move from a regional to a global decarbonisation solution.

Join this hydrogen and floating offshore wind training to discover the dramatic growth of wind, especially offshore wind, and the pivotal role wind in all its forms and hydrogen will play across the globe. It consequently explores in-depth the fundamental aspects of seabed characteristics, the availability of supply chain, infrastructure, hybrid project design effects, and the integration of electrolysers on or offshore.



"Compliments to Charley for very interesting presentations in the H2 classes. Content spot on and the delivery entertaining and a pleasure to listen to."



"Thank you so much for the hero's session on wind to hydrogen, Charley. I enjoyed the stories and the content you delivered."

Meet Your Course Director



Charley Rattan

Hydrogen and Offshore Wind Business Advisor and Trainer

The course is led by Charley Rattan, international hydrogen expert and respected energy insider and facilitator bringing over 25 years' real-world renewable experience and a track record of successful major project delivery. Charley is a trusted strategic advisor to global energy companies and an advocate and facilitator for the emerging innovation energy market.

Charley is respected as a leading authority in hydrogen and renewables providing consultancy and training at high level across the globe including for key stakeholders, governments, consenting authorities and world organisations such as the United Nations.



"What a great job you did during your presentation! You kept virtually every member of the audience hanging on your every word. That was absolutely awe-inspiring. I wholeheartedly appreciate all your efforts."

Course Outline

MODULE ONE

Market Overview & Analysis of Floating Offshore Wind

- Identifying the drivers of the demand for floating offshore wind farms and projects and barriers to growth
- Emerging trends and market projections
- Floating offshore wind technologies & innovation
- Why floating offshore wind?
- Integration of floating offshore wind into the overall wind industry
- Costs & risks associated with floating offshore wind
- Case studies, existing & upcoming projects

MODULE TWO

Engineering Design, Concepts & Key Characteristics of Floating Offshore Wind Farms

- Key components of floating offshore wind farms
- Floating offshore wind farms vs fixed offshore wind farms
- Key elements of the grid
- Various options for turbine foundations
- Integration of other clean energy technologies into floating offshore wind
- Key concepts of floating wind turbines
- Analysis methods for floating wind turbines
- Substructure concepts and design challenges
- Marine & offshore environments suitable for floating offshore wind farms

MODULE THREE

Subsea Cables for Floating Offshore Wind

- Subsea cable design considerations
- Subsea cable components & parameters

- Array versus export cable
- Overcoming challenges in subsea cable installation & maintenance
- Quality control, assurance & reliability for subsea cables
- Complying with the standards of subsea cables
- Minimizing the failure rate of subsea cables in order to deliver optimum performance

MODULE FOUR

Floating Substructure Technology

- Floating wind applicability in relation to substructure technology
- Main floaters concepts
- Spar vs semi-submersible/barge vs tension leg platform
- Concrete versus steel for substructures
- Evaluating the various concepts for substructure technology

MODULE FIVE

Mooring & Anchoring

- Mooring concept types
- Anchor types for mooring
- Mooring line types – materials
- Appendages for mooring
- Concept selection for mooring
- Overcoming challenges and environmental considerations
- Mooring technology
- Mooring risk & integrity management
- Mooring system analysis for floating wind turbines

MODULE SIX

Design Process & Methodologies

- Design method and process considerations
- Design requirements for floating wind turbines

- Ocean wave analysis applied to floating wind turbines
- Wave and current loadings for floating wind turbines
- Hydrodynamic design aspects of floating wind turbine platforms
- Control system
- Coupled load analysis
- Model testing
- Ensuring the stability of floating wind structures through design
- Topside & substructure concepts and technical comparisons
- Design & engineering of offshore substations

MODULE SEVEN

Project Development, Feasibility Assessment & Operations of Floating Offshore Wind Farms

- Evaluating the end-to-end process of the planning, construction and operations of floating offshore wind farms
- Managing timelines and ensuring project delivery within the schedule
- Resource and site feasibility assessment
- Mitigating site condition impact on processes such as grid planning, project scale and component choices
- Key stakeholder management & management
- Mitigating risks and uncertainty within the planning process
- Performance management for floating offshore wind
- O&M requirements, innovation & best practices for floating offshore wind projects
- Evaluating the key differences between floating wind & fixed wind farm operations

MODULE EIGHT

Installation, Supply Chain, Fabrication & Certification

- Installation methodologies
- Managing harsh conditions during the installation process to ensure successful operations
- Foundation, turbine and cabling installation for floating offshore wind farms
- Planning your supply chain management & fabrication process
- Understanding the rationale behind certification
- Certification levels and modules
- Concept, prototype and project certification

MODULE NINE

Floating Offshore Wind Project Business Case, Business Models & Economics

- Market outlook and investment factors/variables
- Competitive mapping and quantifying trends of floating offshore wind
- Cost structures, economic feasibility, financing sources, and how to ensure return on investment
- Project risk management for floating offshore wind
- Emerging technologies and their impact on floating offshore wind business case
- Major offshore wind market players and geographies
- Policy, socioeconomic drivers and regulatory frameworks to foster growth
- Feasible & economically viable floating offshore wind project business models
- Floating offshore wind project checklist – from business planning to practical delivery

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Easy Ways to Register



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Informa Connect

Academy

Informa Connect Academy is a premier provider of global education and training solutions that caters to a diverse range of professionals, industries, and educational partners. We are dedicated to promoting lifelong learning and are committed to offering learners expert guidance, training, and resources to help them stay competitive in a rapidly changing world.

Our comprehensive range of courses and programmes are tailored to meet the needs of all professionals, from aspiring specialists to seasoned experts. We partner with elite academic organisations and industry leaders with unmatched expertise in their respective fields to deliver an exceptional learning experience.

ON-SITE & CUSTOMISED TRAINING

Informa Connect Academy has a long-standing track record of delivering very successful customised learning solutions achieving real and measurable value for our clients through our senior training consultants. If you have 8+ interested people, an on-site course can be the ideal solution – giving you the opportunity to customise our course content to your specific training needs, as well as attracting significant savings compared to public course costs.

WHY CHOOSE ON-SITE WITH INFORMA CONNECT ACADEMY?

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- 2. Quality assured** – We design market-leading training programs, concepts and methodologies, with a 400+ course portfolio. Our rigorously selected 900+ instructor faculty are recognised experts in their field. Quality of their content and delivery methods is assured through continuous monitoring and evolution.
- 3. On-site training** is a cost effective way to train your people and achieve your defined outcomes.

Speak with **Sushil Kunwar** on **+61 (2) 9080 4370** to discuss your customised learning solution, or email inhouse@informa.com.au

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