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Hydrogen Shipping

Understand the applications and commercial considerations for hydrogen in relation to shipping, vessels and ports combined with carbon capture and their integration into a new generation of mega projects.

LIVE ONLINE TRAINING

2 - 5 July 2024



Live Digital

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Course Information

LIVE ONLINE TRAINING

July 2024

Part 1

2 July

Part 2

3 July

Part 3

4 July

Part 4

5 July

3pm - 6pm AEST

Key Learning Objectives

- Understand the applications and commercial considerations for hydrogen in relation to shipping, vessels and ports combined with carbon capture and their integration into a new generation of mega projects.
- Learn about the technologies for the development of hydrogen and green shipping, and associated value chain and the role it can play in the net zero agenda
- Understand practical risks and opportunities associated with hydrogen and green shipping
- Know the challenges around shipping hydrogen, ammonia, and methanol
- Understand vessels, ports, shipping and integration with hydrogen production and global distribution
- Learn about real-world projects integrating shipping and hydrogen
- Understand the differing perspectives of the investor, the operator, the customer and the government
- Review wider financial transportation considerations
- Discover the characteristics that broaden yet constrain the commercial and technical links in the 'supply chain' for hydrogen shipping

Who Will Benefit

- Existing companies, particularly those who are already part of the hydrogen or renewables supply chains and those looking to future-proof their capabilities
- Project developers seeking to decarbonise and source
- Financiers and the construction industry
- Oil and gas majors
- OEM's and balance of plant organisations

This hydrogen shipping training course is also helpful for engineering companies, those involved in storage compression equipment and shipping, and those seeking to enter the energy arena with its myriad shipping opportunities in a market set for exponential growth. Taking this course will also benefit stakeholders from government, finance and consenting and those wishing to understand the realities of CCS and hydrogen production.



Course Information

About the Course

The hydrogen transportation sector is expected to grow significantly across the globe in the coming years. The EU, for example, represents a 40-fold increase within nine years for that sector. Pipelines are planned, but shipping infrastructure will be vital for green hydrogen. The UK is looking to repurpose the infrastructure, for offshore wind and use depleted gas and oil reservoirs to sequester CO2 captured from hydrogen produced in emerging energy clusters across the UK.

The journey to a renewable, circular and low-carbon economy (facilitated by electrons, hydrogen and other technologies) will be challenging. And the top priority will be to make sure it is implemented and delivered safely.

Hydrogen Shipping course details how global shipping and financial leaders can assist. Developers and stakeholders require their people and supply chain to possess the necessary awareness, know-how, skills and competencies to deliver shipping, portage, CCS and hydrogen projects safely, on time and with the highest quality standards.

This hydrogen transport training aims to enable companies and stakeholders to be aware of the fundamentals of shipping for hydrogen. What is it, and what does it mean for the future? What decisions and plans are likely to be made based on the real opportunities that are emerging? Participants will be guided as to where early opportunities are most likely to lie, who is involved and how to engage.

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's 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.

Course Outline

GREEN SHIPPING – WHAT IT IS

- Green shipping, perspectives: maritime transport with low or zero carbon emissions (not to forget NOx), transporting green (clean) energy, transporting CO2 (as part of CCS scheme). The first one is probably what most people would think of.
- Transport (pipelines, example: US CO2 pipeline, Acorn, infrastructure, compression, shipping)
- Carbon sequestration and storage
 - Port and shipping operations
 - Pipelines v shipping or pipelines and shipping?

A BRIEF HISTORY OF GREEN SHIPPING

- The emergence of green shipping
- Pilot projects
- Ramp up
- Impact of fluctuating pricing
- Successful trials and projects

GREEN SHIPPING TECHNOLOGIES

- Overview of current technologies (including potential roles for hydrogen and its derivatives ammonia and methanol)
- Evaluation of technologies: techno-commercial (including licensors) liquid, (LOHC) gas, solid, compression, sequestration
- HSE imperatives, ammonia, methanol?
- Vessel design compression technology, ammonia, methanol, liquid hydrogen
- Logistics and infrastructure requirements
- Cost structure, learning curves: challenges and opportunities
- Operations and maintenance: port requirements HSE, land, lay down areas
- Future technology outlook: opportunities and challenges

POLICY AND REGULATORY PERSPECTIVES – GLOBAL INITIATIVES AND NATIONAL NUANCES

- Introduction
 - GHG emissions
 - CO2 classification (scope 1, 2 and 3)
 - CO2 emissions by sector
 - Embedded versus fuel-related emissions
 - Significance of Shipping
 - Non-GHG emissions (SOx, NOx)
- IMO (United Nations)
- European Commission
- Transport and Environment
- Norway & IMO
- UK maritime emissions strategy
- Lloyds IMAREST

SHIPPING VALUE CHAIN, GREEN SHIPPING BUSINESS MODELS, COST CHALLENGES

- Shipping value chain, and Porter's five forces (new entrants, suppliers, customers, substitutes, internal rivalry – top 10 shipping companies)
- Fundamental options for low or zero carbon emission shipping fuels, cost challenges to overcome
- Differences for in-land, near sea and deep-sea.
- Other supply chain requirements to make green shipping happen including bunkering and steel
- The cost of green shipping and how to still make money: carbon pricing, technology-applied pricing
- Strategic partnerships focusing on green shipping: overview, vision/objectives of each
- Shipping implications for decarbonising industrial clusters

GREEN SHIPPING PROJECTS – OVERVIEW AND DISCUSSION, DEEP DIVES INTO CASE STUDIES

- Description/discussion of plans currently in development Maersk, Thyssen Krupp

- Operations and maintenance, employment opportunities
- Plans and schemes under development, type testing process (consenting, implementation, construction)
- Lessons learnt from LNG
- Project pipeline and future outlook
- GEV and compression

KEY STAKEHOLDER PERSPECTIVES

- Oil and gas companies (Shell, Stasco, BP, Total, Equinor, ENI, Aramco, Gazprom, Petronas)
- Shippers and logistics services providers
- Port operators (bunkering operations)
- Customers (sellers/buyers of cargo)
- NGO's and local community engagement
- Investors
- National hydrogen strategies

SHIPPING, H₂ CCS AND SISTER PATHS IN THE ENERGY TRANSITION (WIND, SOLAR, HYDROGEN ETC.)

- Hydrogen Green and Blue Synergies
- Clashes
- Dilemma's
- The route forwards

10 POINTS TO CONSIDER WHEN INVESTIGATING GREEN SHIPPING PROJECTS

Issues to address (e.g., HSE, Port development, operational requirements)

SUMMARY, WRAP UP, FINAL QUESTIONS

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Easy Ways to Register



www.informaconnect.com/academy



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Course Code	Location/ Format	Course Parts	Course Dates	Standard Price	
P24GR34AU02V	Live Digital	All 4 Parts	2 - 5 July 2024	\$2,195 + \$219.50 GST	\$2,414.50

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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.

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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?

- 1. Custom design** – Together, we will identify the best blended learning solution for your culture, your people and your training objectives.
- 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