



Relevant to Professional – Commercial – Military

End-user Organisations // Operators // Boat Builders
Equipment Manufacturers // Naval Architects // Safety Integrators
Training Organisations // Ports & Harbours // Maritime Legislators

Next Generation Energy – Power – Propulsion

Work Boats // Pilot Boats // Search & Rescue // Patrol Craft
Wind Farm Support // Survey Vessels // Police & Security
Offshore // Training & Charter // Superyacht & Tenders

Standard Rate: £225 per person

Military / Government / Academia / SAR / Ports / UKHMA
UKMPA / British Marine / YBDSA / RINA / IMarEST
Discount Rate: £200 per person



Training Venue – Grand Harbour Southampton

For further information:

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www.nextgen-marine.com

COURSE:	NEXT GEN Marine HYBRID
08:30 – 09:00	Registration & Coffee
09:00 – 10:45	Session 1: OVERVIEW of Marine Hybrid & Energy Systems
	Introduction to Professional Marine Sectors: How hybrid systems are evolving for different maritime sectors. Lessons from land transport.
	Duty Cycles of Sub 24m Vessels / Energy Density: Analysing potential hybrid systems - from workboats to fast craft. Realities of energy density.
	Hybrid using Modified ICE with Cleaner Fuels: Why internal combustion engines plus battery-electric suit multiple maritime roles.
	UK & EC & International - Drivers and Barriers for Hybrid: Understanding the aims and objectives for marine transport. How different sectors are affected.
10:45 – 11:00	Break
11:00 – 12:45	Session 2: BATTERY-ELECTRIC Opportunities & Challenges
	100% Battery-Electric: Where Battery-Electric fits best. Balancing Speed - Payload - Range. Reducing factors.
	Battery-Electric / Charging: What parameters affect 100% battery-electric adoption. Charging in home ports and away.
	Lithium Ion Batteries / Safety: Why Li-ion is dominant now. Pros & cons of various chemistries. What is coming next for marine.
	Energy Infrastructure / Technology Readiness Levels: Why charging and local grid network TRLs are behind vessel TRLs. A systems approach.
12:45 – 13:30	Lunch
13:30 – 15:00	Session 3: HYBRID SYSTEMS Viability & Timelines - Sub 24m / 25 to 100m
	Re-Powering with Hybrid: Adapting and re-powering individual boats and fleets. Maintaining flexibility in a changing world.
	Hybrid Systems: Parallel or Series Hybrid - mechanical led vs electrical led solutions. Range extending.
	Hybrid Examples: Real world case studies of re-powering and new builds. Lessons learned onboard and onshore.
	Timelines & Next Steps: What can we specify now - by 2025 - between 2025 and 2030.
15:00 – 15:15	Break
15:15 – 16:00	Breakout Session / Q&A
END:	16:00 (UK)

John Haynes - NEXT GEN Training Developer

New for 2024 - NEXT GEN Marine HYBRID brings together ICE with clean fuels, battery-electric and onshore infrastructure. The course builds on our experience since 2015 of running a series of hybrid workshops and conferences - plus working with literally hundreds of experts globally.

The aim of hybrid systems is to enhance conventional power and propulsion. Our objective has been to identify the potential of new technologies along with their readiness levels - plus how they fit with various maritime operating profiles and duty cycles.