

NEXT GENERATION MARINE

Power & Propulsion

C O N F E R E N C E

**Grand Harbour Hotel
Southampton UK**

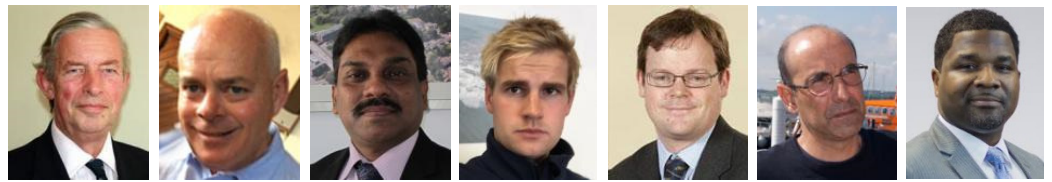
18 & 19 April 2018

Sponsored by:



Networking Drinks Reception
Wednesday 17:00 to 19:30

www.hybridmarine-power.com



DAY 1		THEME: Improving Power & Propulsion Efficiency by All Means	
08:30 – 09:00	Registration & Coffee		
09:00 – 09:15	John Haynes – Workshop Lead, MD Shock Mitigation Conference Introduction & Overview		
09:15 – 09:45	James Fanshawe CBE – Chairman, Maritime Autonomous Systems Regulatory Working Group Autonomous Systems and Smart Ports Require Innovative Marine Power and Energy Solutions		
09:45 – 10:15	Jon Lewis – Maritime Command, UK Border Force Selecting Power & Propulsion Systems for Evolving Maritime Roles		
10:15 – 10:45	Next Generation Marine Power Q&A Session		
10:45 – 11:15	Coffee		
11:15 – 11:45	Captain Muhammad Shafique – Senior Lecturer, Petrochem – Warsash Maritime Academy Alternative Fuels for Propulsion and Emissions Control		
11:45 – 12:15	Andy Page – MD & Naval Architect, Chartwell Marine Comparison of Propulsion Technologies on High Speed Commercial Vessels		
12:15 – 13:00	PANEL DISCUSSION: How can we use our diesel engines more efficiently?		
13:00 – 14:00	Lunch		
14:00 – 14:30	Jonathan Ridley – Head of Engineering, Warsash School of Maritime Science and Engineering Experience of Testing Novel Hull Forms and Propulsion Systems for Sub IMO Vessels		
14:30 – 15:00	Subject Matter Expertise Marine Applications for Hydrogen & Fuel Cell		
15:00 – 15:30	Naval Architecture & Design Engineering Efficiency & Technology Readiness - Q&A Session		
15:30 – 16:00	Coffee		
16:00 – 16:15	Julian Morgan – Technical Director, KPM Marine Energy Efficiency by Design to Reduce Vessel Weight and Power Requirements		
16:15 – 16:30	PANEL DISCUSSION: How can we save fuel and reduce emissions?		
16:30 – 17:00	Michael Canada – CEO, EnerDel Lithium-Ion Energy Storage Solutions and Battery Systems for Marine Applications		
17.00 – 19.30	Networking Drinks Reception		

DAY 1 looks at improving Diesel Engine Efficiency and increasing performance across the powertrain to give fuel savings and reduce emissions. **Here & Now Technology** looks at how industry is adopting viable solutions today. **Next Generation Systems** are within a few years of commercial release. Innovative young designers are pushing the boundaries forward and creating a realm of new possibilities.



DAY 2 **THEME: Viable Hybrid Marine Power & Energy Storage**

08:30 – 09:00 **Registration & Coffee**

09:00 – 09:15 **John Haynes – Workshop Lead, MD Shock Mitigation**
Conference Introduction & Overview

09:15 – 09:45 **John Price – Managing Director, JMP Systems Engineering**
Next Generation Energy and the Innovation Regulation Paradox

09:45 – 10:15 **John Haynes – Managing Director, Shock Mitigation**
Hybrid Technology and The Hour Of Power for Workboats, Patrol Vessels and Superyachts

10:15 – 10:45 **Viable Hybrid Marine Power Solutions**
Q&A Session

10:45 – 11:15 **Coffee**

11:15 – 11:45 **Graeme Hawksley – Managing Director, Hybrid Marine**
Developing a Commercial Passenger Fleet Utilising Hybrid Battery - Electric Systems

11:45 – 12:15 **Dr John T. Warner – President, NAATBatt International**
Maritime Energy Storage Systems - Taking Advantage of Cross Market Learnings to Speed Time to Market

12:15 – 13:00 **PANEL DISCUSSION:**
How do we safely design, install and operate Lithium-ion batteries?

13:00 – 14:00 **Lunch**

14:00 – 14:30 **Dan Kyle Spearman – Naval Architect, The Carbon Trust**
The Potential for Hybrid and Low Emission Solutions in Offshore Wind

14:30 – 15:00 **Bill Davis – Engineering Director & Founder, Subsea Craft**
Developing Battery with Multi Thrusters for Surface and Subsurface Applications

15:00 – 15:30 **Subject Matter Expertise**
Hybrid Systems Integration

15:30 – 16:00 **Coffee**

16:00 – 16:15 **Dr Dennis Doerffel – Founder & Chief Technology Officer, REAP Systems**
Designing and Integrating Diesel – Battery – Electric Solutions for Commercial Craft

16:15 – 16:30 **Subject Matter Expertise**
Kickstarting Fast Innovation Projects

16:30 – 17:00 **PANEL DISCUSSION:**
How do we integrate and pay for hybrid systems?

17.00 **End Of Conference**

DAY 2 focusses on Hybrid Systems that are now commercially available and operating successfully around the world. **Battery - Electric** brings proven crossover technologies from automotive. The maritime sector can also learn from aviation, space and sub-sea power. **Autonomous Vessels** will require low maintenance power and propulsion systems. **CFD modelling and testing** is leading to improved hulls and propulsion systems.





The 2018 NEXT GEN power programme builds on our experience from four previous events and working with literally hundreds of industry experts globally. We know that having the right people onboard is essential and there is no substitute for meeting the experts face to face. Our objective is to bring together a dynamic marine industry group and highlight viable innovation.

Tenders are coming out for hybrid ferries and workboats as port cities including London, Paris and Amsterdam look at reducing emissions. As new marine power and propulsion technology is proving to be scalable this knowledge is relevant to vessels of all sizes. This is not just green energy for the sake of it as fuel can be saved, maintenance costs reduced and engine life extended.

Lithium-ion has become the technology of choice for battery-electric vehicles, from high performance automobiles to city busses. Energy density has more than doubled since the technology was first introduced and costs are beginning to come in line with liquid fuels. Various land transport manufacturers have battery experience that can now be utilized by the marine industry.



Commercial and military organisations are starting to ask boat builders for hybrid battery-electric options. Lithium-ion energy storage is making significant headway on maritime vessels and off-shore platforms, as well as port-side applications including cargo handling systems. Smart energy storage systems can now offer enough fuel and maintenance savings to pay for themselves in a few years.

The Hour Of Power focuses on viable hybrid solutions linked to vessel work cycles and engine duty cycles. The Hour Of Power enables vessels to run in and out of port for an hour on electric with battery power then carry out their open sea work on diesel power. The aim of this innovative hybrid solution is to enhance conventional power and propulsion systems.

Vessels can reduce emissions and improve fuel consumption whilst extending engine maintenance periods and engine life. For commercial and professional organisations the concept of running vessels with zero emissions at up to 10 knots for one hour will shape decisions that lead to improvements of in-service systems and procurement of next generation vessels worldwide.

NEXT GENERATION Workshops Focus on Viable Technology & Efficient Solutions

NEXT GEN events provide an independent platform where maritime organisations can address relevant issues and share knowledge between sectors, the marine industry, safety practitioners and end-users.