Cox Marine is working with the University of Brighton to convert its CXO300 diesel outboard engine to operate as a dual fuel hydrogen engine

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Cox Marine collaborates with clean maritime consortium to demonstrate the world's first diesel-hydrogen fuelled outboard

Shoreham, UK – 6th December 2021– British diesel technology innovator, Cox Marine, has joined SHAPE UK, a consortium looking to transition Portsmouth International Port into the UK's first zero-emissions maritime hub. As part of this project, Cox will be working with the University of

Brighton to convert one of the company's CXO300 diesel outboard engines to operate as a dual fuel hydrogen engine and to demonstrate the engine operating in the port environment.

The conversion and demonstration form part of the wider Shipping, Hydrogen & Port Ecosystems UK (SHAPE UK) project which aims to demonstrate an achievable modular green hydrogen generation system within Portsmouth International Port (PIP). Maritime operations are paramount to the efficient movement of goods nationally and globally but are often high contributors of CO2 emissions and air pollutants. The adoption of decentralised energy systems offers the potential to support the necessary transition of ports and their operations to carbon net-zero operations.

The SHAPE project will:

- Address the viability of a local hydrogen infrastructure through the installation and test of a modular hydrogen electrolyser
- Demonstrate a use case for portside hydrogen through the hydrogen dual-fuel Cox outboard
- Generate a digital twin of the port as a tool to determine the economic and environmental suitability of deploying H2 systems within key stakeholder ports
- Assess the regulatory landscape around the generation and use of hydrogen in a port environment to determine where deployment can occur immediately and where regulations need to be addressed

Tim Routsis, CEO of Cox Powertrain said: “I am delighted that Cox has been invited to participate in SHAPE UK. I see the development of effective and useable hydrogen-based marine propulsion systems as essential if we are to drive down emissions while continuing to provide essential transportation systems. This is an area where the UK is excellently placed to develop the technologies and infrastructure which will both reduce pollutants and give birth to a vibrant new UK-based economic sector.”

James Eatwell, Head of Research and Development for Cox Powertrain and SHAPE project lead for Cox said: “The maritime sector as a whole and Cox in particular, recognise the need to make a positive contribution to the significant challenges of reducing worldwide CO2 emissions. From Cox’s perspective, Hydrogen represents a highly promising option for the reduction

of marine CO2 emissions, and we are delighted to be a

part of this exciting project, bringing together as it does such a comprehensive range of expertise from across industry."

For further information, visit https://www.maritimeuk.org/priorities/environment/netzeromaritime-showcase/shape-shipping-hydrogen-port-ecosystems-uk/

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About SHAPE UK

SHAPE UK is a collaborative project comprising B4T, Connected Places Catapult, Cox Powertrain, Engas, IOTICS, KnowNow, Lloyd's Register, University of Brighton, University of Portsmouth

SHAPE UK is part of the Clean Maritime Demonstration Competition, funded by the Department for Transport and delivered in partnership with Innovate

UK.

Announced in March 2020, and part of the Prime Minister's Ten Point Plan to position the UK at the forefront of green shipbuilding and maritime technology, the Clean Maritime Demonstration Competition is a £20m investment from the government alongside a further c.£10mfrom industry to reduce emissions from the maritime sector. The programme is supporting 55 projects across the UK, including projects in Scotland, Northern Ireland and from the Southwest to the Northeast of England. As set out in the Clean Maritime Plan (2019), Government funding has been used to support early-stage research relating to clean maritime. The programme will be used to support the research, design and development of zero-emission technology and infrastructure solutions for maritime and to accelerate decarbonisation in the sector.

About Cox Marine

Cox Marine is a leading British design and engineering innovator of diesel engines developed for marine applications globally.

Based on the South Coast of England, Cox Marine is backed by a solid base of private institutional investors. As a result, the company has been able to implement a long-term development programme of ground-breaking new products.

Led by ex-Cosworth CEO, Tim Routsis, whose background lies in engine development in global automotive, aerospace, and marine markets, the company's mission was to deliver

a completely new concept in diesel engines that has the potential to revolutionise the marine market.

The high-powered 300hp diesel outboard engine is an innovative product offering a new marine propulsion option and is redefining standards within the maritime industry. Delivering the same performance and packaging of a gasoline outboard but with the fuel efficiency and reliability of a diesel inboard, this purpose built outboard has begun to revolutionise the market and is now in full production at Cox Marine's headquarters in Shoreham-By-Sea

Cox is supported by a worldwide distributor network made up of 35 distributors covering 100 countries.

For further information, visit www.coxmarine.com