

PRESS RELEASE:

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WinGD X-EL Energy Solutions brings engine expertise to energy system integration

Swiss marine power company WinGD has introduced a new battery-hybrid power integration and sustainability advisory service, X-EL Energy Solutions. By integrating two-stroke marine engine control into the electrified vessel power system for the first time, X-EL Energy Solutions aims to widen the range of vessels that can benefit from electrification as shipping seeks to improve efficiency and reduce emissions.

With X-EL Energy Solutions, WinGD has developed proprietary expertise and digital tools to simulate, design and deploy the entire vessel powertrain, incorporating in-line shaft generators, frequency converters, thrusters and, whenever required, battery systems, integrated with the main engine. The overall power configuration is controlled by a holistic energy management system that offers dynamic optimisation to real-time vessel operating conditions.

“Electrification will be crucial both to reduce emissions and to reduce consumption of expensive fuels. Our holistic approach to designing power arrangements involves the entire energy system, not merely the main engine or any other individual component or a sub-system. The X-EL solutions are in complete alignment with the maritime industry’s ongoing energy transition by enabling greater efficiency,” said Stefan Goranov, General Manager Sustainability Solutions at WinGD.

As the most efficient energy provider on big merchant vessels, the two-stroke engine plays a central role in the overall power system, offering far greater fuel efficiency and lower operating costs than auxiliary generating sets when used to generate electricity, especially on partial loads. WinGD’s engine design expertise gives it unique insight into how engines need to interface with other components of the energy system to maximise energy efficiency.

WinGD has developed strong relationships with suppliers of key components, including shaft generators, frequency converters and batteries, to enable accurate simulation of complete energy systems. This ensures an optimal system can be developed virtually, reducing the risk of integration challenges while the vessel is being commissioned and in service.

WinGD’s proprietary energy management system ensures that the vessel has the right power delivered in the most fuel-efficient way at all times. It combines simulation of the energy system with real-time monitoring to identify the most suitable mode of operation for current conditions as well as improving reliability and load response across the integrated power system.

The launch of X-EL Energy Solutions follows WinGD’s first contract to deliver hybrid system integration and energy management, for four LNG-fueled pure car and truck carriers due to enter service in 2023. The vessels will be powered by X-DF2.1 dual-fuel engines as part of a battery-hybrid system developed by X-EL Energy Solutions.



Goranov explained: “By integrating electric hybrid technologies that are customised for the individual vessel’s characteristics and operating profiles, along with our proprietary energy management system, we can ensure lifecycle capabilities for meeting operational and regulatory challenges.”

As well as designing and integrating systems X-EL Energy Solutions also offers advisory services, using its expertise and digital technologies to simulate optimal configurations and control strategies of energy systems for ship owners, shipyards, integrators, and naval architects.

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WinGD in brief

WinGD advances the decarbonisation of marine transportation through sustainable energy systems using the most advanced technologies in emissions reduction, fuel efficiency, hybridisation and digital optimisation. With their two-stroke low-speed engines at the heart of the power equation, WinGD sets the industry standard for reliability, safety, efficiency and environmental design, backed by a global network of service and support. Headquartered in Winterthur, Switzerland since its origin as the Sulzer Diesel Engine business in 1893, today it is powering the transformation to a sustainable future.

WinGD is a CSSC Group company.

For more information visit: www.wingd.com