

WinGD X-EL wins first hybrid integration project for wind-assisted vessels

Swiss marine power company WinGD is to integrate hybrid power and energy systems on four 113,600 DWT, wind-assisted tankers under construction for Union Maritime Limited (UML). The agreement marks the first time that WinGD's X-EL Integrated Energy solution will be deployed with wind-assisted propulsion systems, ensuring optimal use of power generated by the main engine and the sails onboard.

The vessels will be built by Xiamen Shipbuilding Industry Co, with WinGD configuring the hybrid power system, installing a shaft generator for the main engines, coupled with the WinGD X-EL energy management system. The system will optimise the power and electrical distribution between the engines, shaft generator in a power-take out mode and sails, allowing for efficient energy use in extended ranges and all operating conditions. The vessels are also the first on which WinGD will apply its integrated energy system to third-party main engines.

WinGD Head of Integrated Energy Solutions Stefan Goranov said: "To maximise the energy savings from wind-assisted propulsion, operators need an energy management system that can optimise engine and electrical power in response to the available wind power. Our expertise in system integration and control of two-stroke-based hybrid energy systems enable us to optimise the efficiency and reliability of operations of a vessel with wind-assisted propulsion. UML's new vessels will be a showcase for the efficiencies that can be achieved through holistic energy management based around the main engine."

Union Maritime Limited Head of Technical Bhuvnesh Dogra said: "Our ambition is to build the most energy efficient vessels on the market and we believe wind-assisted propulsion is a key element in achieving that. So too is effective energy management across the vessel. WinGD's X-EL solution, managing overall energy use while using the fuel-efficient main engine to generate auxiliary electrical power, will be an important contributor to the efficiency of these vessels."

WinGD X-EL Integrated Energy Solutions have been used by vessels in service since 2022. By using the power margin of the main engine, rather than the auxiliary engines traditionally used to generate electricity onboard, the solution delivers more fuel-efficient energy production and greater flexibility in how power is managed across vessels. WinGD's unique expertise in two-stroke engines means that the company can optimise electricity generation potential, while its state-of-the-art digital capabilities support both the configuration of the initial energy system – including its control strategies - and its subsequent management and in-service optimisation.

WinGD X-EL Energy Management can tailor integrated energy systems for any vessel powered by any make of engine. Configurations can include energy storage such as batteries and fuel cells as well as other energy resources including wind-assisted propulsion.

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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.

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