Hybrid GE Gas Turbine System Will Propel Italian Navy's First Multipurpose Offshore Patrol Ship

EVENDALE, Ohio – GE Marine's LM2500+G4 gas turbine will soon power the Italian Navy's new Paolo Thaon di Revel Pattugliatore Polivalente d'Altura (PPA) multipurpose offshore patrol ship, the company said July 15.

This hybrid-electric powered ship was launched at a June 15 ceremony at the Fincantieri Shipyard in Muggiano-La Spezia, Italy, and will be delivered to the Italian navy in 2021.

"A total of seven PPA ships will be built by Fincantieri by 2026, and GE has a contract to provide seven LM2500+G4 gas turbines," said Mike Reale, acting vice president and general manager at GE Marine.

"The LM2500+G4, with an ISO rating of 35.3 MW and United States Navy rating of 30.3 MW, has found success in the naval market thanks to its selection to power 20 French and Italian FREMM ships and the seven Italian PPA's. There is interest in the U.S. and abroad in propulsion and generator set applications that rely

on the LM2500+G4’s best-in-class power density that is improved with the use of GE’s new fully-shock-qualified, lightweight composite gas turbine module.”

In addition, GE’s Power Conversion business provides the hybrid’s electrification system, including shock-proof MV3000 drives and motors, electrical system integration, energy-efficient PTO/PTI (power take-off/in) and shore power connection functionality. Integration of the electric propulsion system is carried out in support of and in cooperation with Fincantieri. Rounding out the “GE Store” approach for this Italian navy project, Avio Aero, a GE Aviation business headquartered in Italy, designed the gas turbine packages.

The PPA patrol ship will serve multiple functions from patrol with sea rescue capacity to civil protection operations. It is 133 meters long and can carry 90 crew members with additional accommodations for up to 171 members. The ship’s flexible hybrid propulsion plant features small gearbox-mounted motors for low speed operations, two propulsion diesels for mid-speed service and the LM2500+G4 gas turbine to reach more than 31 knots.

The PPA program continues a long tradition of LM2500-powered combatants in the Italian navy with the selection of the LM2500+G4. Starting in 1977, the

Italian navy and Fincantieri were early adopters of GE’s LM2500 gas turbine for the Lupo-, Maestrale-, Artigliere- and Horizon-class frigates, the De la Pen-class destroyers, and the aircraft carriers Garibaldi and Cavour (equipped with GE gears). In 2004, GE’s LM2500+G4 gas turbine was chosen to power 10 FREMM multipurpose frigates for the Italian navy.

The LM2500+G4 gas turbines for the PPA program will be built in Evendale; Avio Aero will manufacture the LM2500+G4 turbine control system at its facility in Brindisi; and GE’s Power Conversion business will manufacture the drives.