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.

Coast Guard Repatriates 14 Migrants to the Dominican Republic

Coast Guard Cutter Heriberto Hernandez transfers 16 Dominican migrants to the Coast Guard Cutter Richard Dixon on July 12 for their repatriation to the Dominican Republic. U.S. Coast Guard

SAN JUAN, Puerto Rico – The Coast Guard
Cutter Richard Dixon (WPC-1113) repatriated 14 Dominican migrants to a
Dominican navy patrol vessel Saturday near Samaná, Dominican

Republic,
following the interdiction of an illegal migrant voyage June 11 off the coast
of Añasco, Puerto Rico.

Two
other Dominican men traveling in the group remain in federal custody facing
possible prosecution by the U.S. Attorney's Office for the District of Puerto
Rico on potential charges of attempted illegal re-entry into a U.S. territory.

The
interdiction is the result of ongoing efforts in support of Operation Unified
Resolve, Operation Caribbean Guard and the Caribbean Border Interagency Group
(CBIG). Since October 2018, the Coast Guard and CBIG partner federal and state
agencies have interdicted over 1,550 migrants at sea near Puerto Rico.

Coast
Guard Sector San Juan Command Center watchstanders were contacted on the
morning of June 11 by Puerto Rico Police, who notified that a Joint Forces of
Rapid Action (FURA) marine unit had just interdicted a 20-foot migrant boat
half a mile off the coast of Añasco.

Coast
Guard watchstanders diverted the Coast Guard Cutter Heriberto Hernandez
(WPC-1114) to the scene. Once there, Heriberto Hernandez crew members
safely embarked all 14 men and two women from the makeshift

vessel.

“We commend our Puerto Rico Police partners who prevented this illegal voyage from making landfall as well as their close collaboration with the Hernandez crew in safely removing all the migrants from a dangerous situation,” said Lt. Andrew Russo, commanding officer of Heriberto Hernandez. “These illegal migrant voyages are very dangerous, often aboard unsafe and unseaworthy vessels, which present a life-threatening situation to everyone aboard.”

Once aboard a Coast Guard cutter, all migrants receive food, water, shelter and basic medical attention.

The cutter Heriberto Hernandez later transferred the migrants to the cutter Richard Dixon for their repatriation to the Dominican Republic. The two migrants facing prosecution are in custody of Ramey Sector Border Patrol agents in Puerto Rico.

The Heriberto Hernandez and Richard Dixon are 154-foot fast-response cutters homeported in San Juan, Puerto Rico.

Vice President Participates in $569 Million Drug Offload in San Diego

Vice President Mike Pence speaks to reporters from aboard the U.S. Coast Guard Cutter Munro in San Diego on July 11 during Munro's bulk offload of more than 39,000 pounds of cocaine and 933 pounds of marijuana. U.S. Coast Guard/Petty Officer 1st Class Matthew S. Masaschi

SAN DIEGO — Vice President Mike Pence attended a U.S. Coast Guard drug offload July 11 in San Diego, the Coast Guard Pacific Area said in a release.

The crew of the Coast Guard Cutter Munro offloaded more than 39,000 pounds of cocaine and 933 pounds of marijuana worth a combined $569 million, which was seized in international waters in the eastern Pacific Ocean.

The drugs represent 14 separate suspected drug smuggling vessel interdictions and disruptions off the coasts of Mexico and Central and South America by three Coast Guard cutters between May and July. This was the Munro's first deployment to the region.

Pence, James W. Carroll, director of the Office of National Drug

Control Policy, DEA acting administrator Uttam Dhillon, and Vice Adm. Linda Fagan, commander of Coast Guard Pacific Area, spent time aboard Munro and talked to the crew and media.

“Let me commend you especially for your new deployment to the Eastern Pacific corridor,” Pence said. “Even though this is a new area of deployment for this cutter, you’ve already proven yourselves more than up to the task … 14 operations went into this offload, and one of them was of a self-propelled, semi-submersible vessel (SPPS), which resulted in the largest Coast Guard removal in four years. The Coast Guard is seizing illegal drugs at a faster rate than ever before. And you all have been at the tip of the spear, making that happen.”

Vice President Mike Pence speaks to Cutter Munro crew members, flanked by the cache of cocaine and marijuana seized by the cutter’s crew between May and July. U.S. Coast Guard/Petty Officer 1st Class Matthew S. Masaschi

Munro interdicted the SPPS on June 18, in international waters west of South America. It was carrying more than 17,000 pounds of cocaine. In fiscal year 2019 to date, the U.S. Coast Guard has interdicted more than 143 metric tons of cocaine, worth more than $4.2 billion.

These drugs are smuggled by international cartels, said Fagan, whose actions “which left unchecked, fuels violence and instability that corrodes our hemisphere’s social and economic fabric, and directly contributes to historically high drug-related deaths in neighborhoods across North America.”

While the Munro, a national security cutter, was commissioned in 2017, 70% of the Coast Guard’s offshore presence is the service’s aging fleet of medium-endurance cutters, many of which are more than 50 years old.

“Our Coast Guard deserves better,” Pence said. “And that’s why we are committed to fully funding our Coast Guard, including replacing old ships with new ones, just like the Cutter Munro.”

Huntington Ingalls Completes Flight Deck on Aircraft Carrier John F. Kennedy

The 780-ton upper bow was lowered into the dry dock and placed on future aircraft carrier John F. Kennedy. Ashley Cowan/Huntington Ingalls Industries

NEWPORT NEWS, Va. – The final piece of the John F. Kennedy’s

(CVN-79) flight deck, the upper bow section, was installed July 10 on the future aircraft carrier, Huntington Ingalls Industries announced in a release.

The addition of the upper bow section at the company's Newport News Shipbuilding division is one of the last steel structural units, known as a superlift, to be placed on Kennedy. It was built using digital technology, such as visual work instructions to install piping in the upper bow on the final assembly platen instead of on the ship.

"We are very pleased with the progress being made on Kennedy as we inch closer to christening the ship later this year," said Mike Butler, Newport News Shipbuilding's program director for the JFK.

"The upper bow is the last superlift that completes the ship's primary hull. This milestone is testament to the significant build strategy changes we have made – and to the men and women of Newport News Shipbuilding who do what no one else in the world can do."

Weighing 780 tons, the superlift took 18 months to build.

Kennedy is being built with an improved build strategy that includes the increased use of digital tools to build superlifts that are much larger and

more complete at
ship erect than on prior carriers. Kennedy is on track to be built with
considerably fewer man-hours than the first ship in its class, USS Gerald R.
Ford.

More than 3,200
shipbuilders and 2,000 suppliers from across the country are supporting the
construction of aircraft carrier Kennedy. The ship is in the early stages of
its testing program and is on schedule to launch during the fourth quarter. Christening
is planned for late 2019.

Coast Guard Cutter Elm to Arrive in New Homeport

The crew of the Coast Guard Cutter Elm restores aid-to-navigation buoys in San Juan, Puerto Rico, in 2017 in the aftermath of Hurricane Maria. U.S. Coast Guard/Petty Officer 3rd Class Taylor Elliott.

ASTORIA,
Ore. – The U.S. Coast Guard Cutter Elm is scheduled to cross the Columbia River
bar and arrive in Astoria, its new homeport, for the first time on July 15 at
10 a.m., the Coast Guard’s 13th District said in a release.

The
Elm, a Juniper Class 225-foot seagoing buoy tender, is

operated by the same
crew that operated the Coast Guard Cutter Fir, which left Astoria in June 2018
as part of a Coast Guard-wide hull swap.

The Elm
is coming out of a midlife, dry-dock, major-overhaul period at the Coast Guard
Yard in Baltimore. The major overhaul began in January 2018.

The
Elm, commissioned in 1998, was previously homeported in Atlantic Beach, North
Carolina, as part of Sector Field Office Macon. It spent the last 20 years
maintaining more than 250 floating aids to navigation from central New Jersey
to the border of North and South Carolina.

The
Elm's primary mission will continue to be servicing aids to navigation, but its
new area of responsibility stretches along the Pacific coasts of Oregon and
Washington as well as in the Columbia River. Its area extends from the
Oregon/California border north to the Strait of Juan de Fuca, and east in the
Columbia River to Longview, Washington.

The
aids to navigation that its crew will service and maintain are essential to
commercial vessel traffic in shipping ports such as Coos Bay, Newport, Astoria,
Portland, Longview and Seattle.

The

Elm’s crew will be responsible for 114 floating aids. The buoys, which the crew normally service, range in size from 13 feet tall and 5 feet wide to 35 feet tall and 9 feet wide and weigh up to 18,000 pounds. The Elm has heavy-lift capabilities with a crane that can extend to 60 feet and lift up to 40,000 pounds.

Cutter Escanaba Returns to Boston After Caribbean Sea Patrol, Change of Command

Crews from Coast Guard Cutter Escanaba guide an MH-60 Jayhawk from the flight deck while at sea. U.S. Coast Guard/Lt. j.g. Brianna Grisell

BOSTON –

The crew of Coast Guard Cutter Escanaba returned to Boston on July 11 following a three-month patrol conducting drug and migrant interdiction operations in the Caribbean Sea, the Coast Guard 1st District said in a release.

Throughout the patrol, Escanaba’s crew focused their efforts on law enforcement, completed a three-week training assessment of mission capabilities in Portsmouth, Virginia, and held a change-of-command ceremony.

Vice Adm. Scott Buschman, the Atlantic Area commander, presides over the Escanaba's change-of-command ceremony in May as Cmdr. Michael Nalli relieves Capt. Michael Turdo. U.S. Coast Guard/Lt. j.g. Brianna Grisell

Escanaba's crew partnered with U.S. Customs and Border Patrol within the Mona Passage for migrant interdiction operations. Crews terminated three illegal migrant ventures and repatriated more than 100 migrants.

The crew's counter-narcotics efforts resulted in the disruption of more than 5,500 pounds of cocaine illegally trafficked by transnational criminal organizations.

During Escanaba's change-of-command ceremony, Cmdr. Michael Nalli relieved Capt. Michael Turdo as the cutter's commanding officer.

"It is an honor and privilege to serve as the commanding officer of such a capable ship," Nalli said. "The crew is well-trained, and we are excited to get underway to conduct the missions of the Coast Guard."

Coast Guard Cutter Escanaba – known as "The Pride of Boston" – is a 270-foot medium-endurance cutter with a crew complement of 100.

Orbit Logic Awarded Phase II Navy Autonomy Contract

GREENBELT, Md. – Orbit Logic has been awarded a Phase II Small Business Technology Transfer (STTR) contract sponsored by the Office of Naval Research (ONR) to develop the MinAu System, an advanced multivehicle mission planning, scheduling and response system for the maritime environment, the company announced July 9.

MinAu addresses current and future mission needs by employing teams of autonomous, cooperative, agent-based vehicles of differing types. Through collaboration strategies, these teams can be highly effective in maximizing mission effectiveness in dynamic environments (where conditions may not be known until the team is deployed). MinAu accomplishes this flexibility through a combination of upfront mission planning and onboard autonomous response capabilities. The solution has been adapted from Orbit Logic's high-heritage COTS space mission planning software.

The STTR team includes the University of Colorado, Boulder's Research and Engineering Center for Unmanned Vehicles (RECUV) and the University of California San Diego's MUlti-Agent RObotics (MURO) lab.

Phase I efforts resulted in an initial prototype of the MinAu solution that demonstrated its effectiveness through several relevant multivehicle collaborative mission scenarios played out in simulation.

During Phase II of the STTR, the team will collaborate with the Naval Information Warfare Center (NIWC) Pacific Command to integrate MinAu with vehicles in NIWC's Heterogeneous Autonomous Mobile Maritime Expeditionary Robots (HAMMER) system and validate its capabilities in a maritime test environment.

HAMMER system is made up of NIWC's SeaRover UUVs (an autonomy enhanced and untethered BlueROV) for collaborative ocean floor bottom mapping, a USV surface craft to act as a mothership for UUV deployment and recovery, and a rotorcraft UAV used as a data ferry to transport mission data from the UUVs and mothership to a shore station for processing and visualization.

For the HAMMER mission, MinAu will optimize an initial plan for all assets that maximizes the satisfaction of mission objectives (for example, getting the bottom mapping data collected by each asset to the shore station as quickly as possible) while minimizing the use of expendable resources, notably the energy stored in an asset's batteries. Once the HAMMER vehicles are

programmed and
deployed, the autonomous software onboard each asset will adapt its actions
when unanticipated events or conditions are encountered.

The University of Colorado's
Event-Triggered Decentralized Data Fusion algorithm facilitates the exchange of
state and situational information between assets with minimal use of acoustic
communications equipment, which allows all collaborating assets to work
together to best meet the original mission needs by responding appropriately to
the unexpected. One example is UCSD's Conflict Avoidance algorithm, which
enables each asset to meet its mission objectives as efficiently and
effectively as possible while preventing collisions with other assets or
obstacles in its operating environment.

Coast Guard Interdicts Migrants, Smuggler East of Boynton Beach

Haitian migrants, one Dominican migrant and a suspected smuggler were interdicted in a 30-foot cabin cruiser about 12 miles east of Boynton Beach, Florida, on July 3. U.S. Coast Guard
MIAMI — The

Coast Guard interdicted 14 Haitian migrants, a Dominican migrant and a suspected smuggler on July 3 about 12 miles east of Boynton Beach, the Coast Guard 7th District said in a release.

Coast Guard 7th District watchstanders received a report from the Palm Beach Sheriff's Office of a Customs and Border Protection Air and Marine Operations aircraft detecting an unlit 30-foot cabin cruiser heading towards West Palm Beach.

Watchstanders launched a Coast Guard Station Lake Worth Inlet 33-foot Special Purpose Craft-Law Enforcement crew and diverted the Coast Guard Cutter Bernard C. Webber (WPC-1101) crew. The cutter Webber crew safely embarked the six Haitian male adults, three Haitian female adults, one Haitian male minor, four Haitian female minors one Dominican male and one Bahamian male. The cutter Webber crew transferred five Haitian adults and five Haitian minors to Bahamas authorities and social services. The suspected smuggler, Dominican adult and four Haitian adults were transferred into Homeland Security Investigations custody.

"The Coast Guard maintains a focused and coordinated effort with multiple agency assets to interdict any attempt to unlawfully immigrate to the United States by sea," said Lt. Matthew Pinhey, Coast Guard 7th District

surface
operations. “Attempting to enter the country this way is not worth the risk and
we discourage people from try to embark on these dangerous voyages.”

A total of
3,027 Haitian migrants have attempted to illegally enter the U.S. via the
maritime environment in fiscal year 2019 compared to 2,727 Haitian migrants in
fiscal year 2018. A total of 1,456 Dominican migrants have attempted to
illegally enter the U.S. via the maritime environment in fiscal year 2019
compared to 829 Dominican migrants in fiscal year 2018. These numbers represent
the total number of at-sea interdictions, landings and disruptions in the
Florida Straits, the Caribbean and the Atlantic.

Coast Guard Interdicts More than 50 Migrants During Fourth of July Weekend

MIAMI — The
Coast Guard interdicted more than 50 migrants during the Fourth of July Weekend
from two separate at-sea interdictions, the Coast Guard 7th District said in a
July 8 release.

On July 3, watchstanders with Coast Guard Sector Jacksonville received notification from a good Samaritan vessel, Bochem London, of a disabled vessel with more than 20 people aboard about 130 miles northeast of Jacksonville, Florida. The crew of the Coast Guard Cutter Seneca (WMEC-906) was diverted to the scene and interdicted 22 Haitian migrants – 17 males, four females and one child – due to safety concerns with the vessel.

On July 6, watchstanders with Coast Guard Sector Key West received notification from a good Samaritan vessel stating there was a 24-foot wooden rustic vessel with more than 30 people aboard about 27 miles south of Key West, Florida. The crew of the Coast Guard Cutter William Trump (WPC-1111) was diverted and interdicted 33 Cuban migrants – 27 males and six females – due to safety concerns with the vessels.

“The Coast Guard continues to maintain a focused and coordinated effort with multiple agency assets to interdict any attempt to dangerously and unlawfully immigrate by sea to the United States,” said Cmdr. Michael Vega, of the Coast Guard’s 7th District enforcement branch. “Those who are interdicted at sea attempting to illegally immigrate will be repatriated to their country in accordance with

existing U.S. immigration policy.”

A total of 3,027 Haitian migrants have attempted to illegally enter the U.S. via the maritime environment in fiscal year 2019 compared to 2,727 Haitian migrants in fiscal year 2018. These numbers represent the total number of at-sea interdictions, landings and disruptions in the Florida Straits, the Caribbean and the Atlantic.

A total of 394 Cuban migrants have attempted to illegally enter the U.S. via the maritime environment in fiscal year 2019, which began on Oct. 1, compared to 384 Cuban migrants in fiscal year 2018.

MQ-8C Fire Scout Reaches IOC

The MQ-8C is cleared for fleet operations and training after reaching initial operational capability. Naval Air Systems Command

PATUXENT RIVER, Md. – The Navy declared initial operational capability of the MQ-8C Fire Scout unmanned helicopter June 28, clearing the way for fleet operations and training, Naval Air Systems Command announced on July 8.

The MQ-8 Fire Scout is a sea-based, vertical lift unmanned system that is designed to

provide reconnaissance, situational awareness and precision targeting support
for ground, air and sea forces.

“This milestone
is a culmination of several years of hard work and dedication from our joint
government and industry team,” said Capt. Eric Soderberg, Fire Scout program
manager. “We are excited to get this enhanced capability out to the fleet.”

The MQ-8C
variant is an endurance and payload upgrade to its predecessor, the MQ-8B,
offering up to 12 hours on station depending on payload, and incorporates the
commercial Bell 407 airframe.

The
Northrop Grumman-built Fire Scout complements the manned MH-60 helicopter by
extending the range and endurance of ship-based operations.

The MQ-8C
has flown more than 1,500 hours with more than 700 sorties to date. Over the
next few years, Northrop Grumman will continue MQ-8C production deliveries to
the Navy to complete a total of 38 aircraft.

The MQ-8C will be equipped
with an upgraded radar that allows for a larger field of view and a range of
digital modes, including weather detection, air-to-air targeting and a ground
moving target indicator (GMTI). It will deploy with littoral combat ships (LCS)

in fiscal 2021 while the MQ-8B conducts operations aboard LCS in the 5th and
7th Fleets.