Belgian Navy Sees Cooperation Opportunities for Wind Farm Industry

ANTWERP, Belgium – Belgium's 40-mile long coastline is shorter than most countries, but Belgium is a maritime nation with one of the busiest seaports in the world, Antwerp, and sits astride the approaches to the Dutch port of Rotterdam. Together they are two of the busiest ports in Europe.

Standing off the coast of Belgium are found enough wind turbines to generate more than five percent of the national energy demand, increasing to 20 percent beyond 2020. The presence of offshore wind generation is growing, especially in Europe. Despite its relatively small coastal zone, Belgium is third in Europe behind the United Kingdom and Denmark in wind energy production. Instead of solely complicating navigation, Capt. Jan De Beurme, chief of staff of the Belgian Navy, said the cooperation with the wind farms industry could prove very useful.

"There is private owned infrastructure in place that could be shared with the Navy," De Beurme said. "Antennas and radars can be mounted on the structures; offshore camera images can be shared to increase the maritime awareness and maritime picture in our coastal waters. In return the Navy can assure the security of these critical infrastructures that the wind farms are to Belgium."

Antwerp prides itself on being the "crossroads of the global supply chain," Beurme added.

De Beurme explains the joint Dutch-Belgian mine countermeasures project that will create new capabilities for both navies. The mine countermeasures ships will abandon the legacy minesweeper or mine hunter that must approach and enter

the minefield to find or clear mines. Those ships have therefore traditionally been made of wood or composites so they won't trigger magnetic influence mines. De Beurme said the new ships will remain outside minefields and rely on a "toolbox" of offboard remote and unmanned systems to enter the danger zones while the ship remains at a safe distance. As drone technology matures, the newer capabilities can replace the older systems.

Belgium's Navy is a blue-water navy and is capable of distant open-ocean operations. While their ships will be interoperable with NATO mine warfare assignments anywhere in the alliance, they will also be optimized to find and neutralize any mines introduced into their own coastal waters.

These offboard systems can be controlled from the ships, or from containerized control stations that can be placed where needed ashore. The unmanned underwater vehicles can carry sensors such as synthetic aperture sonar and side scanning sonar, as well as neutralization charges to destroy mines. The critical part of using underwater vehicles for mine hunting is to be able to communicate with those vehicles and quickly obtain the sensor data for analysis.

The matrix of wind structures can help create an underwater network to communicate with the drones, and even recharge their batteries.

Coastal security is a team effort, De Beurme said, involving the Navy, Federal Police and Customs working together from a single maritime information center. "We want to step up our maritime information center, and add new sensors."