Autonomous Sailing Platform to Gather Data for Offshore Wind Projects

Norwegian offshore wind developer Equinor and US-based start-up Autonomous Marine Systems (AMS) have launched a 16 ft autonomous sailing platform to cut the cost of gathering data needed for developing offshore wind projects. The wind and solar-powered Datamaran vessel, developed by AMS, carries a LiDAR device to collect data on wind and weather conditions at remote offshore wind lease areas.

Over the last 18 months, Equinor and AMS have conducted studies and built prototypes to test the system. These studies have shown dramatic improvements in lead time, cost and areal coverage versus today's options, according to the partners. The maiden Datamaran recently completed a series of tests in the Atlantic run by both companies.

Equinor Wind US president Christer Af Geijerstam said: "Equinor's collaboration with AMS underscores our commitment to collaborate with, invest in, and support local business. The emergence of the US offshore wind energy industry presents an exciting opportunity for local, nimble, innovative companies to partner with established wind-farm developers."

Fault-tolerant Communication Channels

The Datamaran operates autonomously without a manned support vessel, continuously transmitting acquired data and vessel health status to onshore operations via fault-tolerant communication channels. The vessel is propelled by a rigid wing sail while the LiDAR, navigation, and communication systems are powered by deck and sail mounted solar panels and large batteries.

Standard integration interfaces enable broad flexibility in sensor payload and survey types such as the standard meteorological ocean, bathymetric and hydrographic, current and wave characteristics, avian and marine mammal detection, and alerting.