

Long Endurance USV Development



Autonomous Surface Vehicles (ASV, UK) has won a research contract to design and build a Long Endurance Marine Unmanned Surface Vehicle (LEMUSV) under the Small Business Research Initiative (SBRI). This initiative is supported by the UK government.

Autonomous Surface Vehicles (ASV) has won the second phase of the recent SBRI competition to develop a Long Endurance Marine Unmanned Surface Vehicle (LEMUSV). Run by the Natural Environment Research Council (NERC) and the Defence, Science and Technology Laboratories (Dstl) the competition brief sought to develop an autonomous vehicle to gather data from the ocean over several months.

The team includes Cosworth, who are looking at generator systems, Hyperdrive Ltd who will investigate motor options and power management systems and Cranfield University who will be considering collision avoidance technologies.

ASV will undertake the detailed production design, build, commissioning and sea trials of a fully operational, open ocean going “C-Enduro 4” vessel. This second phase work will build on research and development from the phase one of the LEMUSV project. The vehicle design will utilise technologies from the consortium and be designed specifically capable of being deployed at sea for periods of up to three months in all weather conditions and sea states.

The C-Enduro concept centres on a ‘three pillar’ energy system providing a flexible and fault tolerant solution to energy supply. Having researched and trialled various energy sources as part of the phase one work the team has selected solar panels, a wind generator and a lightweight diesel generator as energy sources. Detailed calculations and tests show that this selection, combined with efficient power management and command and control systems packaged in a rugged self-righting vehicle, provides the greatest likelihood of meeting the performance requirements of this project.

ASV will work closely with the NERC and Dstl teams to ensure that their requirements and ideas are captured and incorporated in the detailed design.

<https://www.hydro-international.com/content/news/long-endurance-usv-development>
