Electric ScanEagle®

Insitu’s hybrid electric fuel cell propulsion system for ScanEagle

Working with our technical partners, Insitu is integrating and will demonstrate and test a hybrid electric propulsion module for its ScanEagle unmanned aircraft.

OPERATIONAL CAPABILITY AND BENEFITS

› **Near silent propulsion** Reduces audible signature, enabling mission routes closer to targets of interest, improving imagery quality and pointing accuracy and enabling more diverse SIGINT and EW operations

› **Better image quality** Platform vibration is reduced, resulting in better image quality

› **Increased available payload power** Excess fuel cell power is available for payloads during flight, enabling greater payload diversity

› **Increased air vehicle reliability** Improved reliability due to lower operating temperature and fewer moving parts. The system includes battery back up.

› **Expanded concepts of operation** Electric propulsion enables engine-off operations, in-flight energy harvesting, air drop missions and remote autonomous launch

PROJECT ROADMAP:

› In 2011, Insitu completed the first concept prototype flight with fuel cell technology on ScanEagle. The flight determined that the platform can support the capability and validated many of our operational and capability benefits.

› Q3 2014 electric propulsion validated

› Q1 2015 validated fuel cell

› Q2 2015 full system integration and proof of concept flight test

› Q4 2015 pre-production prototype flight testing

› Contingent upon funding, an operational utility assessment is planned for Q1 of 2016 and an LRIP decision in Q3 of 2016