



CRANFIELD AEROSPACE SOLUTIONS & DRONAMICS TO PROGRESS WITH THE APPLICATION OF CAES HYDROGEN FUEL CELL

News / Manufacturer



Cranfield Aerospace Solutions and Dronamics have signed an MoU to further progress the application of the CAeS hydrogen fuel cell propulsion system to the Dronamics Black Swan cargo drone aircraft. This agreement confirms the position of CAeS as the preferred supplier of hydrogen fuel cell propulsion systems to Dronamics and includes an LOI to supply a substantial number of propulsion systems from 2026, bringing CAeS's total pipeline to over 1300 drivetrains. Two companies have been working together since November 2022, under an earlier MOU, on a feasibility study for the application of CAeS's HFC technology into Dronamics' flagship Black Swan cargo drone aircraft, which is capable of carrying 350kg for up to 2,500km.

The successful feasibility study has concluded that the CAeS HFC system is well suited to meet the required payload, cargo volume and range for the Black Swan aircraft. As a result, CAeS will develop an STC equivalent modification pack for the Black Swan to convert existing conventionally powered versions of the aircraft to a zero emissions HFC variant in accordance with CS23 aircraft design standards. The resultant HFC propulsion system is a half-scale version of the 250kW

system being developed under Project Fresson (the conversion of the 9-seat Britten-Norman Islander aircraft to hydrogen fuel cell propulsion), validating the ability of the CAeS HFC technology to be adapted to different platform requirements.

This agreement with Dronamics provides a further route to market for the modular HFCS propulsion system technology being developed by CAeS and will provide Dronamics customers with zero-emissions cargo drone freight.

Chief Executive Officer of CAeS, Paul Hutton, commented: “The selection as preferred supplier of hydrogen fuel-cell powerplants for the Dronamics Black Swan fleet is testament to the exceptional technology that our team has developed and also to our aircraft integration design capabilities. We have now demonstrated that we can adapt and integrate our modular hydrogen propulsion technology into different platforms, opening up much wider market opportunities to exploit further the CAeS gaseous HFC aircraft propulsion systems from 2026.”

Chief Executive Officer of Dronamics, Svilen Rangelov, said: “We are very excited to be working with CAeS on the adoption of hydrogen fuel-cell technology for our aircraft, having successfully completed the feasibility study. The prospect of running flights with their emissions-free propulsion system helps further solidify our position as a frontrunner in the cargo drone market.”

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