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Aurora Flight Sciences wins DARPA Contract for High Output Turboelectric Diesel Engine

Cambridge, MA, April 8, 2009 - DARPA has awarded Aurora Flight Sciences a Small Business Innovation Research (SBIR) Phase I contract to develop small engines designed for high efficiency, high power density and quiet operations. DARPA's solicitation invites innovative solutions for the growing need for high power density, high thermal efficiency, and low noise power plants for use in such applications as unmanned air vehicles (UAVs), portable battery chargers, and emergency backup power systems. Aurora's concept involves a hybrid electric turbocharger mated with a diesel cycle engine to meet these requirements. The high output turboelectric diesel cycle (HOTeD) engine cycle has the potential to meet DARPA's requirements in a 10 HP class engine.

Most military engines operate on JP-8 or diesel, so called "logistic fuel" because of the logistic advantages of having one fuel for all military applications. Small UAV engines currently run on gasoline or aviation gas because heavy fuel engines in this size class are currently too heavy. According to George Kiwada of Aurora Flight Sciences, "The HOTeD concept is a step forward in the overall Department of Defense effort to move UAVs to logistic fuel. While envisioned for small engines, it may have the potential to scale to larger applications. We at Aurora are very excited to have the opportunity to develop this concept further." While initially a research program, Aurora hopes to develop this work into real world deployment in its UAV systems.

The Phase I contract is a feasibility study and Aurora is partnered with Dr. Wei Chang from the MIT Sloan Automotive laboratory.

About Aurora Flight Sciences

Aurora Flight Sciences designs and builds robotic aircraft and other advanced aerospace vehicles for scientific and military applications. Aurora is headquartered in Manassas, VA and operates production plants in Bridgeport, WV and Columbus, MS and a Research and Development Center in Cambridge, MA. To view recent press releases and more about Aurora please visit our web site at www.aurora.aero.

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