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News Release

Piedmont Propulsion Systems And Oak Ridge National Laboratory Share Anti-Icing Surface Treatment Research

Winston-Salem, NC, May 16, 2016 – Oak Ridge National Laboratory (ORNL) and Piedmont Propulsion Systems, LLC (PPS) recently concluded their successful anti-icing research under a Cooperative Research and Development Agreement (CRADA) and the two organizations are making their findings public.

The project's purpose was to develop surface treatments that will inhibit the formation of ice on turbine blades and propellers. It was an opportunity to foster collaboration between ORNL and PPS with the goal of creating new surface treatments for aviation and wind turbines, among other applications. The surface coatings developed were based on superhydrophobic particles dispersed in polymeric binders. Future research will involve understanding the effect of electrical conductivity of the surface treatment.

Paul Bolton, PPS's Chief Engineer and study participant said "This is our second successful CRADA with ORNL and it is an honor to work with such a distinguished scientific organization in our efforts to advance research into solving critical aviation safety issues. We believe making our preliminary research publicly available is in the best interest of furthering aviation safety."

A copy of the full report is available on www.piedmontpropulsion.com/crada2.

This research is supported by DOE's Office of Energy Efficiency and Renewable Energy – Advanced Manufacturing Office under the Manufacturing Demonstration Facility at ORNL. AMO supports applied research, development and demonstration of new materials and processes for energy efficiency in manufacturing as well as platform technologies for the manufacturing of clean energy products.

About Oak Ridge National Laboratory (www.ornl.gov)

ORNL is managed by UT-Battelle for the Department of Energy's Office of Science. DOE's Office of Science is the single largest supporter of basic research in the physical sciences in the United

States, and is working to address some of the most pressing challenges of our time. For more information, please visit science.energy.gov.

About Piedmont Propulsion Systems (www.piedmontpropulsion.com)

Piedmont Propulsion Systems, LLC, a subsidiary of First Aviation Services Inc. offers extensive component maintenance and overhaul capabilities to the commercial, regional, military, corporate and general aviation industry through its facilities in North Carolina. PPS has over 65 years of experience in propeller maintenance overhauls and is a FAA and EASA Part 145 Repair Station. PPS is a Hartzell and McCauley authorized service center and also has factory trained Dowty and Hamilton technicians. PPS has the majority market share for the Hamilton 14SF/RF, Dash 8, ATR, EMB-120 and DHC-6 platforms.

About First Aviation Services Inc.® (www.firstaviation.com)

First Aviation Services Inc. (FAvS), located in Westport, Connecticut, is a leading provider of repair and overhaul, rotables management and related engineering services to the aviation industry worldwide. FAvS's principal operating subsidiaries are Aerospace Turbine Rotables, Inc. (AeTR) and Evolution Aerospace, Inc. (EVO) in Wichita, KS and Piedmont Propulsion Systems, LLC (PPS) in Winston-Salem, North Carolina. More information about FAvS and its subsidiaries may be found on the company's website www.firstaviation.com.

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