

EU project to develop first fuel-cell aircraft

June 1 2007

Designing the first fuel-cell manned intercity aircraft is the goal of a recently launched EU-funded project.

The Environmentally Friendly Inter City Aircraft powered by Fuel Cells (ENFICA-FC) project is receiving €2.9 million from the EU as part of the aeronautics and space priority of the Sixth Framework Programme (FP6).

The Polytechnic of Turin is leading the project, the goal of which is to develop an intercity aircraft that uses fuel cell technology for the propulsion system, and hydrogen storage.

In addition, these technologies will also be developed to replace on-board electrical systems with larger 'more-electric' or 'all-electric' aircraft.

'No other project funded by the European Commission promises such ambitious results,' says the coordinator of the project, the Full Professor of Airplane Design and Aerospace Structures from the Turin Polytechnic University, Romeo Giulio.

'Hydrogen and fuel cell power technologies have now reached the point where they can be exploited to initiate a new era of propulsion systems for light aircraft and small commuter aircraft,' according to Professor Giulio.

The advantages of deploying these technologies will be low noise and

low emissions - features which are particularly important for commuter aeroplanes, which usually take off and land in urban areas.

The possibility to take off and land without contravening the noise abatement regulations set for small airfields, in urban areas and near population centres, will allow the use of airfields late at night, when noise regulations are the most stringent.

The fuel cell system will be installed in selected aircraft, which will be flight and performance tested as a proof-of-concept for future applicability in other inter-city aircraft.

The results of the ambitious project will be presented at both on-ground and in-flight public events at the end of the three year research project.

The EU is providing two-thirds of the funding for the project, and is keen to see the development of fuel cell technology as an environmentally friendly alternative to fossil fuels.

Source: CORDIS

Citation: EU project to develop first fuel-cell aircraft (2007, June 1) retrieved 1 May 2024 from <https://phys.org/news/2007-06-eu-fuel-cell-aircraft.html>

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