Aerodynamic validation of emission reducing

Fact Sheet

Project Information

AVERT

Grant agreement ID: 30914

Funded under
FP6-AEROSPACE

Start date
1 January 2007

End date
30 June 2010

Overall budget
€ 6 749 869

EU contribution
€ 3 899 932

Coordinated by
AIRBUS OPERATIONS LIMITED
United Kingdom

Objective

AVERT will deliver upstream aerodynamics research that will enable breakthrough technology deployment and innovative aircraft configuration development and a step change in aircraft performance. The project will contribute to the need to improve the environmental impact of aircraft emissions and the drive to strengthen the competitiveness of European manufacturing industry. The major objective of AVERT is the development and industrialisation of novel active flow control technologies for a realistic configuration to significantly reduce airframe drag and thus engine CO2 emissions. This research responds to a target set in the ACARE 2020 review for a substantial increase in aircraft cruise L/D by realising the full potential of new configurations such as the "Pro Green" aircraft. Active flow control technology can attack the two main sources of aircraft drag (profile and vortex drag) directly, by reducing skin friction drag, and indirectly by unlocking traditional configuration constraints on aircraft design and alter the focus of many design rules. It is predicted that the combined drag reduction could be up to 10% and an equivalent reduction in emissions. The achievement of the objective will give the aircraft makers within
AVERT confidence that emerging flow control technologies can be industrialised to the point of practical and beneficial application to an aircraft operating in a commercial environment. The objectives will be achieved through the evaluation of selected types of device and control system, the assessment of these technologies against two baseline aircraft configurations and the validation of the most promising technologies through large scale wind tunnel testing at appropriate flight conditions. The project consortium consists of 16 organisations from 8 different countries whose researchers have significant experience in the areas of aircraft design, flow control technology, MEMS devices and wind tunnel testing.

Programme(s)

Topic(s)

Call for proposal

FP6-2005-AERO-1

Funding Scheme

STREP - Specific Targeted Research Project

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