

EU technology programme ENOVAL launched

New technologies for next generation aero engines Focus on lower CO₂ and noise emissions

Munich, Germany, November 29, 2013 – The European Union’s new technology programme ENOVAL (ENgine mODule VALidators) has been launched. Recently more than 140 representatives from the aerospace industry, from research and academic institutions as well as from the European Commission came together in Freising, near Munich, to kick-off the programme. In this project, which is led by MTU Aero Engines, 35 European partners are jointly developing new technologies for medium-sized, large and very large turbofan aero engines. The aim is to achieve reductions in CO₂ emissions of up to five percent and in noise of up to 1.3 decibels.

ENOVAL will provide new technologies for the low pressure system of ultra-high bypass ratio propulsion systems ($12 < BPR < 20$). Ducted geared and non-geared turbofan engines with ultra-high overall pressure ratio ($50 < OPR < 70$) will be the preferred power systems for next generation of short-, medium- and long-range commercial aircraft entering into service from 2025 onwards. ENOVAL coordinator Dr. Edgar Merkl of MTU noted: “These engines are a key technology within the new Strategic Research and Innovation Agenda SRIA of the Advisory Council for Aviation Research and Innovation in Europe ACARE.”

ENOVAL, which is set up within the Seventh Framework Programme and co-funded by the European Commission with € 26.5 million, will run for four years. With a gross budget of more than € 45 million, the project will provide novel technologies for fan, gearbox, low-pressure compressor and turbine modules to achieve or even surpass CO₂ and noise level targets set by ACARE and the European Commission’s Vision for Aviation – Flightpath 2050. Major players from the European aero engine industry – including Avio Aero, GKN Aerospace, Industria de Turbo Propulsores, MTU, Rolls-Royce, Snecma, Techspace Aero and Turbomeca – cooperate in ENOVAL with SMEs from the aeronautics sector and academic and research organizations.

The engine sector has already successfully demonstrated its innovation potential by achieving breakthroughs in past and ongoing R&T projects such as VITAL, NEWAC, Dream, LEMCOTEC and E-BREAK.

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ARTTIC (France / Germany)
Avio Aero (Italy)
Bauhaus Luftfahrt e.V. (Germany)
Brandenburgische Technische Universität Cottbus (Germany)
CEIT (Spain)
Cenaero (Belgium)
Central Institute of Aviation Motors (Russia)
Centro de Tecnologías Aeronáuticas (Spain)
Chalmers Tekniska Hoegskolen AB (Sweden)
Deutsches Zentrum für Luft- und Raumfahrt e.V. (Germany)
Ecole Centrale de Lyon (France)
Ergon Research S.R.L. (Italy)
GDTech (Belgium)
GKN Aerospace Sweden AB (Sweden)
Industria de Turbo Propulsores SA (Spain)
Institut Supérieur de l'Aéronautique et de l'Espace (France)
Mondragon University (Spain)
MTU Aero Engines AG (Germany)
National Aerospace Laboratory (Netherlands)
Office national d'Etudes et de Recherches Aérospatiales (France)
Progesa S.R.L. (Italy)
Rolls-Royce Deutschland Ltd & Co KG (Germany)
Rolls-Royce PLC (Great Britain)
Snecma SA (France)
Société Lorraine de Construction Aéronautique (France)
Swerea Sicomp AB (Sweden)
Techspace Aero SA (Belgium)
Technische Universität Graz (Austria)
The University of Cambridge (Great Britain)
Turbomeca SA (France)
Universidad Politecnica de Madrid (Spain)
Università degli Studi di Firenze (Italy)
Universität der Bundeswehr München (Germany)
University of Southampton (Great Britain)