

# **Greener by Design Annual Conference 2010**

## **The Greening of Aircraft Propulsion – Progress and Prospects**

**London, UK  
20 October 2010**

**ISBN: 978-1-5108-0183-7**

**Printed from e-media with permission by:**

Curran Associates, Inc.  
57 Morehouse Lane  
Red Hook, NY 12571



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Printed by Curran Associates, Inc. (2015)

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# The Greening of Aircraft Propulsion Progress and Prospects

Wednesday 20 October 2010

No. 4 Hamilton Place, London W1J 7BQ, UK

## **PROGRAMME**

08.30 *Registration / Tea and Coffee*

09.00 **Welcome and Opening Remarks**  
AVM David Couzens, President, Royal Aeronautical Society

### **Session 1: VITAL & DREAM**

Chairman: Peter Curtis, Chairman Propulsion Group, Royal Aeronautical Society & CEO, Aircraft Research Association Limited

09.10 **(1) A Revision on Contrail Avoidance Technologies....1**  
Mr Frank Noppel, Researcher & CEO, Cranfield University, Ambeo PLC

09.40 **(2) Overview of the validation of Radical Engine Architecture systems (DREAM) Programme (EC 7<sup>th</sup> Framework Programme)....13**  
Dipl. Ing Uwe Fuss, Chief Integration Engineer Open Rotor Technologies, Rolls-Royce. Germany

10.10 **(3) DREAM Sub-Programme 5 – Alternative Fuels....21**  
Pierre Baude, Research Project Engineer, Turbomeca

10.40 *Coffee and Networking Break*

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### **Session 2: BIOFUELS**

11.10 **(4) Environmental Impacts, Fuel by Fuel....39**  
Dr Ausilio Bauen, Director, E4Tech  
Jeff Gazzard, Aviation Environment Federation

**(5) Economics – Current/Projected Production Costs; When Will a Cost:Effective Adoption Point be Reached?....**  
Gregory Elders, Director of Research, EQ2

**(6) The Path to the Optimal Biofuel....54**  
Jonathon Counsell, Head of Environment, British Airways

**(7) Impact on R&T - Will the Prospect of a Biofuel 'Remedy' Divert Manufacturers from Accelerating --- Development of Nextgen Technologies?....57**  
Dr James Kinder, Technical Fellow, Boeing Commercial Airplanes

11.45 **Discussion moderated by Mark Pilling, Editor, Airline Business**

12.40 *Lunch*

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### **Session 3: NEWAC (New Aero Engine Core Concepts)**

13.30 **(8) Overview of the NEWAC Programme (EC 6<sup>th</sup> Framework Programme)....64**  
Dr Jörg Sieber, Senior Consultant Innovations Management, MTU Aero Engines GmbH

14.00 **(9) NEWAC Sub-Programme 1 – Whole Engine Assessment....75**  
Andrew Rolt, Senior Systems Specialist, Rolls-Royce

14.30 **(10) NEWAC Sub-Programme 2 – Intercooled Recuperative Engine....86**  
Dr Stefan Donnerhack, Advanced Product Design, MTU Aero Engines GmbH

15.00 *Coffee and Networking Break*

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### **Session 4: INCENTIVISING ACCELERATED DEVELOPMENT OF NEXTGEN TECHNOLOGIES**

15.30 **(11) Anticipated Contribution of Propulsion Technologies to Overall Potential Improvement in Climate Change Impact....96**  
Dr John Green, Greener by Design Committee, Royal Aeronautical Society

**(12) Attainability of ACARE Targets. What next for ACARE?....102**  
Dr Ray Kingcombe, Deputy Director Technology, Aerospace & Defence, Department for Business, Innovation & Skills

**(13) What Will it Take: Market Conditions; Regulation; Fiscal/Subsidy Incentives?....N/A**  
George Dimitroff, Senior Aviation Analyst, ASCEND

15.55 **Discussion moderated Prof Ian Poll, Greener by Design, Professor of Aerospace Engineering at Cranfield University and Technical and Business Development Director of Cranfield Aerospace**

17.35 *Close of Conference*