Rolls-Royce plc
62 Buckingham Gate, London SW1E 6AT, England
T + 44 (0) 20 7222 9020
F + 44 (0) 20 7227 9170

10/08/2016

Response to request for information on civil aviation engine emissions

We design, develop, manufacture and service integrated power solutions for use in the air, on land and at sea. Our engineering expertise helps deliver more efficient products for our customers, helping them to do more using less. Our vision is to create better power for a changing world by providing leading technology and highly efficient products in each of our chosen markets.

Since the first commercial jet engines were produced in the 1950s, our engineering expertise has helped to reduce aircraft fuel burn by 70 per cent and noise by 75 per cent. Many of our products are currently market leaders in terms of environmental performance, including for example the Trent XWB, which is the world's most efficient large civil aero engine.

Our commitment is to improve continuously the environmental performance of our products and services, with particular focus on lowering fuel consumption, emissions and noise. Each year we invest over £1.2 billion in gross Research and Development, over two-thirds of which is dedicated to improving environmental performance.

Our Group environmental strategy focuses on three key areas:

- Supporting customers by further reducing the environmental impact of our products and services
- Developing new technology and capability for future low emissions products and services
- Continually reducing the environmental impact of all our business activities

Each of our products is subject to stringent environmental legislation. In addition, we are committed to reaching the Flightpath 2050 targets set out by the Advisory Council for Aviation Research and Innovation in Europe. These include developing technologies and procedures to:

- Reduce aircraft CO_2 emissions by 75 per cent (per passenger kilometre)
- Reduce noise by 65 per cent
- Reduce oxides of nitrogen (NO_x) by 90 per cent.

This is all relative to a typical new aircraft produced in 2000. The engine contribution to these goals is defined as to reduce CO_2 by 30 per cent and the NO_x certification by 75 per cent.

We do not share details of individual engine flight emissions performance. The reported emissions of each engine type can be accessed through the International Civil Aviation Organisation (ICAO) Emissions Databank.

For more information on our approach see www.rolls-royce.com/sustainability