

A sustainable future – an integrated approach

CantorCO2e

As a global community, air travel has become second nature to us. Bargain-basement flights have opened up the world and paved the way for a more cosmopolitan population. For business or pleasure, the aviation industry supplies our insatiable demand for a jet-setting lifestyle. The downside of this trend is the growing contribution of air transport to climate change. As our carbon footprints have become bigger, so too has our moral obligation to attempt to offset damaging emissions. Forecasts from the Government's 2003 *Future of Air Transport White Paper* suggest that by 2030 aviation could make up to a quarter of the UK's total contribution to global warming – emissions from our planes are increasing faster than any other sector.

The negative effects of air travel are clearly not just a UK problem. The European Union (EU) has warned that greenhouse gas emissions from aviation are growing fast – from 1990 to 2003, the EU's emissions from international aviation increased by 73 per cent, or 4.3 per cent per year. If growth continues at this rate, the increase since 1990 will reach 150 per cent by 2012.

AIMING HIGH FOR CLIMATE STABILISATION

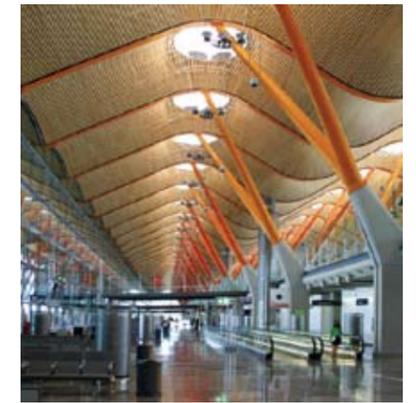
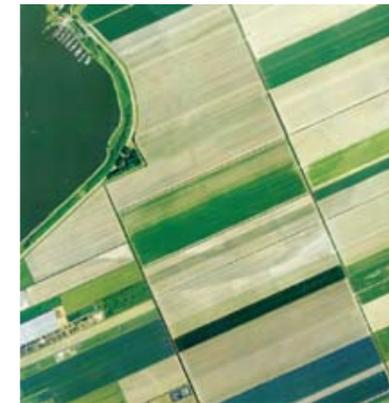
Aircraft typically operate at cruising altitudes of eight to 13 km, where they release several gases and particles that alter the composition of the atmosphere and contribute to climate change. Nitrogen oxides, water vapour, sulphate and soot particles are released during flight – all of which have some kind of detrimental impact on the environment. The most significant greenhouse gas however – largely due to the large quantities released and its long residence in the atmosphere – is carbon dioxide (CO₂). Increasing concentrations of CO₂ have a well-documented effect on climate change. So burning fossil fuels high in our skies effectively acts as the catalyst for extreme weather conditions – melting ice caps, rising sea levels, shifts in ocean currents and unpredictable winds.

Governments and environmentalists have long acknowledged that the issue of aircraft emissions has to be addressed before it spirals too far out of control. People who live on the margins of environmental sustainability will suffer the most – for example, the 90 million who make up the population of Bangladesh. During the UK's presidency of the EU in 2005, there was a concerted effort to highlight the aviation sector in the EU's emissions trading proposals. After various working parties and summit

meetings, the European Commission produced a legislative proposal at the end of 2006. Having examined several solutions, such as airline ticket or departure taxes and emissions charges, the Commission concluded that the most cost-efficient and environmentally effective option would be to include emissions from aviation in the EU Emissions Trading Scheme. Moreover, emissions trading has been endorsed by the International Civil Aviation Organisation (ICAO).

So, the best way of ensuring that aviation contributes towards the national and international goal of climate stabilisation is through a well-designed emissions trading regime. This is where CantorCO2e plays an important role – the Company is a leading global provider of financial services to the world's environmental and energy markets, offering a wide variety of brokerage services to clients engaged in using energy and managing emissions across the world.

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With headquarters in London and San Francisco, the Company has 14 offices across five continents. This global presence, as well as a wealth of experience in this field, enables CantorCO2e to provide a level of service that satisfies the needs of the aviation industry as well as the larger issue of contributing to a cleaner and more sustainable environment in the future. In the UK, the Government has set a challenging target of a 60 per cent reduction of emissions by 2050 – this is likely only to be achievable if organisations embrace emissions trading.

WHAT IS EMISSIONS TRADING?

Operators of industrial installations (which are responsible for much of Europe's CO₂ emissions) receive emission allowances giving them the right to emit a certain level of CO₂ per year. The total of these allowances creates a 'cap' on overall emissions from these installations. Every year, operators must surrender the number of allowances equal to their actual emissions in that year. The existence of a market in which these allowances can be traded enables participating companies to manage their emissions cost-effectively. If they anticipate that their emissions will exceed their allowances, they can either take measures to reduce their emissions, such as installing more efficient technology, or they can buy additional emission allowances or emission reduction credits from developing countries on

Left to right: Ice caps are melting at a faster rate than ever; Agriculture needs water and energy; Bigger airports to meet growing demand of air travel



the market, whichever is cheaper. Conversely, if their actual emissions are lower than their allowances, they can sell their surplus allowances on the market or 'bank' them to cover future emissions. Including the aviation sector in the Emissions Trading Scheme will expand the market covered by an overall emissions cap. Aircraft operators will be allocated emission allowances, thus giving them a permanent incentive to reduce their climate impact. They will also have the flexibility to buy or sell allowances as necessary and invest in emissions reductions from developing countries.

SAFEGUARDING ENVIRONMENTAL INTEGRITY

If the *raison d'être* of these proposals is to reduce aviation emissions, how can airlines actually do this? Ensuring the environmental safety of our planet is obviously a top priority – but will this impact the profit margins of global organisations? Airlines can reduce their emissions in several ways, notably by investing in more efficient aircraft and engines and optimising operations. Although the biggest improvements would typically arise from accelerated fleet renewal, many aircraft in existing fleets also hold potential for improvements. Airlines can also optimise their timetables, route network and flight frequencies to minimise the number of empty seats flown. Already some airlines are running voluntary programmes to offset greenhouse gas emissions and CantorCO2e has an entity, the Climate Warehouse, that has been set up to service such voluntary initiatives.

and this demand requires technology – 'clean-tech', plus more traditional low-impact technologies introduced into new situations.

BUILDING A SUSTAINABLE FUTURE

The environmental benefits of including aviation in the EU Emissions Trading Scheme will depend largely on the target (cap) yet to be agreed. For illustrative purposes, scenarios analysed in a recent feasibility study assume that aviation emissions in 2012 would be capped at their 2008 levels. This is equivalent to an emissions saving of around 17 per cent. For CantorCO2e, the possibility of contributing significantly to a sustainable future is an exciting prospect – and a challenge that keeps the Company focused on the future.

As a global statement, nothing has done more to raise public awareness of carbon footprints than Al Gore's Oscar-winning documentary, *An Inconvenient Truth*. This raised consciousness and the alarming statistics have proven to be a catalyst for change. The UK aviation industry is fully on board and committed to helping to deliver a sustainable future. Indeed, the pioneering initiative – Sustainable Aviation – commits UK companies to a joint strategy aimed at delivering radical cuts in CO₂ emissions.

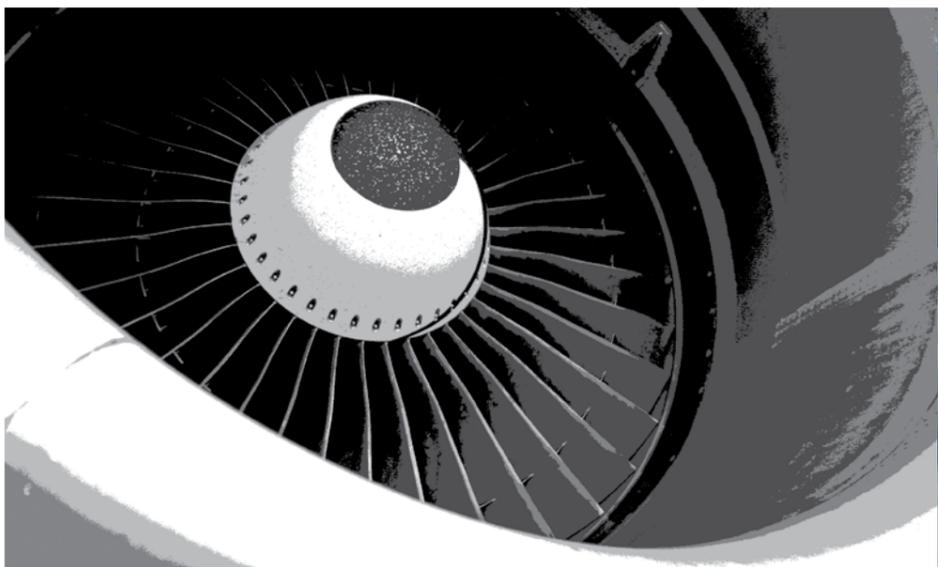


Top to bottom: Greenhouse gas emissions from aviation are growing fast; Finance is key to enabling change; Oil supplies are dwindling. Alternative sources of energy must be found

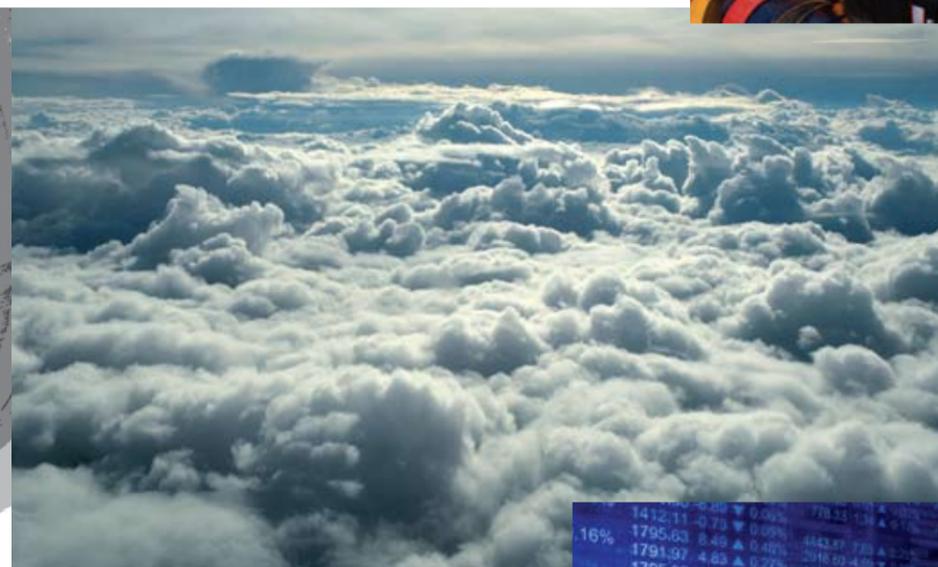
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Right: Investment in more efficient engines is key

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Change cannot happen without the involvement of the world's capital markets – it takes money to finance change. Facilitating this change is a complicated task, especially if environmental integrity is to be safeguarded. This large-scale operation requires knowledge and organisation. CantorCO2e has been at the forefront of the development of environmental markets since they were first conceived, helping design all of the world's major environmental trading schemes. Regarding the importance of technology in reducing aviation emissions, CantorCO2e is likewise ahead of the game. Caps on emissions will create demand for new ways of working,



We can no longer plead ignorance when it comes to global warming and climate change. Action, not words, is what is needed if environmental crises are to be avoided – we have to be proactive in preventing our own carbon footprints from trampling on future generations. CantorCO2e is putting words into action and facilitating a shift in the aviation industry's stance on carbon emissions.

