

## **Submission to the Aviation Issues Paper of April 2008**

### **Summary**

- Climate change represents a major challenge for Australia and the world in the 21st century. Australia is acting on this challenge.
- The future impacts of human-caused changes in the climate system represent systemic and major risks to key areas of the Australian economy, society and the environment.
- The Australian Government is committed to decisive national action on climate change: to reduce Australia's greenhouse gas emissions, to take adaptation actions to reduce the impacts of unavoidable climate change, and to help shape a global solution to this global problem.
- The centre-piece of the Australian Government's climate change policy is the introduction of a 'cap-and-trade' emissions trading scheme in 2010.
- Aviation is a rapidly growing source of emissions and needs to participate in a climate change solution.
- Domestic aviation emissions are recognised and treated separately to international aviation emissions.
- For Australia that means domestic aviation needs to participate in the Australian Emissions Trading Scheme.
- Addressing the climate change issue of international aviation is much more complex. Australia believes that the International Civil Aviation Organization (ICAO) remains the most appropriate UN body to address international aviation emissions.
- Technical and operational measures offer one of the most practical means of gaining near-term emissions reductions, particularly for international emissions.
- The Government has made a commitment to developing a national carbon offset standard by December 2008.

### **Setting the scene**

Climate change is one of the most complex challenges facing Australia and the world in the 21st century.

The Intergovernmental Panel on Climate Change in its 2007 Assessment Report on Climate Change concluded that:

- Global greenhouse gas emissions must peak and decline, and stabilisation at lower atmospheric concentrations of greenhouse gases requires an earlier peak and decline in emissions. The emissions mitigation efforts over the next two or three decades will have a large impact on opportunities to achieve the lower stabilisation levels which could avoid dangerous interference with the climate system. Development, deployment and diffusion of technologies are fundamental to achieving this outcome.

The Australian Government's climate change policy is built on three pillars:

- Reducing Australia's greenhouse gas emissions;
  - This pillar is marked by a commitment to a target of reducing emissions by 60 per cent of 2000 levels by 2050, and to a commitment of setting a medium term target in 2008.

- The Government will also introduce an emissions trading scheme in 2010. The Department of Climate Change is responsible for the development of Australia's emissions trading scheme, including issues of international linking and negotiation, and for public consultation on these issues.
- Adapting to climate change that we cannot avoid; and
- Helping to shape a global solution.

Domestic aviation is projected to grow by 4.8 per cent per annum between 2005 and 2010, and 3.0 per cent per year between 2010 and 2020. As a result, domestic aviation is projected to account for an increasing share of Australia's greenhouse gas emissions, from 0.9 per cent in 2005 to 1.3 per cent in 2020. Australian international aviation is also projected to grow 3.3 per cent per year between 2005 and 2010, and 4.9 per cent per year between 2010 and 2020. However, emissions from international aviation are not reported under the Kyoto Protocol.

As well as emitting carbon dioxide, aircraft contribute to global warming through emissions of nitrogen oxides (NO<sub>x</sub>), and aircraft induced cloudiness. These effects are estimated by the IPCC to be at least two to four times greater than carbon dioxide alone. A possible offsetting global 'cooling effect' from aviation aerosols has also been suggested by some. However, the IPCC concluded that the evidence for this possible offsetting effect is unclear.

Investigating ways in which to reduce aviation emissions is part of the climate change challenge.

## **Responses to the questions on Section 4.1**

### *1. What practical steps can the aviation industry take right now to reduce greenhouse gas emissions? Are carbon offset schemes enough?*

The role of offsetting in the aviation industry must be considered in the context of broader decisions made around the treatment of the aviation sector under Australia's mandatory emissions trading scheme.

Any decision made to offset emissions should involve a robust assessment of the carbon footprint and the purchase and retirement of quality carbon credits that represent additional, verifiable, permanent greenhouse gas abatement.

The Government has made a commitment to developing a national carbon offset standard by December 2008 which will set minimum requirements for the generation, verification and retirement of offset credits and provide assurance to consumers that offsets they are buying are credible.

### *2. What measures should the aviation industry be taking in the short-medium term to reduce emissions, such as clean engine technology and clean aviation fuels?*

The paper notes that the growth of the aviation industry is likely to out-strip projected efficiency gains. Nonetheless, technical and operational measures still offer one of the most practical means of gaining near-term emissions reductions, particularly for international aviation emissions. Robust analysis needs to continue to be encouraged in areas such as fuel efficiency and more efficient air traffic management (ATM). In addition, domestic action, including in the area of more efficient ATM, has the potential to assist with the reduction of aviation emissions in our region and other regions where ATM is not yet fully integrated (eg the European Union).

In addressing aviation emissions through technical and operational measures, it is also important to ensure robust analysis of relative trade-offs. For example, it may

be the case that more efficient take-off and landing cycles reduce greenhouse gas emissions, while increasing noise. Detailed analysis of such trade-offs, and public availability of this analysis, will be important to ensure well-informed public-private consultations on the overall environmental impact of the aviation industry, both domestically and internationally.

*3. Given the international nature of aviation, what opportunities are there to minimise greenhouse emissions and trade emission permits through emission trading schemes?*

There should be a clear delineation between efforts to address domestic aviation emissions and international aviation emissions. The issues paper does not sufficiently make this distinction, with the potential to cause confusion about the Government's approach to these matters, which are quite different. In particular, the domestic-international distinction needs to be made in relation to the question of using market-based measures to address aviation emissions. The Government's approach to including domestic aviation emissions in the emissions trading scheme differs to its position on the use of emissions trading to address emissions from international aviation.

The apportionment of responsibility for emissions from international aviation is a sensitive and complex matter, and therefore so is the development of mitigation measures to address international aviation emissions. For example, the European Union has proposed to unilaterally include international aviation emissions in its emissions trading scheme without the agreement of affected States, and that this proposal was opposed strongly by the vast majority of International Civil Aviation Organization (ICAO) members at the last ICAO Assembly (September 2007), including by Australia.

The other complex issue that is only hinted at in the paper, but which has a direct impact on the feasibility of using market-based measures to address emissions from international aviation is the differentiation between developed and developing country action.

Australia believes that in relation to international aviation emissions there should be no differentiation between carriers from different countries. The international aviation sector is global and highly integrated (for example, Qantas competes directly with Singapore and Emirates Airlines) and, as such, the general equity approach of the United Nations Climate Change Framework and its Kyoto Protocol should not apply to this sector.

Australia believes that, as per the Kyoto Protocol (Article 2.2), ICAO, with its underlying principle of non-discrimination, remains the most appropriate United Nations body within which to address international aviation emissions.