Aviation and the Belgian Climate Policy: Integration Options and Impacts

ABC Impacts

Fourth users’ committee meeting + workshop on aviation and offset programmes
6 May 2008

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(2005 – 2010)
Agenda

1. Calendar second reading + ABC Impacts phase I
2. Comparison of offset programmes
3. EBAA’s proposal to offset business aviation CO$_2$ emissions
4. Carbon offsetting and climate protection – WWF position

5. European governmental guidelines for voluntary CO$_2$ offsetting best practice
6. Aviation climate impacts: the global and regional points of view
7. Discussion / questions
Calendar EU Parliament second reading on the inclusion of the aviation sector in the EU-ETS
Calendar second reading

- 13 November 2007: EU Parliament opinion – first reading and related Commission position
- 18 April 2008: EU Environment Council adoption of a common position
- 24 April 2008: EU Parliament receipt of the common position

- Beginning process of the second reading

- 19 May 2008: WP on the Environment aviation and EU-ETS
ABC Impacts

Final report phase I
Main conclusions

- Reduction of emissions (0.5%-2%/yr) lower than growth rate of sector (average 6.4%/yr)
  - Long-term some radical changes (maybe hydrogen)
  - Short-medium term:
    - implementation of synthetic fuels, biofuels,... All with some specific strengths and weaknesses.
    - other innovative concepts (adapted rear turboprop mounting, adapted empennage and air frame, improved aerodynamics...).
Main conclusions

- Sectoral management changes
  - Improved ATM
  - Single European Sky
  - Reduced Vertical Separation Minimum (already largely implemented)
  - Continuous Descent Approach…

  Might reduce the climate impact by more than 10%

  No need for new technologies to be implemented onboard

  No delay (needed for fleet renewal)
Main conclusions

The Belgian market:

- Very specific position within Europe (FLAP area)
- Number of overflights is already considerable and could even increase due to:
  - Sectoral growth
  - Potential route adaptations (according to Eurocontrol, the adoption of shorter routes could increase overflights above the Belgian territory by 10%).
Main conclusions

- Ozone and cirrus clouds influence regional climate:
  - Operational measures to reduce them (or their triggers) should be considered, despite remaining uncertainties.

- Important are tradeoffs between different impacts:
  - Often reduction of CO₂ emissions induces increase in NOₓ emissions (increasing ozone formation).
  - More fuel efficient engines often produce more contrails at higher temperature (i.e. lower altitudes).
Main conclusions

- The impact of Belgian aviation
  - Global climate change is relatively small,
  - Regional climate impacts due to contrails, cirrus formation and change in the ozone concentration could have a large influence on the country (sunshine and precipitations) because of the concentration of flights over Belgium (mostly overflights from outside Belgium).

- Focus for Belgian policy makers could be to reduce the impacts from transit aviation via:
  - Operational measures targeting non-CO$_2$ gases,
  - Encourage European shift to other transport modes.
Final report phase I

Available on the ABC Impacts website:

http://www.climate.be/abci

→ Open section

→ References – project publications