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Aviation and the EU ETS

How to comply with the ETS obligations

Aviation and the European Emission Allowance Trading Scheme

The Kyoto Protocol adopted in Kyoto, Japan, on 11 December 1997, excluded emissions from international aviation services from national emissions targets, and stipulated that an approach to addressing emissions from international aviation should be developed separately through the International Civil Aviation Organization (ICAO). Owing to a lack of consensus over whether and how to allocate responsibility for these emissions, only domestic CO₂ emissions are included in the Kyoto Parties national emission totals. Emissions from international flights are not subject to the quantified emissions limitations taken on by the countries which ratified the Kyoto Protocol.

The European Commission proposed in February 2005 that international aviation should be included in any post-2012 climate change regime. A new directive 2008/101/EC of the European Parliament and of the Council of the European Union requires all aircraft operators flying into or out of any EU airport to participate in the EU's emissions trading scheme (ETS) from 2012.

The EU's emissions trading scheme could be a model for a global scheme as the International Civil Aviation Organisation is developing a framework for a global emissions trading scheme for aviation as part of an attempt by the ICAO to retain responsibility for the environmental impact of aviation under a post-2012 international agreement that will have to be agreed in Copenhagen in December 2009.

The European Greenhouse Gas Emissions Trading Scheme has been operational since January 2005 for some 12,000 fixed energy intensive installations in the energy, metals, minerals and paper industries. It is the largest multi-country, multi-sector Greenhouse Gas emission trading scheme in the world and covers around 2 billion tonnes of CO₂ emissions or about 50 % of the EU's total emissions. The scheme is based on Directive 2003/87/EC, which entered into force on 25 October 2003. Emission trading is an economic policy instrument used to control emissions by providing economic incentives for achieving emission reductions. An emission trading system sets a cap on the amount of a pollutant that can be emitted.

Companies under the trading system are given allowances which represent the right to emit a specific amount. Companies that emit in excess of their allowances must buy allowances from an operator that has more allowances than it needs. In the first period, 15% of allowances are to be auctioned.

For the period from 1 January 2012 to 31 December 2012, the total quantity of allowances to be allocated to aircraft operators will be equivalent to 97% of the mean average of the annual emissions in the calendar years 2004, 2005 and 2006. For the five year period beginning on 1 January 2013 the total quantity will be equivalent to 95 % of historic aviation emissions.

This brochure explains the latest status on how the EU ETS is going to work as well as best practice for managing key obligations. Some of the information in this brochure is based on draft versions of reports and templates and is for general information purposes only. Information included in this brochure does not replace official documents or legal information.

Categories of activities included in the EU ETS

From 1 January 2012 all flights which arrive at or depart from an airport situated in the territory of a Member State to which the Treaty applies shall be included in the EU ETS.

A flight is the operation of an aircraft from the moment the aircraft first moves under its own power (block-off) for the purpose of taking off until the moment it comes to rest after landing.

Not included are categories such as military flights, customs and police flights, flights related to search and rescue, fire fighting flights, humanitarian flights, flights performed exclusively under visual flight, training flights, flights performed by aircraft with a certified maximum take-off mass of less than 5 700 kg and flights performed in the framework of public service obligations on routes within outermost regions or on routes where the capacity offered does not exceed 30 000 seats per year.

Aircraft operators operating fewer than 243 flights per period for three consecutive four-month periods and aircraft operators operating flights with total annual emissions lower than 10 000 tonnes CO₂ per year may estimate the fuel consumption using tools implemented by Eurocontrol.

General rules of the Emission trading system

The allocation methodology for the distribution of allowances to aircraft operators will be based on the verified tonne-kilometre data and the total quantity of allowances for the air transport sector.

The annual issuance of allowances to operators must take place before March of each year. So an aircraft operator will receive the allowances for the year 2012 before March of that same year.

Each aircraft operator under the EU ETS has to have a greenhouse gas permit before it can operate. This permit is the monitoring plan. This plan lays down the rules that have to be followed when reporting the CO₂ emissions data under the EU ETS. Each year, before April, the EU ETS installation or aircraft operator has to report the amount of emissions that have been emitted in the previous year. This report has to comply with the rules of the monitoring protocol and has to be verified by an accredited verifier appointed by the aircraft operator.

Aircraft operators are obliged to match the (verified) emissions with an equal amount of allowances. This is called surrendering of allowances. Each aircraft operator has to surrender the allowances (of the previous year) before May of the ongoing year. If an operator is short of allowances it will have to buy allowances from an installation or aircraft operator that has more allowances than needed to cover the verified emissions. A company that does not surrender enough allowances will be fined and will still be obliged to surrender the missing allowances.

Member States can allow a limited use of credits by the Clean Development Mechanism (CDM) and Joint implementation (JI) for compliance use in the EU ETS. This means that airline operators can use CERs (Certified Emission Reductions) and ERUs (Emission Reduction Units) next to EUAs (EU Allowances) to cover their emissions.

The Commission shall publish in February 2009 a list of aircraft operators which carried out aviation activity on or after 1 January 2006 specifying the administering Member State for each aircraft operator and before 1 February of each subsequent year, update the list to include aircraft operators which have subsequently carried out aviation activity.

In order to reduce the administrative burden on aircraft operators, one Member State will be responsible for each aircraft operator.

Each aircraft operator may apply for an allocation of allowances that are to be allocated free of charge by submitting to the Competent Authority verified tonne-kilometre data for the calendar year ending 24 months before the start of the period to which it relates or in relation to the period from 1 January 2012 to 31 December 2012, the year 2010.

Monitoring and reporting of emissions from aviation activities

Compliance with the amended Monitoring and Reporting Guidelines 2007 is needed for the submissions of annual emissions report.

A verified annual emissions report must be submitted to the Competent Authority before April of each year and for the first time before April 2011.

A separate calculation should be made for each flight and for each fuel as well as aggregated emissions (tCO₂) from all flights. Emissions should be monitored by calculation using the formula: *Fuel consumption x emission factor*. Fuel consumption shall include fuel consumed by the auxiliary power unit. Actual fuel consumption for each flight is to be used. If actual fuel consumption data is not available, a standardised tiered method should be used to estimate fuel consumption data based on best available information.

Monitoring of tonne-kilometre data

A verified tonne-kilometre report must be submitted to the Competent Authority before April 2011. Tonne-kilometre data has to be monitored and reported for the purpose of applying for an allocation of allowances. The amount of aviation activity shall be calculated in tonne-kilometres using the following formula: *tonne-kilometres = distance x payload*, where *distance* means the great circle distance between the airport of departure and the airport of arrival plus an additional fixed factor of 95 km; and *payload* means the total mass of freight, mail, passengers and baggage. Crew members are excluded. Tonne-kilometre data will include:

- number of flights per airport pair;
- number of passenger-kilometres per airport pair;
- number of tonne-kilometres per airport pair;
- chosen method for calculation of mass for passengers and checked baggage; and
- total number of tonne-kilometres for all flights performed during the year.

Verification of tonne-kilometre and emissions data

Airline operators have to appoint an accredited verifier for the tonne-kilometre report as well as for their annual emissions report to check the data underlying the annual report and conformance with the approved monitoring plan of their procedures for calculating tonne-kilometres and emissions. The verification process should address the reliability, credibility and accuracy of monitoring systems and the reported data and information relating to emissions.

The verifier shall in particular ascertain that only flights actually performed and falling within the ETS have been taken into account. In addition, the verifier shall ascertain that the payload reported by the aircraft operator corresponds to records on payloads kept by that operator for safety purposes. To be able to show and ensure compliance and to be able to reconstruct emissions data reported, the operator shall keep records of all control activities and of the information for at least ten years after the submission of the annual emissions report.

The Green Logistics Consultants Group is a global collaborative network of experts and researchers in the field of sustainable transport.

Altimedès Consulting, a Brussels based management consulting firm, assist aircraft operators to prepare for the EU Emission Trading Scheme and to integrate emission data and emission trading aspects into their operational and financial decision making processes.

A handbook explaining the EU ETS and best practices for aircraft operators will be published by Altimedès Consulting in June 2009.