



Q & A on emissions monitoring and reporting requirements under the EU ETS

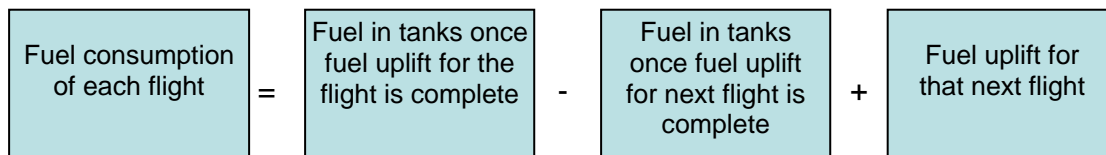
➤ Why do I need to monitor and report emissions data?

- At the start of each year (on 30 April, as from 2013), an airline must “pay” for its emissions in the previous year by surrendering allowances.
- In order to determine how many allowances have to be surrendered, aircraft operators have to monitor their CO₂ emissions for each flight covered by the scheme.
- Emissions data must be collected starting in 2010 and every year thereafter.
- The data must be reported to the administering Member State by 31 March of each year (from 2011).
- An accredited verifier must verify each data submission before it can be submitted to the administering Member State. In order for the verifier to conduct the necessary checks an airline will most likely be required to keep all the underlying data for at least 10 years.

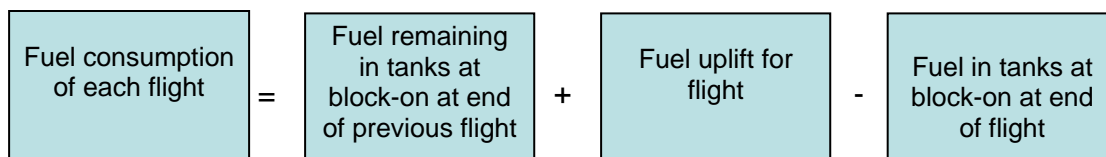
➤ What emissions data must be monitored?

- The Directive determines that emissions are calculated by using the formula: *fuel consumption (t) x emission factor*.
- A separate calculation shall be made for each flight and for each fuel.
- Fuel consumption “shall include fuel consumed by the auxiliary power unit”.
- Aircraft operators shall choose for each aircraft type which of the two methods they will use to calculate actual fuel consumption:

Method A



Method B



- To obtain the CO₂ emissions of each flight the fuel consumption has to be multiplied by the standard aviation fuels emission factors of the monitoring and reporting guidelines. The emission factor for jet kerosene is 3.15 tCO₂/tfuel. For alternative fuels activity specific emission factors have to be determined according to the procedure specified in the guidelines.
- Fuel uplift may be determined based on measurement by the fuel supplier, or using aircraft on-board measurement systems. Fuel contained in tanks may be determined using aircraft on-board measurement systems.
- The data may be taken from the fuel supplier, the mass and balance documentation or transmitted electronically from the aircraft to the aircraft operator.
- If the amount of fuel uplift (or the amount of fuel remaining in the tanks) is determined in units of volume (litres or m³), the aircraft operator shall convert this to mass by using actual density values.
- This should be done using on-board measurement systems. If not available, alternative methods may be used:
 - Actual density provided by the fuel supplier.
 - Or, if not available, the actual density shall be determined from the fuel temperature during the uplift using standard density-temperature correlation tables.
 - Only if actual values are not available a standard density factor of 0.8 kg/litre shall be applied (but agreement from the competent authority is needed).

➤ Do I need to provide an uncertainty assessment?

- Aircraft operators are not required to carry out a uncertainty assessment provided that they identify:
 - The sources of uncertainty.
 - Their associated level of uncertainty
 - Fuel consumption has to be determined with a maximum uncertainty of less than $\pm 5.0\%$ for aircraft operators with <50.000 tonnes CO₂ per trading period.
 - Fuel consumption has to be determined with a maximum uncertainty of less than $\pm 2.5\%$ for aircraft operators with >50.000 tonnes CO₂ per trading period.
- No further proof of the associated uncertainty levels is required:
 - Where fuel uplifts are solely determined on data provided by the fuel suppliers.
 - Where on-board systems are used for the measuring of fuel uplift they are supported by calibration certificates. If such certificates are not available the aircraft operator shall:
 - Provide aircraft manufacturer's specifications determining uncertainty levels of on-board systems.
 - Provide evidence of carrying out routine checks of the satisfactory operation of fuel measurement systems.

- Aircraft operators shall regularly carry out cross-checks between uplift quantity as provided by fuel suppliers and as indicated on on-board system.

➤ How should the monitored emissions data be reported?

- The annual emission report should include the following information:
 - Changes and deviations from the approved monitoring plan.
 - Aircraft registration numbers and types of aircraft used by aircraft operator.
 - Total number of flights covered by the report.
 - Fuel consumption data, reported on different aggregated levels:
 - Total fuel consumption and total aggregated emissions from all flights covered by the scheme, by aircraft type (source stream) and by fuel type; and
 - Total aggregated emissions from:
 - All flights which departed from an aerodrome situated in a Member State and arrived at an aerodrome situated in the same Member State (=domestic flights).
 - All other flights (international flights both intra and extra EU)
 - Aggregated emissions from:
 - Domestic flights per Member State
 - Departing international flights (intra-EU and third countries) per Member State (For every third country aggregated emissions should be reported).
 - Arriving international flights from third countries per Member State (For every third country aggregated emissions should be reported).
- An annex to the annual emissions report should include the following information (The aircraft operator may request that this annex is treated as confidential information).
 - Annual emissions and annual number of flights per aerodrome pair
 - The monitoring and reporting guidelines include a reporting format that aircraft operators shall use. The Commission is planning to publish an electronic template for submission of the emissions report (not yet available).

➤ When should the emissions data be monitored and reported?

- Data must be collected throughout the year starting in 2010 and each year thereafter.
- By 31 March of each year, emissions data for the previous year must be verified and submitted to the administering Member State.
- As from 2013, by 30 April of each year, the operators must surrender allowances to cover the previous year's emissions.