

Commission Regulation (EU) No 601/2012 of 21 June 2012 on the monitoring and reporting of greenhouse gas emissions pursuant to Directive 2003/87/EC of the European Parliament and of the Council (Text with EEA relevance) (repealed)

## CHAPTER IV

### **MONITORING OF EMISSIONS AND TONNE-KILOMETRE DATA FROM AVIATION**

#### *Article 50*

#### **General provisions**

1 Each aircraft operator shall monitor and report emissions from aviation activities for all flights included in Annex I to Directive 2003/87/EC that are performed by that aircraft operator during the reporting period and for which the aircraft operator is responsible.

To that end, the aircraft operator shall attribute all flights to the calendar year according to the time of departure measured in Coordinated Universal Time.

2 The aircraft operator intending to apply for an allocation of allowances free of charge pursuant to Articles 3e or 3f of Directive 2003/87/EC shall also monitor tonne-kilometre data for the same flights during the respective monitoring years.

3 For the purpose of identifying the unique aircraft operator referred to in point (o) of Article 3 of Directive 2003/87/EC that is responsible for a flight, the call sign used for air traffic control purposes, shall be used. The call sign shall be one of the following:

- a the ICAO designator laid down in box 7 of the flight plan;
- b where the ICAO designator of the aircraft operator is not available, the registration markings of the aircraft.

4 Where the identity of the aircraft operator is not known, the competent authority shall consider the owner of the aircraft as aircraft operator unless it proves the identity the aircraft operator responsible.

#### *Article 51*

#### **Submission of monitoring plans**

1 At the latest four months before an aircraft operator commences aviation activities covered by Annex I to Directive 2003/87/EC, it shall submit to the competent authority a monitoring plan for the monitoring and reporting of emissions in accordance with Article 12.

By way of derogation from the first subparagraph, an aircraft operator that performs an aviation activity covered by Annex I to Directive 2003/87/EC for the first time that could not be foreseen four months in advance of the activity, shall submit a monitoring plan to the competent authority without undue delay, but no later than six weeks after performance of that activity. The aircraft operator shall provide adequate justification to the competent authority why a monitoring plan could not be submitted four months in advance of the activity.

---

*Status: This is the original version as it was originally adopted in the EU. This legislation may since have been updated - see the latest available (revised) version*

---

Where the administering Member State referred to in Article 18a of Directive 2003/87/EC is not known in advance, the aircraft operator shall without undue delay submit the monitoring plan when information on the competent authority of the administering Member State becomes available.

2 Where the aircraft operator is intending to apply for an allocation of allowances free of charge pursuant to Articles 3e or 3f of Directive 2003/87/EC, it shall also submit a monitoring plan for the monitoring and reporting of tonne-kilometre data. That monitoring plan shall be submitted at the latest four months prior to the start of one of the following:

- a the monitoring year mentioned in Article 3e(1) of Directive 2003/87/EC for applications pursuant to that Article;
- b the second calendar year of the period referred to in Article 3c(2) of Directive 2003/87/EC for applications pursuant to Article 3f of that Directive.

#### *Article 52*

#### **Monitoring methodology for emissions from aviation activities**

1 Each aircraft operator shall determine the annual CO<sub>2</sub> emissions from aviation activities by multiplying the annual consumption of each fuel expressed in tonnes by the respective emission factor.

2 Each aircraft operator shall determine the fuel consumption for each flight and for each fuel, including fuel consumed by the auxiliary power unit. For that purpose, the aircraft operator shall use one of the methods laid down in section 1 of Annex III. The aircraft operator shall choose the method which provides for the most complete and timely data combined with the lowest uncertainty without incurring unreasonable costs.

3 Each aircraft operator shall determine the fuel uplift referred to in section 1 of Annex III based on one of the following:

- a the measurement by the fuel supplier, as documented in the fuel delivery notes or invoices for each flight;
- b data from aircraft onboard measurement systems recorded in the mass and balance documentation, in the aircraft technical log or transmitted electronically from the aircraft to the aircraft operator.

4 The aircraft operator shall determine fuel contained in the tank using data from aircraft onboard measurement systems and recorded in the mass and balance documentation, in the aircraft technical log or transmit it electronically from the aircraft to the aircraft operator.

5 Aircraft operators shall apply tier 2 as set out in section 2 of Annex III.

However, aircraft operators having reported average annual emissions over the trading period immediately preceding the current trading period, which were equal to or less than 50 000 tonnes of fossil CO<sub>2</sub> may apply as a minimum tier 1 as defined in section 2 of Annex III. All aircraft operators may apply as a minimum tier 1 as defined in section 2 of Annex III for source streams jointly corresponding to less than 5 000 tonnes of fossil CO<sub>2</sub> per year or less than 10 %, up to a maximum contribution of 100 000 tonnes of fossil CO<sub>2</sub> per year, whichever is highest in terms of absolute value. Where, for the purposes of this subparagraph reported emissions are not available or no longer applicable, the aircraft operator may use a conservative estimate or projection to determine the average annual emissions.

6 Where the amount of fuel uplift or the amount of fuel remaining in the tanks is determined in units of volume, expressed in litres, the aircraft operator shall convert that amount from volume to mass by using actual density values. The aircraft operator shall determine the actual density by using one of the following:

- a on-board measurement systems;
- b the density measured by the fuel supplier at fuel uplift and recorded on the fuel invoice or delivery note.

The actual density shall be expressed in kg/litre and determined for the applicable temperature for a specific measurement.

In cases for which actual density values are not available, a standard density factor of 0,8 kg/litre shall be applied upon approval by the competent authority.

7 For the purposes of the calculation referred to in paragraph 1, the aircraft operator shall use the default emission factors set out in Table 2 in Annex III.

For reporting purposes, that approach shall be considered as tier 1. For fuels not listed in that table, the aircraft operator shall determine the emission factor in accordance with Article 32, considered as tier 2. For such fuels, the net calorific value shall be determined and reported as a memo-item.

8 By way of derogation from paragraph 7, the aircraft operator may, upon approval by the competent authority, derive the emission factor or the carbon content, on which it is based, or the net calorific value for commercially traded fuels from the purchasing records for the respective fuel provided by the fuel supplier, provided that those have been derived based on internationally accepted standards and the emission factors listed in Table 2 in Annex III cannot be applied.

### *Article 53*

#### **Specific provisions for biomass**

Article 39 shall apply accordingly to the determination of the biomass fraction of a mixed fuel.

Notwithstanding Article 39(2), the competent authority shall allow the use of a methodology uniformly applicable in all Member States for the determination of the biomass fraction, as appropriate.

Under that methodology, the biomass fraction, net calorific value and emission factor or carbon content of the fuel used in an EU ETS aviation activity listed in Annex I to Directive 2003/87/EC shall be determined using fuel purchase records.

The methodology shall be based on the guidelines provided by the Commission to facilitate its consistent application in all Member States.

The use of biofuels for aviation shall be assessed in accordance with Article 18 of Directive 2009/28/EC.

---

*Status: This is the original version as it was originally adopted in the EU. This legislation may since have been updated - see the latest available (revised) version*

---

## Article 54

### Small emitters

1 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 25 000 tonnes CO<sub>2</sub> per year shall be considered small emitters.

2 By way of derogation from Article 52, small emitters may estimate the fuel consumption using tools implemented by Eurocontrol or another relevant organisation, which can process all relevant air traffic information corresponding to that available to Eurocontrol and avoid any underestimations of emissions.

The applicable tools may only be used if they are approved by the Commission including the application of correction factors to compensate for any inaccuracies in the modelling methods.

3 By way of derogation from Article 12, a small emitter who intends to make use of any of the tools referred to in paragraph 2 of this Article may submit only the following information in the monitoring plan for emissions:

- a information required pursuant to point 1 of section 2 of Annex I;
- b evidence that the thresholds for small emitters set out in paragraph 1 of this Article are met;
- c the name of or reference to the tool as referred to in paragraph 2 of this Article that will be used for estimating the fuel consumption.

A small emitter shall be exempted from the requirement to submit the supporting documents referred to in the third subparagraph of Article 12(1).

4 Where an aircraft operator uses any of the tools referred to in paragraph 2 and exceeds the thresholds referred to in paragraph 1 during a reporting year, the aircraft operator shall notify the competent authority thereof without undue delay.

The aircraft operator shall, without undue delay, submit a significant modification of the monitoring plan within the meaning of point (vi) of Article 15(4)(a) to the competent authority for approval.

However, the competent authority shall allow that the aircraft operator continues to use a tool referred to in paragraph 2 provided that that aircraft operator demonstrates to the satisfaction of the competent authority that the thresholds referred to in paragraph 1 have not already been exceeded within the past five reporting periods and will not be exceeded again from the following reporting period onwards.

## Article 55

### Sources of uncertainty

1 The aircraft operator shall identify sources of uncertainty and their associated levels of uncertainty. The aircraft operator shall consider that information when selecting the monitoring methodology pursuant to Article 52(2).

2 Where the aircraft operator determines fuel uplifts in accordance with point (a) of Article 52(3), it shall not be required to provide further proof of the associated uncertainty level.

3 Where on-board systems are used for measuring fuel uplift or fuel contained in tanks in accordance with point (b) of Article 52(3), the level of uncertainty associated with fuel measurements shall be supported by all of the following:

- a the aircraft manufacturer's specifications determining uncertainty levels of on-board fuel measurement systems;
- b evidence of carrying out routine checks of the satisfactory operation of the fuel measurement systems.

4 Notwithstanding paragraphs 2 and 3, the aircraft operator may base uncertainties for all other components of the monitoring methodology on conservative expert judgement taking into account the estimated number of flights within the reporting period.

5 The aircraft operator shall regularly perform suitable control activities, including cross-checks between the fuel uplift quantity as provided by invoices and the fuel uplift quantity indicated by on-board measurement, and take corrective action if notable deviations are observed.

#### *Article 56*

#### **Determination of tonne-kilometre data**

1 The aircraft operator intending to apply for an allocation of allowances free of charge pursuant to Articles 3e or 3f of Directive 2003/87/EC shall monitor tonne-kilometre data for all flights covered by Annex I to Directive 2003/87/EC in the monitoring years relevant for such applications.

2 The aircraft operator shall calculate tonne-kilometre data by multiplying the distance, calculated in accordance with section 4 of Annex III and expressed in kilometres (km), with the payload, calculated as the sum of the mass of freight, mail, passengers and checked baggage expressed in tonnes (t).

3 The aircraft operator shall determine the mass of freight and mail on the basis of the actual or standard mass contained in the mass and balance documentation for the relevant flights.

Aircraft operators not required to have a mass and balance documentation shall propose in the monitoring plan a suitable methodology for determining the mass of freight and mail, while excluding the tare weight of all pallets and containers that are not payload and the service weight.

4 The aircraft operator shall determine the mass of passengers using one of the following tiers:

- a Tier 1: consisting in a default value of 100 kg for each passenger including their checked baggage;
- b Tier 2: consisting in the mass for passengers and checked baggage contained in the mass and balance documentation for each flight.

However, the tier selected shall apply to all flights in the monitoring years relevant for applications pursuant to Articles 3e or 3f of Directive 2003/87/EC.