

ANNEX IV

PRINCIPLES FOR MONITORING AND REPORTING REFERRED TO IN ARTICLE 14(1)

[^{F1}PART A —**Monitoring and reporting of emissions from stationary installations]**

Monitoring of carbon dioxide emissions

Emissions shall be monitored either by calculation or on the basis of measurement.

Calculation

Calculations of emissions shall be performed using the formula:

Activity data × Emission factor × Oxidation factor

Activity data (fuel used, production rate etc.) shall be monitored on the basis of supply data or measurement.

Accepted emission factors shall be used. Activity-specific emission factors are acceptable for all fuels. Default factors are acceptable for all fuels except non-commercial ones (waste fuels such as tyres and industrial process gases). Seam-specific defaults for coal, and EU-specific or producer country-specific defaults for natural gas shall be further elaborated. IPCC default values are acceptable for refinery products. The emission factor for biomass shall be zero.

If the emission factor does not take account of the fact that some of the carbon is not oxidised, then an additional oxidation factor shall be used. If activity-specific emission factors have been calculated and already take oxidation into account, then an oxidation factor need not be applied.

Default oxidation factors developed pursuant to Directive 96/61/EC shall be used, unless the operator can demonstrate that activity-specific factors are more accurate.

A separate calculation shall be made for each activity, installation and for each fuel.

Measurement

Measurement of emissions shall use standardised or accepted methods, and shall be corroborated by a supporting calculation of emissions.

Monitoring of emissions of other greenhouse gases

[^{F2}Standardised or accepted methods, developed by the Commission in collaboration with all relevant stakeholders and adopted pursuant to Article 14(1), shall be used.]

Textual Amendments

- F2** Substituted by [Directive \(EU\) 2018/410 of the European Parliament and of the Council of 14 March 2018 amending Directive 2003/87/EC to enhance cost-effective emission reductions and low-carbon investments, and Decision \(EU\) 2015/1814 \(Text with EEA relevance\).](#)

Reporting of emissions

Each operator shall include the following information in the report for an installation:

- A. Data identifying the installation, including:
- Name of the installation;
 - Its address, including postcode and country;

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- Type and number of Annex I activities carried out in the installation;
 - Address, telephone, fax and email details for a contact person; and
 - Name of the owner of the installation, and of any parent company.
- B. For each Annex I activity carried out on the site for which emissions are calculated:
- Activity data;
 - Emission factors;
 - Oxidation factors;
 - Total emissions; and
 - Uncertainty.
- C. For each Annex I activity carried out on the site for which emissions are measured:
- Total emissions;
 - Information on the reliability of measurement methods; and
 - Uncertainty.
- D. For emissions from combustion, the report shall also include the oxidation factor, unless oxidation has already been taken into account in the development of an activity-specific emission factor.

Member States shall take measures to coordinate reporting requirements with any existing reporting requirements in order to minimise the reporting burden on businesses.

Textual Amendments

- F1** Inserted by [Directive 2008/101/EC of the European Parliament and of the Council of 19 November 2008 amending Directive 2003/87/EC so as to include aviation activities in the scheme for greenhouse gas emission allowance trading within the Community \(Text with EEA relevance\)](#).

[^{F1}PART B —

Monitoring and reporting of emissions from aviation activities

Monitoring of carbon dioxide emissions

Emissions shall be monitored by calculation. Emissions shall be calculated using the formula:

Fuel consumption × emission factor

Fuel consumption shall include fuel consumed by the auxiliary power unit. Actual fuel consumption for each flight shall be used wherever possible and shall be calculated using the formula:

Amount of fuel contained in aircraft tanks once fuel uplift for the flight is complete – amount of fuel contained in aircraft tanks once fuel uplift for subsequent flight is complete + fuel uplift for that subsequent flight.

If actual fuel consumption data are not available, a standardised tiered method shall be used to estimate fuel consumption data based on best available information.

Default IPCC emission factors, taken from the 2006 IPCC Inventory Guidelines or subsequent updates of these Guidelines, shall be used unless activity-specific emission factors identified by

independent accredited laboratories using accepted analytical methods are more accurate. The emission factor for biomass shall be zero.

A separate calculation shall be made for each flight and for each fuel.

Reporting of emissions

Each aircraft operator shall include the following information in its report under Article 14(3):

- A. Data identifying the aircraft operator, including:
- name of the aircraft operator,
 - its administering Member State,
 - its address, including postcode and country and, where different, its contact address in the administering Member State,
 - the aircraft registration numbers and types of aircraft used in the period covered by the report to perform the aviation activities listed in Annex I for which it is the aircraft operator,
 - the number and issuing authority of the air operator certificate and operating licence under which the aviation activities listed in Annex I for which it is the aircraft operator were performed,
 - address, telephone, fax and e-mail details for a contact person, and
 - name of the aircraft owner.
- B. For each type of fuel for which emissions are calculated:
- fuel consumption,
 - emission factor,
 - total aggregated emissions from all flights performed during the period covered by the report which fall within the aviation activities listed in Annex I for which it is the aircraft operator,
 - aggregated emissions from:
 - all flights performed during the period covered by the report which fall within the aviation activities listed in Annex I for which it is the aircraft operator and which departed from an aerodrome situated in the territory of a Member State and arrived at an aerodrome situated in the territory of the same Member State,
 - all other flights performed during the period covered by the report which fall within the aviation activities listed in Annex I for which it is the aircraft operator,
 - aggregated emissions from all flights performed during the period covered by the report which fall within the aviation activities listed in Annex I for which it is the aircraft operator and which:
 - departed from each Member State, and
 - arrived in each Member State from a third country,
 - uncertainty.

Monitoring of tonne-kilometre data for the purpose of Articles 3e and 3f

For the purpose of applying for an allocation of allowances in accordance with Article 3e(1) or Article 3f(2), the amount of aviation activity shall be calculated in tonne-kilometres using the following formula:

tonne-kilometres = distance × payload

where:

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‘distance’ means the great circle distance between the aerodrome of departure and the aerodrome of arrival plus an additional fixed factor of 95 km; and

‘payload’ means the total mass of freight, mail and passengers carried.

For the purposes of calculating the payload:

- the number of passengers shall be the number of persons on-board excluding crew members,
- an aircraft operator may choose to apply either the actual or standard mass for passengers and checked baggage contained in its mass and balance documentation for the relevant flights or a default value of 100 kg for each passenger and his checked baggage.

Reporting of tonne-kilometre data for the purpose of Articles 3e and 3f

Each aircraft operator shall include the following information in its application under Article 3e(1) or Article 3f(2):

- A. Data identifying the aircraft operator, including:
- name of the aircraft operator,
 - its administering Member State,
 - its address, including postcode and country and, where different, its contact address in the administering Member State,
 - the aircraft registration numbers and types of aircraft used during the year covered by the application to perform the aviation activities listed in Annex I for which it is the aircraft operator,
 - the number and issuing authority of the air operator certificate and operating licence under which the aviation activities listed in Annex I for which it is the aircraft operator were performed,
 - address, telephone, fax and e-mail details for a contact person, and
 - name of the aircraft owner.
- B. Tonne-kilometre data:
- number of flights by aerodrome pair,
 - number of passenger-kilometres by aerodrome pair,
 - number of tonne-kilometres by aerodrome pair,
 - chosen method for calculation of mass for passengers and checked baggage,
 - total number of tonne-kilometres for all flights performed during the year to which the report relates falling within the aviation activities listed in Annex I for which it is the aircraft operator.]