

Commission Implementing Regulation (EU) 2018/2066 of 19 December 2018 on the monitoring and reporting of greenhouse gas emissions pursuant to Directive 2003/87/EC of the European Parliament and of the Council and amending Commission Regulation (EU) No 601/2012 (Text with EEA relevance)

CHAPTER I

GENERAL PROVISIONS

SECTION 1

Subject matter and definitions

Article 1

Subject matter

This Regulation lays down rules for the monitoring and reporting of greenhouse gas emissions and activity data pursuant to Directive 2003/87/EC in the trading period of the Union emissions trading system commencing on 1 January 2021 and subsequent trading periods.

Article 2

Scope

This Regulation shall apply to the monitoring and reporting of greenhouse gas emissions specified in relation to the activities listed in Annex I to Directive 2003/87/EC and activity data from stationary installations, from aviation activities and to the monitoring and reporting of tonne-kilometre data from aviation activities.

It shall apply to emissions and activity data occurring from 1 January 2021.

Article 3

Definitions

For the purposes of this Regulation, the following definitions shall apply:

- (1) ‘activity data’ means data on the amount of fuels or materials consumed or produced by a process relevant for the calculation-based monitoring methodology, expressed in terajoules, mass in tonnes or (for gases) volume in normal cubic metres, as appropriate;
- (2) ‘trading period’ means a period as referred to in Article 13 of Directive 2003/87/EC;
- (3) ‘tonne-kilometre’ means a tonne of payload carried a distance of one kilometre;
- (4) ‘source stream’ means any of the following:

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- (a) a specific fuel type, raw material or product giving rise to emissions of relevant greenhouse gases at one or more emission sources as a result of its consumption or production;
 - (b) a specific fuel type, raw material or product containing carbon and included in the calculation of greenhouse gas emissions using a mass-balance methodology;
- (5) ‘emission source’ means a separately identifiable part of an installation or a process within an installation, from which relevant greenhouse gases are emitted or, for aviation activities, an individual aircraft;
 - (6) ‘uncertainty’ means a parameter, associated with the result of the determination of a quantity, that characterises the dispersion of the values that could reasonably be attributed to the particular quantity, including the effects of systematic as well as of random factors, expressed in per cent, and describes a confidence interval around the mean value comprising 95 % of inferred values taking into account any asymmetry of the distribution of values;
 - (7) ‘calculation factors’ means net calorific value, emission factor, preliminary emission factor, oxidation factor, conversion factor, carbon content or biomass fraction;
 - (8) ‘tier’ means a set requirement used for determining activity data, calculation factors, annual emission and annual average hourly emission, and payload;
 - (9) ‘inherent risk’ means the susceptibility of a parameter in the annual emissions report or tonne-kilometre report to misstatements that could be material, individually or when aggregated with other misstatements, before taking into consideration the effect of any related control activities;
 - (10) ‘control risk’ means the susceptibility of a parameter in the annual emissions report or tonne-kilometre report to misstatements that could be material, individually or when aggregated with other misstatements, and not prevented or detected and corrected on a timely basis by the control system;
 - (11) ‘combustion emissions’ means greenhouse gas emissions occurring during the exothermic reaction of a fuel with oxygen;
 - (12) ‘reporting period’ means a calendar year during which emissions have to be monitored and reported or, for tonne-kilometre data, the monitoring year as referred to in Articles 3e and 3f of Directive 2003/87/EC;
 - (13) ‘emission factor’ means the average emission rate of a greenhouse gas relative to the activity data of a source stream assuming complete oxidation for combustion and complete conversion for all other chemical reactions;
 - (14) ‘oxidation factor’ means the ratio of carbon oxidised to CO₂ as a consequence of combustion to the total carbon contained in the fuel, expressed as a fraction, considering carbon monoxide (CO) emitted to the atmosphere as the molar equivalent amount of CO₂;
 - (15) ‘conversion factor’ means the ratio of carbon emitted as CO₂ to the total carbon contained in the source stream before the emitting process takes place, expressed as a fraction, considering CO emitted to the atmosphere as the molar equivalent amount of CO₂;

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- (16) ‘accuracy’ means the closeness of the agreement between the result of a measurement and the true value of the particular quantity or a reference value determined empirically using internationally accepted and traceable calibration materials and standard methods, taking into account both random and systematic factors;
- (17) ‘calibration’ means the set of operations, which establishes, under specified conditions, the relations between values indicated by a measuring instrument or measuring system, or values represented by a material measure or a reference material and the corresponding values of a quantity realised by a reference standard;
- (18) ‘flight’ means flight as defined in point 1(1) of the Annex to Decision 2009/450/EC;
- (19) ‘passengers’ means the persons onboard the aircraft during a flight excluding its on duty crew members;
- (20) ‘conservative’ means that a set of assumptions is defined in order to ensure that no under-estimation of annual emissions or over-estimation of tonne-kilometres occurs;
- (21) ‘biomass’ means the biodegradable fraction of products, waste and residues from biological origin from agriculture (including vegetal and animal substances), forestry and related industries including fisheries and aquaculture, as well as the biodegradable fraction of industrial and municipal waste; it includes bioliquids and biofuels;
- (22) ‘bioliquids’ means liquid fuel for energy purposes other than for transport, including electricity and heating and cooling, produced from biomass;
- (23) ‘biofuels’ means liquid or gaseous fuel for transport produced from biomass;
- (24) ‘legal metrological control’ means the control of the measurement tasks intended for the field of application of a measuring instrument, for reasons of public interest, public health, public safety, public order, protection of the environment, the levying of taxes and duties, the protection of consumers and fair trading;
- (25) ‘maximum permissible error’ means the error of measurement allowed as specified in Annex I and instrument-specific annexes to Directive 2014/32/EU of the European Parliament and of the Council⁽¹⁾, or national rules on legal metrological control, as appropriate;
- (26) ‘data-flow activities’ mean activities related to the acquisition, processing and handling of data that are needed to draft an emissions report from primary source data;
- (27) ‘tonnes of CO_{2(e)}’ means metric tonnes of CO₂ or CO_{2(e)};
- (28) ‘CO_{2(e)}’ means any greenhouse gas, other than CO₂, listed in Annex II to Directive 2003/87/EC with an equivalent global-warming potential as CO₂;
- (29) ‘measurement system’ means a complete set of measuring instruments and other equipment, such as sampling and data-processing equipment, used to determine variables such as the activity data, the carbon content, the calorific value or the emission factor of the greenhouse gas emissions;
- (30) ‘net calorific value’ (NCV) means the specific amount of energy released as heat when a fuel or material undergoes complete combustion with oxygen under standard conditions, less the heat of vaporisation of any water formed;
- (31) ‘process emissions’ means greenhouse gas emissions other than combustion emissions occurring as a result of intentional and unintentional reactions between substances or their transformation, including the chemical or electrolytic reduction of metal ores,

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the thermal decomposition of substances and the formation of substances for use as product or feedstock;

- (32) ‘commercial standard fuel’ means the internationally standardised commercial fuels that exhibit a 95 % confidence interval of not more than 1 % for their specified calorific value, including gas oil, light fuel oil, gasoline, lamp oil, kerosene, ethane, propane, butane, jet kerosene (jet A1 or jet A), jet gasoline (jet B) and aviation gasoline (AvGas);
- (33) ‘batch’ means an amount of fuel or material representatively sampled and characterised, and transferred as one shipment or continuously over a specific period of time;
- (34) ‘mixed fuel’ means a fuel which contains both biomass and fossil carbon;
- (35) ‘mixed material’ means a material which contains both biomass and fossil carbon;
- (36) ‘preliminary emission factor’ means the assumed total emission factor of a fuel or material based on the carbon content of its biomass fraction and its fossil fraction before multiplying it by the fossil fraction to produce the emission factor;
- (37) ‘fossil fraction’ means the ratio of fossil carbon to the total carbon content of a fuel or material, expressed as a fraction;
- (38) ‘biomass fraction’ means the ratio of carbon stemming from biomass to the total carbon content of a fuel or material, expressed as a fraction;
- (39) ‘energy balance method’ means a method to estimate the amount of energy used as fuel in a boiler, calculated as the sum of utilisable heat and all relevant losses of energy by radiation, transmission and via the flue gas;
- (40) ‘continuous emission measurement’ means a set of operations having the objective of determining the value of a quantity by means of periodic measurements, applying either measurements in the stack or extractive procedures with a measuring instrument located close to the stack, whilst excluding measurement methodologies based on the collection of individual samples from the stack;
- (41) ‘inherent CO₂’ means CO₂ which is part of a source stream;
- (42) ‘fossil carbon’ means inorganic and organic carbon that is not biomass;
- (43) ‘measurement point’ means the emission source for which continuous emission measurement systems (CEMS) are used for emission measurement, or the cross-section of a pipeline system for which the CO₂ flow is determined using continuous measurement systems;
- (44) ‘mass and balance documentation’ means the documentation specified in international or national implementation of the standards and recommended practices (SARPs) laid down in Annex 6 to the Convention on International Civil Aviation, signed in Chicago on 7 December 1944 and specified in Section 3 of Subpart C of Annex IV to Commission Regulation (EU) No 965/2012⁽²⁾, or equivalent applicable international rules;
- (45) ‘distance’ means the great-circle distance between the aerodrome of departure and the aerodrome of arrival, in addition to a fixed factor of 95 km;
- (46) ‘aerodrome of departure’ means the aerodrome at which a flight constituting an aviation activity listed in Annex I to Directive 2003/87/EC begins;

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- (47) ‘aerodrome of arrival’ means the aerodrome at which a flight constituting an aviation activity listed in Annex I to Directive 2003/87/EC ends;
- (48) ‘payload’ means the total mass of freight, mail, passengers and baggage carried onboard an aircraft during a flight;
- (49) ‘fugitive emissions’ means irregular or unintended emissions from sources that are not localised, or too diverse or too small to be monitored individually;
- (50) ‘aerodrome’ means aerodrome as defined in point 1(2) of the Annex to Decision 2009/450/EC;
- (51) ‘aerodrome pair’ means a pair constituted by the aerodrome of departure and the aerodrome of arrival;
- (52) ‘standard conditions’ means temperature of 273,15 K and pressure conditions of 101 325 Pa defining normal cubic metres (Nm³);
- (53) ‘storage site’ means storage site as defined in Article 3(3) of Directive 2009/31/EC;
- (54) ‘CO₂ capture’ means the activity of capturing from gas streams CO₂ that would otherwise be emitted, for the purposes of transport and geological storage in a storage site permitted under Directive 2009/31/EC;
- (55) ‘CO₂ transport’ means the transport of CO₂ by pipelines for geological storage in a storage site permitted under Directive 2009/31/EC;
- (56) ‘geological storage of CO₂’ means geological storage of CO₂ as defined in Article 3(1) of Directive 2009/31/EC;
- (57) ‘vented emissions’ means emissions deliberately released from an installation by provision of a defined point of emission;
- (58) ‘enhanced hydrocarbon recovery’ means the recovery of hydrocarbons in addition to those extracted by water injection or other means;
- (59) ‘proxy data’ means annual values which are empirically substantiated or derived from accepted sources and which an operator uses to substitute the activity data or the calculation factors for the purpose of ensuring complete reporting when it is not possible to generate all the required activity data or calculation factors in the applicable monitoring methodology;
- (60) ‘water column’ means water column as defined in Article 3(2) of Directive 2009/31/EC;
- (61) ‘leakage’ means leakage as defined in Article 3(5) of Directive 2009/31/EC;
- (62) ‘storage complex’ means storage complex as defined in Article 3(6) of Directive 2009/31/EC;
- (63) ‘transport network’ means transport network as defined in Article 3(22) of Directive 2009/31/EC.

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SECTION 2

General principles

Article 4

General obligation

Operators and aircraft operators shall carry out their obligations related to the monitoring and reporting of greenhouse gas emissions under Directive 2003/87/EC in accordance with the principles laid down in Articles 5 to 9.

Article 5

Completeness

Monitoring and reporting shall be complete and cover all process and combustion emissions from all emission sources and source streams belonging to activities listed in Annex I to Directive 2003/87/EC and other relevant activities included pursuant to Article 24 of that Directive, and of all greenhouse gases specified in relation to those activities, while avoiding double-counting.

Operators and aircraft operators shall take appropriate measures to prevent any data gaps within the reporting period.

Article 6

Consistency, comparability and transparency

1 Monitoring and reporting shall be consistent and comparable over time. To that end, operators and aircraft operators shall use the same monitoring methodologies and data sets, subject to changes and derogations approved by the competent authority.

2 Operators and aircraft operators shall obtain, record, compile, analyse and document monitoring data, including assumptions, references, activity data and calculation factors, in a transparent manner that enables the reproduction of the determination of emissions by the verifier and the competent authority.

Article 7

Accuracy

Operators and aircraft operators shall ensure that emission determination is neither systematically nor knowingly inaccurate.

They shall identify and reduce any source of inaccuracies as far as possible.

They shall exercise due diligence to ensure that the calculation and measurement of emissions exhibit the highest achievable accuracy.

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Article 8

Integrity of the methodology and of the emissions report

Operators and aircraft operators shall enable reasonable assurance of the integrity of emission data to be reported. They shall determine emissions using the appropriate monitoring methodologies set out in this Regulation.

Reported emission data and related disclosures shall be free from material misstatement as defined in Article 3(6) of Commission Implementing Regulation (EU) 2018/2067⁽³⁾, avoid bias in the selection and presentation of information, and provide a credible and balanced account of an installation's or aircraft operator's emissions.

In selecting a monitoring methodology, the improvements from greater accuracy shall be balanced against additional costs. Monitoring and reporting of emissions shall aim for the highest achievable accuracy, unless this is technically not feasible or incurs unreasonable costs.

Article 9

Continuous improvement

Operators and aircraft operators shall take account of the recommendations included in the verification reports issued pursuant to Article 15 of Directive 2003/87/EC in their consequent monitoring and reporting.

Article 10

Coordination

Where a Member State designates more than one competent authority pursuant to Article 18 of Directive 2003/87/EC, it shall coordinate the work carried out by those authorities pursuant to this Regulation.

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- (1) Directive 2014/32/EU of the European Parliament and of the Council of 26 February 2014 on the harmonisation of the laws of the Member States relating to the making available on the market of measuring instruments ([OJ L 96, 29.3.2014, p. 149](#)).
- (2) Commission Regulation (EU) No 965/2012 laying down technical requirements and administrative procedures related to air operations pursuant to Regulation (EC) No 216/2008 of the European Parliament and of the Council ([OJ L 296, 25.10.2012, p. 1](#)).
- (3) Commission Implementing Regulation (EU) 2018/2067 of 19 December 2018 on the verification of data and on the accreditation of verifiers pursuant to Directive 2003/87/EC of the European Parliament and of the Council (see page 94 of this Official Journal).

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Changes and effects yet to be applied to :

- Regulation amendment to earlier affecting provision S.I. 2020/1265, Sch. 4 by [S.I. 2020/1557 art. 35\(3\)-\(8\)](#)
- Regulation amendment to earlier affecting provision S.I. 2020/1265, Sch. 4 by [S.I. 2021/1455 art. 22\(2\)-\(9\)](#)
- Regulation amendment to earlier affecting provision S.I. 2020/1265, Sch. 4 by [S.I. 2022/1173 art. 13](#)
- Regulation amendment to earlier affecting provision S.I. 2020/1265, Sch. 4 by [S.I. 2023/850 art. 8\(2\)](#)
- Regulation amendment to earlier affecting provision S.I. 2020/1265, Sch. 7 para. 13 by [S.I. 2022/1173 art. 17\(3\)](#)
- Regulation modified by [S.I. 2020/1265 art. 24Sch. 4](#)
- Regulation modified by [S.I. 2020/1265 Sch. 7 para. 13](#)
- Regulation modified by 2019 c. 1, s. 77(4) (as substituted) by [2020 c. 14 Sch. 12 para. 7\(3\)](#)
- Regulation power to amend conferred by 2019 c. 1, ss. 76, 77 (as amended) by [2020 c. 14 Sch. 12 para. 4\(4\)\(b\)\(i\)7\(2\)\(b\)](#)
- Regulation power to amend conferred by 2019 c. 1, ss. 76, 77 (as amended) by [2020 c. 14 Sch. 12 para. 5\(b\)7\(2\)\(b\)](#)
- Regulation restricted by [S.I. 2020/1265 Sch. 8 para. 5\(3\)](#)