

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
Article 2	Scope
Article 3	Definitions

SECTION 2

General principles

Article 4	General obligation
Article 5	Completeness
Article 6	Consistency, comparability and transparency
Article 7	Accuracy
Article 8	Integrity of the methodology and of the emissions report
Article 9	Continuous improvement
Article 10	Coordination

CHAPTER II

MONITORING PLAN

SECTION 1

General rules

Article 11	General obligation
Article 12	Content and submission of the monitoring plan
Article 13	Standardised and simplified monitoring plans
Article 14	Modifications of the monitoring plan
Article 15	Approval of modifications of the monitoring plan
Article 16	Implementation and record-keeping of modifications

SECTION 2

Technical feasibility and unreasonable costs

Article 17	Technical feasibility
------------	-----------------------

Changes to legislation: There are outstanding changes not yet made to Commission Implementing Regulation (EU) 2018/2066. Any changes that have already been made to the legislation appear in the content and are referenced with annotations. (See end of Document for details) [View outstanding changes](#)

Article 18 Unreasonable costs

CHAPTER III

MONITORING OF EMISSIONS FROM STATIONARY INSTALLATIONS

SECTION 1

General provisions

- Article 19 Categorisation of installations, source streams and emission sources
- Article 20 Monitoring boundaries
- Article 21 Choice of the monitoring methodology
- Article 22 Monitoring methodology not based on tiers
- Article 23 Temporary changes to the monitoring methodology

SECTION 2

Calculation-based methodology

Subsection 1

General

- Article 24 Calculation of emissions under the standard methodology
- Article 25 Calculation of emissions under the mass balance methodology
- Article 26 Applicable tiers

Subsection 2

Activity data

- Article 27 Determination of activity data
- Article 28 Measurement systems under the operator's control
- Article 29 Measurement systems outside the operator's own control

Subsection 3

Calculation factors

- Article 30 Determination of calculation factors
- Article 31 Default values for calculation factors
- Article 32 Calculation factors based on analyses
- Article 33 Sampling plan
- Article 34 Use of laboratories
- Article 35 Frequencies for analyses

Subsection 4

Specific calculation factors

- Article 36 Emission factors for CO₂

Article 37 Oxidation and conversion factors

Subsection 5

Treatment of biomass

Article 38 Biomass source streams

Article 39 Determination of biomass and fossil fraction

SECTION 3

Measurement-based methodology

Article 40 Use of the measurement-based monitoring methodology

Article 41 Tier requirements

Article 42 Measurement standards and laboratories

Article 43 Determination of emissions

Article 44 Data aggregation

Article 45 Missing data

Article 46 Corroborating with calculation of emissions

SECTION 4

Special provisions

Article 47 Installations with low emissions

Article 48 Inherent CO₂

Article 49 Transferred CO₂

Article 50 Use or transfer of N₂O

CHAPTER IV

MONITORING OF EMISSIONS AND TONNE-KILOMETRE DATA FROM AVIATION

Article 51 General provisions

Article 52 Submission of monitoring plans

Article 53 Monitoring methodology for emissions from aviation activities

Article 54 Specific provisions for biomass

Article 55 Small emitters

Article 56 Sources of uncertainty

Article 57 Determination of tonne-kilometre data

CHAPTER V

DATA MANAGEMENT AND CONTROL

Article 58 Data flow activities

Article 59 Control system

Article 60 Quality assurance

Article 61 Quality assurance of information technology

Article 62 Segregation of duties

Article 63 Internal reviews and validation of data

Article 64 Corrections and corrective action

Changes to legislation: There are outstanding changes not yet made to Commission Implementing Regulation (EU) 2018/2066. Any changes that have already been made to the legislation appear in the content and are referenced with annotations. (See end of Document for details) [View outstanding changes](#)

Article 65	Out-sourced processes
Article 66	Treatment of data gaps
Article 67	Records and documentation

CHAPTER VI

REPORTING REQUIREMENTS

Article 68	Timing and obligations for reporting
Article 69	Reporting on improvements to the monitoring methodology
Article 70	Determination of emissions by the competent authority
Article 71	Access to information
Article 72	Rounding of data
Article 73	Ensuring consistency with other reporting

CHAPTER VII

INFORMATION TECHNOLOGY REQUIREMENTS

Article 74	Electronic data exchange formats
Article 75	Use of automated systems

CHAPTER VIII

FINAL PROVISIONS

Article 76	Amendments to Regulation (EU) No 601/2012
Article 77	Repeal of Regulation (EU) No 601/2012
Article 78	Entry into force and application
	Signature

ANNEX I

Minimum content of the monitoring plan (Article 12(1))

1. MINIMUM CONTENT OF THE MONITORING PAN FOR INSTALLATIONS
2. MINIMUM CONTENT OF MONITORING PLANS FOR AVIATION EMISSIONS
3. MINIMUM CONTENT OF MONITORING PLANS FOR TONNE-KILOMETRE DATA

ANNEX II

Tier definitions for calculation-based methodologies related to installations (Article 12(1))

1. DEFINITION OF TIERS FOR ACTIVITY DATA
2. DEFINITION OF TIERS FOR CALCULATION FACTORS FOR COMBUSTION EMISSIONS

Changes to legislation: There are outstanding changes not yet made to Commission Implementing Regulation (EU) 2018/2066. Any changes that have already been made to the legislation appear in the content and are referenced with annotations. (See end of Document for details) [View outstanding changes](#)

- 2.1 Tiers for emission factors
- 2.2 Tiers for net calorific value (NCV)
- 2.3 Tiers for oxidation factors
- 2.4 Tiers for biomass fraction
- 3. DEFINITION OF TIERS FOR CALCULATION FACTORS FOR MASS BALANCES
 - 3.1 Tiers for carbon content
 - 3.2 Tiers for net calorific values
 - 3.3 Tiers for biomass fraction
- 4. DEFINITION OF TIERS FOR THE CALCULATION FACTORS FOR PROCESS EMISSIONS...
 - 4.1 Tiers for the emission factor using Method A:
 - 4.2 Tiers for the conversion factor using Method A:
 - 4.3 Tiers for the emission factor using Method B:
 - 4.4 Tiers for the conversion factor using Method B:
- 5. DEFINITION OF TIERS FOR CALCULATION FACTORS FOR CO₂ PROCESS EMISSIONS...
 - 5.1 Tiers for emission factors
 - 5.2 Tiers for net calorific value (NCV)
 - 5.3 Tiers for conversion / oxidation factors
 - 5.4 Tiers for biomass fraction

ANNEX III

Monitoring methodologies for aviation (Article 53 and Article 57)

- 1. CALCULATION METHODOLOGIES FOR THE DETERMINATION OF GHGS IN THE AVIATION...
 - Method A:
 - Method B:
- 2. EMISSION FACTORS FOR STANDARD FUELS
- 3. CALCULATION OF GREAT CIRCLE DISTANCE

ANNEX IV

Activity-specific monitoring methodologies related to installations (Article 20(2))

- 1. SPECIFIC MONITORING RULES FOR EMISSIONS FROM COMBUSTION PROCESSES
 - A. Scope
 - B. Specific monitoring rules
 - C. Flue gas scrubbing
 - C.1 Desulphurisation
 - Method A: Emission factor
 - Method B: Emission factor
 - C.2 De-NO_x
 - D. Flares

Changes to legislation: There are outstanding changes not yet made to Commission Implementing Regulation (EU) 2018/2066. Any changes that have already been made to the legislation appear in the content and are referenced with annotations. (See end of Document for details) [View outstanding changes](#)

2. REFINING OF MINERAL OIL AS LISTED IN ANNEX I TO...
 - A. Scope
 - B. Specific monitoring rules
3. PRODUCTION OF COKE AS LISTED IN ANNEX I TO DIRECTIVE...
 - A. Scope
 - B. Specific monitoring rules
4. METAL ORE ROASTING AND SINTERING AS LISTED IN ANNEX I...
 - A. Scope
 - B. Specific monitoring rules
5. PRODUCTION OF PIG IRON AND STEEL AS LISTED IN ANNEX...
 - A. Scope
 - B. Specific monitoring rules
6. PRODUCTION OR PROCESSING OF FERROUS AND NON-FERROUS METALS AS LISTED...
 - A. Scope
 - B. Specific monitoring rules
7. CO₂ EMISSIONS FROM PRODUCTION OR PROCESSING OF PRIMARY ALUMINIUM AS...
 - A. Scope
 - B. Specific monitoring rules
8. PFC EMISSIONS FROM PRODUCTION OR PROCESSING OF PRIMARY ALUMINIUM AS...
 - A. Scope
 - B. Determination of PFC emissions
 - Calculation Method A – Slope Method:
 - Calculation Method B – Overvoltage Method:
 - C. Determination of CO₂(e) emissions
9. PRODUCTION OF CEMENT CLINKER AS LISTED IN ANNEX I TO...
 - A. Scope
 - B. Specific monitoring rules
 - Calculation Method A: Kiln Input Based
 - Calculation Method B: Clinker Output Based
 - C. Emissions Related to Discarded Dust
 - D. Emissions from non-carbonate carbon in raw meal
10. PRODUCTION OF LIME OR CALCINATION OF DOLOMITE OR MAGNESITE AS...
 - A. Scope
 - B. Specific monitoring rules
11. MANUFACTURE OF GLASS, GLASS FIBRE OR MINERAL WOOL INSULATION MATERIAL...
 - A. Scope
 - B. Specific monitoring rules
12. MANUFACTURE OF CERAMIC PRODUCTS AS LISTED IN ANNEX I TO...

Changes to legislation: There are outstanding changes not yet made to Commission Implementing Regulation (EU) 2018/2066. Any changes that have already been made to the legislation appear in the content and are referenced with annotations. (See end of Document for details) [View outstanding changes](#)

- A. Scope
 - B. Specific monitoring rules
 - Method A (Input based):
 - Method B (Output based):
13. PRODUCTION OF GYPSUM PRODUCTS AND PLASTER BOARDS AS LISTED IN...
- A. Scope
 - B. Specific monitoring rules
14. PULP AND PAPER PRODUCTION AS LISTED IN ANNEX I TO...
- A. Scope
 - B. Specific monitoring rules
15. PRODUCTION OF CARBON BLACK AS LISTED IN ANNEX I TO...
- A. Scope
 - B. Specific monitoring rules
16. DETERMINATION OF NITROUS OXIDE (N₂O) EMISSIONS FROM NITRIC ACID, ADIPIC...
- A. Scope
 - B. Determination of N₂O emissions
 - B.1. Annual N₂O emissions
 - B.2. Hourly N₂O emissions
 - B.3. Determination of flue gas flow
 - B.4. Oxygen (O₂) concentrations
 - B.5. Calculation of N₂O emissions
 - B.6. Determination of activity production rates
 - B.7. Sampling rates
 - C. Determination of annual CO₂ equivalent – CO₂(e)
17. PRODUCTION OF AMMONIA AS LISTED IN ANNEX I TO DIRECTIVE...
- A. Scope
 - B. Specific monitoring rules
18. PRODUCTION OF BULK ORGANIC CHEMICALS AS LISTED IN ANNEX I...
- A. Scope
 - B. Specific monitoring rules
19. PRODUCTION OF HYDROGEN AND SYNTHESIS GAS AS LISTED IN ANNEX...
- A. Scope
 - B. Specific monitoring rules
20. PRODUCTION OF SODA ASH AND SODIUM BICARBONATE AS LISTED IN...
- A. Scope
 - B. Specific monitoring rules
21. DETERMINATION OF GREENHOUSE GAS EMISSIONS FROM CO₂ CAPTURE ACTIVITIES FOR...
- A. Scope
 - B. Quantification of transferred and emitted CO₂ amounts
 - B.1. Installation level quantification
 - B.2. Determination of transferred CO₂

Changes to legislation: There are outstanding changes not yet made to Commission Implementing Regulation (EU) 2018/2066. Any changes that have already been made to the legislation appear in the content and are referenced with annotations. (See end of Document for details) View outstanding changes

22. DETERMINATION OF GREENHOUSE GAS EMISSIONS FROM THE TRANSPORT OF CO₂...
 - A. Scope
 - B. Quantification Methodologies for CO₂
 - B.1. Method A
 - B.2. Method B
 - B.2.1. Fugitive emissions from the transport network
 - B.2.2. Emissions from leakage events
 - B.2.3. Vented emissions
23. GEOLOGICAL STORAGE OF CO₂ IN A STORAGE SITE PERMITTED UNDER...
 - A. Scope
 - B. Quantification of CO₂ emissions
 - B.1. Vented and fugitive emissions from injection
 - B.2. Vented and fugitive emissions from enhanced hydrocarbon recovery operations
 - B.3. Leakage from the storage complex

ANNEX V

Minimum tier requirements for calculation-based methodologies involving category A installations and calculation factors for commercial standard fuels used by category B and C installations (Article 26(1))

ANNEX VI

Reference values for calculation factors (Article 31(1)(a))

1. FUEL EMISSION FACTORS RELATED TO NET CALORIFIC VALUES (NCV)
2. EMISSION FACTORS RELATED TO PROCESS EMISSIONS
3. GLOBAL WARMING POTENTIALS FOR NON-CO₂ GREENHOUSE GASES

ANNEX VII

Minimum frequency of analyses (Article 35)

ANNEX VIII

Measurement-based methodologies (Article 41)

1. TIER DEFINITIONS FOR MEASUREMENT-BASED METHODOLOGIES
2. MINIMUM TIER REQUIREMENTS FOR CATEGORY A INSTALLATIONS
3. DETERMINATION OF GHGS USING MEASUREMENT-BASED METHODOLOGIES
4. CALCULATION OF THE CONCENTRATION USING INDIRECT CONCENTRATION MEASUREMENT

Changes to legislation: There are outstanding changes not yet made to Commission Implementing Regulation (EU) 2018/2066. Any changes that have already been made to the legislation appear in the content and are referenced with annotations. (See end of Document for details) [View outstanding changes](#)

5. SUBSTITUTION FOR MISSING CONCENTRATION DATA FOR MEASUREMENT-BASED METHODOLOGIES

ANNEX IX

Minimum data and information to be retained in accordance with Article 67(1)

Operators and aircraft operators shall retain at least the following:...

1. COMMON ELEMENTS FOR INSTALLATIONS AND AIRCRAFT OPERATORS
2. SPECIFIC ELEMENTS FOR STATIONARY SOURCE INSTALLATIONS:
3. SPECIFIC ELEMENTS FOR AVIATION ACTIVITIES:

ANNEX X

Minimum content of Annual Reports (Article 68(3))

1. ANNUAL EMISSION REPORTS OF STATIONARY SOURCE INSTALLATIONS
2. ANNUAL EMISSION REPORTS OF AIRCRAFT OPERATORS
3. TONNE-KILOMETRE DATA REPORTS OF AIRCRAFT OPERATORS

ANNEX XI

Correlation table

Changes to legislation: There are outstanding changes not yet made to Commission Implementing Regulation (EU) 2018/2066. Any changes that have already been made to the legislation appear in the content and are referenced with annotations. (See end of Document for details) [View outstanding changes](#)

- (1) [OJ L 275, 25.10.2003, p. 32.](#)
- (2) 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 Council ([OJ L 181, 12.7.2012, p. 30](#)).
- (3) Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009 on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC ([OJ L 140, 5.6.2009, p. 16](#)).
- (4) Commission Decision 2009/450/EC of 8 June 2009 on the detailed interpretation of the aviation activities listed in Annex I to Directive 2003/87/EC of the European Parliament and of the Council ([OJ L 149, 12.6.2009, p. 69](#)).
- (5) Directive 2009/31/EC of the European Parliament and of the Council of 23 April 2009 on the geological storage of carbon dioxide and amending Council Directive 85/337/EEC, European Parliament and Council Directives 2000/60/EC, 2001/80/EC, 2004/35/EC, 2006/12/EC, 2008/1/EC and Regulation (EC) No 1013/2006 ([OJ L 140, 5.6.2009, p. 114](#)).
- (6) Judgment of the Court of Justice of 19 January 2017, *Schaefer Kalk GmbH & Co. KG v Bundesrepublik Deutschland*, C-460/15, ECLI:EU:C:2017:29.

Changes to legislation:

There are outstanding changes not yet made to Commission Implementing Regulation (EU) 2018/2066. Any changes that have already been made to the legislation appear in the content and are referenced with annotations.

[View outstanding changes](#)

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. 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\(3\)](#)
- Annex 1 modified by S.I. 2020/1265, reg. 28(3) (as amended) by [S.I. 2021/1455 art. 7\(4\)\(b\)](#)
- Art. 12 modified by S.I. 2020/1265, reg. 28(3) (as amended) by [S.I. 2021/1455 art. 7\(4\)\(b\)](#)
- Art. 13 modified by S.I. 2020/1265, reg. 28(3) (as amended) by [S.I. 2021/1455 art. 7\(4\)\(b\)](#)
- Art. 14 applied (with modifications) by [S.I. 2020/1265 Sch. 8 para. 5\(4\)\(5\)](#)
- Art. 16 applied (with modifications) by [S.I. 2020/1265 Sch. 8 para. 5\(6\)](#)