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Directorate B – Carbon Markets & Clean Mobility

Guidance on Interpretation of Annex I of the EU ETS Directive (excl. aviation and maritime activities)

Update applicable from 2024

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This document is part of a series of documents provided by the Commission services for supporting the implementation of the EU ETS (the European Union Emission Trading System).

The guidance represents the views of the Commission services at the time of publication. It is not legally binding.

All guidance documents relating to the EU ETS can be downloaded from the Commission's website at the following address:

https://climate.ec.europa.eu/eu-action/eu-emissions-trading-system-eu-ets_en

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1 INTRODUCTION

1.1 Status of this Guidance

This guidance was drafted by consultants in close cooperation with the European Commission, taking into account input received from Member State experts. It takes into account the discussions within the Technical Working Group on Monitoring, Reporting, Verification and Accreditation (TWG MRVA) and the Climate Change Expert Group (CCEG) general and free allocation formations, as well as written comments received from stakeholders and experts from Member States. It was endorsed by the members of the TWG MRVA in a meeting on 15 December 2023.

Development

The guidance reflects the status of the EU ETS Directive¹, following 2023 revision, as in force on 5 June 2023². The majority of the amendments applies from 1 January 2024. The provisions related to the deletion of the concept of electricity generators and the change of the criterion for excluding biomass installations apply from 1 January 2026³. They will have to be taken into account in the National Implementation Measures (NIMs)⁴ notification in 2024, which applies to the period 2026 to 2030.

Update Status 2023

Therefore, this document is structured as follows:

- Chapters 2 to 5 cover the current situation and will continue to apply, with the exception of the biomass rules (sections 3.4.5 and 4.5) which apply until end 2025.
- Chapter 6 deals with the obligation of installations for the incineration of municipal waste to carry out Monitoring, Reporting and Verification (MRV) from 1 January 2024.
- Chapter 7 gives guidance to the rules on exclusion of biomass installations and a “decision tree” for compiling the NIMs List in 2024 to be applied to installations for the period 2026 to 2030.

Document structure

Previous guidance documents provided by the Commission regarding the scope of the EU ETS for installations are not applicable anymore.

The guidance represents the views of the Commission services at the time of publication. It is not legally binding. Only the European Court of Justice can give definitive judgements concerning interpretation of the EU ETS Directive.

¹ Directive 2003/87/EC of the European Parliament and of the Council of 13 October 2003 establishing a system for greenhouse gas emission allowance trading within the Union and amending Council Directive 96/61/EC

² I.e. including the latest updates by: Directive (EU) 2023/958 (for aviation), <http://data.europa.eu/eli/dir/2023/958/oj>, and Directive (EU) 2023/959, <http://data.europa.eu/eli/dir/2023/959/oj>. The consolidated version of the Directive is available from: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A02003L0087-20230605>

³ Article 4 of Directive (EU) 2023/959

⁴ Article 11(1) requires the Member States to notify “NIMs” (National Implementation Measures) to the Commission, including a list of installations and free allocation levels for the next allocation period. Deadline for this notification for the period 2026 to 2030 is 30 September 2024.

1.2 Scope of this Guidance

Permitting unchanged

This guidance does *not* give instructions regarding the procedures that Member States apply when issuing GHG emissions permits. The approach to setting the installation boundaries laid down in GHG emissions permits differ between Member States. Therefore, no further guidance is given on the definitions of "operator" and "site". In some Member States, industrial sites (e.g. in the chemical industry) receive one overarching GHG emissions permit for the total site and are thus regarded as a single installation, whereas in other Member States, the same site could receive separate GHG emissions permits and thus be seen as more than a single installation.

For example, industrial combined heat and power (CHP) installations in one Member State will operate under a separate GHG emissions permit, while in other Member States they will operate under an integrated GHG emissions permit together with the industrial installation to which this CHP plant delivers its heat. As a result of these different approaches, a full harmonisation of permitting procedures is outside the scope of this guidance.

Only stationary installations

This guidance only deals with the EU ETS scope with regards to stationary installations. For guidance on the scope regarding aviation activities, see Commission Decision 2009/450/EC⁵ and MRR Guidance Document No. 2 ("General guidance for Aircraft Operators")⁶. Out of scope of this document are furthermore maritime transport activities and the activities covered by Annex III of the Directive (i.e. the emissions trading system for buildings, road transport and additional sectors (ETS2)).

EU ETS Directive

Note: All references to articles or annexes in this document refer to the EU ETS Directive, unless other legal acts are explicitly specified.

See consolidated text: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A02003L0087-20230605>

For the purposes of this Guidance Document, EU ETS refers to the emission trading system for stationary installations (i.e. installations covered by Chapter III of the EU ETS Directive).

⁵ Commission Decision 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.

⁶ https://climate.ec.europa.eu/system/files/2023-05/gd2_guidance_aircraft_en.pdf

1.3 What is new in this guidance?

This guidance has been updated in 2023 to take into account the review of the EU ETS Directive by Directive (EU) 2023/959, and other issues (e.g. updating references to legislation). The structure of the document has been kept to the extent possible. New chapters or sections have been added to highlight specific new elements as follows:

- From 1 January 2024, some new definitions of activities of Annex I apply. They have been compiled in a new section 3.3.
- From 1 January 2024, installations for the incineration of municipal waste are included in the EU ETS, but only for the purpose of monitoring, reporting and verification, without an obligation to surrender allowances for the emissions reported. Guidance on how to identify installations concerned is given in chapter 6. However, as *co-incineration* of waste was already fully included in the EU ETS before 2024, the respective parts of the guidance (sections 3.4.3 and 3.4.4) are kept and supplement the new part of the document.
- From 2026, the rules on the exclusion from the EU ETS of installations using predominantly biomass will be significantly changed, with a lower threshold (95% instead of 'exclusive' use) and requiring that the biomass complies with the sustainability and greenhouse gas savings criteria put forward by the RED II (Renewable Energy Directive). Guidance on how to implement this new approach is given in section 7.1.
- The step-by-step approach given in section 4.5 for applying the "aggregation clause" remains valid until end 2025. A new version of this "decision tree" is presented in section 7.2 for application from 2026 onwards.
- The new version of Annex I of the EU ETS Directive is appended to this document.

2 INSTALLATION

2.1 General aspects

The EU ETS Directive refers in several instances to "installations". The term "installation" is defined in Article 3(e) as:

Installation definition

'installation' means a stationary technical unit where one or more activities listed in Annex I are carried out and any other directly associated activities which have a technical connection with the activities carried out on that site and which could have an effect on emissions and pollution;

Member States shall ensure that no installation carries out any activity listed in Annex I unless its operator holds a GHG emissions permit (Article 4)⁷, or the installation has been excluded from the EU ETS pursuant to Articles 27 or 27a(1)⁸.

Relationship of GHG emissions permit and monitoring plan

The GHG emissions permit must contain a description of the activities and emissions from the installation as well as a monitoring plan. Changes in installation boundaries laid down in existing permits or new GHG emissions permits could be necessary as a consequence of the changes to Annex I in the EU ETS Directive. Accordingly, also changes in the monitoring plan or new monitoring plans may have to be submitted to competent authorities for approval.

To avoid changing the GHG emissions permit too frequently due to changes within the monitoring plan, Member States may allow operators to change the monitoring plan without changing the permit (Article 6(2)(c)). Furthermore, Articles 15 and 16 of the Monitoring and Reporting Regulation (MRR⁹) provide rules on updating monitoring plans (see also section 5.6 of MRR GD1¹⁰).

Advantage of broad installation boundaries

Where several installations are operated by the same operator at the same site, these installations may be covered by one GHG emissions permit (Article 6(1)). It should be noted that in applying the Union-wide rules for transitional harmonised free allocation under Article 10a, it might have several advantages to define installations boundaries as broadly as possible. Especially in the case of several installations at the same site transferring heat one to another, application of the Union-wide rules will become simpler if there is a common GHG emissions permit.

Associated activity

The competent authority decides whether an "associated activity" is to be included in the installation's boundaries. For combustion units, there is a specific clause in Annex I of the EU ETS Directive (see section 2.3.2) for this purpose.

⁷ For installations for the incineration of municipal waste included from 2024 for MRV purposes only, there is no obligation for Member States to issue a permit. For details, see section 6.4.

⁸ For small installations excluded from the EU ETS pursuant to Articles 27 and 27a(1), and in order to ensure that monitoring and reporting arrangements in accordance with Article 14 still apply for those installations, a Member State may also require that small installations hold a GHG emissions permit, even when excluded from the EU ETS.

⁹ 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, consolidated version: http://data.europa.eu/eli/reg_impl/2018/2066/2022-08-28

¹⁰ MRR Guidance Document No.1 ("General guidance for installations"), https://climate.ec.europa.eu/system/files/2023-03/gd1_guidance_installations_en.pdf

Furthermore, the criteria given by the definition of “installation” (see above) for defining directly associated activities are:

- The directly associated activity has a technical connection to the activities listed in Annex I; and
- There could be an effect on the (GHG) emissions of the installation.

If there cannot be an impact on the GHG emissions or there is no technical connection, the associated activity should not be included in the permit/monitoring plan. If there could be GHG emissions, the criterion of having a “technical connection” requires further considerations, like for example:

- Is the associated activity a necessary part of the production process otherwise covered by an Annex I activity? If the production is not possible without the associated activity (e.g. if it concerns the supply with necessary inputs (pressurised air) or if the product is not saleable without the associated activity (e.g. packaging of products), this is a confirmation that the associated activity is part of the installation.
- Technical connections involve but are not limited to all kinds of (stationary) conveyors and pipeline for transporting materials and goods, fuels, heat media etc. between technical units. Cables for the transport of electrical energy and information may also be considered technical connections if their interruption would lead to a necessary stop of the production process.

One installation can have only one operator. For being part of the installation, it is therefore a requirement that the associated activity is under the control¹¹ of the same operator. Where there are two different operators, the parts operated by each operator must be identified as separate installations. The mere ownership of an installation or unit within an installation is not the decisive criterion. In this regard, units of different ownership that are technically connected and are effectively run by one operator with decisive economic power over the technical functioning of these units should be included under the same GHG emissions permit.

***One installation,
one operator***

All directly associated activities identified here will have to be taken into account for the purpose of clauses 3 and 5 of Annex I (see section 4.2 and the step-by-step approach in sections 4.5 and 0).

2.2 Relation to other classifications of activities

When determining the coverage of the EU ETS (and compiling the full list of installations covered), the activities listed in Annex I of the EU ETS Directive are the only relevant criteria.

***Activity is not a
sector classification***

However, it may be useful to consult other lists of installations based on other classifications like NACE or Annex I of the Industrial Emissions Directive (IED) with some reservations.

While NACE is used for identification of the sectors or subsectors exposed to a significant risk of carbon leakage, NACE can only give a first rough estimate where to find EU ETS installations. Most installations covered by the EU ETS will

¹¹ The EU ETS Directive, Article 3(f) defines: “‘operator’ means any person who operates or controls an installation or, where this is provided for in national legislation, to whom decisive economic power over the technical functioning of the installation has been delegated”.

be found in the NACE categories¹² B (Mining and quarrying), C (Manufacturing) and D (Electricity, gas and steam and air conditioning supply). However, the activity “combustion of fuels” can occur in all types of NACE categories, not only industrial ones. Examples of such non-industrial installations are combustion units in greenhouses, hospitals, universities and office buildings, booster stations in natural gas transport networks etc. Thus, performing an “industrial activity” is not the determining factor for deciding whether an installation falls under the scope of the EU ETS.

Scope different from IED

Several activities of Annex I of the EU ETS Directive are not identical to those in Annex I of the IED¹³. In several cases, the EU ETS-related installation boundaries may deviate from the IED-related installation boundaries (e.g., regarding waste water plants, on-site landfills, etc.). Also, the EU ETS Directive’s aggregation clause for combustion installations (see chapter 4) differs from the IED. While a list of IED installations might give a good first estimate, each installation has to be assessed individually regarding inclusion in the EU ETS.

2.3 Various questions

2.3.1 What is “stationary”?

Stationary, but not permanent

Every technical unit that is connected to the installation and serves a purpose, which usually requires the unit to be stationary during operation, is considered part of that installation. For example, some types of installations are stationary only for a period of time such as LNG terminals¹⁴ and asphalt plants and can be moved to another place. During operation, however, they are stationary. The GHG emissions permit should clearly identify such units as part of the installation. Furthermore, emergency and backup electricity generators may be installed in movable containers but cannot be removed from the installation for safety reasons. Such units should be considered “stationary”.

Also, testing stands for motors, turbines and equivalent products should be considered stationary. Even though the tested products are removed after the test, the production equipment such as fuel supply and exhaust stack are stationary¹⁵ and should be considered integral part of the installation.

Mobile machinery

The “stationary” definition does not include mobile machinery and vehicles (e.g. trucks, forklifts, bulldozers, company cars, etc.), which are mobile at the moment of performing their tasks. However, their fuel consumption and emissions will be included in the ETS2 when they are used for activities listed in Annex III of the EU ETS Directive or for activities included by the Member State in accordance with Article 30j of the Directive¹⁶.

¹² According to NACE rev.2, <https://ec.europa.eu/eurostat/documents/3859598/5902521/KS-RA-07-015-EN.PDF>

¹³ Bulk organic chemicals, ceramics, etc.

¹⁴ Note: Where the LNG terminal or other offshore installations such as oil rigs are installed on a ship, the emissions from the ship’s engine would be covered by the EU ETS for maritime transport while it is mobile. However, if the ship’s engine is used during stationary mode (e.g. for the production of electricity or heating, its emissions are to be included in the GHG permit which it requires for being stationary.

¹⁵ Note that such testing stands could be considered as “units” (see section 4.4) if separately useable, and could fall under the 3 MW de-minimis rule of clause 3.

¹⁶ A separate guidance document for the ETS2 will be published.

It should be noted that Chapter III “Stationary installations” of the EU ETS Directive applies to all the activities listed in Annex I other than aviation activities and maritime transport activities. This includes the activity “Transport of greenhouse gases for geological storage in a storage site permitted under Directive 2009/31/EC, with the exclusion of those emissions covered by another activity under this Directive” although it may include non-stationary elements in the chain of custody. The exclusion of those emissions covered by another activity means that the emissions from the combustion of fuels in maritime transport and in road transport (e.g. trucks) would be covered respectively by the maritime activity and by the ETS2 activity once it starts. Before the start of ETS2, the emissions from road transport should be covered by the existing EU ETS (rules are under development).

2.3.2 Installation boundaries and treatment of associated activities

The installation boundaries should be set as broad as possible. This is supported by clause 5 of Annex I:

“When the capacity threshold of any activity in this Annex is found to be exceeded in an installation, all units in which fuels are combusted, other than units for the incineration of hazardous or municipal waste, shall be included in the greenhouse gas emission permit.”

This also gives an indication that ‘directly associated activities’, as mentioned in the definition of installation, are primarily combustion units. Other activities which do not emit GHGs but may be relevant under the IED because of the emission of other pollutants, are often irrelevant under the EU ETS.

Small units such as heaters for office buildings belonging to the site should be considered part of the installation and should be included in the GHG emissions permit.

In relation to the phrase “*other than units for the incineration of hazardous or municipal waste*” see sections 3.4.3 and 3.4.4 as well as chapter 6.

2.3.3 Testing and research

Clause 1 of Annex I states:

“Installations or parts of installations used for research, development and testing of new products and processes are not covered by this Directive.”

Pure research operations (like pilot scale or even small plants) can usually be identified based on their environmental permits or other types of written opinion given by the competent authority (as far as required by national legislation). The production of goods (even if they are saleable) is not the main purpose of such installations or technical units. Such installations or parts of installations should not be included when calculating the capacity of an installation for the purpose of deciding its inclusion in the EU ETS.

“Testing of new products and processes” is often carried out for a limited period of time (some hours up to several days) in existing, commercial scale installa-

Use broadest installation boundaries

Research

tions. This includes optimisation tests, the test of new raw materials or the production of new grades of products. Such occasional tests are to be understood as business as usual for normal industrial operations and cannot, therefore, be understood as a reason for exclusion of the whole installation from the EU ETS, nor when calculating the capacity (rated thermal input or production capacity) of an installation.

Commissioning Another type of test is the period of pre-commissioning or start-up operations of new installations or after significant technical changes in existing installations. Such pre-commissioning or start-up operations are an integral part of the operation of installations, and must therefore be covered fully by the GHG emissions permit and the monitoring plan. However, precise monitoring may sometimes be difficult as long as the construction of the installation is not finalised. The MRR requires¹⁷ completeness of monitoring of all emissions including non-typical situations such as during start-up. It also covers the commissioning phase¹⁸. As for permitting in general (see section 1.2), it is left to the national permitting practice and the judgment of the competent authority, whether it may be acceptable if a simplified monitoring plan (low tier approaches or the fall-back approach should be applicable) is approved by the competent authority until the full regular operation starts. It should be ensured that low tier approaches do not lead to an underestimation of emissions.

2.3.4 Does an installation have to emit greenhouse gases?

New: zero-emission installations possible Article 2(1), first sentence, describes the scope of the EU ETS Directive as “*This Directive shall apply to the activities listed in Annexes I and III, and to the greenhouse gases listed in Annex II.*”¹⁹ This clarifies that the activity carried out in an installation (and meeting its threshold, if applicable) is the relevant criterion for inclusion in the EU ETS, not whether the installation actually emits greenhouse gases covered by the Directive. In this context, note section 3.5 on the option for installations to remain in the EU ETS if falling below the 20 MW_{th} threshold, and section 3.3 on updated activity definitions in Annex I of the EU ETS Directive.

¹⁷ Last subparagraph of Article 20(1) of the MRR: “*The operator shall also include emissions from regular operations and abnormal events, including start-up, shut-down and emergency situations, over the reporting period, with the exception of emissions from mobile machinery for transportation purposes.*”

¹⁸ European Court of Justice (case C 457/15), Vattenfall Europe Generation AG vs Bundesrepublik Deutschland: The ruling finds that emissions generated during other abnormal events, such as those produced during the trial period of an installation before the start of normal operation, must also be taken into account for the purposes of the monitoring and reporting of emissions.

¹⁹ In accordance with the 2023 amendments of the EU ETS Directive, which introduced the quoted wording replacing “This Directive shall apply to emissions from the activities...”. Note that this amendment impacts the interpretation made in case C-577/16, judgment of the European Court of Justice of 28 February 2018, Trinseo Deutschland Anlagengesellschaft mbH vs. Bundesrepublik Deutschland.

2.3.5 What is an emission?

The 2023 amendment of the EU ETS Directive updated the definition of 'emissions' in Article 3(b) as follows: “*Emissions’ means the release of greenhouse gases ~~into the atmosphere~~ from sources in an installation or the release from an aircraft performing an aviation activity listed in Annex I or from ships performing a maritime transport activity listed in Annex I of the gases specified in respect of that activity, or the release of greenhouse gases corresponding to the activity referred to in Annex III*”;

The deletion of “into the atmosphere” in the definition does not impact whether an installation should be included in the EU ETS or the installation boundaries. However, it paves the way to a consistent treatment of CO₂ transfer and carbon capture and utilisation (CCU) activities (Article 12(3b) of the EU ETS Directive).

3 DEFINITION OF ANNEX I ACTIVITIES

3.1 Combustion activities

Codified broad definition

The EU ETS uses a broad definition of combustion activities:

“combustion’ means any oxidation of fuels, regardless of the way in which the heat, electrical or mechanical energy produced by this process is used, and any other directly associated activities, including waste gas scrubbing”.

Although not explicitly stated by the Directive, but within the same spirit of unambiguous broadness, “fuel” for the purpose of the EU ETS for installations²⁰ should be defined as “any solid, liquid or gaseous combustible material”²¹.

Gasification is an oxidation process even though less than the stoichiometric amount of oxygen is used. In pyrolysis, heat has to be fed into the process and oxygen is usually absent. The gaseous products of pyrolysis and gasification are usually used as fuel onsite. Thus, the existence of combustion can be assumed.

Sector-independent

The definition of combustion is applicable to all kind of economic activities, including industrial activities listed in Annex I to the EU ETS Directive as well as non-listed ones (e.g. asphalt mixing, textiles production...), as well as to the service sector (see section 2.2), no matter if there is direct heat use (e.g. in a steel reheating furnace) or if a heat transfer medium (steam, hot water etc.) is used. Even if the generated heat is not used at all (flares and in some post-combustion units²²), the fact of combustion will lead to an inclusion in the EU ETS, since the combustion definition clarifies that combustion is found *“regardless of the way in which the heat, electrical or mechanical energy produced by this process is used”*. Furthermore, all combustion units are included of which only the mechanical energy is used without use of heat or generation of electricity. This applies e.g. to pipeline booster stations and other compressors directly driven by turbines or engines.

The fact that the definition is very broad is supported by clause 3 of Annex I, which gives a *non-exhaustive* list of types of combustion units, that *includes*

“all types of boilers, burners, turbines, heaters, furnaces, incinerators, calciners, kilns, ovens, dryers, engines, fuel cells, chemical looping combustion units, flares, and thermal or catalytic post-combustion units.”

Flue gas treatment

As a further consequence of the definition of combustion, associated activities are relevant not only in the context of installation boundaries, but also within the activity “combustion of fuels”. This clarifies that process emissions may occur as part of combustion activities²³, especially CO₂ emissions from desulphurisation, from deNO_x units (e.g. when urea is used as reductant), etc.²⁴

²⁰ The Directive contains a different definition for ‘fuel’ for the purpose of the ETS2.

²¹ This is the same definition as in IED Article 3(24).

²² Note that no distinction can be justified between the gases flared and the auxiliary fuel.

²³ See also Section 1 of Annex IV of the MRR.

²⁴ The MRR contains specific rules for monitoring of these combustion-associated process emissions. They are furthermore included in the calculation of the heat and fuel benchmarks according to the FAR (Free Allocation Rules), Commission Delegated Regulation (EU) 2019/331, http://data.europa.eu/eli/reg_del/2019/331/oj

3.2 Combustion vs. more specific activities

3.2.1 Clause 4 of Annex I

Eleven activities are listed in Annex I for which the capacity threshold (if any) is not expressed as total rated thermal input, but as "production capacity", "melting capacity" or just "capacity". These activities are:

Activities with production thresholds

Table 1: Activities of which the capacity threshold is not expressed as total rated thermal input (Applicable from 1 January 2024)

Activities	Relevant capacity	Relevant capacity threshold to be exceeded
Production of iron or steel (primary or secondary fusion) including continuous casting	Capacity	2,5 tonnes per hour
Production of cement clinker	Production capacity	500 tonnes per day (when in rotary kilns) 50 tonnes per day (when in other furnaces)
Production of lime or calcination of dolomite or magnesite	Production capacity	50 tonnes per day
Manufacture of glass including glass fibre	Melting capacity	20 tonnes per day
Manufacture of ceramic products by firing, in particular roofing tiles, bricks, refractory bricks, tiles, stoneware or porcelain	Production capacity	75 tonnes per day
Manufacture of mineral wool insulation material using glass, rock or slag	Melting capacity	20 tonnes per day
Drying or calcination of gypsum or production of plaster boards and other gypsum products, with a of calcined gypsum or dried secondary gypsum	Production capacity	20 tonnes per day
Production of paper or cardboard	Production capacity	20 tonnes per day
Production of carbon black involving the carbonisation of organic substances such as oils, tars, cracker and distillation residues	Production capacity	50 tonnes per day
Production of bulk organic chemicals by cracking, reforming, partial or full oxidation or by similar processes	Production capacity	100 tonnes per day
Production of hydrogen (H ₂) and synthesis gas	Production capacity	5 tonnes per day

Clause 4 of Annex I stipulates:

“If a unit serves an activity for which the threshold is not expressed as total rated thermal input, the threshold of this activity shall take precedence for the decision about the inclusion in the EU ETS.”

This clause stipulates that the activity-specific capacity thresholds mentioned in Table 1 shall take precedence (above the total rated thermal input capacity threshold) for the decision about the inclusion in the EU ETS. That activity-specific capacity threshold only takes precedence and does not exclude the application of another threshold expressed as total rated thermal input.

In some cases, a unit can be assigned to two different categories of activity, e.g., a furnace used for production of glass, which can be considered a combustion unit (where the threshold for all combustion units is expressed as total rated thermal input) or a unit dedicated to the activity “manufacture of glass” (where the threshold is *not* expressed as total rated thermal input but as daily tonnage). In such a case:

1. If both thresholds are exceeded in the installation, then the threshold not expressed as total rated thermal input takes precedence over the other, and the installation is included in the EU ETS as performing the activity corresponding to that threshold (i.e. as performing “manufacture of glass” in the example mentioned above). The activity under which the installation is included in the EU ETS may be relevant for different reasons:
 - regarding the information to be submitted to open the operator holding account;
 - regarding the content of the GHG emissions permit;
 - regarding the determination of the possibility of exclusion as small emitter (see section 4.5.2).
2. If only one of the thresholds is exceeded in the installation (e.g. the 20 MW total rated thermal input threshold), the installation is included in the EU ETS as performing the related activity (in this example as performing the activity “combustion of fuels”).
3. If none of the thresholds are exceeded in the installation, then the installation is not included in the EU ETS.

Example: An installation producing ceramic products operates 3 units: two ceramics kilns and one CHP plant.

If the ceramics installation exceeds the threshold of 75 tonnes per day, the installation is to be included in the EU ETS. In the GHG emissions permit, the Annex I activity “Manufacture of ceramic products” must be listed. Regardless of the total rated thermal input of the CHP plant, this unit must also be included in the GHG emissions permit (and/or in the monitoring plan), following clause 5 of Annex I²⁵. A special situation occurs if the CHP plant alone exceeds the 20 MW threshold for the rated thermal input. In such case, the Annex I activity “Combustion of fuels” should also be listed in the GHG emissions permit.

If the ceramics installation does not exceed the threshold of 75 tonnes per day, the assessment must continue to confirm if the activity “combustion of fuels” is carried out at that installation. If it exceeds 20 MW, this installation is included in the EU ETS. The activity listed in the GHG emissions permit is then “Combustion of fuels”.

²⁵ “When the capacity threshold of any activity in this Annex is found to be exceeded in an installation, all units in which fuels are combusted, other than units for the incineration of hazardous or municipal waste, shall be included in the greenhouse gas emission permit.”

3.2.2 Specific activities with capacity threshold expressed as total rated thermal input exceeding 20 MW

There are four activities (besides “Combustion of fuels”) listed in Annex I of which the specific activity is combined with a capacity threshold expressed as “where combustion units with a total rated thermal input exceeding 20 MW are operated” (see Table 2).

Activities which can be treated like combustion

These activities could have been included in Annex I as the “combustion of fuels” activity only since the broad combustion definition would be sufficient for their inclusion. However, these activities (e.g. ferrous and non-ferrous metals processing) can also give rise to process emissions (e.g. from reduction agents, graphite electrodes etc.), which would not be included in the EU ETS when these activities would only fall under the “combustion of fuels” activity alone²⁶. The separate listing of these activities in Annex I together with the 20 MW capacity threshold makes it clear that all emissions stemming from the respective activity are included in the EU ETS, not only those relating to combustion.

Table 2: Specific activities in Annex I combined with a capacity threshold expressed as “where combustion units with a total rated thermal input exceeding 20 MW are operated”, applicable from 1 January 2024

Activities
Refining of oil
Production or processing of ferrous metals (including ferro-alloys). Processing includes, inter alia, rolling mills, re-heaters, annealing furnaces, smitheries, foundries, coating and pickling
Production of secondary aluminium
Production or processing of non-ferrous metals, including production of alloys, refining, foundry casting, etc.

Another issue arising from these “pseudo-combustion” activities is the aggregation of units belonging to separate activities. As an example, we use a foundry which produces parts from cast iron (using combustion units of 15 MW installed capacity) and from brass (again 15 MW installed). Here the two activities “production or processing of ferrous metals” and “production or processing of non-ferrous metals” are carried out, but each stays below the individual capacity threshold. However, in this example the “precedence clause” (clause 4 of Annex I) does not apply, since both activities have capacity thresholds expressed as total rated thermal input. Thus, all units involved in the two activities must be considered units for the activity “combustion of fuels”, and all the capacities should be added together. This gives a rated thermal input of 30 MW, and the installation is included in the EU ETS with the activity “combustion of fuels”.

Example: Metals processing

²⁶ As mentioned in the last paragraph of section 3.1, some process emissions can be part of the combustion activity itself, limited to process emissions from flue-gas scrubbing.

New rule when falling below the threshold

Note that the review of the EU ETS Directive in 2023 resulted in a rule which allows installations falling below the 20 MW threshold to remain in the EU ETS for some years. Details are given in section 3.5.

3.3 Activity definitions applicable from 2024

New: activity definitions

As a consequence of the amendments²⁷ made to the EU ETS Directive in 2023, competent authorities will have to revise the list of installations covered in their Member States from 1 January 2024. There may be cases where additional installations will fall under the EU ETS, or where installations do not fall under the EU ETS anymore. The following factors need to be taken into account:

- Installations that carry out activities which have not been included before may have to be included (see below – in particular regarding production of iron other than pig iron, alumina, refining of non-mineral oil);
- For some activities, the threshold for inclusion has changed (also discussed below), which may lead to both inclusions or exclusions of installations;
- Installations, which carry out Annex I activities, may have to be included even though they do not emit greenhouse gases (see section 2.3.4), or even though they have dropped below the 20 MW thermal input threshold (see section 3.5);
- The coverage of installations for the incineration of municipal waste for the purpose of monitoring and reporting as discussed in chapter 6 will lead to coverage of additional installations.

Note: From 1 January 2026, the exclusion of units using exclusively biomass in the aggregation clause has been removed from the Directive. Instead, a new criterion taking into account the sustainability and GHG savings criteria of the RED II (Renewable Energy Directive) has been introduced (see section 7.1). This will lead to further updates of the installation list, to be made for the NIMs submission in September 2024.

Detailed changes and thresholds

A complete overview of Annex I changes is given in the Annex of this document. In connection with the amendment which allows installations without direct GHG emissions to be covered by the EU ETS (see section 2.3.4), the consequences of the changes are summarised as follows:

- In the refining sector, two changes apply:
 - The activity is not limited anymore to the refining of mineral oils²⁸.
 - As this may also concern relatively small installations, a new threshold of 20 MW for the rated thermal input has been added.
- In the iron and steel sector, “iron production” is not limited anymore to “pig iron”. Therefore, production routes leading to other forms of iron, in particular sponge iron (also called DRI (Direct Reduced Iron) or HBI (Hot briquetted Iron)) are covered. This enables inclusion (with free allocation) of steel production routes using hydrogen or even electrolytic iron reduction processes.

²⁷ Reference given in footnote 2.

²⁸ The word “mineral” was deleted from “mineral oil refining” to enable the equal treatment of synthetic fuels and petroleum refining. The definition should be understood as refining of oil for purposes not related to the production of edible products. Refining of oil for edible purposes will continue to be covered by the activity ‘combustion of fuels’, where relevant.

- Alumina (i.e. aluminium oxide) production is included. There is no production or thermal input threshold for this activity²⁹.
- For gypsum and plaster board, instead of the 20 MW threshold, a new threshold is given as production capacity of calcined gypsum or dried secondary gypsum exceeding a total of 20 tonnes per day.
- For carbon black, instead of the 20 MW threshold, a production level of 50 tonnes per day is used for defining the threshold.
- Hydrogen & synthesis gas is affected by two changes:
 - The limitation to the production processes “reforming or partial oxidation” has been removed. Together with the removal of the need for GHG emissions in the installation itself (section 2.3.4) this means that all kinds of electrolysis processes will be included.
 - The threshold has been reduced from 25 to 5 tonnes production per day.
 As a result, more installations are expected to be included in the EU ETS.
- Regarding CO₂ transport for the purpose of geological storage of CO₂, the limitation to transport in pipelines has been removed. However, the Commission is in the process of developing the relevant legal framework³⁰ for this topic.

3.4 Various interpretation issues

3.4.1 What is “rated thermal input”

Thermal input in the context of the GHG-emitting processes means all input in the form of fuels. Thus, if a furnace can use both, electrical heating or heating by combustion of fuels, only the fuel-related input is used for the calculation. Where various proportions of heat input can be used, the maximum fuel related input is assumed.

The maximum rated thermal input is normally specified by the manufacturer and is displayed on the technical device with the consent of an inspection body. Where different fuels or fuel mixes can be used, leading to different maximum thermal inputs, the highest possible thermal input should be used.

When no information from the manufacturer is available, the operator of the installation must provide to the competent authority an estimate based on best available information (for example maximum fuel throughput achieved in 24 hours during the last calendar year). As in most cases the exhaust gas has a temperature above 100°C, and in line with monitoring requirements defined by the MRR, net calorific values (NCV³¹) are considered most appropriate for determination of the thermal input.

Although a fully harmonised approach should be the aim for the EU ETS, it is recognised that in some Member States gross calorific values (GCV) are used

²⁹ Notably, Annex I to the EU ETS Directive lists not only CO₂ but also perfluorocarbon (PFC) emissions for the activity. In Alumina production processes, usually no PFC emission occur. These will therefore not be relevant in practice. It is suggested that operators and CAs explicitly agree upon this fact in the GHG permit and/or monitoring plan to provide for legal certainty.

³⁰ At the time of publishing this guidance document.

³¹ Also known as “lower heating value”

for specifying nameplate capacity. For practical and simplicity reasons only, the use of GCV in these Member States is considered acceptable.

Where fuels are used as reducing agents, e.g. in the production or processing of metals or alloys, the heat input of these fuels is also to be taken into account when calculating the rated thermal input as if they were fuels.

**Technical reduction
of rated thermal
input**

The rated thermal input may be reduced by operators compared to the original unit's design by technical means.³² Such reduction of the rated thermal input may be accepted by the competent authority in the determination of the installation's total capacity provided that the change is permanent and cannot be reversed without major technical intervention or without consent of the competent authority, and the existence of those restrictions and their permanent nature are in fact verifiable by the competent authority.

3.4.2 Interpretation of “production or processing” of metals

In order to distinguish the Annex I activities “Production of iron or steel (primary or secondary fusion) including continuous casting” and “Production or processing of ferrous metals”, it is useful to look at the production processes:

- “Production of iron and steel including continuous casting” ends at iron or steel in primary forms (slabs, ingots etc.), and it relates to the product benchmarks “hot metal”, “EAF carbon steel” or “EAF high alloy steel”.
- Production or processing of ferrous metals includes activities using these primary forms of iron or steel, for performing processes using units such as “*rolling mills, re-heaters, annealing furnaces, smitheries, foundries, coating and pickling*”, relating to product benchmark “iron casting” or heat benchmark or fuel benchmark sub-installations.

Similarly, a distinction is possible for the aluminium-related activities:

- “Production of primary aluminium”: involving electrolysis processes, product benchmark “aluminium”, products in primary forms (ingots, slabs);
- “Production of secondary aluminium”: Production of aluminium in primary forms from aluminium scrap without electrolysis, no product benchmark applicable;
- “Production or processing of non-ferrous metals” covers all other production or processing of non-ferrous metals, including production of ferro-alloys.

³² Case C-575/20, Apollo Tyres (Hungary)

3.4.3 Waste incineration and co-incineration

The first activity in Annex I is defined as

“Combustion of fuels in installations with a total rated thermal input exceeding 20 MW (except in installations for the incineration of hazardous or municipal waste)

From 1 January 2024, combustion of fuels in installations for the incineration of municipal waste with a total rated thermal input exceeding 20 MW, for the purposes of Articles 14 and 15.”³³

Installations for the *incineration* of municipal waste or hazardous waste are thus excluded by Annex I to the EU ETS Directive (see chapter 6 for the partial inclusion of installations for the incineration of *municipal waste*). The competent authority determines whether a particular installation falls into one of these categories taking into account the relevant definitions in the IED. Installations falling under the IED have a permit under that Directive, which should clearly state the status of the waste incineration or waste co-incineration units. The IED in force at the time of publication of this guidance defines a “waste incineration plant” as a stationary or mobile technical unit and equipment

“dedicated to the thermal treatment of wastes with or without recovery of the combustion heat generated, through the incineration by oxidation of waste as well as other thermal treatment processes, such as pyrolysis, gasification or plasma process, if the substances resulting from the treatment are subsequently incinerated.”

If an installation is found by the competent authority to fall under this definition, and if the waste incinerated falls predominantly under the category “municipal” or “hazardous” (according to the European Waste List³⁴), then it is not subject to the EU ETS Directive in respect of any incineration that takes place at that installation, **except for cases discussed in chapter 6.**

A waste co-incineration plant is defined in the IED as a plant

“whose main purpose is the generation of energy or production of material products and which uses wastes as a regular or additional fuel or in which waste is thermally treated for the purpose of disposal through the incineration by oxidation of waste as well as other thermal treatment processes, such as pyrolysis, gasification or plasma process, if the substances resulting from the treatment are subsequently incinerated.”

If the status of individual technical units cannot be derived unambiguously from the IED permit, the following considerations may serve as guidance: Units burning waste, which are situated at sites with industrial production³⁵ (within the same installation or outsourced to a separate operator), are usually to be classified as *co-incineration*, because their main purpose is the supply of energy to the production of industry goods. This fact is often supported by the substitutability of the

Exclusion of hazardous and municipal waste incinerators

Waste co-incineration to be included in the EU ETS

³³ The second part of the activity description will be discussed in chapter 6.

³⁴ Commission Decision of 3 May 2000 replacing Decision 94/3/EC establishing a list of wastes pursuant to Article 1(a) of Council Directive 75/442/EEC on waste and Council Decision 94/904/EC establishing a list of hazardous waste pursuant to Article 1(4) of Council Directive 91/689/EEC on hazardous waste (2000/532/EC). Consolidated version:
<http://data.europa.eu/eli/dec/2000/532/2015-06-01>

³⁵ Including both, activities listed in Annex I, and other industrial activities.

waste unit by units fired with conventional fossil fuels. As evidence for such substitutability may serve *inter alia*:

- The waste unit is operated in technical connection with other boilers or CHP units, e.g. by feeding into a steam grid;
- The waste unit has replaced a previous boiler or CHP plant, which was fired by conventional fuels;
- The existence of reserve units which use conventional fuels;
- A significant amount of the thermal input in the waste unit is provided by conventional fuels or other waste than hazardous or municipal waste.

Wherever the competent authority classifies the waste unit as co-incineration or as using other wastes than municipal and hazardous wastes, it is to be included in the EU ETS.

3.4.4 Waste (co-)incineration units

Section 3.4.3 has dealt with whole installations for the incineration or co-incineration of wastes (or installations where only the activity “combustion of fuels” is carried out). Beyond this case, clause 5 of Annex I mandates: “*When the capacity threshold of any activity in this Annex is found to be exceeded in an installation, all units in which fuels are combusted, other than units for the incineration of hazardous or municipal waste, shall be included in the greenhouse gas emission permit.*” In contrast to what has been explained in section 3.4.3, clause 5 of Annex I mentions “units” for the incineration of hazardous or municipal waste. As this clause deals primarily with the inclusion of associated activities, a suitable decision making for this case can be outlined as follows:

1. Is the unit under consideration, according to the competent authority’s assessment, dedicated to the *incineration* (not co-incineration) of hazardous or municipal waste? If yes, the unit is to be exempted. If not, continue to point 2.
2. Is this unit an integral part of another activity listed in Annex I of the EU ETS Directive (e.g. of oil refining or a bulk organic chemical production³⁶)? If yes, this unit is included in the EU ETS as part of that activity. If not, continue to point 3.
3. This unit is exempted from the EU ETS³⁷.

3.4.5 Units using exclusively biomass

Units using exclusively biomass

Until the end of 2025, units exclusively using biomass³⁸ are excluded from the aggregation clause. However, where an installation also operates fossil fuelled

³⁶ Subject to the judgement of the competent authority, a unit may be regarded as “integral part” of the activity, if the production is technically impossible or not allowed under the relevant permit (IED or other), when the unit under consideration is shut down.

³⁷ The coverage of installations for the incineration of municipal waste under the EU ETS for monitoring and reporting purposes as discussed in chapter 6 is independent of the exclusion of waste *incineration* units from the full participation in the EU ETS under the first sentence of the first activity in Annex I, or of the inclusion as a waste *co-incineration* unit within another activity of Annex I.

³⁸ Note that for this clause, for practical purposes, the sustainability and GHG savings criteria of the RED II were not applied in most Member States.

combustion units (with an aggregated capacity above 20 MW_{th}), the biomass units are included in the EU ETS.

When doing the aggregation to decide upon the inclusion of an installation in the EU ETS, units which use fossil fuels only for start-up or shutdown may be excluded as well. However, this exclusion is only relevant for the decision of including the installation in the EU ETS. As soon as the whole installation is in the EU ETS, these units are included as well. Consequently, the fossil emissions from the start-up burners are to be monitored and reported.

Start-up burners

Start-up burners are separate ignition/pilot burners used during start-up of a combustion unit, which are necessary for avoiding unstable combustion situations by ensuring re-ignition of the fuel, and for controlled shutdown of the combustion unit. Usually this should be clearly stated by the manufacturer of that unit and be laid down in the operating and/or GHG emissions permit. The existence of a dedicated start-up burner may serve as indicator of the fact that otherwise exclusively biomass is used in this unit.

If no detailed information is available on the use of fossil fuels, it can be assumed that fossil fuels are used only for start-up if the share of energy input derived from fossil fuels of the units does not exceed 1 % of the total annual energy input.

Refer to section 7.1 for the new rules on biomass to be applied to determination of the EU ETS scope from 2026 onwards.

3.5 Options for installations falling below the 20 MW threshold

The 2023 amendments of the EU ETS Directive improve the incentive to reduce emissions by allowing to keep some free allocation³⁹: If an installation is included in the EU ETS due to one or more activities with the threshold expressed as 20 MW rated thermal input (see section 3.2.2) and changes its production processes to reduce its emissions, and thereby reduces its rated thermal input below the threshold, e.g. by replacing fuel input by electricity, it will not be automatically excluded from the EU ETS anymore. Instead, the operator may request the competent authority to keep the installation in the EU ETS for the remainder of the current 5-year allocation period, and optionally for the following allocation period⁴⁰. Remaining in the EU ETS will mean the continued obligation to perform monitoring, reporting and verification of emissions, and respective surrender of allowances, i.e. continued compliance with the GHG emissions permit.

New: remain in the EU ETS after decarbonisation or capacity reduction

³⁹ Article 2(1), starting from the 2nd sentence: “Where an installation that is included in the scope of the EU ETS due to the operation of combustion units with a total rated thermal input exceeding 20 MW changes its production processes to reduce its greenhouse gas emissions and no longer meets that threshold, the Member State in which that installation is situated shall provide the operator with the options to remain in the scope of the EU ETS until the end of the current and next five year period referred to in Article 11(1), second subparagraph, following the change to its production process. The operator of that installation may decide that the installation remains in the scope of the EU ETS until the end of that current five-year period only or also in the next five-year period, following the change to its production process. The Member State concerned shall notify to the Commission changes compared to the list submitted to the Commission pursuant to Article 11(1).”

⁴⁰ The Directive does not exclude the possibility for an operator to change their mind and to request to be excluded due to the reduced rated thermal input. This may happen e.g. where an installation changes ownership. However, the exclusion from the EU ETS thereafter is final.

4 THE AGGREGATION RULE

4.1 Capacity

No specific capacity definition

The EU ETS Directive does not define ‘capacity’. The “Community-wide fully harmonised Implementing Measures” pursuant to Article 10a(1) (“CIMs”⁴¹) for the 3rd phase of the EU ETS (2013-2020) contained a definition of “capacity”, but this was removed in the free allocation rules for the 4th phase⁴² (2021-2030) as it was in some cases difficult to apply. Furthermore, it was linked to the concept of “sub-installations” and was therefore not suitable for issues of Annex I of the EU ETS Directive.

Since then, capacity is not defined in the legal acts related to the EU ETS. Nevertheless, the term has been consistently implemented with the following meaning since the beginning of the EU ETS, consistent with established practice under the IED:

“The only technically coherent meaning of “capacity” is, therefore, the capacity at which the installation is capable of being operated. That is to say, it is the rated capacity of the installation to operate 24 hours a day, provided that the equipment is capable of being operated in that way.”⁴³

4.2 The aggregation clause

Adding up of smaller units

The aggregation clause in Annex I of the EU ETS Directive uses the same overall approach as the IED. The clause is included in the second sentence of clause 2 of Annex I and states:

“Where several activities falling under the same category are carried out in the same installation, the capacities of such activities are added together.”

The clause should lead to equal treatment of installations of the same capacity, even if one carries out this activity in several smaller production units and the other in one bigger unit. In order to support the implementation of the broad combustion definition, the EU ETS Directive adds further rules with clause 3 of Annex I:

“When the total rated thermal input of an installation is calculated in order to decide upon its inclusion in the EU ETS, the rated thermal inputs of all technical units which are part of it, in which fuels are combusted within the installation, are added together. These units could include all types of boilers, burners, turbines, heaters, furnaces, incinerators, calciners, kilns, ovens, dryers, engines, fuel cells, chemical looping combustion units, flares, and thermal or catalytic post-combustion units. Units with a rated thermal input under 3 MW and units which use exclusively biomass shall not be taken into account for the purposes of this calculation. ‘Units using exclusively biomass’ includes units which use fossil fuels only during start-up or shut-down of the unit.”

⁴¹ Commission Decision 2011/278/EU (not in force anymore).

⁴² Commission Delegated Regulation (EU) 2019/331

⁴³ COM (2003) 354, cited in a Commission non-paper on the scope of the EU ETS, September 2003.

The purpose of this clause (which applies only until 31 December 2025)⁴⁴ is multifold:

The meaning of clause 3 of Annex I

- The aggregation clause is repeated with special clarification for all activities, which have a capacity threshold expressed as total rated thermal input. All units in which fuels are combusted (i.e. without differentiation between more specific activities), are to be aggregated. See section 3.2.
- It clarifies (together with the definition of installation (Article 3(e)) the hierarchy of terms: A site is the biggest item, which can consist of several installations. An installation can consist of several units.
- The non-exhaustive list gives further insight in what can be such units: boilers, turbines, kilns, flares, etc. (see section 4.4)
- An exemption (de-minimis rule) to the aggregation clause is included: Units with a rated thermal input below 3MW are excluded, as well as units using exclusively biomass (see section 3.4.5). This intends to reduce administrative burden by excluding installations that would fall under the scope of the EU ETS only because of many small emission sources which are hard to monitor.

Note: Article 27 does not provide a basis for leaving out biomass units and the 3 MW de-minimis units (see section 4.5.2). However, the term “unit” is relevant for the exclusion of reserve or backup units under Article 27a(3) (see section 4.5.3).

4.3 Reserve and backup units and parallel capacities

It is common industry practice that reserve or backup units exist at installations. Such units are used to replace the main units during maintenance or other shut-downs, or to cover heat demands during peak load situations. They can, thus, be used in parallel to the main units but are not in operation during a major part of the year. A similar situation occurs where two intermittent kilns take turns for production batches.

Treatment of reserve and back-up units

This situation, where parts of installations *usually* do not operate at the same time, is *per se* not a reason for not adding their capacities together. An exception can only be granted if the operator can give evidence to the satisfaction of the competent authority, that there are physical or legal restrictions which effectively prevent the simultaneous operation of these units⁴⁵. These restrictions must be clearly identified and be mandated by the competent authority in an enforceable way (e.g. by conditions in the GHG emissions permit or IED permit) and be subject to regular inspection⁴⁶ by the competent authority. In such cases, the bigger of the two capacities shall be assumed to determine the inclusion in the EU ETS.

4.4 Definition of “Unit”

Combustion units

⁴⁴ For the new approach on biomass installations from 1 January 2026 onwards, consult section 7.1.

⁴⁵ See more details on restricting the thermal input of installations given in section 3.4.1, which especially also apply to limiting the possibility to run units in parallel.

⁴⁶ This can be done either by third party verifiers, who are accredited for this type of inspection, or by the competent authority itself.

The term “unit” is defined only indirectly in the EU ETS Directive, by a non-exhaustive list in clause 3 of Annex I:

“These units could include all types of boilers, burners, turbines, heaters, furnaces, incinerators, calciners, kilns, ovens, dryers, engines, fuel cells, chemical looping combustion units, flares, and thermal or catalytic post-combustion units.”

Room for interpretation could exist where one unit contained in this list, e.g. a kiln, has sub-units also contained in the list, e.g. several burners which together supply the heat necessary for a certain production process. In such cases, the overarching unit (in this example the kiln) should be considered the “unit” when applying the aggregation clause or de-minimis exemption. There are two reasons for this:

Equal treatment

- A kiln with 12 MW thermal input could be equipped with 2 × 6 MW burners, but also with 3 × 4 MW, 4 × 3 MW or 6 × 2 MW, and several more options. In order to treat all comparable kilns equal, the burner cannot be considered the appropriate “unit”.
- The Directive stated (before the 2023 review, but still applicable until 31 December 2025) *“Units using exclusively biomass’ includes units which use fossil fuels only during start-up or shut-down of the unit.”* Thus, the Directive acknowledged with its own example that a unit is usually the more complex item and can contain several independent burners (the fossil start-up fuel usually requires a separate “start-up burner”).

Unit = equipment serving a particular purpose

From the above, it can be concluded that “burner” is in the list of units for completeness reasons in order to demonstrate the broadness of the definition for the rare case of stand-alone burners. Otherwise, a burner is usually considered to be a sub-part of a bigger unit, which as a whole serves a particular purpose, such as kilns, boilers or dryers, chemical reactors, distillation columns, CHP plants, etc.

The exclusion of de-minimis units is only relevant for the decision of including the installation in the ETS. As soon as the whole installation is in the ETS, these units are included as well. However, Article 27a(3) provides a possibility for Member States to allow the exclusion of *reserve or backup units* (see section 4.5.3).

4.5 Step-by-step approach (until end of 2025)

Note 1: This guidance focuses on the decision whether an installation should be included in the EU ETS, as if the installation in question were a potential new entrant. However, it seems logical to apply the same criteria also for the question if an installation currently under the EU ETS should be excluded from the EU ETS. In practice this question will arise in case of permit or monitoring plan updates due to technical changes to the installation or upon application by an operator to re-evaluate the installation's situation. In such case, the competent authority can follow the same step-by-step approach laid down in this section, taking into account the latest technical circumstances of the installation.

Note 2: Excluding installations under Articles 27 or 27a is only possible for whole allocation periods (2021 to 2025, 2026 to 2030, etc.). Re-introduction into the EU ETS is due the year after the relevant threshold is exceeded. The exclusion based on the 95% biomass criterion from 2026 (see chapter 7) applies to a whole 5-year period, and neither re-introduction nor an additional exclusion during the 5-year period is foreseen. All other criteria for inclusion/exclusion (in particular the thresholds given in Annex I) apply to the actual situation of an installation, i.e. changes throughout the allocation period are possible.

4.5.1 Defining installations which fall under the scope of EU ETS *Decision tree*

Summarizing the previous chapters, the following decision tree can be followed when determining if an installation falls under the scope of the EU ETS (valid only until the end of 2025)⁴⁷:

1. Apply the broadest possible installation boundaries (section 2).
2. Are activities of Annex I other than "combustion of fuels" carried out at the installation? (section 3.2).
 - a. YES: Is the activity-specific capacity threshold (if any) exceeded?
 - i. YES:
 1. Include all directly related activities (especially combustion units including their waste gas treatment);
 2. Check for units for the incineration of hazardous or municipal waste to be excluded following section 3.4.4 and for installations/units for the incineration of municipal waste for the inclusion for monitoring and reporting from 2024 in accordance with chapter 6;
 3. *Proceed to point 9* (section 4.5.2).
 - ii. NO: *Carry on with point 3* (assessing combustion units).
 - b. NO: *Carry on with point 3* (assessing combustion units).
3. List all combustion units of the installation.
4. Exclude units for the incineration of hazardous or municipal waste (see sections 3.4.3 and 3.4.4) from the list derived under point 3, but leave units for waste co-incineration on the list. From 2024, if applicable, include units for the

⁴⁷ For the situation from 1 January 2026 see section 7.2.

incineration of municipal waste, in accordance with sections 6.2 and 6.3, for the purpose of monitoring and reporting of emissions only.

5. Exclude biomass units from the list⁴⁸,
6. Exclude units with a rated thermal input of less than 3 MW_{th} from the list.
7. Add up all rated thermal inputs of the units remaining on the list of combustion units.
8. Does the sum determined under point 7 exceed 20 MW_{th}?
 - a. YES: Installation is under the EU ETS. Add again all units excluded under point 5 and 6. From 2024, distinguish cases of inclusion of installations for the incineration of municipal waste for monitoring and reporting and cases of full inclusion (see sections 6.2 and 6.3). *Proceed to point 9* (section 4.5.2).
 - b. NO: Installation stays out of the EU ETS. *Exit decision tree*.

4.5.2 Identifying installations which fall under the scope of EU ETS, but could be excluded as "small installations" pursuant to Article 27

9. Does the Member State concerned intend to allow an exclusion of small installations pursuant to Article 27?
 - a. NO: Installation is included in the EU ETS or may be excluded under Article 27a. *Proceed to point 11*.
 - b. YES: *Proceed to point 10*.
10. Is at least one of the following criteria met?
 - i. Installation is a hospital (see section 5.5),
 - ii. Installation carries out Annex I activity other than "combustion of fuels", and annual GHG emissions potentially⁴⁹ covered by the EU ETS in each of the three years before notification of the "NIMs list"⁵⁰ have been less than 25 000 tonnes CO₂(eq)^{51,52},
 - iii. Installation carries out Annex I activity "combustion of fuels", and the aggregate capacity (including the capacity of units mentioned under points 5 and 6) is less than 35 MW_{th}⁵³, and annual GHG emissions potentially⁴⁹ covered by the EU ETS in each of the three years before notification of the "NIMs list" have been less than 25 000 tonnes CO₂(eq)⁵¹.
 - a. YES: Installation may be excluded from EU ETS, if equivalent measures and monitoring and reporting arrangements in accordance with Article 14

⁴⁸ Units with start-up burners are also excluded, see section 3.4.5 for definition.

⁴⁹ This is to indicate emissions of installations already excluded from the EU ETS before.

⁵⁰ The list of installations and free allocation levels contained in the "NIMs" (National Implementation Measures) pursuant to Article 11(1). Deadline for this notification by Member States is 30 September 2024 and every 5 years thereafter. Therefore, the three years for assessing the given threshold are 2021, 2022 and 2023, and the respective years every five years thereafter.

⁵¹ In order to also give the possibility to exclude small installations that only started up their Annex I activity in one of the three relevant years, only the years during which the installation was already operating are taken into account.

⁵² Emissions from biomass are to be excluded in this calculation.

⁵³ When assessing the 35 MW and 25 000 tonnes CO₂(eq) threshold for possible exclusion from the EU ETS, also the fuel use (and CO₂ emissions) from units with a rated thermal input of less than 3 MW_{th} are included. Exempting the latter is only relevant when assessing whether an installation falls under the scope of the EU ETS.

are put in place and if installation is notified at the latest to the Commission by the relevant deadline for NIMs notification⁵⁰.

b. NO: Installation stays in the EU ETS or may be excluded under Article 27a.

4.5.3 Identifying installations or units which could be excluded pursuant to Article 27a

11. Does the Member State concerned intend to allow an exclusion of small installations pursuant to Article 27a(1)⁵⁴?

a. NO: Installation is included in the EU ETS. *Proceed to point 13.*

b. YES: *Proceed to point 12.*

12. Did the installation emit less than 2 500 tonnes CO₂ per year⁵⁵ in each of the three years before notification of the “NIMs list”?

a. YES: *Installation may be excluded from the EU ETS.*

b. NO: *Continue to point 13.*

13. Does the Member State intend to allow exclusion of reserve and backup units pursuant to Article 27a(3)⁵⁶?

a. NO: The installation as a whole remains in the EU ETS. *Exit decision tree.*

b. YES: *Continue to point 14.*

14. Does the installation have reserve or backup units which did not operate for more than 300 hours in each of the three years before notification of the “NIMs list”?

a. YES: Such units may be excluded from the EU ETS.

b. NO: The installation as a whole remains in the EU ETS. *Exit decision tree.*

4.5.4 Examples

Example 1: An installation operating:

- 3 units with 4 MW_{th} each,
- 1 unit (boiler) of 9 MW_{th}, and
- 8 units of 2 MW_{th} each.

This installation is included in the EU ETS ($3 \times 4 + 9 = 21$ MW_{th}). As all units excluded under point 5 and 6 have to be added up again, the installation is included with its full capacity of $12 + 9 + 8 \times 2 = 37$ MW_{th}, and cannot be excluded under Article 27 due to its capacity of 37 MW_{th}.

If the 9 MW_{th} unit were used for the incineration of hazardous waste, the whole installation would fall out of the scope of ETS, because only the 3 units with 4

⁵⁴ Article 27a(1): “Member States may exclude from the EU ETS installations that have reported to the competent authority of the Member State concerned emissions of less than 2 500 tonnes of carbon dioxide equivalent, disregarding emissions from biomass, in each of the three years preceding the notification [of the NIMs]” under conditions given in that Article.

⁵⁵ Emissions from biomass are to be excluded in this calculation.

⁵⁶ “3. Member States may also exclude from the EU ETS reserve or backup units which did not operate more than 300 hours per year in each of the three years preceding the notification under point (a) of paragraph 1, under the same conditions as set out in paragraphs 1 and 2.”

MW_{th} each would remain to be aggregated. No decision regarding possible exclusion under Article 27 would be necessary in this case.

Example 2: An installation operates a boiler of 28 MW_{th} fired with natural gas, and a biomass-based boiler of 12 MW_{th}. While the biomass boiler is excluded for the aggregation, it is included for the purpose of checking the capacity threshold for possible exclusion. Since Article 27 does not refer to the same de-minimis rules as clause 3 of Annex I, all combustion units at the installation are to be considered. Thus, the relevant capacity is $28 + 12 = 40$ MW_{th}, i.e. too high for a possible exclusion. (Note that this example would not be valid from 2026 due to the changes in the biomass criterion).

Example 3: A ceramics plant operates 2 tunnel kilns with an aggregate production capacity exceeding 75 tonnes per day and a boiler feeding steam to a dryer. In this situation, the installation can be considered to carry out only the activity “production of ceramics”. For possible exclusion under Article 27, only the emissions threshold of 25 000 tonnes CO₂(eq) per year is relevant.

Note: Member States are required to notify a list of *all* installations under the scope of EU ETS in their NIMs list⁵⁰ (identifying also small installations to be possibly excluded pursuant to Article 27 or 27a).

5 OTHER TOPICS

5.1 What are “bulk organic chemicals”?

Bulk organic chemicals are chemicals which are usually produced at large scale and sold as commodities for the purpose of producing other chemicals. Production processes under this activity are “cracking, reforming, partial or full oxidation” and “similar processes” (i.e. processes where severe thermal and/or oxidising conditions prevail). A production process can be assumed to be a “similar process” falling under this activity, if CO₂ emissions are not only result of separate combustion of fuels, but where part of the emitted carbon stems from the feedstock. Other chemical production processes should be assessed regarding inclusion in the EU ETS under the aspect of combustion activities.

Production process as criterion, no exhaustive list available

There is no exhaustive list of chemicals available that would satisfy the definition of the activity in Annex I of the EU ETS Directive. However, Table 3 can serve as a starting point. The fact that the chemicals produced are not listed in Table 3 does not mean that the installation considered should not be included in the EU ETS. A consideration on a case-by-case basis will therefore be required.

In line with section 4.2, where more than one organic chemical is produced, the aggregation clause requires all production volumes to be added. Also, in line with section 3.2, the production of chemicals which have not been identified as being bulk organic chemicals and which are not individually listed in Annex I (i.e. chemicals such as ammonia, carbon black, etc.) must be assessed for inclusion in the EU ETS under the assumption that the activity “combustion of fuels” is relevant.

Table 3: Non-exhaustive list of bulk organic chemicals

Ethylene / Propylene / Butene / Butadiene and other olefins
Acetylene if not produced from calcium carbide
EDC / VCM (Vinyl chloride)
Aromatics (Benzene, Toluene, Xylenes, Styrene, Ethylbenzene, Naphthalene and others)
Terephthalic acid / Dimethyl terephthalate
Ethylene oxide and Ethylene glycol, Propylene oxide and other epoxides
Phenol and other phenols
Acetone, Cyclohexanone and other Ketones
Acrylonitrile, Acrylic acid, Methacrylic acid
Cumene
Methanol, Ethanol (if not produced by fermentation) and higher alcohols
Formaldehyde, Acetaldehyde, Acrolein and higher aldehydes
Formic acid, acetic acids (if not from fermentation) and higher carboxylic acids
Phthalic acid, Maleic acid and their anhydrides
Acetic anhydride
Polyethylene, Polypropylene, Polystyrene, Polyvinylchloride
Polycarbonate, Polyamide, Urea derivatives, Silicones

5.2 Glyoxal and glyoxylic acid

A special case of Annex I is the activity “production of glyoxal and glyoxylic acid”. These can be produced by two different routes: (1) Oxidation of ethylene glycol in the presence of a catalyst only leads to CO₂ emissions. (2) Liquid phase oxidation of acetaldehyde with nitric acid leads to emission of both CO₂ and N₂O. MS have to take this into consideration when identifying and permitting respective installations.

5.3 Nitric acid, adipic acid, glyoxal and glyoxylic acid

N₂O and CO₂ For these activities, N₂O and CO₂ emissions are to be included. This means N₂O emissions as covered by Section 16 of Annex IV to the MRR and all CO₂ emissions arising from the production process of these chemicals and from combustion activities at these installations.

5.4 Production of primary and secondary aluminium

Aluminium production and processing

In the case of primary aluminium production, CO₂ emissions can occur from fuel combustion and anode consumption, and PFC emissions⁵⁷ can occur from anode effects. In secondary aluminium productions CO₂ emissions from fuel consumption can occur. With regards to installation boundaries, at least the following process steps should be taken into consideration:

- Primary smelting operations (CO₂ and PFC)
- Primary aluminium casting
- Combustion of fuels for
 - Secondary remelting operations
 - Secondary refining operations
 - Rolling operations
 - Extrusion operations
 - Casting

Alumina refining and anode production are considered part of the activity “aluminium production” if carried out in the same installation. If the production of anodes takes place in a separate installation, the activity must be included in the EU ETS if fuels are combusted with a rated thermal input of more than 20 MW. Alumina production is included without a threshold, both in installations for the production of primary aluminium or as separate installation, from 2024.

For secondary aluminium production or processing see also section 3.2.2.

⁵⁷ Gases to be taken into consideration are CF₄ and C₂F₆.

5.5 Definition of hospital

Hospitals can be excluded from the EU ETS under Article 27, irrespective of their emissions or thermal capacities. Thus, a definition of hospitals should be applied consistently by all Member States in order to prevent abuse of this exception. For this purpose, the operator of a hospital shall provide evidence to the competent authority that providing hospital activities is the main purpose of the installation in question. This can be a proof from the statistical office that the installation is classified as 86.10 (NACE rev. 2).

5.6 Flue gas desulphurisation

Even though sometimes marketable gypsum is a by-product of flue gas desulphurisation, this cannot be regarded a separate activity of gypsum production as listed under Annex I. Since waste gas scrubbing is part of the definition of combustion, only one activity (“combustion of fuels”) is carried out per definition in such case.

6 MUNICIPAL WASTE INCINERATION – APPLICABLE FROM 2024

Relevance from 1 January 2024

According to the EU ETS Directive as amended in 2023, the first activity in Annex I is defined as

“Combustion of fuels in installations with a total rated thermal input exceeding 20 MW (except in installations for the incineration of hazardous or municipal waste)

From 1 January 2024, combustion of fuels in installations for the incineration of municipal waste with a total rated thermal input exceeding 20 MW, for the purposes of Articles 14 and 15.”

The bold part of the definition is discussed here. How it is applied together with the first part, in particular regarding the phrase “*(except in installations for the incineration of hazardous or municipal waste)*” is discussed in section 6.3.

MRV only

It is a novel element of the Directive that an activity is included in the EU ETS only for the obligation to perform monitoring, reporting and verification (MRV), but without an obligation to surrender allowances. This is further emphasised by Article 30(7), which mandates the Commission to perform a review by July 2026 to assess the feasibility of including municipal waste incineration (MWI) installations in the EU ETS.

Note: As long as there is no obligation to surrender allowances for emissions from ***installations for the incineration of municipal waste*** (‘MWI installations’), any heat delivered from such installations to other EU ETS installations shall be considered “non-ETS heat” for the purpose of free allocation rules. The same applies to heat delivered from other EU ETS installations to such MWI installations.

This section only discusses installations or technical units being included in the EU ETS with this new qualifier of “MRV only”. All installations or units in which waste is used that have already been included in the EU ETS before 2024 do not need to be further discussed. **All installations and units which have been identified as included in accordance with sections 3.4.3 and 3.4.4 remain fully within the EU ETS.**

New questions

Questions that need to be answered are:

- How can MWI installations be identified which have not yet been included in the EU ETS, but need to carry out MRV from 1 January 2024? (Section 6.1)
- For these MWI installations, how to interpret the aggregation clause and the “associated activities”? (Section 6.2)
- Regarding installations already included in the EU ETS, are there changes with regard to Clause 5 of Annex I, i.e. regarding the exclusion of “units for the incineration of hazardous or municipal waste”? (Section 6.3)
- How to implement the “MRV only” inclusion in the EU ETS in practical terms, in particular for installations that consist of parts fully included in the EU ETS and parts included for MRV only? Guidance on this issue is given in section 6.4.

6.1 What are installations for the incineration of municipal waste

According to the premise put forward that any co-incineration is included in the EU ETS already, the first identifying element must be that the installation under consideration for inclusion must be a “waste incineration plant” as defined by the Industrial Emissions Directive (IED), which regulates waste incineration, not a “co-incineration plant”. The IED defines⁵⁸:

“waste incineration plant⁵⁹ means any stationary or mobile technical unit and equipment dedicated to the thermal treatment of waste, with or without recovery of the combustion heat generated, through the incineration by oxidation of waste as well as other thermal treatment processes, such as pyrolysis, gasification or plasma process, if the substances resulting from the treatment are subsequently incinerated.”

IED differentiates only hazardous and other waste incineration

The IED does not contain a definition of “municipal waste incineration plant”, as waste incinerators in general are designed to use many waste types in a flexible way. In Annex I of the IED, two different activities are defined:

5.2. Disposal or recovery of waste in waste incineration plants or in waste co-incineration plants:

(a) for non-hazardous waste with a capacity exceeding 3 tonnes per hour;

(b) for hazardous waste with a capacity exceeding 10 tonnes per day.

As these thresholds are relatively low, it is highly likely that most waste incineration or co-incineration covered by the EU ETS will be covered by an IED permit. Smaller units would be of interest for the EU ETS only if they are included due to the aggregation clause, in which case they would usually be *co-incineration* units, which would be covered by the EU ETS not just for MRV, as discussed in sections 3.4.3 and 3.4.4.

The IED provides further helpful elements for the purpose of this guidance:

- Waste incinerators using only certain vegetable biomass wastes are exempted from the waste-relevant chapter of the IED⁶⁰. Therefore, it can be concluded that such installations or units will qualify neither as MWI nor hazardous waste incineration installations or units. Note that municipal biomass wastes (park and garden wastes, kitchen wastes, etc.) do not fall under this exception.

⁵⁸ IED Article 3(40)

⁵⁹ Note that “plant” might be both, an installation or only a “unit” in EU ETS terminology.

⁶⁰ More precisely, point (a)(i) of Article 42(2) of the IED excludes the whole point (b) of Article 3(31) from the scope of chapter IV of the IED (i.e. rules on waste (co-)incineration), that is:

(i) vegetable waste from agriculture and forestry;

(ii) vegetable waste from the food processing industry, if the heat generated is recovered;

(iii) fibrous vegetable waste from virgin pulp production and from production of paper from pulp, if it is co-incinerated at the place of production and the heat generated is recovered;

(iv) cork waste;

(v) wood waste with the exception of wood waste which may contain halogenated organic compounds or heavy metals as a result of treatment with wood preservatives or coating and which includes, in particular, such wood waste originating from construction and demolition waste;

This list does not include e.g. vegetable wastes like “garden and park wastes” which again qualify as municipal according to the European Waste List.

**IED provides basis
for waste use
records**

- Pursuant to Article 45(1)(a) of the IED, any waste incineration plant's permit must contain a list of all types of waste which may be treated (identified according to the European Waste List⁶¹) and information on the quantity of each type of waste that can be used.
- Article 52(2) of the IED requires the operator to determine the mass of each type of waste according to the European Waste List, prior to accepting the waste. It is therefore a valid assumption that operators can provide data to the competent authority demonstrating whether they have incinerated predominantly municipal wastes over the last years. The same applies to hazardous wastes.
- Article 45(2) of the IED establishes additional requirements for the permit of waste incineration plants which can use hazardous wastes. It is therefore possible to identify if units can be used for incinerating hazardous waste.
- Article 50 of the IED requires that waste incineration plants for the incineration of certain⁶² hazardous wastes are designed, equipped, built and operated in such a way that the gas resulting from incineration is raised to a temperature of at least 1100°C for at least 2 seconds, while for the incineration of other wastes only a combustion gas temperature of at least 850°C needs to be ensured. Therefore, it can be assumed that if a waste incineration unit has an IED permit requiring a combustion gas temperature of at least 1100°C and fulfils the requirements of Article 45(2) of the IED, it is a unit for hazardous waste incineration.

**Definition of
municipal waste**

The second element to be considered is the definition of "municipal waste". The MRR defines 'municipal waste' as defined in the Waste Framework Directive (WFD)⁶³, Article 3(2b):

'municipal waste' means:

- (a) *mixed waste and separately collected waste from households, including paper and cardboard, glass, metals, plastics, bio-waste, wood, textiles, packaging, waste electrical and electronic equipment, waste batteries and accumulators, and bulky waste, including mattresses and furniture;*
- (b) *mixed waste and separately collected waste from other sources, where such waste is similar in nature and composition to waste from households;*

Municipal waste does not include waste from production, agriculture, forestry, fishing, septic tanks and sewage network and treatment, including sewage sludge, end-of-life vehicles or construction and demolition waste.

This definition is without prejudice to the allocation of responsibilities for waste management between public and private actors.

European Waste List

⁶¹ Decision 2000/532/EC

⁶² More precisely, at least 1100°C are required only if hazardous waste with a content of more than 1 % of halogenated organic substances, expressed as chlorine, is incinerated.

⁶³ Directive 2008/98/EC of the European Parliament and of The Council of 19 November 2008 on waste and repealing certain Directives; consolidated version:
<http://data.europa.eu/eli/dir/2008/98/2018-07-05>

The third important legislation in this area is the European Waste List⁶⁴. It can be used to determine what should be considered “municipal waste”. Category 20 contains “*municipal wastes (household waste and similar commercial, industrial and institutional wastes) including separately collected fractions*”. However, the categorisation is not unique. Category 20 contains also hazardous wastes (e.g. batteries and pesticides), while in particular packaging, which will be a significant part of mixed municipal wastes, is in category 15, too. Municipal waste is very heterogeneous, containing a wide mix of materials common to household-like wastes (although fractions suitable for recycling should be largely removed before incineration takes place). In this regard, the WFD and the Waste List converge.

Therefore, the competent authority should assess waste incineration installations not yet included in the EU ETS on a case-by-case basis, using the installation’s IED permit and its documentation of waste streams received in the past (or planned to be used, in case of new installations) to decide whether it is an MWI installation that needs to be included in the EU ETS for MRV obligations from 2024 onwards.

The following may be used for a step-by-step assessment:

1. If the installation or unit does not have an IED permit stating the activity “5.2 Disposal or recovery of waste in waste incineration plants”, the installation or unit is probably not relevant⁶⁵.
2. As has been argued above, units which according to the IED permit are designed, equipped, built and operated for the incineration of certain types of hazardous waste because they fulfil the criterion of combustion gas temperature above 1100°C can be considered units for the incineration of hazardous waste and can remain excluded in line with clause 5 of Annex I of the EU ETS Directive.
3. Based on the IED permit and the documentation of actually used waste streams:
 - a. If only a narrow, specific range of (sorted, not mixed) waste types is used, it is likely that it is non-municipal waste, in particular where specific (industrial) sources of the wastes can be identified;
 - b. A broad range of wastes, or highly mixed wastes containing materials typical for household wastes, indicate that it may be an MWI installation or unit;
 - c. A large percentage (in terms of energy content) of hazardous wastes (all waste numbers indicated by an asterisk in the European Waste List), indicates that it might be an installation or unit not exclusively used for municipal wastes. Fractions listed in section 20 of the European Waste List but marked as hazardous waste should be treated like hazardous rather than municipal waste in this assessment. This would be consistent with the fact that also for the plant design and permit conditions the hazardous character of such waste would prevail⁶⁶.

Identifying MWI installations

⁶⁴ Decision 2000/532/EC

⁶⁵ It may, however, be worth checking its rated thermal input, whether it has been “forgotten” before.

⁶⁶ See above regarding the IED requirement of having a combustion gas temperature of at least 1100°C and meeting the requirements of Art 45(2) of IED.

The assessment of the predominant waste type should cover the previous three years⁶⁷ or longest period possible if the start of operation was within the last three years. The predominant waste type is defined as the type of waste with the largest share in mass (municipal waste, hazardous waste or other wastes). The following results are possible:

- The predominant type is hazardous waste. In this case the installation (or unit) remains outside of the EU ETS.
- The predominant type is other waste (neither municipal, nor hazardous). In this case, the installation or unit should be fully included in the EU ETS, i.e. not only for MRV purposes.
- The predominant type is municipal waste. In this case the installation should be included for MRV from 2024 onwards.
- All three types of waste are used with no clearly dominant waste type. The installation should be fully included in the EU ETS, as it is not an installation “for the incineration of hazardous or municipal waste” only.

Example:

A given installation that incinerates waste uses the following types of waste: 34% municipal waste, 33% hazardous waste, 33% other wastes. The predominant waste type is municipal waste. Therefore, the installation should be included for MRV only from 2024 onwards.

6.2 MWI-associated activities and aggregation clause

Relation to other “combustion of fuels”

The aggregation rule of clause 3 of Annex I has not changed. The decision tree in section 4.5.1 is still applicable for existing activities.

As municipal waste incineration is part of the definition of “combustion of fuels”, in principle the aggregation clause will apply. This means that e.g. an installation consisting of two MWI lines of 12 MW each would be above 20 MW and consequently be included in the EU ETS for MRV only.

Because the normal combustion of fuels and MWI fall within the same activity, respective units need to be added up in the aggregation clause. However, because clause 5 of Annex I still excludes units for MWI, the Directive requires a distinction of different cases as follows:

The following cases can be distinguished:

- MWI unit above 20 MW_{th}: This unit would fall under the EU ETS for MRV purposes on its own. It could therefore be qualified as an *installation* on its own. If there are associated activities (combustion units), which are *below* 20 MW_{th} themselves (excluding units for the incineration of hazardous waste), those units are included in the monitoring plan and/or permit (depending on the Member State’s practice), but only MRV needs to be performed.

⁶⁷ Since data needs to be assessed by the competent authority before the end of 2023, these would be the years 2020-2022.

- MWI unit above 20 MW_{th} (i.e. qualifying as an *installation*) and associated activities (combustion units) which are *above* 20 MW_{th} themselves (excluding units for the incineration of hazardous waste): Here the units except the MWI need to be fully in the EU ETS. If it is confirmed that the MWI is an *incineration* unit, it is subject to MRV only, and its heat – if delivered for use in an EU ETS installation, including in the same installation – is considered “non-ETS heat”. Those MWI units are to be included in the monitoring plan and/or permit (depending on the Member State’s practice), but only MRV needs to be performed for these units;

For practical implementation in this situation see section 6.4.

However, if the competent authority determines that the MWI is in fact *co-incineration*, it is to be fully included in the EU ETS (i.e. with an obligation to surrender allowances).

- MWI *unit* below 20 MW_{th}, but as an installation together with other combustion units (above 3 MW_{th} each) – the 20 MW_{th} threshold is exceeded (but the non-MWI units together do not reach 20 MW_{th}, i.e. the installation was not included in the EU ETS before). Here all combustion units (including those below 3 MW_{th}) are added together to the GHG permit and/or monitoring plan for MRV only.
- Installation with activity “combustion of fuels”, where the 20 MW_{th} threshold is exceeded without inclusion of MWI units, and where the sum of MWI units alone does not exceed the 20 MW_{th} threshold: The installation is fully included in the EU ETS, but the *units* for municipal waste incineration remain excluded from the EU ETS (see also section 6.3).

To assess which of the above situations applies, it is necessary to decide which combustion units⁶⁸ are “normal combustion”, and which ones belong to the incineration of municipal wastes. For example, auxiliary burners using fossil fuels for raising the combustion temperature to the levels required by the IED would qualify as units that need to be included as part of the MWI unit. On the other hand, where e.g. a reserve boiler with conventional fuels is used to cover heat demand of a district heating network during peak hours or maintenance of the MWI unit, such reserve boiler would be a “normal combustion unit” for consideration in the bullet points below.

6.3 Units for the incineration of hazardous or municipal waste

For the purpose of including associated activities, the 2023 amendment of the EU ETS Directive has left clause 5 of Annex I unchanged:

Aggregation clause for MWI units

*“When the capacity threshold of any activity in this Annex is found to be exceeded in an installation, all units in which fuels are combusted, **other than units for the incineration of hazardous or municipal waste**, shall be included in the greenhouse gas emission permit.”*

⁶⁸ Annex I clause 3: “Those units may include all types of boilers, burners, turbines, heaters, furnaces, incinerators, calciners, kilns, ovens, dryers, engines, fuel cells, chemical looping combustion units, flares, and thermal or catalytic post-combustion units.”

This is to be understood as applying in the assessment of the activities for the full inclusion in the EU ETS as it was not changed in the EU ETS revision. This rule should be applied as follows, considering the coverage of MWI installations for MRV only:

- If only other Annex I activities than “combustion of fuels” are carried out in the installation, then:
 - The associated activities should be governed by clause 5, i.e. all combustion units except those for the incineration of municipal or hazardous waste should be excluded, as has been discussed in sections 3.4 and 4.5 for the situation before the 2023 amendment.
 - However, if units are identified as units for the incineration of municipal waste, but not hazardous waste, which together exceed the 20 MW_{th} threshold, these units need to be included for MRV purposes only.
- If all combustion units alone exceed the 20 MW_{th} threshold, it can be assumed that the activity “combustion of fuels” is carried out at the installation, and the approach laid down in section 6.2 above applies. This approach builds on the fact that MWI and other combustion of fuels are within the same Annex I activity.

6.4 How to implement the inclusion for MRV only

Practical implementation

For practical implementation of the inclusion of MWI installations for MRV purposes only, Member States should consider the following:

- Where an MWI installation has been identified in line with section 6.2 to be included in the EU ETS for MRV only, the Member State may issue a GHG permit for this installation. However, this is not a strict requirement.
- Where in an installation already included in the EU ETS there are units for the incineration of municipal waste which jointly exceed 20 MW_{th}, there is some flexibility whether to treat the MWI and the rest of the installation as two separate installations, i.e. with separate monitoring plans. Member States may decide to include those MWI units in the permit. A separate permit for those units is not a requirement.
- The MWI installation or units included for MRV only have to be covered by a monitoring plan. Where installation parts fully covered by the EU ETS and parts covered for MRV only are considered the same installation, the monitoring plan must clearly indicate which source streams and emissions sources belong to which part.
- In any event, for practical reasons, annual emission reports for the two separate installation parts have to be separate, since the part of the installation fully in the EU ETS needs to report the amount of emissions for which allowances need to be surrendered (and this number must be entered in the Registry), and the MWI under the MRV only regime needs to report information that Member States then have to report to the Commission separately according to Article 68(4) of the MRR.

7 CHANGES APPLICABLE FROM 2026

7.1 The biomass criterion from 2026 onwards

Before the 2023 EU ETS review, clause 3 (the aggregation clause) contained the provision that “units which use exclusively biomass shall not be taken into account for the purposes of this calculation [i.e. the summing up of thermal inputs of combustion units]. ‘Units using exclusively biomass’ includes units which use fossil fuels only during start-up or shut-down of the unit.” This provision has been deleted from the Directive. Therefore, the provisions discussed in section 3.4.5 are not applicable from 2026. Consequently, the decision tree presented in section 4.5 is not applicable from 2026. A new decision tree is provided in section 7.2.

From 2026, the question whether installations can be excluded from the EU ETS will not be applied anymore on basis of individual units using biomass, but at installation level. Furthermore, it is now clarified that only “zero-rated” biomass will allow excluding installations from the EU ETS, i.e. biomass must comply with the GHG savings and sustainability criteria defined by the RED II⁶⁹. Clause 1 of Annex I, 2nd sentence reads:

“Installations where during the preceding relevant five-year period referred to in Article 11(1), second subparagraph, emissions from the combustion of biomass that complies with the criteria set out pursuant to Article 14 contribute on average to more than 95 % of the total average greenhouse gas emissions are not covered by this Directive.”

The reference to Article 14 means the way how the MRR applies the RED II criteria⁷⁰.

Biomass and RED II criteria

⁶⁹ RED II means the recast Renewable Energy Directive (Directive (EU) 2018/2001).

⁷⁰ At the time of publishing this guidance document, Article 38(5) of the MRR reads as follows: “5. Where reference is made to this paragraph, biofuels, bioliquids and biomass fuels used for combustion shall fulfil the sustainability and the greenhouse gas emissions saving criteria laid down in paragraphs 2 to 7 and 10 of Article 29 of Directive (EU) 2018/2001 [the RED II].

However, biofuels, bioliquids and biomass fuels produced from waste and residues, other than agricultural, aquaculture, fisheries and forestry residues are required to fulfil only the criteria laid down in Article 29(10) of Directive (EU) 2018/2001. This subparagraph shall also apply to waste and residues that are first processed into a product before being further processed into biofuels, bioliquids and biomass fuels.

Electricity, heating and cooling produced from municipal solid waste shall not be subject to the criteria laid down in Article 29(10) of Directive (EU) 2018/2001.

The criteria laid down in paragraphs 2 to 7 and 10 of Article 29 of Directive (EU) 2018/2001 shall apply irrespective of the geographical origin of the biomass.

Article 29(10) of Directive (EU) 2018/2001 shall apply to an installation as defined in Article 3(e) of Directive 2003/87/EC [the EU ETS Directive].

The compliance with the criteria laid down in paragraphs 2 to 7 and 10 of Article 29 of Directive (EU) 2018/2001 shall be assessed in accordance with Articles 30 and 31(1) of that Directive.

Where the biomass used for combustion does not comply with this paragraph, its carbon content shall be considered as fossil carbon.”

For the interpretation of the relevant criteria of the RED II as laid down in Article 38(5) of the MRR and for how to provide evidence on compliance with those criteria, see the Commission's MRR Guidance document No. 3 ("Biomass issues in the EU ETS"):

https://climate.ec.europa.eu/system/files/2022-10/gd3_biomass_issues_en.pdf ⁽⁷¹⁾

On how to apply Clause 1 of Annex I, two cases should be distinguished:

- For incumbent installations, guidance is given in section 7.1.1;
- Installations which had no MRV obligation under the EU ETS in the relevant baseline years⁷², but could fall under the scope of the EU ETS due to the activities carried out, should be treated as new entrants (see section 7.1.2).

7.1.1 Assessing the biomass criterion for incumbent installations

For the assessment whether incumbent installations can be excluded from the EU ETS, the following points provide guidance:

1. The 95% biomass criterion relates to the total emissions of the installation, i.e. it does not exclude process emissions. It is to be noted that process emissions, if stemming from biomass, are always zero-rated, as the RED II criteria apply only to combustion emissions (see GD3 as referred to in the box above).
2. Also, the criterion related to the total emissions is not limited to combustion activities only. For determining the total emissions, to which the biomass emissions are to be compared, all emissions must be determined using the "preliminary emission factor"⁷³. If the (final) emission factor were used, all eligible biomass emissions would be zero and would never reach the 95% threshold. If an installation is already included in the EU ETS (or excluded pursuant to Article 27), it is obliged to perform monitoring according to a monitoring plan approved by the competent authority. In this case, the data of verified annual emissions reports of the relevant years are to be used for determination of the zero-rated emissions, and as a basis for determination of the total emissions. In case a competent authority has performed a conservative estimate of the annual emissions pursuant to Article 70 of the MRR, that estimate should be used instead of the annual emissions report.
3. If the installation has not been operated during the whole reference period (e.g. because of maintenance shut-downs), all years shall be taken into account for which verified annual emission reports are available. If a merger or split of installation has taken place during the reference period, the relevant data representing the situation after the merger or split shall be used.

⁷¹ Note that FAQs on the topic are included in the 2022 Compliance Forum training material found under https://climate.ec.europa.eu/system/files/2023-05/ets_mrva_training_biomass_en.pdf

⁷² This includes installations that have never been in the EU ETS before (e.g. because they are to be included due to changed definitions of Annex I activities, see section 3.3), but also installations which were excluded due to meeting the 95% threshold (or earlier, the "exclusively biomass use" criterion).

⁷³ Defined by Article 3(36) of the MRR: "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;"

4. Competent authorities have to collect installations' emissions data of the years 2019 to 2023 for the purpose of the NIMs notification in September 2024. For administrative efficiency and to use most recent data available, the emissions data of these five NIMs baseline years are to be used also for the purpose of the biomass criterion of clause 1 of Annex I. In NIMs data, like in annual emission reports, emissions are reported in accordance with the MRR, i.e. the biomass emissions complying with the sustainability and GHG savings criteria of the RED II and in accordance with Article 38(5) of the MRR are separately reported.

Applicable reference period

For the years 2019 and 2020 the MRR did not explicitly require the reporting of emissions from biomass. Some Member States allowed them to be reported simply as zero. Only since the MRR 2018 (applicable as of 2021), it has become mandatory to report biomass emissions using a *preliminary emissions factor*. Therefore, operators will have to provide best available data for these years for the purpose of clause 1 of Annex I of the EU ETS Directive. Such best available data may be based on default values of the preliminary emission factor (tier 2: from national GHG inventories, tier 1: emission factors given in the Annex of MRR Guidance Document 3, see textbox above).

Where operators do not submit NIMs baseline data because they do not apply for free allocation, the competent authority will have to rely on annual emissions reports. However, the same baseline years are to be used for consistency.

5. While sustainability criteria applied to liquid biomass already during the 3rd phase of the EU ETS, RED II criteria were relevant for biomass fuels (i.e. solid and gaseous biomass) only from 2022 onwards, and many Member States allowed operators a derogation pursuant to Article 38(6) which made monitoring of compliance with these criteria mandatory only from 2023 onwards. Operators will therefore have only one or two complete years of data available for the data collection in 2024 based on the current RED II criteria. Retrospective certification of biomass is not possible pursuant to the rules of the RED II, i.e. the RED II criteria cannot be checked for years where they were not applicable in the Member State. Therefore, the data collection will cover years for which different sets of sustainability and GHG savings criteria are applied. The rules for zero-rating of biomass applied for the purpose of emissions reporting during the respective year need to be considered for the purpose of the biomass criterion of clause 1 of Annex I.

Dealing with changes of RED criteria

For subsequent NIMs data (e.g. baseline years 2024-2028 for submission by Member States in 2029), the full RED II criteria as established by the MRR will have to be applied.

6. The average percentage of zero-rated emissions in the installation's total emissions of the available years during the reference period shall be calculated as follows to determine whether more than 95 % of emissions stem from zero-rated biomass (see also the example below):
- First calculate the sum of the emissions over the 5 years period:
 - A = Sum of emissions complying with RED II criteria
 - B = Sum of other emissions (Fossil and non-RED II compliant biomass)
 - Then calculate $C = A / (A + B)$
 - If $C > 95\%$, the installation is to be excluded.

Example:

Source stream	t CO ₂	2019	2020	2021	2022	2023	Sum (5 yr)
Biomass No 1	fossil						
	RED II compliant	1 003 406	995 516	997 521	998 438	996 911	4 991 792
	other biomass						
Natural gas	fossil	29 862	29 883	29 935	30 014	29 920	149 614
	RED II compliant						
	other biomass						
Limestone	fossil	5 019	4 993	5 019	4 984	4 992	25 007
	RED II compliant						
	other biomass						
Biomass No 2	fossil						
	RED II compliant	24 935	25 064	25 021			75 020
	other biomass				24 886	25 075	49 961
Sum	fossil						174 621
	RED II compliant						5 066 812
	other biomass						49 961
Total emissions (fossil + non-RED II biomass)							5 291 394
Zero rated emissions							5 066 812
Percentage of zero-rated emissions							95,8%
							criterion fulfilled

7.1.2 Assessing installation not previously included in the EU ETS

Case A: The installation has operated at least one full calendar year in the baseline period mentioned in section 7.1.1, but was not included in the EU ETS during that period: In principle, the same approach as described in section 7.1.1 applies. However, the installation did neither have a GHG emissions permit nor an obligation to comply with the MRR in monitoring and reporting. Therefore, data availability is limited, unless the Member State has relevant monitoring obligations in place (e.g. for providing evidence on its national renewable energy targets). The operator should provide “best available data”⁷⁴ on its emissions during the relevant baseline period (or longest available period if not under operation for the whole duration of the baseline period) to the competent authority. The competent authority should perform a conservative estimation pursuant to Article 70 of the MRR; where deemed necessary.

⁷⁴ Building on the monitoring methods provided by the MRR to the extent possible, not requiring specific tiers. For characterisation of source streams, information from currently used fuels and materials may be considered to apply also to earlier years. Consumption data of fuels and materials should be proven using financial statements or production data where possible. Where the Member State requires reporting on biomass sustainability for the purpose of its national renewable energy target, such data can also be used.

Case B: For installations which have not operated (“greenfield installations”), the above approach is not appropriate. Therefore, a deviating approach should be followed exclusively for such installations:

1. *If the operator of such installation provides evidence to the satisfaction of the competent authority that more than 95% of their emissions will be from biomass which complies with the RED II criteria*, the competent authority may decide to exclude the installation from the EU ETS from the start of its operation. Such evidence may be based on the installation’s design description provided to the competent authority for the purpose of permitting, in combination with supply contracts for specific types and quantities of fuels (including biomass and information on their planned certification under the RED II).
2. Where the occurrence of non-biomass emissions cannot be excluded, or where combustion of biomass not complying with the RED II criteria may occur, or where the competent authority has any other doubts about the predicted biomass use, the competent authority has to require the operator to provide emissions data from the first full calendar year of operation in conformity with the MRR. For this purpose, it will be necessary to include the installation in the EU ETS by issuing a GHG permit and approving a monitoring plan.
3. When the annual emissions report, or, where applicable, the new entrant data report (covering the first full calendar year of the installation’s operation) confirms that the criterion of more than 95% zero-rated biomass emissions is complied with, the installation can be excluded for the rest of the applicable five-year period.

In both cases A and B, installations which have not been covered by the EU ETS before but which are included from 2026 based on the 95% biomass criterion will be treated like new entrants with regard to receiving a permit and to free allocation. Therefore, it is not necessary to notify them to the Commission as part of the list pursuant to Article 11(1) of the EU ETS Directive. However, Member State should notify the new entrants as soon as possible in a way that allows the installation’s inclusion in the EU ETS from 1 January 2026.

7.2 New step-by-step approach regarding aggregation of combustion units

Additions compared to the situation in 2024 are indicated in **bold font** and deletions by ~~strikethrough~~.

7.2.1 Defining installations which fall under the scope of EU ETS

Decision tree applicable from 2026

Summarizing the previous sections, the following decision tree can be followed when determining if an installation falls under the scope of the EU ETS from 1 January 2026:

1. Apply the broadest possible installation boundaries (chapter 2).
2. **If the installation uses significant amounts of biomass so that the “95 % sustainable biomass” criterion (see section 7.1) might be relevant, carry out the assessment as described in that section.**
 - a. **More than 95 % of the installation’s emissions can be zero-rated as stemming from RED II compliant biomass^{75,76}: The installation is not to be included in the EU ETS. *Exit Decision tree.***
 - b. **Less than 95% of the installation’s emissions can be zero-rated as stemming from RED II compliant biomass: Continue to point 3.**
3. Are activities of Annex I other than "combustion of fuels" carried out at the installation? (section 3.2).
 - a. YES: Activity-specific capacity threshold (if any) exceeded?
 - i. YES:
 1. Include all directly related activities (especially combustion units including their waste gas treatment),
 2. Check for units for the incineration of ~~municipal and~~ hazardous waste to be excluded following section 3.4.4 and ~~(from 2024)~~ taking into account chapter 6,
 3. *Proceed to point 10* (section 7.2.2).
 - ii. NO: *Carry on with point 4* (assessing combustion units).
 - b. NO: *Carry on with point 4* (assessing combustion units).
4. List all combustion units of the installation.
5. Exclude units for the incineration of ~~municipal and~~ hazardous waste (see sections 3.4.3 and 3.4.4) from the list derived under point 3, but leave units for co-incineration on the list; ~~from 2024,~~ take into account municipal waste incineration units in accordance with sections 6.2 and 6.3,
- ~~6. Exclude biomass units from the list,~~
7. Exclude units with a rated thermal input of less than 3 MW_{th} from the list.
8. Add up all rated thermal inputs of the units remaining on the list of combustion units.
9. Does the sum determined under point 8 exceed 20 MW_{th}?

⁷⁵ It is to be noted that process emissions, if stemming from biomass, are always zero-rated, as the RED II criteria apply only to combustion emissions.

⁷⁶ RED II criteria compliance can be checked only from the time period the criteria have been applied in the specific Member State.

- c. YES: Installation is under the EU ETS. Add again all units excluded under point 5 and 6. ~~From 2024~~. Distinguish cases where municipal waste incinerations units are included for MRV only, and cases of full inclusion (see sections 6.2 and 6.3). *Proceed to point 10* (section 7.2.2).
- d. NO: Installation stays out of the EU ETS. *Exit decision tree*.

7.2.2 Identifying installations which fall under the scope of EU ETS, but could be excluded as "small installations" pursuant to Article 27

10. Does the Member State concerned intend to allow an exclusion of small installations pursuant to Article 27?

- a. NO: Installation is included in the EU ETS, or may be excluded under Article 27a. *Proceed to point 12*.
- b. YES: *proceed to point 11*.

11. Is at least one of the following criteria met?

- i. Installation is a hospital (see section 5.5),
 - ii. Installation carries out Annex I activity other than "combustion of fuels", and annual GHG emissions potentially⁷⁷ covered by the EU ETS in each of the three years before notification of the "NIMs list"⁷⁸ have been less than 25 000 t CO₂(eq)^{79,80},
 - iii. Installation carries out Annex I activity "combustion of fuels", and the aggregate capacity (including the capacity of units mentioned under points 5 and 6) is less than 35 MW_{th}⁸¹, and annual GHG emissions potentially⁷⁷ covered by the EU ETS in each of the three years before notification of the "NIMs list" have been less than 25 000 t CO₂(eq)⁷⁹.
- a. YES: Installation may be excluded from EU ETS, if equivalent measures and monitoring and reporting arrangements in accordance with Article 14 are in place and if installation is notified at the latest to the Commission by the relevant deadline for NIMs notification⁷⁸.
 - b. NO: Installation stays in the EU ETS or may be excluded under Article 27a.

⁷⁷ This is to indicate emissions of installations already excluded from the EU ETS before.

⁷⁸ The list of installations and free allocation levels contained in the "NIMs" (National Implementation Measures) pursuant to Article 11(1). Deadline for this notification by Member States is 30 September 2024 and every 5 years thereafter. Therefore, the three years for assessing the given threshold are 2021, 2022 and 2023, and the respective years every five years thereafter.

⁷⁹ In order to also give the possibility to exclude small installations that only started up their Annex I activity in one of the three relevant years, only the years during which the installation was already operating are taken into account.

⁸⁰ Emissions from biomass are to be excluded in this calculation.

⁸¹ When assessing the 35 MW and 25 000 t CO₂(eq) threshold for possible exclusion from the EU ETS, also the fuel use (and CO₂ emissions) from units with a rated thermal input of less than 3 MW_{th} are included. Exempting the latter is only relevant when assessing whether an installation falls under the scope of the EU ETS.

7.2.3 Identifying installations or units which could be excluded pursuant to Article 27a

12. Does the Member State concerned intend to allow an exclusion of small installations pursuant to Article 27a(1)⁸²?
 - a. NO: Installation is included in the EU ETS. *Proceed to point 14.*
 - b. YES: *Proceed to point 13.*
13. Did the installation emit⁸⁰ less than 2 500 t CO₂ per year in each of the three years before notification of the “NIMs list”?
 - a. YES: *Installation may be excluded from the EU ETS.*
 - b. NO: *Continue to point 14.*
14. Does the Member State intend to allow exclusion of reserve and backup units pursuant to Article 27a(3)⁸³?
 - a. NO: The installation as a whole remains in the EU ETS. *Exit decision tree.*
 - b. YES: *Continue to point 15.*
15. Does the installation have reserve or backup units which did not operate more than 300 hours in each of the three years before notification of the “NIMs list”?
 - a. YES: Such units may be excluded from the EU ETS.
 - b. NO: The installation as a whole remains in the EU ETS. *Exit decision tree.*

⁸² Article 27a(1): “Member States may exclude from the EU ETS installations that have reported to the competent authority of the Member State concerned emissions of less than 2 500 tonnes of carbon dioxide equivalent, disregarding emissions from biomass, in each of the three years preceding the notification [of the NIMs]” under conditions given in that Article.

⁸³ “3. Member States may also exclude from the EU ETS reserve or backup units which did not operate more than 300 hours per year in each of the three years preceding the notification under point (a) of paragraph 1, under the same conditions as set out in paragraphs 1 and 2.”

8 ANNEX

8.1 Glossary

CA.....	Competent Authority
CHP	Combined Heat and Power production (Cogeneration)
FAR.....	Free Allocation Rules: Commission Delegated Regulation (EU) 2019/331 of 19 December 2018 determining transitional Union-wide rules for harmonised free allocation of emission allowances pursuant to Article 10a of Directive 2003/87/EC of the European Parliament and of the Council. Download: http://data.europa.eu/eli/reg_del/2019/331/oj
EU ETS.....	EU greenhouse gas Emission Trading System. For the purposes of this Guidance Document, EU ETS refers to the emission trading system for stationary installations (i.e. installations covered by Chapter III of the EU ETS Directive).
EU ETS Directive..	Directive 2003/87/EC of the European Parliament and of the Council of 13 October 2003 establishing a system for greenhouse gas emission allowance trading within the Community and amending Council Directive 96/61/EC. Download: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A02003L0087-20230605
GD	Guidance Document. For the Commission's guidance documents on MRVA topics (in particular GD3 on biomass issues), see https://climate.ec.europa.eu/eu-action/eu-emissions-trading-system-eu-ets/monitoring-reporting-and-verification-eu-ets-emissions_en
GHG.....	Greenhouse gas(es) listed in Annex II to the EU ETS Directive. Only those GHG which are listed in Annex I for each activity are considered within this guidance.
IED.....	Industrial Emissions Directive, i.e. Directive 2010/75/EU of the European Parliament and of the Council of 24 November 2010 on industrial emissions (integrated pollution prevention and control), http://data.europa.eu/eli/dir/2010/75/2011-01-06
MRR.....	Monitoring and Reporting Regulation: 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. Download consolidated version: http://data.europa.eu/eli/reg_impl/2018/2066/2022-08-28
MRV.....	Monitoring, Reporting and Verification
MRVA	Monitoring, Reporting, Verification and Accreditation

MS	Member State(s). Note that within this guidance, this should be read as “EU Member States and Norway, Iceland and Liechtenstein”, i.e. all States participating in the EU ETS
MWI	Municipal Waste Incineration
NACE	Statistical classification of economic activities in the European Community
NIMs	National implementation measures pursuant to Article 11
RED II	Renewable Energy Directive II: Directive (EU) 2018/2001 of the European Parliament and of the Council of 11 December 2018 on the promotion of the use of energy from renewable sources (recast). Download under: http://data.europa.eu/eli/dir/2018/2001/2022-06-07
WFD.....	Waste Framework Directive: Directive 2008/98/EC of the European Parliament and of The Council of 19 November 2008 on waste and repealing certain Directives; consolidated version: http://data.europa.eu/eli/dir/2008/98/2018-07-05

8.2 Annex I of the revised ETS-directive (excluding maritime and aviation activities)

Additions compared to the Directive before the 2023 preview are indicated in **bold font** and deletions by ~~strike through~~.

Categories of activities to which this directive applies

1. Installations or parts of installations used for research, development and testing of new products and processes ~~and installations exclusively using biomass~~ are not covered by this Directive. **Installations where during the preceding relevant five-year period referred to in Article 11(1), second subparagraph, emissions from the combustion of biomass that complies with the criteria set out pursuant to Article 14 contribute on average to more than 95 % of the total average greenhouse gas emissions are not covered by this Directive.**
2. The thresholds values given below generally refer to production capacities or outputs. Where several activities falling under the same category are carried out in the same installation, the capacities of such activities are added together.
3. When the total rated thermal input of an installation is calculated in order to decide upon its inclusion in the EU ETS, the rated thermal inputs of all technical units which are part of it, in which fuels are combusted within the installation, are added together. ~~These~~ **Those** units ~~may~~ **could** include all types of

boilers, burners, turbines, heaters, furnaces, incinerators, calciners, kilns, ovens, dryers, engines, fuel cells, chemical looping combustion units, flares, and thermal or catalytic post-combustion units. Units with a rated thermal input under 3 MW ~~and units which use exclusively biomass~~ shall not be taken into account for the purposes of this calculation. ~~"Units using exclusively biomass" includes units which use fossil fuels only during start-up or shut-down of the unit.~~

4. If a unit serves an activity for which the threshold is not expressed as total rated thermal input, the threshold of this activity shall take precedence for the decision about the inclusion in the EU ETS.
5. When the capacity threshold of any activity in this Annex is found to be exceeded in an installation, all units in which fuels are combusted, other than units for the incineration of hazardous or municipal waste, shall be included in the GHG emission permit.

	Activities	Greenhouse gases
1	Combustion of fuels in installations with a total rated thermal input exceeding 20 MW (except in installations for the incineration of hazardous or municipal waste) From 1 January 2024, combustion of fuels in installations for the incineration of municipal waste with a total rated thermal input exceeding 20 MW, for the purposes of Articles 14 and 15.	Carbon dioxide
2	Refining of mineral oil, where combustion units with a total rated thermal input exceeding 20 MW are operated	Carbon dioxide
3	Production of coke	Carbon dioxide
4	Metal ore (including sulphide ore) roasting or sintering, including pelletisation	Carbon dioxide
5	Production of pig-iron or steel (primary or secondary fusion) including continuous casting, with a capacity exceeding 2,5 tonnes per hour	Carbon dioxide
6	Production or processing of ferrous metals (including ferroalloys) where combustion units with a total rated thermal input exceeding 20 MW are operated. Processing includes, inter alia, rolling mills, re-heaters, annealing furnaces, smitheries, foundries, coating and pickling	Carbon dioxide
7	Production of primary aluminium or alumina	Carbon dioxide and perfluorocarbons
8	Production of secondary aluminium where combustion units with a total rated thermal input exceeding 20 MW are operated	Carbon dioxide

	Activities	Greenhouse gases
9	Production or processing of non-ferrous metals, including production of alloys, refining, foundry casting, etc., where combustion units with a total rated thermal input (including fuels used as reducing agents) exceeding 20 MW are operated	Carbon dioxide
10	Production of cement clinker in rotary kilns with a production capacity exceeding 500 tonnes per day or in other furnaces with a production capacity exceeding 50 tonnes per day	Carbon dioxide
11	Production of lime or calcination of dolomite or magnesite in rotary kilns or in other furnaces with a production capacity exceeding 50 tonnes per day	Carbon dioxide
12	Manufacture of glass including glass fibre with a melting capacity exceeding 20 tonnes per day	Carbon dioxide
13	Manufacture of ceramic products by firing, in particular roofing tiles, bricks, refractory bricks, tiles, stoneware or porcelain, with a production capacity exceeding 75 tonnes per day	Carbon dioxide
14	Manufacture of mineral wool insulation material using glass, rock or slag with a melting capacity exceeding 20 tonnes per day	Carbon dioxide
15	Drying or calcination of gypsum or production of plaster boards and other gypsum products, with a production capacity of calcined gypsum or dried secondary gypsum exceeding a total of 20 tonnes per day where combustion units with a total rated thermal input exceeding 20 MW are operated	Carbon dioxide
16	Production of pulp from timber or other fibrous materials	Carbon dioxide
17	Production of paper or cardboard with a production capacity exceeding 20 tonnes per day	Carbon dioxide
18	Production of carbon black involving the carbonisation of organic substances such as oils, tars, cracker and distillation residues with a production capacity exceeding 50 tonnes per day , where combustion units with a total rated thermal input exceeding 20 MW are operated	Carbon dioxide
19	Production of nitric acid	Carbon dioxide and nitrous oxide
20	Production of adipic acid	Carbon dioxide and nitrous oxide
21	Production of glyoxal and glyoxylic acid	Carbon dioxide and nitrous oxide
22	Production of ammonia	Carbon dioxide
23	Production of bulk organic chemicals by cracking, reforming, partial or full oxidation or by similar processes, with a production capacity exceeding 100 tonnes per day	Carbon dioxide
24	Production of hydrogen (H ₂) and synthesis gas by reforming or partial oxidation with a production capacity exceeding 25 5 tonnes per day	Carbon dioxide
25	Production of soda ash (Na ₂ CO ₃) and sodium bicarbonate (NaHCO ₃)	Carbon dioxide

	Activities	Greenhouse gases
26	Capture of greenhouse gases from installations covered by this Directive for the purpose of transport and geological storage in a storage site permitted under Directive 2009/31/EC	Carbon dioxide
27	Transport of greenhouse gases by pipeline for geological storage in a storage site permitted under Directive 2009/31/EC, with the exclusion of those emissions covered by another activity under this Directive	Carbon dioxide
28	Geological storage of greenhouse gases in a storage site permitted under Directive 2009/31/EC	Carbon dioxide