



2024/873

4.4.2024

COMMISSION DELEGATED REGULATION (EU) 2024/873

of 30 January 2024

amending Delegated Regulation (EU) 2019/331 as regards transitional Union-wide rules for harmonised free allocation of emission allowances

(Text with EEA relevance)

THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union,

Having regard to 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 ⁽¹⁾, and in particular Article 10a(1), thereof,

Whereas:

- (1) Directive 2003/87/EC has been revised and amended by Directive (EU) 2023/959 of the European Parliament and of the Council ⁽²⁾ to align it with Regulation (EU) 2021/1119 of the European Parliament and of the Council ⁽³⁾ setting a target of at least 55 % net emission reductions by 2030 compared to 1990. The revision of Directive 2003/87/EC also concerns free allocation of allowances and requires changes to Commission Delegated Regulation (EU) 2019/331 ⁽⁴⁾.
- (2) Directive (EU) 2023/959 introduces obligations for monitoring and reporting of emissions on operators of installations for the incineration of municipal waste. Given that those installations do not have to surrender allowances in accordance with Article 12 of that Directive, it is appropriate not to consider heat delivered by those installations to other installations as covered by the European Union Emissions Trading System (EU ETS) for the purpose of free allocation.
- (3) In order to incentivise the electrification of industrial processes as an important technology to significantly reduce emissions from such processes and to ensure equal treatment of processes covered by product benchmarks and the heat and fuel benchmarks, measurable and non-measurable heat produced from electricity should in principle be eligible for free allocation under the heat and fuel benchmarks.
- (4) In Case C-271/20 ⁽⁵⁾, the Court of Justice ruled that chemical energy stored in the raw material and released as heat during the combustion process is to be treated as a fuel for the purpose of free allocation. As such combustion processes release emissions other than greenhouse gases, it is appropriate to explicitly exclude the heat released during such combustion processes from free allocation under the fuel benchmark to ensure environmental integrity, in particular in view of the release of sulphur oxides during such combustion processes. Therefore, the use of the fuel benchmark should be restricted to combustion processes where the primary purpose is the generation of non-measurable heat.

⁽¹⁾ OJ L 275, 25.10.2003, p. 32.

⁽²⁾ Directive (EU) 2023/959 of the European Parliament and of the Council of 10 May 2023 amending Directive 2003/87/EC establishing a system for greenhouse gas emission allowance trading within the Union and Decision (EU) 2015/1814 concerning the establishment and operation of a market stability reserve for the Union greenhouse gas emission trading system (OJ L 130, 16.5.2023, p. 134).

⁽³⁾ Regulation (EU) 2021/1119 of the European Parliament and of the Council of 30 June 2021 establishing the framework for achieving climate neutrality and amending Regulations (EC) No 401/2009 and (EU) 2018/1999 ('European Climate Law') (OJ L 243, 9.7.2021, p. 1).

⁽⁴⁾ 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 (OJ L 59, 27.2.2019, p. 8).

⁽⁵⁾ Judgment of the Court (Fifth Chamber) of 25 November 2021, Case C-271/20, *Aurubis AG v Bundesrepublik Deutschland*, ECLI:EU:C:2021:959.

- (5) Article 10a of Directive 2003/87/EC provides the Commission with a mandate to integrate the implementation of the new conditionality on energy efficiency measures into the existing five-year cycle for installations applying for free allocation established by this Regulation, in order to ensure harmonisation with existing procedures and to avoid undue administrative burden.
- (6) The competent authority should approve the monitoring methodology plan in order to ensure consistency with the monitoring rules. Due to time constraints, approval by the competent authority had not been required for the submission of baseline data reports in 2019, the year in which the monitoring methodology plans were introduced by Delegated Regulation (EU) 2019/331. This exemption is no longer necessary and should no longer apply.
- (7) Directive 2003/87/EC provides that no free allocation shall be given in relation to the production of products covered by the Carbon Border Adjustment Mechanism (CBAM), established by Regulation (EU) 2023/956 of the European Parliament and of the Council ⁽⁶⁾, with a gradual phase-out of free allocation during a transitional period. To ensure a harmonised implementation of this provision, operators should provide information and evidence, in particular based on Combined Nomenclature (CN) codes established by Council Regulation (EEC) No 2658/87 ⁽⁷⁾, on the goods produced.
- (8) In order to simplify procedures, in particular in relation to annual activity level reporting and subsequent adjustments to free allocation in accordance with Commission Implementing Regulation (EU) 2019/1842 ⁽⁸⁾, data for all sub-installations, including small sub-installations, should be reported as a basis for later free allocation adjustments.
- (9) In order to incentivise the electrification of industrial processes to significantly reduce emissions from such processes, it is necessary to remove the rules for the exchangeability of fuel and electricity. Consequently, highly or entirely electrified processes covered by the EU ETS should benefit from free allocation in the same way as processes with high direct emissions. Therefore, the amount of free allocation should be determined regardless of the share of direct and indirect emissions for installations falling under the same benchmark. Even though free allocation for those processes will cover also indirect emissions, it does not necessarily imply that carbon leakage risks determined in accordance with Article 10a(6) of Directive 2003/87/EC have been fully addressed for those processes. Indirect costs passed on to electricity consumers may vary depending on the electricity mix in a relevant geographic area. Any free allocation granted to indirect emissions of electrified processes should not prejudice the possibility to receive compensation for indirect costs in accordance with Article 10a(6) of Directive 2003/87/EC. In turn, financial measures to compensate indirect costs passed on in electricity prices should not compensate the same indirect costs covered by free allocation. For the purpose of the determination of electricity benchmarks, it is appropriate to collect data on electricity consumption for relevant product benchmarks.
- (10) In order to further incentivise the recovery of heat from fuel benchmark sub-installations and process emissions sub-installations, such heat should be eligible for free allocation in addition to the allocation based on fuel consumption and process emissions. The risk of double counting should be considered mitigated by the updates of the value of the fuel benchmark and of the multiplier applied to process emissions in accordance with Article 16(2), point (e), of Delegated Regulation (EU) 2019/331.
- (11) In order to minimise the administrative burden for operators, the information on the climate-neutrality plans should be integrated in the existing national implementation measures which serve as the basis for calculating free allocation.

⁽⁶⁾ Regulation (EU) 2023/956 of the European Parliament and of the Council of 10 May 2023 establishing a carbon border adjustment mechanism (OJ L 130, 16.5.2023, p. 52).

⁽⁷⁾ Council Regulation (EEC) No 2658/87 of 23 July 1987 on the tariff and statistical nomenclature and on the Common Customs Tariff (OJ L 256, 7.9.1987, p. 1).

⁽⁸⁾ Commission Implementing Regulation (EU) 2019/1842 of 31 October 2019 laying down rules for the application of Directive 2003/87/EC of the European Parliament and of the Council as regards further arrangements for the adjustments to free allocation of emission allowances due to activity level changes (OJ L 282, 4.11.2019, p. 20).

- (12) To reward best performers and innovation, Directive 2003/87/EC exempts installations whose greenhouse gas emission levels are below the average of the 10 % most efficient installations under a given benchmark, from the application of the cross-sectoral correction factor. As benchmarks are defined at sub-installation level, it is appropriate to trigger the exemption if the greenhouse gas emission levels of at least one sub-installation meets the threshold, provided that this sub-installation contributes significantly to the total free allocation for the installation.
- (13) To facilitate the harmonised implementation of allocation adjustments and cessations of operation, excess allowances not duly returned by an operator should be deducted from free allocation to the operator concerned.
- (14) To ensure that operators correct any non-conformities or any errors in baseline data reports that impact on the determination of the historical activity levels, the competent authorities should ensure that those errors or non-conformities are corrected and not only request the corrections.
- (15) To ensure that the historical activity levels are, as far as possible, representative of industry cycles and to reduce the impact of special circumstances, such as economic crises, those levels should be calculated using the median of the activity levels during the baseline period.
- (16) To ensure a harmonised and correct application of the free allocation rules, it is appropriate to clarify the determination of historical activity levels in cases where a sub-installation only started normal operation during the baseline period. In this respect, historical activity levels should be based on activities of full calendar years.
- (17) Free allocation for process emissions not covered by product benchmarks is based on the grandfathering of historical emissions. Since 2013 free allocation has been given at the level of 97 % of the historical emissions. To incentivise the reduction of such process emissions and to ensure better alignment with free allocation for process emissions covered by product benchmarks, it is necessary to reduce the level of free allocation for process emissions not covered by product benchmarks to 91 %, equivalent to an annual reduction of 0,3 % as the minimum update rate applied to product benchmarks in accordance with Article 10a(2) of Directive 2003/87/EC. The reduced multiplication factor should apply from 1 January 2028 to better align with the timeline for the deployment of solutions to abate process emissions, such as carbon capture and storage.
- (18) To ensure the gradual phase-out of free allocation for goods covered by Regulation (EU) 2023/956, the relevant CBAM factor set out in Article 10a(1a), second subparagraph, of Directive 2003/87/EC, should be applied to the preliminary free allocation for the sub-installation concerned. Potential future changes to the CBAM scope and to the relevant CBAM factor introduced in Regulation (EU) 2023/956 should be reflected in the corresponding gradual phase-out of free allocation.
- (19) Directive (EU) 2023/959 removes the concept of electricity generators from 1 January 2026 and their specific treatment in terms of free allocation from the EU ETS. It is therefore necessary to delete related provisions in Delegated Regulation (EU) 2019/331 accordingly.
- (20) To maintain the level playing field between incumbent installations and new entrants, it is necessary to reflect changes in the respective rules for new entrants as regards historical activity levels and free allocation of allowances.
- (21) To provide further incentives to reduce greenhouse gas emissions a provision on conditionality of free allocation on implementation of energy efficiency improvement measures was introduced in Article 10a, third subparagraph, of Directive 2003/87/EC, which needs to be supplemented. Recommendations included in energy audit reports or certified energy management systems, referred to in Article 10a(1), third subparagraph, of that Directive, which are at company-level, require a translation to installation level. To ensure legal certainty, the competent authority should only consider those recommendations as implemented when the implementation has been completed and the verifier has confirmed the completion. In order to safeguard the incentive given by the introduction of the conditionality, an installation should be granted the possibility to recover the reduced free allocation after having implemented the recommended measures as part of the annual activity level report and after the implementation of the recommended measures has been verified. An annual cycle for reviewing the conditionality of non-compliant

installations that follows the reporting of the annual activity levels should be established. Operators of non-compliant installations facing the 20 % reduction of free allocation should provide verified evidence to the competent authority on the implementation of all recommended measures to ensure recovery of free allocation reduced due to conditionality.

- (22) Following the introduction of new rules on the conditionality of free allocation on climate neutrality plans pursuant to Article 10a(1) and Article 10b(4) of Directive 2003/87/EC, the procedural steps of the conditionality are to be supplemented. In accordance with Article 10a(1), fifth subparagraph, of that Directive, the operators are to establish climate-neutrality plans by 1 May 2024. In order to align the conditionality with the existing procedure of application for free allocation, the climate-neutrality plans should be submitted by 30 May 2024, or as appropriate depending on the alternative time-limit for the submission of such applications set by Member States. In accordance with Article 10a(1) of Directive 2003/87/EC, the installations concerned by this conditionality are those whose greenhouse gas emission levels are higher than the 80th percentile of emission levels for the relevant product benchmarks in the years 2016 and 2017. For this purpose, the calculation for the determination of the revised benchmark values in accordance with Commission Implementing Regulation (EU) 2021/447⁽⁹⁾ should be used. That determination is based on verified information on the greenhouse gas efficiency of installations reported pursuant to Article 11 of Directive 2003/87/EC for the years 2016 and 2017. As benchmarks are defined at sub-installation level, it is appropriate to introduce a threshold for small sub-installations below which the conditionality does not apply, provided that the sub-installation does not contribute to more than 20 % of the total preliminary free allocation of the installation.
- (23) To incentivise and expedite the reduction of greenhouse gas emissions originated from district heating, Article 10b(4) of Directive 2003/87/EC sets out further rules for the conditionality on climate-neutrality plans in case of district heating installations. As a result, the ETS installations providing heat to district heating systems may apply for additional free allocation in the period from 2026 to 2030. In order to provide operators of district heating sub-installations applying for additional free allocation with certainty on the further conditions regarding significant greenhouse gas emission reduction achievement before 2030, the value of the additional free allowances needs to be fixed for the size of the investment to be made. In order to be consistent, carbon price used in the determination of the monetary value of those allowances should be used similarly to Article 10c(3) of Directive 2003/87/EC. To provide clarity on the level and type of investment required from the operators and to ensure equal treatment of all installations concerned, significant reduction of greenhouse gas emission should be established using a linear trajectory of the average linear reduction factor over the period between the mid-point of the 2019-2023 baseline period, namely 2021, and 2030 in accordance with Article 9 of Directive 2003/87/EC. This methodology leads to the same reduction requirement for all operators of district heating concerned and does not require installation-specific reduction rates to be established.
- (24) In order to safeguard the incentives of the double-conditionality and to avoid unreasonable consequences, the conditionality of free allocation on implementation of energy efficiency improvement measures and the conditionality of free allocation on climate-neutrality plans should not be cumulative. This means that the reduction by 20 % in free allocation should apply if one or both conditionalities are not met under Article 10a(1), third and fifth subparagraphs of Directive 2003/87/EC.
- (25) In accordance with Article 10b(4) of Directive 2003/87/EC, Commission Implementing Regulation (EU) 2023/2441⁽¹⁰⁾ sets out the minimum content and format of the climate-neutrality plans. It is also appropriate to review the climate-neutrality plans at regular intervals, in order to give the possibility to revise and replace intermediate targets and milestones taking into account new technologies and emission reductions already achieved or not achieved, as defined for each verification period in 2025 and every five years thereafter, as long as they remain suited to the climate-neutrality objective as defined by Article 2 of Regulation (EU) 2021/1119.

⁽⁹⁾ Commission Implementing Regulation (EU) 2021/447 of 12 March 2021 determining revised benchmark values for free allocation of emission allowances for the period from 2021 to 2025 pursuant to Article 10a(2) of Directive 2003/87/EC of the European Parliament and of the Council (OJ L 87, 15.3.2021, p. 29).

⁽¹⁰⁾ Commission Implementing Regulation (EU) 2023/2441 of 31 October 2023 laying down rules for the application of Directive 2003/87/EC of the European Parliament and of the Council as regards the content and format of climate-neutrality plans needed for granting free allocation of emission allowances (OJ L, 2023/2441, 3.11.2023, ELI: http://data.europa.eu/eli/reg_impl/2023/2441/oj).

- (26) For transparency reasons, climate-neutrality plans should be published by competent authorities. The publication of climate-neutrality plans provides for an increased awareness and understanding of greenhouse gas reduction within the installation. In order to protect commercially sensitive information, operators of installations should be able to request the deletion of certain commercially sensitive elements from the version of the climate-neutrality plans to be made publicly available. Such requests should be duly justified.
- (27) To facilitate implementation of rules for mergers and splits of installations and considering the specificities of the installations concerned in view of free allocation rules, it is appropriate to provide more flexibility to cover justified cases of different allocation levels before and after the merger or split by removing the requirement to have the same level of allocation after the merger or split.
- (28) To avoid unjustified free allocation to installations that no longer operate, no free allocation should be granted for the proportion of the calendar year after the day of cessation of operations.
- (29) To strengthen incentives for reducing greenhouse gas emissions and improving energy efficiency and to ensure a level playing field for new and existing technologies, Directive 2003/87/EC provides for a review of the determined Union-wide *ex-ante* benchmarks with a view to potentially modifying the definitions and system boundaries of existing product benchmarks. The review has taken place and identified a number of benchmarks where modifications to definitions and system boundaries should be introduced to provide such additional incentives or technical clarifications.
- (30) Following the review, to incentivise low-carbon technologies for the production of agglomerated iron ore products as feed into primary steel production and to consider the needs of green steel technologies, it is appropriate to open the sintered ore benchmark to alternative products. To maximise those incentives, the label of the benchmark and the definitions of products covered and of system boundaries should be kept technology neutral.
- (31) Following the review, to incentivise low- and zero-carbon technologies for the production of primary steel and to create a level playing field for the existing coke-based blast furnace route and the direct reduction technology, the hot metal benchmark should be modified in terms of additions to the definitions of products covered and of the system boundaries.
- (32) Following the review, to incentivise low-carbon technologies for the production of alternative hydraulic binders as substitutes for white and grey cement clinker, it is appropriate to open the grey cement clinker and white cement clinker benchmarks to alternative products. Products covered by other product benchmarks and by-products or waste resulting from other processes should not be considered to avoid undue allocation.
- (33) Following the review, to facilitate harmonised implementation of free allocation rules in terms of treatment of emissions from carbon dioxide reactors, for the soda ash benchmark it should be clarified that those processes are covered by the system boundary of that product benchmark.
- (34) Following the review, to avoid double counting in terms of free allocation to the production of steel from iron sponge and to ensure that the product benchmarks for hot metal, EAF carbon steel and EAF high alloy steel do not overlap, it is necessary to exclude steel produced from iron sponge from the definition of the EAF carbon steel and EAF high alloy steel benchmarks.
- (35) Following the review, to incentivise low- and zero-carbon technologies for the production of hydrogen and to create a level playing field for existing and new technologies such as water electrolysis, Directive (EU) 2023/959 extended the activity description for the production of hydrogen to include the production of green hydrogen and lowered the production threshold. The hydrogen benchmark should be modified accordingly. However, the electrolysis processes where hydrogen is a by-product should not benefit from free allocation under the hydrogen or ammonia benchmark as these technologies are not new and serve a primary purpose other than hydrogen production. To further clarify the free allocation rules, it is appropriate to explicitly exclude hydrogen used for the production of ammonia from the hydrogen product benchmark.

- (36) Following the review, to further harmonise the implementation of free allocation rules for the production of lime and dolime and to ensure consistency with the annual reporting of emissions, it is appropriate to delete the references to conservative estimates for the content of free calcium oxide and magnesium oxide.
- (37) To better reflect the energy intensity of the production of mixes of ethylene oxide and ethylene glycols and of the composition of gas mixes of hydrogen and carbon monoxide, it is appropriate to adjust the calculation of the historical activity levels for the ethylene oxide/ethylene glycol and hydrogen product benchmarks.
- (38) To reflect the changes in allocation rules, including the revision of product benchmarks, the introduction of conditionality of free allocation and the phase-out of free allocation due to the CBAM, the scope for data collection in the context of applications for free allocation should be adjusted accordingly. Similar changes are necessary for the minimum content of the monitoring methodology plans.
- (39) Delegated Regulation (EU) 2019/331 should therefore be amended accordingly.
- (40) The amendments set out in this Regulation should apply to allocations relating to the period from 1 January 2024. However, to reduce undue administrative burden and ensure predictability of free allocation levels, for new entrants whose applications for free allocation were submitted by 31 December 2023 to the Commission and incumbent installations, provisions concerning definitions of benchmarks, waste incinerators, CBAM, small sub-installations, exchangeability of fuel and electricity, recovery of heat from fuel benchmark sub-installations and process emissions sub-installations, historical activity level for incumbent installations, allocation at installation level for incumbent installations, allocation for process emissions not covered by product benchmarks, the removal of the concept of electricity generators, and allocation in respect of steam cracking and vinyl chloride monomer, should apply to allocations relating to the period from 1 January 2026. Free allocation for the period until 31 December 2025 should remain unaffected by the amendments. To ensure equal treatment and a level playing field for new entrants with different dates of applications for allocations, specific application rules should be introduced. For new entrants whose applications for free allocation are submitted on or after 1 January 2024, the amendments to this Regulation should apply to allocations relating to the period from 1 January 2024 while for allocations relating to the period until 31 December 2023 the Regulation in its version applicable on 31 December 2023 applies.
- (41) Given that free allocation is calculated based on full calendar years and that most amendments to Directive 2003/87/EC introduced by Directive (EU) 2023/959 apply from 1 January 2024, this Regulation should apply from 1 January 2024.
- (42) This Regulation should enter into force as a matter of urgency as operators are required to comply with its rules on baseline data reporting as of April, May or June 2024 as required by Article 4(1) of Delegated Regulation (EU) 2019/331,

HAS ADOPTED THIS REGULATION:

Article 1

Delegated Regulation (EU) 2019/331 is amended as follows:

(1) Article 2 is amended as follows:

(a) point (3) is replaced by the following:

(3) “heat benchmark sub-installation” means inputs, outputs and corresponding emissions not covered by a product benchmark sub-installation relating to the production of measurable heat or the import of measurable heat from an installation covered by the EU ETS other than installations covered by the EU ETS only for the purposes of Articles 14 and 15 of Directive 2003/87/EC, or both, which is:

(a) consumed within the installation’s boundaries for the production of products, for the production of mechanical energy other than used for the production of electricity, for heating or cooling other than the consumption for the production of electricity; or

- (b) exported to an installation or other entity not covered by the EU ETS other than district heating with the exception of the export for the production of electricity;’;
- (b) point (6) is replaced by the following:
- ‘(6) “fuel benchmark sub-installation” means inputs, outputs and corresponding emissions not covered by a product benchmark sub-installation, relating to the production of non-measurable heat, by fuel combustion or from electricity, for the primary purpose of the generation of heat, consumed for the production of products, for the production of mechanical energy other than used for the production of electricity, for heating or cooling other than the consumption for the production of electricity, and including safety flaring;’;
- (2) in Article 4, paragraph 2 is amended as follows:
- (a) the following point is inserted:
- ‘(ba) where relevant, the climate-neutrality plan in accordance with Article 10a(1), fifth subparagraph, and Article 10b(4) of Directive 2003/87/EC;’;
- (b) point (c) is replaced by the following:
- ‘(c) a verification report issued in accordance with measures adopted pursuant to Article 15 of Directive 2003/87/EC on the baseline data report.’;
- (3) Article 6 is replaced by the following:

‘Article 6

The operator of an installation, applying for or receiving free allocation pursuant to Article 10a of Directive 2003/87/EC shall monitor the data to be submitted as listed in Annex IV to this Regulation, based on a monitoring methodology plan approved by the competent authority.’;

- (4) Article 10 is amended as follows:
- (a) the following paragraph is inserted:
- ‘2a. For product benchmark sub-installations, where relevant, the operator shall clearly distinguish, based on CN codes, and provide evidence to the satisfaction of the competent authority, whether or not the relevant process serves the production of goods listed in Annex I to Regulation (EU) 2023/956 of the European Parliament and Council (*).

(*) Regulation (EU) 2023/956 of the European Parliament and of the Council of 10 May 2023 establishing a carbon border adjustment mechanism (OJ L 130, 16.5.2023, p. 52, ELI: <http://data.europa.eu/eli/reg/2023/956/oj>);’;

- (b) paragraph 3 is replaced by the following:
- ‘3. For heat benchmark sub-installations, fuel benchmark sub-installations and process emissions sub-installations, the operator shall clearly distinguish, based on NACE and PRODCOM codes, whether or not the relevant process serves a sector or subsector deemed to be at risk of carbon leakage as determined in accordance with Article 10b(5) of Directive 2003/87/EC. In addition, the operator shall distinguish the amount of measurable heat which is exported for the purposes of district heating, from the measurable heat which does not serve a sector or subsector deemed to be at risk of carbon leakage, as determined in accordance with Article 10b(5) of Directive 2003/87/EC.

In addition, the operator shall clearly distinguish, based on CN codes, and provide evidence to the satisfaction of the competent authority, whether or not the relevant process serves the production of goods listed in Annex I to Regulation (EU) 2023/956.’;

- (c) paragraph 4 is amended as follows:
- (i) the first subparagraph is replaced by the following:

‘Where an installation included in the EU ETS has produced and exported measurable heat to an installation or other entity not included in the EU ETS, the operator shall consider that the relevant process of the heat benchmark sub-installation for this heat does not serve a sector or subsector deemed to be at risk of carbon leakage as determined in accordance with Article 10b(5) of Directive 2003/87/EC, unless the operator provides evidence to the satisfaction of the competent authority that the consumer of the measurable heat belongs to a sector or subsector deemed to be at risk of carbon leakage, as determined in accordance with Article 10b(5) of Directive 2003/87/EC.’;

(ii) the following third subparagraph is added:

‘In addition, where an installation included in the EU ETS has produced and exported measurable heat to an installation or other entity not included in the EU ETS, the operator shall provide evidence on the quantity of measurable heat used to produce goods listed in Annex I to Regulation (EU) 2023/956. Unless the operator provides such evidence to the satisfaction of the competent authority, that heat shall be considered as used to produce goods listed in Annex I of that Regulation’;

(d) paragraph 5 is amended as follows:

(i) point (d) is replaced by the following:

‘(d) for all measurable heat produced, imported or exported by sub-installations, it is documented whether the measurable heat was produced within an EU ETS installation, imported from other heat producing processes, imported from non-EU ETS entities or imported from EU ETS installations covered by the EU ETS only for the purposes of Articles 14 and 15 of Directive 2003/87/EC’;

(ii) point (f) is deleted;

(iii) point (j) is replaced by the following:

‘(j) for avoiding any double counting, products of a production process returned into the same production process are deducted from annual activity levels, in line with product definitions laid down in Annex I’;

(iv) point (k) is deleted;

(5) Article 14 is amended as follows:

(a) paragraph 1 is replaced by the following:

‘1. The list pursuant to Article 11(1) of Directive 2003/87/EC shall be submitted to the Commission using an electronic template provided by the Commission and shall identify all installations covered by the EU ETS, including installations covered by the EU ETS only for the purposes of Articles 14 and 15 of that Directive, small installations that may be excluded from the EU ETS pursuant to Articles 27 and 27a of that Directive and installations that will be included under the EU ETS pursuant to Article 24 of that Directive.’;

(b) paragraph 2 is amended as follows:

(i) point (a) is replaced by the following:

‘(a) an identification of the installation and its boundaries using the installation identification code in the Union Registry’;

(ii) the following points are inserted:

‘(da) the competent authority’s assessment on the reduction of free allocation of 20 % in accordance with Article 22a and Article 22b(1), where applicable;

(db) the fulfilment of the conditions related to the additional 30 % free allocation pursuant to Article 22b(3), where applicable’;

(iii) point (e) is replaced by the following:

‘(e) for each sub-installation, information on whether it belongs to a sector or subsector deemed to be at risk of carbon leakage as determined in accordance with Article 10b(5) of Directive 2003/87/EC, including the PRODCOM codes of the products produced, where applicable’;

(iv) the following point is inserted:

‘(ea) for each sub-installation, information on whether the goods produced are listed in Annex I to Regulation (EU) 2023/956, using the CN codes of these goods produced, where applicable’;

(c) paragraph 6 is replaced by the following:

‘6. Once the preliminary annual amounts of free allowances for the relevant allocation period are notified, the Commission shall determine any factor established pursuant to Article 10a(5) of Directive 2003/87/EC by comparing the sum of the preliminary annual amounts of free allowances to installations in each year over the relevant allocation period applying the factors as determined in Annex V to this Regulation with the annual amount of allowances that is calculated in accordance with Article 10a(5) and (5a) of Directive 2003/87/EC for installations, taking into account the relevant share of the annual Union-wide total quantity, as determined pursuant to Article 10(1) and Article 10a(5) of Directive 2003/87/EC as well as the exemption of the 10 % most efficient sub-installations as determined pursuant to Article 16(8), second subparagraph, of this Regulation. The determination shall take into account inclusions pursuant to Article 24 of Directive 2003/87/EC and exclusions pursuant to Articles 27 and 27a of that Directive, as appropriate.’;

(d) paragraph 8 is replaced by the following:

‘8. Upon request, each Member State shall make the reports and plans received on the basis of Article 4(2) available to the Commission.’;

(e) the following paragraph is added:

‘9. Member States shall ensure that excess allowances allocated to operators are duly returned. Where operators do not return the excess allowances, the competent authority shall request the national registry administrator to deduct the amount of excess allowances from the quantity of allowances to be allocated to the operator. Member States shall inform the Commission of any such requests.’;

(6) Article 15 is amended as follows:

(a) paragraph 1 is replaced by the following:

‘1. Member States shall assess the baseline data reports and verification reports submitted in accordance with Article 4(2) to ensure conformity with the requirements of this Regulation. Where appropriate, the competent authority shall ensure that operators correct any non-conformities or any errors that impact on the determination of the historical activity levels. The competent authority may request operators to submit more data in addition to the information and documents to be provided in accordance with Article 4(2).’;

(b) paragraphs 3 to 8 are replaced by the following:

‘3. The product-related historical activity level shall, for each product for which a product benchmark has been determined as referred to in Annex I, refer to the median of annual historical production of that product in the installation concerned during the baseline period.

4. The heat-related historical activity level shall refer to the median of annual historical import from an installation covered by the EU ETS, other than installations covered by the EU ETS only for the purposes of Articles 14 and 15 of Directive 2003/87/EC, production, or both, during the baseline period, of net measurable heat consumed within the installation’s boundaries for the production of products, for the production of mechanical energy other than used for the production of electricity, for heating or cooling with the exception of the consumption for the production of electricity, or exported to an installation or other entity not covered by the EU ETS with the exception of the export for the production of electricity expressed as terajoule per year.

The district heating-related historical activity level shall refer to the median of annual historical import from an installation covered by the EU ETS, other than EU ETS installations covered by the EU ETS only for the purposes of Articles 14 and 15 of Directive 2003/87/EC, production, or both, during the baseline period, of measurable heat which is exported for the purposes of district heating expressed as terajoule per year.

5. The fuel-related historical activity level shall refer to the median of annual historical consumption of energy used for the primary purpose of the production of non-measurable heat consumed for the production of products, for the production of mechanical energy other than used for the production of electricity, for heating or cooling with the exception of the consumption for the production of electricity, and including safety flaring, during the baseline period expressed as terajoule per year.

6. For process emissions, which occurred in relation with the production of products in the installation concerned during the baseline period, the process-related historical activity level shall refer to the median of annual historical process emissions expressed as tonnes of carbon dioxide equivalent.

7. For the purposes of the determination of the median values referred to in paragraphs 3 to 6, only calendar years during which the installation has been operating for at least one day shall be taken into account.

If a sub-installation has been operating for less than two calendar years during the relevant baseline period, the historical activity level shall be the activity level of the first calendar year of operation after the calendar year where the start of normal operation occurs of this sub-installation.

If a sub-installation has been operating for less than one calendar year after the start of normal operation during the baseline period, the historical activity level shall be determined when the activity level report for the first calendar year after the calendar year where the start of normal operation occurs is submitted.

8. By way of derogation from paragraph 3, Member States shall determine the product-related historical activity level for products to which the product benchmarks referred to in Annex III apply on the basis of the median of annual historical production according to the formulas set out in that Annex.;

(7) Article 16 is amended as follows:

(a) paragraph 1 is replaced by the following:

‘1. Where the operator of an incumbent installation has submitted a valid application for free allocation in accordance with Article 4, the Member State concerned shall, based on the data collected in accordance with Article 14, calculate, for each year, the number of emission allowances allocated free of charge from 2021 onwards as regards the first allocation period and every five years thereafter.’;

(b) paragraph 2 is amended as follows:

(i) point (d) is replaced by the following:

‘(d) for fuel benchmark sub-installations, the preliminary annual number of emission allowances allocated free of charge for a given year shall correspond to the value of the fuel benchmark for the relevant five-year period, adopted in accordance with Article 10a(2) of Directive 2003/87/EC, multiplied by the fuel-related historical activity level for the energy consumed.’;

(ii) point (e) is replaced by the following:

‘(e) for process emissions sub-installations, the preliminary annual number of emission allowances allocated free of charge for a given year shall correspond to the process-related historical activity level multiplied by 0,97 for the years until 31 December 2027 and by 0,91 for the years 2028 and onwards.’;

(c) in paragraph 3, the first subparagraph is replaced by the following:

‘For the purpose of Article 10b(4) of Directive 2003/87/EC, the factors determined in Annex V to this Regulation shall be applied to the preliminary annual number of emission allowances allocated free of charge determined for each sub-installation pursuant to paragraph 2 of this Article for the year concerned where the processes in those sub-installations serve sectors or subsectors deemed not to be at risk of carbon leakage as determined in accordance with Article 10b(5) of Directive 2003/87/EC.’;

(d) paragraph 4 is replaced by the following:

‘4. Where the processes in the sub-installations referred to in paragraph 2 serve sectors or subsectors deemed to be at risk of carbon leakage as determined in accordance with Article 10b(5) of Directive 2003/87/EC, the factor to be applied shall be 1.’;

- (e) the following paragraph is inserted:

‘(4a) Where the processes in the sub-installations referred to in paragraph 2 serve the production of goods listed in Annex I to Regulation (EU) 2023/956, the preliminary annual number of emission allowances allocated free of charge determined for each sub-installation pursuant to paragraph 2 for the year concerned shall be multiplied by the relevant CBAM factor set out in Article 10a(1a), second subparagraph, of Directive 2003/87/EC.’;

- (f) paragraph 8 is replaced by the following:

‘8. The final annual amount of emission allowances allocated free of charge for each incumbent installation shall be the preliminary annual amount of emission allowances allocated free of charge for each installation determined in accordance with paragraph 6 of this Article, multiplied by the factor as determined in accordance with Article 14(6) of this Regulation.

By way of derogation from the first subparagraph, the final annual amount of emission allowances allocated free of charge shall be 100 % of the preliminary annual amount of emission allowances allocated free of charge to each installation whose sub-installations with greenhouse gas emission levels below the average of the 10 % most efficient sub-installations for the relevant benchmarks in the period referred to in Article 10a(2), third subparagraph, point (c), of Directive 2003/87/EC, cover more than 60 % of the preliminary annual amount of emission allowances allocated free of charge for this installation.’;

- (8) in Article 17, points (a) to (f) are replaced by the following:

- (a) the product-related historical activity level shall be, for each product for which a product benchmark has been determined as referred to in Annex I to this Regulation or pursuant to Article 24 of Directive 2003/87/EC, the activity level of the first calendar year after the calendar year where the start of normal operation occurs for the production of this product of the sub-installation concerned;
- (b) the heat-related historical activity level shall be the activity level of the first calendar year after the calendar year where the start of normal operation occurs for the import from an installation covered by the EU ETS, other than installations covered by the EU ETS only for the purposes of Articles 14 and 15 of Directive 2003/87/EC, production, or both, of measurable heat consumed within the installation’s boundaries for the production of products, for the production of mechanical energy other than used for the production of electricity, for heating or cooling with the exception of the consumption for the production of electricity, or exported to an installation or other entity not covered by the EU ETS with the exception of the export for the production of electricity;
- (c) the district heating-related historical activity level shall be the activity level of the first calendar year after the calendar year where the start of normal operation occurs for the import from an installation covered by the EU ETS other than installations covered by the EU ETS only for the purposes of Articles 14 and 15 of Directive 2003/87/EC, production, or both, of measurable heat which is exported for the purposes of district heating;
- (d) the fuel-related historical activity level shall be the activity level of the first calendar year after the calendar year where the start of normal operation occurs for the consumption of energy used for the primary purpose of the production of non-measurable heat consumed for the production of products, for the production of mechanical energy other than used for the production of electricity, for heating or cooling with the exception of the consumption for the production of electricity, and including safety flaring, of the installation concerned;
- (e) the process emissions-related activity level shall be the activity level of the first calendar year after the calendar year where the start of normal operation occurs for the production of process emissions of the process unit;
- (f) by way of derogation from point (a), the product-related historical activity level for products to which the product benchmarks referred to in Annex III apply shall be the activity level of the first calendar year after the calendar year where the start of normal operation occurs for the production of this product of the sub-installation concerned, determined by applying the formulas set out in that Annex.’;

(9) Article 18(1) is amended as follows:

(a) in the first subparagraph, point (b) is replaced by the following:

‘(b) for each process emissions sub-installation, the preliminary annual number of emission allowances allocated free of charge for a given year shall correspond to the process-related historical activity level multiplied by 0,97 for the years until 31 December 2027 and by 0,91 for the years 2028 and onwards.’;

(b) the second subparagraph is replaced by the following:

‘Article 16(3), (4), (4a), (5) and (7) shall apply *mutatis mutandis* to the calculation of the preliminary annual number of emission allowances allocated free of charge to new entrants.’;

(10) Articles 19, 20 and 21 are replaced by the following:

‘Article 19

Allocation in respect of steam cracking

By way of derogation from Article 16(2), point (a), and Article 18(1), point (a), the preliminary annual number of emission allowances allocated free of charge for a product benchmark sub-installation and relating to the production of high value chemicals (HVC) shall correspond to the value of the steam cracking product benchmark for the relevant allocation period multiplied by the historical activity level determined in accordance with Annex III. To the result of that calculation, 1,78 tonnes of carbon dioxide per tonne of hydrogen times the median historical production of hydrogen from supplemental feed expressed in tonnes of hydrogen, 0,24 tonnes of carbon dioxide per tonne of ethylene times the median historical production of ethylene from supplemental feed expressed in tonnes of ethylene, and 0,16 tonnes of carbon dioxide per tonne of HVC times the median historical production of other high value chemicals than hydrogen and ethylene from supplemental feed expressed in tonnes of HVC, shall be added.

Article 20

Allocation in respect of vinyl chloride monomer

By way of derogation from Article 16(2), point (a), and Article 18(1), point (a), the preliminary annual number of emission allowances allocated free of charge for a sub-installation and relating to the production of vinyl chloride monomer (VCM) shall correspond to the value of the VCM benchmark for the relevant allocation period multiplied by the historical activity level for VCM production expressed as tonnes and multiplied by the quotient of the direct emissions for the production of VCM including emissions from net imported heat, calculated on the basis of the historical net heat import expressed as terajoules times the value of the heat benchmark for the relevant allocation period, over the baseline period referred to in Article 15(2) or of the first calendar year after the calendar year where the start of normal operation occurs referred to in Article 17, point (a), as appropriate, expressed as tonnes of carbon dioxide equivalent and the sum of those direct emissions and the hydrogen-related emissions for the production of VCM over the baseline period referred to in Article 15(2) or of the first calendar year after the calendar year where the start of normal operation occurs referred to in Article 17, point (a), as appropriate, expressed as tonnes of carbon dioxide equivalent calculated on the basis of the historical heat consumption stemming from hydrogen combustion expressed as terajoules times the value of the heat benchmark for the relevant allocation period.

Article 21

Heat flows between installations

Where a product-benchmark sub-installation encompasses measurable heat imported from an installation or other entity not included in the EU ETS or only included for the purposes of Articles 14 and 15 of Directive 2003/87/EC, the preliminary annual number of emission allowances allocated free of charge for the product benchmark sub-installation concerned determined pursuant to Article 16(2), point (a), or Article 18(1), point (a), as appropriate, shall be reduced by the amount of heat historically imported from an installation or other entity not included in the EU ETS or only included for the purposes of Articles 14 and 15 of that Directive in the year concerned multiplied by the value of the heat benchmark for measurable heat for the relevant allocation period.’;

(11) Article 22 is deleted;

(12) the following Articles are inserted:

'Article 22a

Conditionality of free allocation on implementation of energy efficiency improvement measures

1. The final annual amount of emission allowances allocated free of charge, determined pursuant to Article 16(8) of this Regulation to the installation referred to in Article 10a(1), third subparagraph, of Directive 2003/87/EC, shall be reduced by 20 % in accordance with Article 10a(1) of that Directive if the operator cannot demonstrate to the satisfaction of the competent authority that all recommendations under Article 8 of Directive 2012/27/EU of the European Parliament and of the Council (*) have been implemented.

By way of derogation from the first subparagraph, no such reduction shall apply if the operator can demonstrate to the satisfaction of the competent authority that any of the following conditions apply:

- (a) the pay-back time for the relevant investments of a recommendation exceeds three years;
 - (b) the investment costs for the implementation of a recommendation exceed either of the following thresholds:
 - (i) 5 % of the installation's annual turnover or 25 % of the installation's profit, calculated on the basis of the corresponding annual averages over the three calendar years prior to the date on which the application for free allocation shall be submitted in accordance with Article 4;
 - (ii) 50 % of the average annual economic equivalent of the amount reduced in accordance with the first subparagraph from the final annual amount of emission allowances allocated free of charge pursuant to Article 16(8) calculated based on the average price of allowances on the common auction platform in the relevant calendar year preceding the application referred to in Article 4(2);
 - (c) other measures have been implemented during or after the relevant baseline period which lead to greenhouse gas emission reductions within the installation equivalent to those recommended by the energy audit report or the certified energy management system under Article 8 of Directive 2012/27/EU;
 - (d) the recommendations would not lead to energy savings within the system boundaries of the industrial process carried out at the installation;
 - (e) the installation-specific operating conditions, including planned or unplanned periods of maintenance, based on which the pay-back period referred to under point (a) was determined, have not occurred yet;
 - (f) the recommendations of the audit report or of the certified energy management system were not issued during the first four years of the relevant baseline period.
2. The operator shall establish, implement, document and maintain a procedure for implementing recommendations and, where applicable, demonstrating the application of the conditions as referred to in paragraph 1.
3. The verifier shall check as part of the verification of the baseline data report referred to in Article 4(2) whether the recommendations referred to in paragraph 1, first subparagraph, are implemented and whether the conditions set out in paragraph 1, second subparagraph, are met, where applicable.

Where relevant, the verifier shall check, as part of the verification of the annual activity level report in accordance with Article 7 of Commission Implementing Regulation (EU) 2018/2067 (**), whether the recommendations referred to in paragraph 1, first subparagraph, are implemented and whether the conditions set out in paragraph 1, second subparagraph, are met, where applicable.

4. The competent authority shall only consider the recommendations referred to in paragraph 1, first subparagraph, as implemented where all of the following conditions are met:
- (a) the operator demonstrates the completion of the implementation of those recommendations;
 - (b) the verifier has confirmed the completion referred to in point (a) in accordance with paragraph 3.

*Article 22b***Conditionality of free allocation on climate-neutrality plans**

1. For the purposes of Article 10a(1), fifth subparagraph, of Directive 2003/87/EC, the final annual number of emission allowances allocated free of charge, determined pursuant to Article 16(8) of this Regulation, shall be reduced by 20 % for an installation with product benchmark sub-installations where the greenhouse gas emission levels of at least one of those product-benchmark sub-installations were higher than the 80th percentile of emission levels for the relevant product benchmarks in the years 2016 and 2017.

By way of derogation from the first subparagraph, no such reduction shall apply if the following conditions are fulfilled:

- (a) the operator of an installation referred to in the first subparagraph has submitted a climate-neutrality plan for its activities covered by Directive 2003/87/EC to the competent authority by 30 May 2024, or as appropriate, pursuant to Article 4 of this Regulation as part of the application for free allocation;
- (b) the achievement of the targets and milestones referred to in Article 10b(4), third subparagraph, point (b), of Directive 2003/87/EC has been confirmed by the verification carried out in accordance with Article 10b(4), fourth subparagraph, of that Directive;
- (c) the competent authority has checked and deemed compliant the content and format of the climate-neutrality plan pursuant to paragraph 4.

2. Paragraph 1, first subparagraph, shall not apply where the relevant product benchmark sub-installation does not contribute to more than 20 % of the sum of all sub-installations' preliminary annual numbers of emission allowances allocated free of charge in respect of the period from 2021 to 2025, calculated in accordance with Article 16, paragraphs 2 to 5.

3. For the purposes of Article 10b(4), second, third and fourth subparagraphs, of Directive 2003/87/EC, the preliminary annual number of emission allowances allocated free of charge to a district heating sub-installation, calculated in accordance with Article 16, paragraphs 2 and 3, of this Regulation, shall be increased by 30 % of the number calculated in accordance with paragraph 2 of Article 16, where the operator of a district heating sub-installation has submitted an application in accordance with Article 4 of this Regulation and where, in respect of the period until the end of 2025 or in respect of the period from 2026 to 2030, all of the following conditions are met:

- (a) the installation or district heating company is located in a Member State that meets the criteria set out in Article 10b(4), second subparagraph, of Directive 2003/87/EC and as referred to in Annex VIII;
- (b) the installation or district heating company invested a volume at least equivalent to the economic value of the additional number of free allowances for the period from 2026 to 2030, in accordance with the intermediate targets and milestones as set out in the climate-neutrality plan to measure, by 31 December 2025 and by 31 December of each fifth year thereafter, progress made towards reaching climate-neutrality;
- (c) the investment referred to under point (b) leads to significant emission reductions before 2030;
- (d) the installation or district heating company submits a climate neutrality plan by 30 May 2024 pursuant to Article 4(1) or as appropriate, for its activities covered by Directive 2003/87/EC;
- (e) the achievement of the targets and milestones referred to in Article 10b(4), third subparagraph, point (b), of Directive 2003/87/EC is confirmed by the verification carried out in accordance with Article 10b(4), fourth subparagraph, of that Directive;
- (f) the competent authority has checked and deemed compliant the content and format of the climate-neutrality plan pursuant to paragraph 4.

For the purposes of point (b), the economic value of the additional 30 % allowances shall be determined by multiplying the additional number of free allowances over the period from 2026 to 2030 by the average price of allowances on the common auction platform in the calendar year preceding the application referred to in Article 4(2) and multiplied by the factor determined in accordance with Article 14(6), as applicable to the installation.

For the purposes of point (c), emission reductions are significant where the specific emissions, expressed as tonnes of CO₂ per terajoules of district heating supplied, of the installation or district heating company are reduced below the average specific emissions during the relevant baseline period with an emission reduction rate equivalent to the application of the linear reduction factors referred to in Article 9 of Directive 2003/87/EC, starting from the mid-point of the relevant baseline period.

4. The competent authority shall check, by 30 September 2024, that the content and format of the climate-neutrality plans referred to in paragraphs 1 and 3 of this Article comply with Implementing Regulation (EU) 2023/2441.

Article 22c

Non-cumulative nature of the 20 % reduction in Articles 22a and 22b

The 20 % reduction referred to in Articles 22a and 22b shall be applied to an installation only once in the relevant allocation period.

Article 22d

Update of the climate-neutrality plan

1. The operators shall, at periods specified in the climate-neutrality plan referred to in Article 22b and whenever necessary, evaluate the effectiveness of the climate-neutrality plan regarding greenhouse gas emissions reductions and implement corrective actions where appropriate to ensure that the milestones and targets are met. Any update shall only affect future milestones and targets.

2. Where the climate-neutrality plan is updated with respect to milestones and targets, the operator shall submit the updated plan to the competent authority without undue delay.

Article 22e

Publication of the climate-neutrality plan

1. Competent authorities shall publish the climate-neutrality plan submitted pursuant to Article 22b.

2. If an operator considers that the climate-neutrality plan contains commercially sensitive elements which, if disclosed, would harm its commercial interests, the operator may request the competent authority not to publish those elements. Where the request is justified the competent authority shall publish the climate-neutrality plan without those elements.

(*) Directive 2012/27/EU of the European Parliament and of the Council of 25 October 2012 on energy efficiency, amending Directives 2009/125/EC and 2010/30/EU and repealing Directives 2004/8/EC and 2006/32/EC (OJ L 315, 14.11.2012, p. 1, ELI: <http://data.europa.eu/eli/dir/2012/27/2023-05-04>).

(**) Commission Implementing Regulation (EU) 2018/2067 of 19 December 2018 on the verification of data and on the accreditation of verifiers pursuant to Directive 2003/87/EC of the European Parliament and of the Council (OJ L 334, 31.12.2018, p. 94, ELI: http://data.europa.eu/eli/reg_impl/2018/2067/2021-01-01).;

(13) in Article 23, paragraph 4 is replaced by the following:

‘4. The Commission shall adopt a Decision based on the notification received, shall inform the relevant competent authority and shall introduce the changes, where appropriate, into the Union Registry set up pursuant to Article 19 of Directive 2003/87/EC and the transaction log, referred to in Article 20 of that Directive.’;

(14) Article 25(4) is deleted;

(15) Article 26 is amended as follows:

(a) in paragraph 1, point (a) is replaced by the following:

‘(a) the relevant greenhouse gas emissions permit has expired or been withdrawn, including if the installation no longer meets the thresholds of the activities listed in Annex I to Directive 2003/87/EC’;

(b) paragraph 2 is replaced by the following:

‘2. Where an installation has ceased operations, the Member State concerned shall not issue emission allowances to that installation for the remainder of the calendar year following the day of cessation of operations. Such adjustments shall be made on a pro-rata basis.’;

- (16) Annex I is amended in accordance with Annex I to this Regulation;
- (17) Annex III is replaced by the text in Annex II to this Regulation;
- (18) Annex IV is amended in accordance with Annex III to this Regulation;
- (19) Annex VI is amended in accordance with Annex IV to this Regulation;
- (20) Annex VII is amended in accordance with Annex V to this Regulation;
- (21) the text set out in Annex VI to this Regulation is added as Annex VIII.

Article 2

Entry into force and application

This Regulation shall enter into force on the day of its publication in the *Official Journal of the European Union*. It shall apply to allocations relating to the period from 1 January 2024.

However, Article 1, points (1), (4)(a), (4)(b), (4)(c)(ii), (4)(d)(i), (4)(d)(ii), (4)(d)(iv), (6) and (7), (10) and (11) and points (16) and (17) shall apply to allocations relating to the period from 1 January 2026 to new entrants whose applications were submitted by 31 December 2023 and to incumbent installations.

This Regulation shall be binding in its entirety and directly applicable in all Member States.

Done at Brussels, 30 January 2024.

For the Commission
The President
Ursula VON DER LEYEN

ANNEX I

Annex I to Delegated Regulation (EU) 2019/331 is amended as follows:

(1) Section 1 is amended as follows:

(a) the heading is replaced by the following:

‘1. Definition of product benchmarks and system boundaries without collection of data on electricity consumption’;

(b) the second row on sintered ore is replaced by the following:

‘Agglomerated iron ore	Agglomerated iron-bearing product containing iron ore fines, fluxes and possibly iron-containing recycling materials with the chemical and physical properties such as the level of basicity, mechanical strength and permeability required to deliver iron and necessary flux materials into iron ore reduction processes. Expressed in tonnes of agglomerated ore as leaving the agglomerated iron ore production plant. Agglomerated iron ore returned to the production process is not to be considered as part of the product.	All processes directly or indirectly linked to the production of agglomerated iron ore are included.	0,171’
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(c) the third row on hot metal is replaced by the following:

‘Hot metal	Iron produced from iron ores for primary steelmaking including (a) liquid iron saturated with carbon for further processing, considered as product of blast furnaces, and expressed in tonnes of liquid iron at the exit point of the blast furnace, excluding liquid iron produced from sponge iron under (b); (b) sponge iron at the exit point of a direct reduced iron reactor, and expressed in tonnes of sponge iron at the exit point of the direct reduced iron reactor. Similar products such as ferroalloys are not covered by this product benchmark. Residual material and by-products are not to be considered as part of the product.	All processes directly or indirectly linked to the process units blast furnace, hot metal treatment units, blast furnace blowers, blast furnace hot stoves, direct reduced iron reactor, electric arc furnace and electric smelting furnace for sponge iron, basic oxygen furnace, secondary metallurgy units, vacuum ladles, casting units (including cutting), slag treatment unit, burden preparation, BF and other gas treatment units, dedusting units, scrap pre-heating, coal drying for PCI, vessels preheating stands, casting ingots preheating stands, compressed air production, dust treatment unit (briquetting), sludge treatment unit (briquetting), steam injection in BF unit, steam generation plant, converter BOF gas cooling and miscellaneous are included.	1,328’
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(d) the sixth row on grey cement clinker is replaced by the following:

'Grey cement clinker'	<p>Grey cement clinker or alternative hydraulic binders for the production of cement, as total amount of hydraulic binder produced.</p> <p>Products produced within the system boundaries of other product benchmarks or as by-product or waste of other production processes are not covered by this benchmark, including fly ash, blast-furnace slag, steel slag, silica fume, paper sludge.</p>	All processes directly or indirectly linked to the production of grey cement clinker or alternative hydraulic binders are included.	0,766'
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(e) the seventh row on white cement clinker is replaced by the following:

'White cement clinker'	<p>White cement clinker or alternative hydraulic binders for use as main binding component in the formulation of materials such as joint fillers, ceramic tile adhesives, insulation, and anchorage mortars, industrial floor mortars, ready mixed plaster, repair mortars, and water-tight coatings with maximum average contents of 0,4 mass-% Fe₂O₃, 0,003 mass-% Cr₂O₃ and 0,03 mass-% Mn₂O₃. Expressed in tonnes of hydraulic binders (as 100 % clinker/alternative hydraulic binders).</p> <p>Products produced within the system boundaries of other product benchmarks or as by-product or waste of other production processes are not covered by this benchmark, including fly ash, blast-furnace slag, steel slag, silica fume, paper sludge.</p>	All processes directly or indirectly linked to the production of white cement clinker or alternative hydraulic binders are included.	0,987'
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(f) the twenty-eighth row on tissue is replaced by the following:

'Tissue'	<p>Tissue papers, covering a wide range of tissue and other hygienic papers for use in households or commercial and industrial premises such as toilet paper and facial tissues, kitchen towels, hand towels and industrial wipes, the manufacture of baby nappies, sanitary towels, etc. TAD – Through Air Dried Tissue is not part of this group. Expressed as tonnes of net saleable production of parent reel in air dried tonnes, defined as paper with 6 % moisture content.</p>	All processes which are part of the paper production process (in particular paper or board machine and connected energy conversion units (boiler/CHP) and direct process fuel use) are included. Other activities on site that are not part of this process such as sawmilling activities, woodworking activities, production of chemicals for sale, waste treatment (treating waste onsite instead of offsite (drying, pelletising, incinerating,	0,334'
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		landfilling), PCC (precipitated calcium carbonate) production, treatment of odorous gases, and district heating are not included. The conversion of parent reel to finished products is not part of this product benchmark.	
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(g) the last row on soda ash is replaced by the following:

'Soda ash	Disodium carbonate, expressed in tonnes of soda ash as total gross production except dense soda ash obtained as by-product in a caprolactam production network.	All processes directly or indirectly linked to the process units brine purification, limestone calcination and milk of lime production, carbon dioxide reactors, absorption of ammonia, precipitation of NaHCO ₃ , filtration or separation of NaHCO ₃ crystals from mother liquor, decomposition of NaHCO ₃ to Na ₂ CO ₃ , recovery of ammonia and densification or production of dense soda ash are included.	0,843'
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(2) Section 2 is replaced by the following:

'2. Definition of product benchmarks and system boundaries with collection of data on electricity consumption

Product benchmark	Definition of products covered	Definition of processes and emissions covered (system boundaries)	Starting point for determination of annual reduction rate for benchmark value update (allowances/t)
Refinery products	Mix of refinery products with more than 40 % light products (motor spirit (gasoline) including aviation spirit, spirit type (gasoline type) jet fuel, other light petroleum oils/light preparations, kerosene including kerosene type jet fuel, gas oils) expressed as CO ₂ weighted tonne (CWT). Refineries with other product mixes are not covered by this product benchmark.	All processes of a refinery matching the definition of one of the CWT process units as well as ancillary non-process facilities operating inside the refinery fence-line such as tankage, blending, effluent treatment, etc. are included. Lube oils and bitumen processing units located in mainstream refineries are also included in the refinery CWT and emissions envelope. Process units pertaining to other sectors, such as petrochemicals, are sometimes physically integrated with the refinery. Such process units and their emissions are excluded from the CWT approach.	0,0295

		For the purpose of data collection, the total electricity consumption within the system boundaries shall be considered.	
EAF carbon steel	<p>Steel containing less than 8 % metallic alloying elements and tramp elements to such levels limiting the use to those applications where no high surface quality and processability is required and if none of the criteria for the content of the metal alloying elements and the steel quality for high alloy steel are met. Expressed in tonnes of crude secondary steel ex-caster.</p> <p>Steel produced from iron sponge already covered under the hot metal benchmark is not covered by this benchmark.</p>	<p>All processes directly or indirectly linked to the process units electric arc furnace, secondary metallurgy, casting and cutting, post-combustion unit, dedusting unit, vessels heating stands, casting ingots preheating stands, scrap drying and scrap preheating are included.</p> <p>Processes downstream of casting are not included.</p> <p>For the purpose of data collection, the total electricity consumption within the system boundaries shall be considered.</p>	0,283
EAF high alloy steel	<p>Steel containing 8 % or more metallic alloying elements or where high surface quality and processability is required. Expressed in tonnes of crude secondary steel ex-caster.</p> <p>Steel produced from iron sponge already covered under the hot metal benchmark is not covered by this benchmark.</p>	<p>All processes directly or indirectly linked to the process units electric arc furnace, secondary metallurgy, casting and cutting, post-combustion unit, dedusting unit, vessels heating stands, casting ingots preheating stands, slow cooling pit, scrap drying and scrap preheating are included. The process units FeCr converter and cryogenic storage of industrial gases are not included.</p> <p>Processes downstream of casting are not included.</p> <p>For the purpose of data collection, the total electricity consumption within the system boundaries shall be considered.</p>	0,352
Iron casting	Casted iron expressed as tonnes of liquid iron ready alloyed, skinned, and ready for casting.	<p>All processes directly or indirectly linked to the process steps melting shop, casting shop, core shop and finishing are included.</p> <p>The process step “finishing” refers to operations like fettling but not general matching, heat treatment or painting which are not covered by the system boundaries of this product benchmark.</p> <p>For the purpose of data collection, only the electricity consumption of melting processes within the system boundaries shall be considered.</p>	0,325

Mineral wool	Mineral wool insulation products for thermal, acoustic and fire applications manufactured using glass, rock or slag. Expressed in tonnes of mineral wool (saleable product).	All processes directly or indirectly linked to the production steps melting, fiberizing and injection of binders, curing and drying and forming are included. For the purpose of data collection, the total electricity consumption within the system boundaries shall be considered.	0,682
Plasterboard	The benchmark covers boards, sheets, panels, tiles, similar articles of plaster/compositions based on plaster, (not) faced/reinforced with paper/paperboard only, excluding articles agglomerated with plaster, ornamented (in tonnes of stucco, saleable product). High-density gypsum fibreboards are not covered by this product benchmark.	All processes directly or indirectly linked to the production steps milling, drying, calcining and board drying are included. For the purpose of data collection, only the electricity consumption of heat pumps applied in the drying stage shall be considered. The production of the intermediary product dried secondary gypsum is not covered by this benchmark.	0,131
Carbon black	Furnace carbon black, expressed in tonnes of furnace carbon black, saleable product, purity above 96 %. Gas- and lamp black products are not covered by this benchmark.	All processes directly or indirectly linked to the production of furnace carbon black as well as finishing, packaging and flaring are included. For the purpose of data collection, the total electricity consumption within the system boundaries shall be considered. However, only electricity driven devices like pumps and compressors with a rated power of 2 MW or more should be considered.	1,954
Ammonia	Ammonia (NH ₃), expressed in tonnes produced, 100 % purity. Ammonia produced from hydrogen produced by chloralkali electrolysis or by chlorate production is not covered by this benchmark.	All processes directly or indirectly linked to the production of the ammonia and the intermediate product hydrogen are included. Ammonia production from other intermediate products is not covered. For the purpose of data collection, the total electricity consumption within the system boundaries shall be considered.	1,619

Steam cracking	Mix of high value chemicals (HVC) expressed in tonnes as total mass of acetylene, ethylene, propylene, butadiene, benzene and hydrogen exported out of the cracker perimeter excluding HVC from supplemental feed (hydrogen, ethylene, other HVC) with an ethylene content in the total product mix of at least 30 mass-percent and a content of HVC, fuel gas, butenes and liquid hydrocarbons of together at least 50 mass-percent of the total product mix.	All processes directly or indirectly linked to the production of high value chemicals as purified product or intermediate product with concentrated content of the respective HVC in the lowest tradable form (raw C4, unhydrogenated pygas) are included except C4 extraction (butadiene plant), C4-hydrogenation, hydrotreating of pyrolysis gasoline & aromatics extraction and logistics/storage for daily operation. For the purpose of data collection, the total electricity consumption within the system boundaries shall be considered.	0,702
Aromatics	Mix of aromatics expressed as CO ₂ weighted tonne (CWT).	All processes directly or indirectly linked to the aromatics sub-units pygas hydrotreater, benzene/toluene/xylene (BTX) extraction, TDP, HDA, xylene isomerisation, P-xylene units, cumene production and Cyclo-hexane production are included. For the purpose of data collection, the total electricity consumption within the system boundaries shall be considered.	0,0295
Styrene	Styrene monomer (vinyl benzene, CAS number: 100-42-5). Expressed in tonnes of styrene (saleable product).	All processes directly or indirectly linked to the production of styrene as well as the intermediate product ethylbenzene (with the amount used as feed for the styrene production) are included. For installations producing both propylene oxide and styrene monomer, the facilities exclusively dedicated to propylene and propylene oxide unit operations are excluded from this benchmark, and shared facilities are covered in proportion to the production in tonnes of the styrene monomer production. For the purpose of data collection, the total electricity consumption within the system boundaries shall be considered.	0,527

Hydrogen	<p>Pure hydrogen and mixtures of hydrogen and carbon monoxide having a hydrogen content ≥ 60 % volume fraction of total contained hydrogen plus carbon monoxide based on the aggregation of all hydrogen and carbon-monoxide-containing product streams exported from the sub-installation concerned expressed as tonnes of 100 % pure hydrogen, as net saleable product.</p> <p>Hydrogen used for ammonia production is not covered by this benchmark but under the ammonia benchmark.</p> <p>Hydrogen produced by chloralkali electrolysis or by chlorate production or released from chemical conversion from hydrogen carriers used to transport hydrogen from production facilities is not covered by this benchmark.</p>	<p>All relevant process elements directly or indirectly linked to the production of hydrogen and the separation of hydrogen and carbon monoxide are included. These elements lie between:</p> <ul style="list-style-type: none"> (a) the point(s) of entry of feed-stock(s) and, if separate, fuel(s); (b) the points of exit of all product streams containing hydrogen and/or carbon monoxide; (c) the point(s) of entry or exit of import or export heat. <p>For the purpose of data collection, the total electricity consumption within the system boundaries shall be considered.</p>	8,85
Synthesis gas (syngas)	<p>Mixtures of hydrogen and carbon monoxide having a hydrogen content < 60 % volume fraction of total contained hydrogen plus carbon monoxide based on the aggregation of all hydrogen and carbon-monoxide-containing product streams exported from the sub-installation concerned. Expressed in tonnes of synthesis gas referred to 47 volume-percent hydrogen as net saleable product.</p>	<p>All relevant process elements directly or indirectly linked to the production of syngas and the separation of hydrogen and carbon monoxide are included. These elements lie between:</p> <ul style="list-style-type: none"> (a) the point(s) of entry of feed-stock(s) and, if separate, fuel(s); (b) the points of exit of all product streams containing hydrogen and/or carbon monoxide; (c) the point(s) of entry or exit of import or export heat. <p>For the purpose of data collection, the total electricity consumption within the system boundaries shall be considered.</p>	0,242
Ethylene oxide/ethylene glycols	<p>The ethylene oxide/ethylene glycol benchmark covers the products ethylene oxide (EO, high purity), monoethylene glycol (MEG, standard grade + fibre grade (high purity)), diethylene glycol (DEG), triethylene glycol (TEG).</p>	<p>All processes directly or indirectly linked to the process units EO production, EO purification and glycol section are included.</p> <p>For the purpose of data collection, the total electricity consumption within the system boundaries shall be considered.</p>	0,512

	The total amount of products is expressed in terms of tonnes of EO-equivalents (EOE), which are defined as the amount of EO (in mass) that is embedded in one mass unit of the specific glycol.		
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If no other reference is given, all product benchmarks refer to 1 tonne of product produced expressed as saleable (net) production and to 100 % purity of the substance concerned.

All definitions of processes and emissions covered (system boundaries) include flares where they occur.’.

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ANNEX II

Annex III to Delegated Regulation (EU) 2019/331 is replaced by the following:

‘ANNEX III

Historical activity level for specific benchmarks referred to in Articles 15(8) and 17(f)

1. The product-related historical activity level for the baseline period for products to which the refinery product benchmark as referred to in Annex I applies on the basis of the different CWT functions, their definitions, the basis for throughput as well as the CWT factors as listed in Annex II, shall be determined according to the following formula:

$$HAL_{CWT} = MEDIAN\left(1, 0183 \times \sum_{i=1}^n (TP_{i,k} \times CWT_i) + 298 + 0, 315 \times TP_{AD,k}\right)$$

whereby:

HAL_{CWT} :	historical activity level expressed as CWT
$TP_{i,k}$:	throughput of the CWT function i in year k of the baseline period
CWT_i :	CWT factor of the CWT function i
$TP_{AD,k}$:	throughput of the CWT function “Atmospheric Crude Distillation” in year k of the baseline period

2. The product-related historical activity level for the baseline period for products to which the lime product benchmark as referred to in Annex I applies shall be determined according to the following formula:

$$HAL_{lime,standard} = MEDIAN\left(\frac{785 \times m_{CaO,k} + 1\,092 \times m_{MgO,k}}{751,7} \times HAL_{lime,uncorrected,k}\right)$$

whereby:

$HAL_{lime,standard}$:	historical activity level for lime production expressed in tons of standard pure lime
$m_{CaO,k}$:	content of free CaO in the produced lime in year k of the baseline period expressed as mass-%
$m_{MgO,k}$:	content of free MgO in the produced lime in year k of the baseline period expressed as mass-%
$HAL_{lime,uncorrected,k}$:	uncorrected historical activity level for lime production in year k of the baseline period expressed in tonnes of lime

3. The product-related historical activity level for the baseline period for products to which the dolime product benchmark as referred to in Annex I applies shall be determined according to the following formula:

$$HAL_{dolime,standard} = MEDIAN\left(\frac{785 \times m_{CaO,k} + 1\,092 \times m_{MgO,k}}{865,6} \times HAL_{dolime,uncorrected,k}\right)$$

whereby:

$HAL_{dolime,standard}$:	historical activity level for dolime production expressed in tonnes of standard pure dolime
$m_{CaO,k}$:	content of free CaO in the produced dolime in year k of the baseline period expressed as mass-%
$m_{MgO,k}$:	content of free MgO in the produced dolime in year k of the baseline period expressed as mass-%

$HAL_{dolime,uncorrected,k}$: uncorrected historical activity level for dolime production in year k of the baseline period expressed in tonnes of lime

4. The product-related historical activity level for the baseline period for products to which the steam cracking product benchmark as referred to in Annex I applies shall be determined according to the following formula:

$$HAL_{HVC,net} = MEDIAN(HAL_{HVC,total,k} - HSF_{H,k} - HSF_{E,k} - HSF_{O,k})$$

whereby:

$HAL_{HVC,net}$: historical activity level for high value chemicals net of high value chemicals produced from supplemental feed expressed in tonnes of HVC

$HAL_{HVC,total,k}$: historical activity level for total high value chemicals production in year k of the baseline period expressed in tonnes of HVC

$HSF_{H,k}$: historical supplemental feed of hydrogen in year k of the baseline period expressed in tonnes of hydrogen

$HSF_{E,k}$: historical supplemental feed of ethylene in year k of the baseline period expressed in tonnes of ethylene

$HSF_{O,k}$: historical supplemental feed of other high value chemicals than hydrogen and ethylene in year k of the baseline period expressed in tonnes of HVC

5. The product-related historical activity level for the baseline period for products to which the aromatics product benchmark as referred to in Annex I applies on the basis of the different CWT functions, their definitions, the basis for throughput as well as the CWT factors as listed in Annex II shall be determined according to the following formula:

$$HAL_{CWT} = MEDIAN\left(\sum_{i=1}^n (TP_{i,k} \times CWT_i)\right)$$

whereby:

HAL_{CWT} : historical activity level expressed as CWT

$TP_{i,k}$: throughput of the CWT function i in year k of the baseline period

CWT_i : CWT factor of the CWT function i

6. Where a mixture of hydrogen and carbon monoxide is produced, the product-related historical activity level for the baseline period for products to which the hydrogen product benchmark as referred to in Annex I applies shall be determined according to the following formula:

$$HAL_{H_2} = MEDIAN\left(\left(HAL_{H_2,act} + HAL_{H_2,WGS}\right) \times \frac{Em_{act}}{Em_{act} + Em_{WGS}}\right)$$

whereby:

HAL_{H_2} : historical activity level for hydrogen production referred to 100 % hydrogen

$HAL_{H_2,act}$: actual hydrogen production

$HAL_{H_2,WGS}$: additional hydrogen production under theoretical complete water gas shift (WGS) reaction, calculated via the stoichiometric ratio as $HAL_{CO,act} \times 0,071967 \text{ t H}_2/\text{tCO}$ for the WGS reaction

$HAL_{CO,act}$: actual carbon monoxide production

Em_{act} : actual emissions related to hydrogen production

Em_{WGS} : additional emissions related to hydrogen production from theoretical complete WGS reaction

The actual emissions related to hydrogen production shall be determined as follows:

$$Em_{act} = DirEm_{act} - Heat_{export,act} \times BM_{heat}$$

whereby:

Em_{act} :	actual emissions related to hydrogen production
$DirEm_{act}$:	actual direct emissions excluding heat-related emissions, prior to any carbon capture for use or geological storage. For emissions stemming from biomass, the emissions shall be calculated as the energy content from biomass multiplied with the emission factor of natural gas instead of the actual emissions
$Heat_{export,act}$:	actual net heat export
BM_{heat} :	the value of the heat benchmark for measurable heat for the relevant allocation period

The additional emissions related to hydrogen production from theoretical complete water gas shift shall be determined as follows:

$$Em_{WGS} = CO_{WGS} \times \frac{M_{CO_2}}{M_{CO}} - Heat_{export,WGS} \times BM_{heat}$$

whereby:

CO_{WGS} :	the amount of CO produced prior to the additional theoretical conversion into CO ₂ via the WGS reaction
M_{CO_2} :	molecular mass of CO ₂ (44,01 g/mol)
M_{CO} :	molecular mass of CO (28,01 g/mol)
$Heat_{export,WGS}$:	theoretical additional net heat export after full WGS reaction assuming 99,5 % heat recovery, calculated via the reaction enthalpy of the WGS reaction (-20,439 GJ/t H ₂ produced) multiplied with HAL _{H₂,WGS} and with the 99,5 % efficiency of recovery
BM_{heat} :	the value of the heat benchmark for measurable heat for the relevant allocation period

7. The product-related historical activity level for the baseline period for products to which the synthesis gas (syngas) product benchmark as referred to in Annex I applies shall be determined according to the following formula:

$$HAL_{syngas} = MEDIAN\left(HAL_{H_2+CO,k} \times \left(1 - \frac{0,47 - VF_{H_2,k}}{0,0863}\right) \times 0,0007047 \frac{t}{Nm^3}\right)$$

whereby:

HAL_{syngas} :	historical activity level for synthesis gas production referred to 47 % hydrogen
$VF_{H_2,k}$:	historical production volume fraction of pure hydrogen in the total volume of hydrogen and carbon monoxide in year k of the baseline period
$HAL_{H_2+CO,k}$:	historical activity level for synthesis gas production referred to historical hydrogen content expressed as norm cubic meters per year referring to 0 °C and 101,325 kPa in year k of the baseline period

8. The product-related historical activity level for the baseline period for products to which the ethylene oxide/ethylene glycols product benchmark as referred to in Annex I applies shall be determined according to the following formula:

$$HAL_{EO/EG} = MEDIAN\left(\sum_{i=1}^n (HAL_{i,k} \times CF_{EOE,i})\right)$$

whereby:

HA-
L_{EO/EG}: historical activity level for ethylene oxide/ethylene glycols production expressed in tonnes of ethylene oxide equivalents

HAL_{i,k}: historical activity level for the production of the ethylene oxide or glycol i in year k of the baseline period expressed in tonnes

CF_{EOE,i}: conversion factor for the ethylene oxide or glycol i relative to ethylene oxide

Following conversion factors shall be applied:

Ethylene oxide: 0,926

Monoethylene glycol: 0,717

Diethylene glycol: 1,174

Triethylene glycol: 1,429'

ANNEX III

Annex IV to Delegated Regulation (EU) 2019/331 is amended as follows:

(1) in Section 1.3 the following point is added:

‘(d) The total rated thermal input for all relevant activities pursuant to Annex I to Directive 2003/87/EC.’;

(2) Section 1.4 is replaced by the following:

1.4. Implementation of the conditionality provisions in Articles 22a and 22b

This item contains at least the following information:

- (a) Whether an energy audit report has been issued or a certified energy management system has been implemented for the installation under Article 8 of Directive 2012/27/EU;
- (b) Whether there are outstanding recommendations of the energy audit report or the certified energy management system under Article 8 of Directive 2012/27/EU;
- (c) Whether the installation is a district heating installation, eligible for additional free allocation pursuant to Article 10b(4) of Directive 2003/87/EC, and its operator intends to apply for the additional free allocation;
- (d) For all product-benchmark sub-installations, whether the greenhouse gas emission levels were higher than the 80th percentile of emission levels for the relevant product benchmarks in the years 2016 and 2017;
- (e) Whether a climate-neutrality plan in accordance with Implementing Regulation (EU) 2023/2441 has been submitted, where relevant;
- (f) Detailed information on the fulfilment of the conditions for free allocation according to Articles 22a and Article 22b.’;

(3) Section 2.3 is amended as follows:

(a) point (a) is replaced by the following:

‘(a) The total amount of energy input used in the installation contained in fuels and in materials (for example exothermic heat from chemical reactions);’;

(b) point (f) is replaced by the following:

‘(f) The amount of energy input from fuels attributed to fuel benchmark sub-installations (reported separately for carbon leakage and non-carbon leakage fuel benchmark sub-installation as well as for each of the respective amounts how much is used to produce goods listed in Annex I to Regulation (EU) 2023/956);’;

(c) point (g) is replaced by the following:

‘(g) The amount of fuel and electricity input used for the production of measurable heat;’;

(d) point (j) is replaced by the following:

‘(j) Net amount of measurable heat imported from installations and entities not covered by the EU ETS or included in the EU ETS only for the purposes of Articles 14 and 15 of Directive 2003/87/EC;’;

(e) point (n) is replaced by the following:

‘(n) Net amount of measurable heat exported to installations or entities not covered by the EU ETS or included in the EU ETS only for the purposes of Articles 14 and 15 of Directive 2003/87/EC;’;

(f) point (p) is replaced by the following:

‘(p) Net amount of measurable heat attributable to heat benchmark sub-installations (reported separately for carbon leakage and non-carbon leakage heat benchmark and district heating sub-installations as well as for each of the respective amounts how much is used to produce goods listed in Annex I to Regulation (EU) 2023/956);’;

(4) in Section 2.4, point (a) is replaced by the following:

‘(a) Amount of energy input from fuels, electricity and materials (e.g. exothermic heat from chemical reactions), including their respective emissions factor, to:

- each product benchmark sub-installation;
- each heat benchmark and district heating sub-installation;
- each fuel benchmark sub-installation;’;

(5) Section 2.5 is amended as follows:

(a) point (f) is replaced by the following:

‘(f) For electricity consumption within product benchmark sub-installations, which are listed in Section 2 of Annex I, the amount of electricity consumed within the system boundaries.’;

(b) the last subparagraph is replaced by the following:

‘Points (a) to (d) only have to be reported by installations that produce electricity.’;

(6) Section 2.6 is amended as follows:

(a) point (a) is replaced by the following:

‘(a) The amount of measurable heat attributed to sub-installation imported from non-EU ETS entities or processes or installations included in the EU ETS only for the purposes of Articles 14 and 15 of Directive 2003/87/EC.’;

(b) the following point is inserted:

‘(bb) If applicable, for each sub-installation, a list of goods produced within the boundaries of the sub-installation, including their CN codes, and the amount of production.’;

(c) point (c) is replaced by the following:

‘(c) By way of derogation from point (b), for the carbon leakage heat benchmark sub-installation, where measurable heat is exported to installations or entities not covered by the EU ETS, the NACE-4 codes (NACE rev. 2) of those installations or entities and the CN codes for the goods produced by those installations or entities.’;

(7) Section 2.7 is amended as follows:

(a) the following point is inserted:

‘(bb) If applicable, for each sub-installation, a list of goods produced within the boundaries of the sub-installation, including their CN codes.’;

(b) point (d) is replaced by the following:

‘(d) The name and amount of export or import of intermediate products covered by product benchmark sub-installations.’;

(c) point (h) is replaced by the following:

‘(h) If applicable, for the synthesis gas product benchmark sub-installations, the annual amount of hydrogen or synthesis gas production referred to hydrogen content expressed as norm cubic metres per year referring to 0 °C and 101,325 kPa and the annual production volume fraction of pure hydrogen in the hydrogen/carbon monoxide mixture.’;

(8) Section 3.1 is amended as follows:

(a) the following point is inserted:

‘(aa) if applicable, for each sub-installation, a list of goods produced within the boundaries of the sub-installation, including their CN codes.’;

(b) point (i) is replaced by the following:

‘(i) Quantity of electricity consumed within the system boundaries, for benchmarks which are listed in Section 2 of Annex I.’;

(c) the following point is added:

‘(p) Quantity of hydrogen and carbon monoxide produced, for the hydrogen product benchmark;’

(9) in Section 3.2, the following point is inserted:

‘(aa) Quantity of net measurable heat produced from electricity within each heat benchmark sub-installation or district heating sub-installation;’

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ANNEX IV

Annex VI to Delegated Regulation (EU) 2019/331 is amended as follows:

(1) point 1 is amended as follows:

(i) point (d) is replaced by the following:

‘(d) A diagram which contains at least the following information:

- The technical elements of the installation, identifying emissions sources as well as heat producing and consuming units;
- All energy and material flows, in particular the source streams, measurable and non-measurable heat, electricity where relevant, and waste gases;
- The points of measurement and metering devices;
- Boundaries of the sub-installations, including the split between sub-installations serving sectors deemed to be at risk of carbon leakage and sub-installations serving other sectors, based on NACE rev. 2 or PRODCOM, and the split between sub-installations serving the production of goods listed in Annex I to Regulation (EU) 2023/956 and sub-installations serving the production of other goods, based on CN codes;’;

(2) in point 2, point (a) is replaced by the following:

‘(a) For each sub-installation, a reference to the procedure for keeping track of the products and goods produced and their respective PRODCOM and CN codes;’.

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ANNEX V

Annex VII to Delegated Regulation (EU) 2019/331 is amended as follows:

(1) the second subparagraph of Section 4.2 is replaced by the following:

'The competent authority shall consider costs unreasonable where the operator's cost estimation exceeds the benefit of a specific determination methodology. To that end, the benefit shall be calculated by multiplying an improvement factor with a reference price referred to in Article 18, paragraph 1 of Commission Implementing Regulation (EU) 2018/2066 (*) and costs shall include an appropriate depreciation period based on the economic lifetime of the equipment, where applicable.

(*) 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 (OJ L 334, 31.12.2018, p. 1).';

(2) Section 9 is replaced by the following:

'9. PROCEDURE FOR TRACKING PRODCOM CODES AND CN CODES OF PRODUCTS AND GOODS

For the purpose of correct attribution of data to sub-installations, the operator shall maintain a list of all products and goods produced at the installation and their respective applicable PRODCOM codes, based on NACE rev. 2, and CN codes. Based on this list, the operator shall:

- Attribute products and their annual production figures to product benchmark sub-installations in accordance with product definitions provided in Annex I where appropriate;
- Take this information into account for attributing inputs, outputs and emissions separately to sub-installations related to sectors at risk of carbon leakage or not exposed to such risk, in accordance with Article 10.
- Take this information into account for attributing inputs, outputs and emissions separately to sub-installations related to the production of goods listed in Annex I to Regulation (EU) 2023/956.

To this end the operator shall establish, document, implement and maintain a procedure for regular checking whether the products and goods produced in the installation confirm with the PRODCOM codes and CN codes applied when setting up the monitoring methodology plan. This procedure shall furthermore contain provisions to identify if the installation produces a new product for the first time, and to ensure that the operator determines the applicable PRODCOM code for the new product, add it to the list of products and attributes related inputs, outputs and emissions to the appropriate sub-installation.;

(3) Section 10 is amended as follows:

(i) in paragraph 10.1.5, point (b) is replaced by the following:

'(b) An amount of emissions assigned to the consumption of the waste gas is attributed to the product benchmark sub-installation, heat benchmark sub-installation, district heating sub-installation or fuel benchmark sub-installation, where it is consumed. This amount is determined by multiplying the amount and calorific value of the waste gas with the value of the interim heat or fuel benchmark, as applicable, determined based on the relevant annual reduction rate from 2007/2008 to the two years specified as the basis for the benchmark values in Article 10a(2) of Directive 2003/87/EC.;

(ii) the following paragraphs are added:

'10.1.6. *Attribution of emission for the production of high value chemicals for the steam cracking benchmark*

In consistency with the allocation rules pursuant to Article 19, 1,78 tonnes of carbon dioxide per ton of hydrogen times the historical production of hydrogen from supplemental feed expressed in tons of hydrogen, 0,24 tonnes of carbon dioxide per ton of ethylene times the historical production of ethylene from supplemental feed expressed in tons of ethylene, and 0,16 tonnes of carbon dioxide per ton of HVC times the historical production of other high value chemicals than hydrogen and ethylene from supplemental feed expressed in tons of HVC, shall be deducted from the attributed emissions.

10.1.7. *Attribution of emission for hydrogen for the vinyl chloride benchmark*

In consistency with the allocation rules pursuant to Article 20, the amount of hydrogen combusted expressed as terajoules times the value of the interim heat benchmark, determined based on the on the relevant two years specified as the basis for the benchmark values in Article 10a(2) of Directive 2003/87/EC, shall be added to the attributed emissions.

10.1.8. *Attribution of emission for the hydrogen benchmark*

Where carbon monoxide (CO) is contained in the final product gas, the stoichiometric equivalent of the amount of CO in the product gas shall be considered converted in CO₂ and added to the attributed emissions. Assuming a water-gas shift reaction, an equivalent of the recoverable heat for the exothermic reaction of 1,47 GJ/t CO times the value of the interim heat benchmark, determined based on the annual reduction rate from 2007/2008 to the relevant two years specified as the basis for the benchmark values in Article 10a(2) of Directive 2003/87/EC, and assuming an efficiency of 99,5 %, shall be deducted from the attributed emissions. Correspondingly, the stoichiometric equivalent of hydrogen that would be produced from that same amount of CO via a water-gas shift reaction shall be added to the denominator when calculating the greenhouse gas intensity of the sub-installation.;

(iii) in paragraph 10.2, first paragraph, the following point is added:

(e) Emissions attributable to special benchmarks determined in accordance with Sections 10.1.6, 10.1.7 and 10.1.8, as applicable.’.

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ANNEX VI

ANNEX VIII

Determination of eligible Member States pursuant to Article 22b(3)

Installations in certain Member States may benefit from additional free allocation for district heating pursuant to Article 10b(4) of Directive 2003/87/EC.

1. METHODOLOGY

According to Article 10b(4) of Directive 2003/87/EC, the following condition shall be met for the average of the years 2014 to 2018, for Member States to be eligible for additional free allocation pursuant to Article 22b(3):

$$\frac{\text{Emissions from district heating in the concerned MS} / \text{Emissions from district heating in all MS}}{\text{GDP of concerned MS} / \text{GDP of all MS}} > 5$$

2. ELIGIBLE MEMBER STATES

According to the methodology described in point 1, installations located in the following Member States may benefit from additional free allocation pursuant to Article 22b(3):

- (a) Bulgaria;
- (b) Czechia;
- (c) Latvia;
- (d) Poland.