



EU EMISSIONS TRADING SYSTEM

BASELINE DATA COLLECTION

Supplementary Guidance Note

27th April 2011

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1. Introduction

This is supplementary guidance to be used when completing the ETS300 form V2. This guidance note has been produced to identify any additional data requirements as a result of the vote by the EU Climate Change Committee on the 15th of December 2010 to agree the Commission Decision determining the transitional Union-wide rules for the harmonised allocation of emission allowances [European Commission Decision](#) thereby referred to as the CIMs, which sets out the allocation rules for Phase III of the European Union Emissions Trading System (EUETS).

This guidance covers the data requirements for version 2 of the ETS300 as well as information to further clarify data that was submitted on version 1 of the form in 2010.

In addition, the Commission has produced a significant quantity of detailed guidance documents which can be found on the Commission website http://ec.europa.eu/clima/documentation/ets/benchmarking_en.htm.

A brief content summary of each guidance is noted below:

- *Guidance document n. 1* – general guidance: this guidance gives a general overview of the allocation process and explains the basics of the allocation methodology.
- *Guidance document n. 2* – guidance on allocation methodologies: this guidance explains how the allocation methodology works and its main features.
- *Guidance document n.3* – this document isn't applicable to UK operators as this details how to complete the Commission form. We have updated our ETS300 form to facilitate collection of additional data.
- *Guidance document n. 4* – guidance on NIMs data verification: this guidance explains the verification process concerning the data collection for the National Implementation Measures¹.
- *Guidance document n. 5* – guidance on carbon leakage: it presents the carbon leakage issue and how it affects the free allocation calculation.
- *Guidance document n. 6* – guidance on cross boundary heat flows: it explains how the allocation methodologies work in case of heat transfer across the 'boundaries' of an installation.
- *Guidance document n. 7* – guidance on new entrants, those with insufficient data and closures: this guidance explains allocation rules concerning new entrants, those with less than 2 years data, as well as the treatment of closures.
- *Guidance document n. 8* – guidance on waste gas and process emission sub-installations: this document provides an explanation of the allocation methodology concerning process emission sub-installation, and waste gas.
- *Guidance document n. 9* – sector specific guidance: this guidance provides for detailed description of the product benchmarks as well as the system boundaries of each of the product benchmarks listed within the CIMs.

This list of documents is intended to complement other guidance papers issued by the European Commission related to Phase III of the EU ETS, in particular:

- Guidance on Interpretation of Annex I of the EU ETS Directive (excl. aviation activities), and
- Guidance paper to identify electricity generators

2. Allocation Process

The Commission Decision formalises the detail behind the Phase III allocations, as set out in the EU ETS Directive, as developed over the last 2 years whereby operators are required to define their installations according to the following hierarchy:

- Product benchmark sub-installation
- Heat benchmark sub-installation
- Fuel benchmark sub-installation
- Process emissions sub-installation

The data requirements are expanded below:

- Production data - will be required for those installations that are covered by one or more product benchmarks.
- Fallback approaches - will be used when there are no product benchmarks available for the product produced by an installation, or where the product benchmark does not cover all the activities carried out at the installation. Fallback approaches are as follows:
 1. Heat production data - where product benchmarks do not exist or do not cover the activities carried out at the installation and measurable heat is produced, a heat benchmark should be applied.
 2. Fuel consumption data - where product or heat benchmarks cannot be applied or do not cover all the activities carried out at the installation, a fuel mix benchmark should be applied.
 3. Non-fuel related historic process emissions - where there are historic non-fuel related process emissions that are not covered by any of the other allocation methodologies listed above, that proportion of remaining historic emissions should be supplied.

These allocation methodologies must be used on the hierarchal basis described above, and will be applied in a harmonised manner to sectors across the EU.

The annual activity levels for each benchmark will be used to calculate the median activity level for the baseline period chosen. The median will then be taken and applied to the relevant benchmark value, with any corrections being taken into account as necessary.

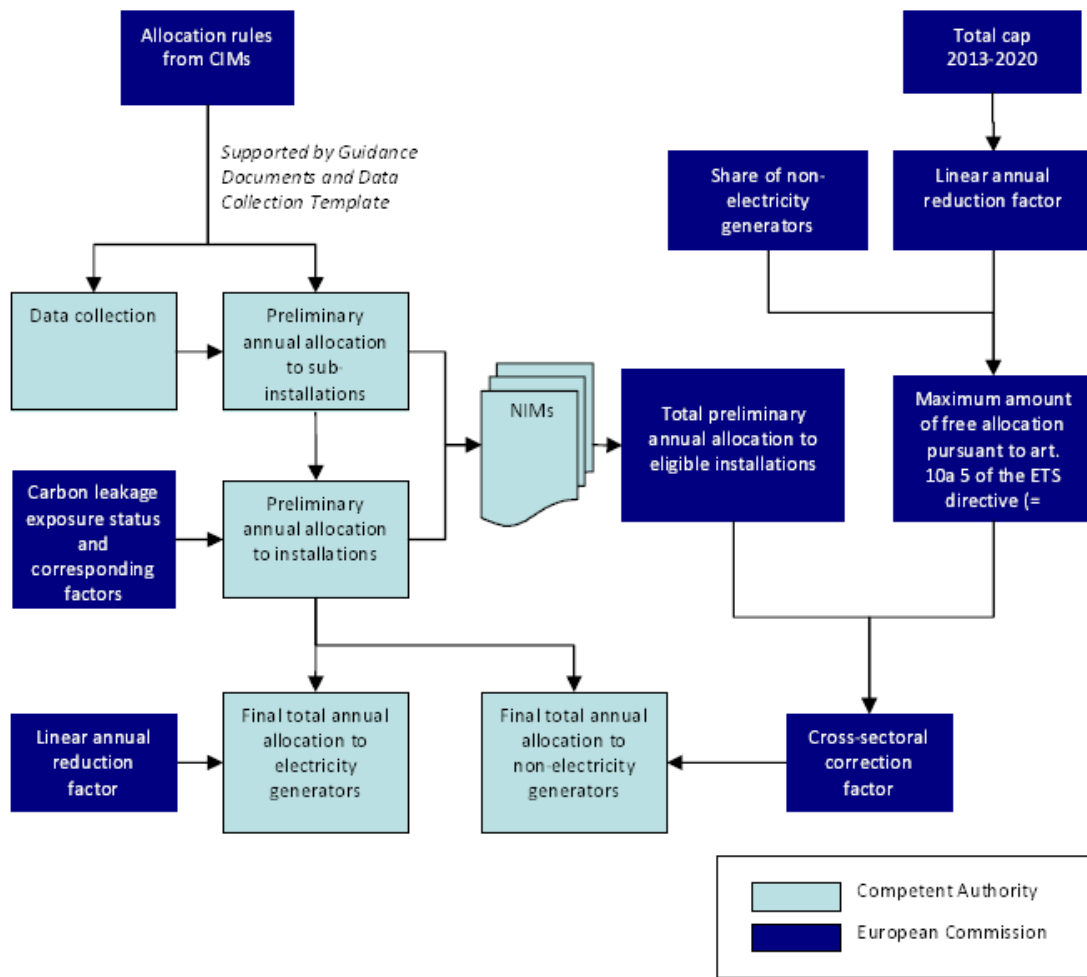
The ETS300 form aims to assist operators to define their sub-installations according to the above hierarchy.

Operators who did not submit their data according to this hierarchy must re-submit their data in line with this approach. This is particularly relevant for installations that produce products which, have product benchmarks but were not included in the 2010 data collection, products where production data was collected previously but were not given a product benchmark, and those operators which submitted fuel data instead of heat data, where they considered that the metering data for heat data has a higher level of uncertainty.

It is worth emphasizing that there must be no double counting of emissions in any of the sub-installations. Thus, where an operators activities are covered by a product benchmark, they must not provide any heat or fuel data in the heat and fuel data sections of the form which are already within the system boundaries of the product benchmark.

This form should also be completed by installations that have undergone significant extensions or reductions to their capacity (as defined in the CIMS) within the baseline periods, or installations that have less than 2 years of data within any of the baseline periods.

The full process for allocating emissions is set out by the Commission and can be seen in the diagram below:



3. The ETS300 Form

The ETS300 form now contains new sections to collect any additional data. The cells in the form which require additional information not previously requested are in a light yellow background for operator sections, and red for the verifiers.

Data which we consider has already been requested retains the white cell background for the Operator and green for the verifier.

In addition, we have introduced some automation into the form to help give you an indication of the correction factors that will be applied to adjust your allocation in accordance with the rules. Cells where automatic calculations appear are shown in blue.

Fig 1. Cell formatting for new data

Please use the table below to indicate which product you are producing and the installed capacity of the product sub-installations.

The production capacity shall be determined by one of the following methodologies:
 a) the average of the 2 highest monthly production volumes in the period from 1 January 2005 to 31 December 2008, assuming that the sub-installation been operating at this load 720 hours per month for 12 months per year.
 b) where it is not possible to determine the initial installed capacity according to point (a), an experimental verification of the sub-installation's capacity, the supervision of a verifier shall take place in order that the parameters used are typical for the sector concerned and that the results of the experimental verification are representative.

Where you have undergone a significant change, the capacity entered below should only cover the period before the significant change occurred.

Product	Two Months With Highest Production Figures		Installed capacity	Experimental Verification	Units of capacity	Ve
	Month 1	Month 2				
			0			
			0			
			0			
			0			
			0			
			0			
			0			
			0			

4. Summary of Additional Data

The additional data requirements within the form are summarised in table 1 below. More detail on these sections can be found later on in this document if they are relevant to you. It is likely that all operators who are eligible for free allocation will need to supply some data, however this is very much dependant on the sector you are in and the type of data you are supplying in line with the hierarchy.

In addition to the data collection, installations are required to submit a Methodology Report, which each operator is required to submit by virtue of Article 7(7) of the CIMs. The methodology report template provides for a comprehensive list of the possible information that the operators need to provide through the methodology report, in order to comply with the requirements of the CIMs

Table 1. Summary of additional data requirements and who they affect.

Additional data requirement	Who needs to complete this section?
2009-2010 Data	It is optional for any installation to supply 2009 to 2010 data where the Operator of that installation considers that the verified 2009 to 2010 data is higher than for the period of 2005 to 2008.
Additional Products	It is mandatory for installations that produce the following products to supply the production data for the relevant baseline period (if you have not done so already): <ul style="list-style-type: none"> • Sintered Dolime • Synthesis gas • Vinyl Chloride monomer • Styrene • Ethylene Oxide/ ethylene glycol • Phenol/ acetone • Cumene • Low-density clay blocks • High-density clay blocks • Short fibre kraft pulp • Long fibre kraft pulp • Testliner and fluting • Uncoated carton board • Coated carton board • Iron casting • Plasterboard • Dried secondary gypsum • Grey/ white cement clinker
Changes to product benchmarks	The following products have had their product descriptions amended from the initial data collection. <ul style="list-style-type: none"> • Sinter • Primary Aluminium

Additional data requirement	Who needs to complete this section?
	<ul style="list-style-type: none"> • Clinker • Sulphite pulp, TMP and mechanical pulp • Hydrogen • Plasterboard <p>It is mandatory for operators that supplied data for these products to update their submissions.</p>
Products that no longer have benchmarks	<p>The following products no longer have product benchmarks applicable to them:</p> <ul style="list-style-type: none"> • Casted primary aluminium • High heat resistant products • Low heat resistant products • Gypsum blocks, plasterboards, fibreboards and coving and GRG plasterboard • Dry pressed floor tiles <p>It is mandatory for operators to update their submissions, by providing relevant data for new product benchmarks that may apply, or by submitting data for the relevant fall back approaches.</p>
Exchangeability of Fuels and Electricity data	<p>It is mandatory for installations producing products where there is exchangeability of fuels and electricity to submit additional data. It covers the following products:</p> <ul style="list-style-type: none"> • Refinery products • EAF Carbon Steel • EAF High Alloy Steel • Iron Casting • Mineral Wool • Plasterboard • Carbon Black • Ammonia • Steam Cracking (High Value Chemicals) • Aromatics • Styrene • Hydrogen • Synthesis Gas and • Ethylene oxide/ ethylene glycols <p>Installations producing the above products must supply electricity data (if they have not done so already), direct emissions data and emissions data resulting from heat produced that has been imported into the installation.</p>
Capacity data for benchmarked products	<p>It is mandatory for all installations that produce products with product benchmarks to supply initial installed capacity data.</p>
Additional Fuel Mix data requirements	<p>It is optional for installations using the fuel mix approach to supply additional information to</p>

Additional data requirement	Who needs to complete this section?
	supplement fuel data previously supplied. This is not mandatory, however it may adversely impact on the level of free allocation if you do not supply the additional data as you may not receive allocations that you are entitled to.
Additional data required for the specific product benchmark rules in Annex III of the Commission Decision	It is mandatory for installations within the following sectors which have specific rules for calculating the level of free allocation to supply additional data that has not been submitted already. These sectors are as follows: <ul style="list-style-type: none"> • Lime • Dolime • Steam Cracking-HVCs • Hydrogen • Synthesis Gas • Ethylene oxide/ ethylene glycol • Vinyl Chloride Monomer
Operators supplying heat to domestic consumers	There is an additional question for operators to indicate if they supply heat to private households in question 3.9 of the general details tab of the ETS300 form. Operators to whom this applies must complete the updated cross boundary heat tab with the relevant information.
Significant Changes	It is mandatory for installations that have undergone a significant change in any of their sub-installations (either increase or decrease) between Jan 1 2005 and 30 June 2011 to include details of these changes. If an installation has undergone a change but does not expect to utilise the new capacity before 30 June 2011, this must be flagged to us at this stage if it is to be eligible for allowances from the Phase III New Entrant Reserve.
< 2years Data	It is mandatory for operational installations that have less than 2 years data to complete the relevant sections of the form.
Total Emissions, Energy Data and attribution of emissions from the installation	It is mandatory for all installations to supply emissions data and fuel data, with the exception of those installations that only have product benchmark sub-installations.
Methodology Report	It is mandatory for all installations to supply a methodology report, even if no new data are being provided

We have identified in table 1, those items of data which are mandatory and **without this information we are unable to determine the level of free allocation an installation is eligible to receive.** For those sections which have been identified as optional, if you choose not to supply this information then your allocation will be determined using the information we currently have and you may receive a lower allocation level than you are eligible to receive.

If you are required or choose to submit data, then you must submit the data to the regulator using the ETS300 collection template.

Where necessary you must also submit to the regulator “a statement from an independent verifier that production data or other relevant data has been submitted in accordance with the allocation rules. Please ensure that you have arranged for your data to be verified in time to meet this deadline. Guidance Note 4 (see <http://www.environment-agency.gov.uk/business/topics/pollution/32244.aspx>) sets out “the applicable verification standards”, which must be applied to the data.

If you have any questions in relation to the template or your submission, please contact EUETSPHASE3help@environment-agency.gov.uk. If your regulator is not the Environment Agency, you should also copy your question to your regulator.

5.Data Submitted in 2010

In 2010, data was required to be submitted to the EA under the Greenhouse Gas Emissions Data and National Implementation Regulations 2010. This data was required to be submitted based on the UK’s understanding of the allocations rules at that time.

To a large extent, the allocation methodologies remain the same and operators must still apply the hierarchical approach to their data for the purposes of determining allocations.

If the data submitted is still valid and you are not re-submitting it, you will be required to confirm that this data remains valid and is in accordance with the CIMS. Your verifier will be asked to comment to this effect as well, in order to ensure that only data which is correct and in accordance with the rules is accounted for in calculating the level of free allowances that you are eligible for.

6. Detailed Data Requirements

6.1 General Details Section of the Form

The general details section of the form remains largely unchanged from the original form, however there are some additional sections which need completing.

Section A1- Installation Details

The first tab of the excel spreadsheet requires you to enter some basic information about your installation as follows:

Existing installations

If you are an installation currently permitted under the EU ETS in Phase II, all you need to do is enter your NAP number, and this will bring up the installation details.

Please note, for those installations that hold more than 1 NAP number, please only enter the lowest of the NAP numbers applicable to your installation. If any details are incorrect, please correct them here. The corrections you make to installation details will be used for Phase III only and will not result in any amendments to existing permits or Phase II allocations. Any changes which need to be made for Phase II must be submitted to your Regulator via the normal procedures.

Installations captured by Phase III

For installations that are currently in operation but which will only be captured by the EU ETS from 2013 (i.e. Phase III) onwards, you should already have supplied us with your contact details and installation name. If you have not already done so, please do this immediately.

If you are an installation only captured by the EU ETS in Phase III, please enter your unique ID that has been supplied to you and this will populate the remaining installation fields automatically.

If you are a new installation which is currently in operation, but is not yet a participant of the Emissions Trading System (and therefore answered “yes” to question 1.2) please complete questions 1.8 which, asks you to specify whether you hold any other environmental permits, and if so, what they are and their reference number. This is required for confirmation of your eligibility to apply for free allowances as an incumbent installation.

Section A2- Contact Details

Please provide the details of the person who we can contact in connection with the completion of this form. If this person is from an organisation other than the operator, please indicate this as required.

Please also supply an address for service of documents. This may either be a postal address within the UK or an e-mail address.

Section A3- Annex I Activities

This section requires you to provide details of the Annex I activities undertaken at the installation and some general questions about these activities. Please note that some of the descriptions of the activities listed in Annex I have changed in the revised Directive.

When selecting the activities you undertake, you should list these in terms of how the activities are categorised in the revised Directive for Phase III, which may be different from the current categorisation in your permit.

A complete list of all Annex I activities can be found in Annex A of Guidance Note 3

Section A3.3- Data submission

We have added question A3.3 on the general details tab to enable us to determine what the additional data is that you are supplying and how you want us to handle this data. This question asks you to select one of the following options:

- 1) if you are supplying a brand new form to cover all operations from the installation
- 2) if you are supplying additional data to supplement the previous submission
- 3) If you are correcting a previous submission

Use option one if you have not previously submitted a form, or you are re-submitting data for the entire installation, which will instruct us to discount any previous submissions.

Use option two if your previous data submission is still relevant and all you are doing is supplying some additional data (e.g. installed capacity data for a benchmarked product).

Use option three if you have only updated/corrected one section of the form, and all other sections in your previous data submission remain valid. You should not use this option if you are correcting data in one section, which updates another, and instead you will need to re-submit all data under option 1.

Section A3.4 & A3.5- Electricity generating installations

Electricity Generator is defined in the revised Directive as "an installation that, on or after 1 January 2005, has produced electricity for sale to third parties, and in which no activity listed in Annex I is carried out other than the 'combustion of fuels'".

Installations that solely produce electricity are not eligible for free allocation. However operators of such installations must simply complete the form up to section A3.5 Once these sections are complete and you have confirmed that the

purpose is solely to generate electricity, you do not need to go any further and will not need to undertake any verification.

In addition to there being no free allocation for those installations generating only electricity, there will be no free allocation for any onsite electricity generation. This also applies to the electricity generated by combined heat and power. However free allocation can be granted for heat generation from these plants.

Section A3.6 Installations using biomass

Annex I of the revised Directive excludes installations which exclusively use biomass from the EU ETS in Phase III. As such, if you are an installation which has exclusively used biomass (except for during start-up and shut-down), you will be excluded from the EU ETS and simply need to answer sections A1 to A3.6 of the form and the data that you submit will not need to be verified.

If you use, or intend to use fossil fuels outside of start-up and shut-down, you must complete and submit all the relevant sections of the form, which must be verified.

Furthermore, if you use waste gases for the purpose of generating electricity and/or heat, you will need to complete the waste gases section of the form. This data must also be verified.

Section A3.7 2009 - 2010 data

You initially submitted data for the period 2005-2008. However, the Commission Decision allows for the baseline period to be taken as either 2005 to 2008, or where higher, the period 2009 to 2010. This is to enable operators to supply verified data for 2009 to 2010 where the activity levels were higher, and the operator will therefore be eligible for a higher level of free allocation. It is not compulsory to submit data for these additional years; however if operators choose to supply these data, it will be used instead of the 2005-2008 data, as the basis for determining the level of allocation that the installation is eligible for.

You may only select one baseline period for all the data you submit for your installation. This means that you cannot provide one type of product data for 2005 to 2008, and then provide another product data type for 2009 to 2010. All data must cover the same baseline period.

Data must be submitted which is attributable to an “Annex I activity”. Guidance on defining the scope of activities covered by the EU ETS following changes brought about by the revised EU ETS Directive¹ can be found in Guidance Note 3 (see <http://www.environment-agency.gov.uk/business/topics/pollution/32244.aspx>). The

¹ <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:140:0063:0087:EN:PDF>

data you supply must cover all your activities that are eligible for free allocation and will be included in Phase III, not just those captured in Phase II of the EU ETS.

Section 3.8- Sub-installations with less than 2 years data

Separate rules exist for installations or sub-installations, where they have less than 2 years activity data for their sub-installations. As such operators are asked to indicate which sub-installations have less than 2 years data. Separate tabs will appear allowing operators to submit the data required. If this is relevant to you, please see section 8 later on in this guidance.

Section 3.9. Installations Supplying Heat to Private Households

Installations which supply heat to private households need to indicate this in question 3.9 of the general details tab. A private household is defined as a residential unit in which persons make arrangements, individually or in groups, for providing themselves with measurable heat.

The quantity of heat supplied to these private households is to be supplied in the cross-boundary heat section of the form. In addition, the emissions data relating to the installation must also be supplied in the total emissions and energy data tab of the form.

If you supply to premises other than private households, please separate the data (heat and emissions) so that the appropriate rules can be applied to the appropriate data. Please see section 6.8 for further information.

Section 3.10. Small Emitters and Hospitals Opt-Out

Article 27 of the revised EU Emissions Trading Directive provides member states with a discretion to opt smaller emitters and hospitals out of Phase III of the EU ETS from 2013. Please use General Details Section of the form to indicate if you want to be considered for a potential opt out from the EU ETS. You can only choose one of the options 1 or 2.

If you meet the criteria given in the general details this does not guarantee that you will be able to opt- out from the EU ETS as the UK Government is still considering whether an opt-out will be implemented and under what circumstances an operator will be opted out.

Please note, if a voluntary opt out is implemented, you will only be eligible to opt out from the system if your installation is less than 35MW thermal input and is less than 25,000tonnes CO₂ equivalent **or** your installation is a hospital. If either of these criteria are met then section 3.11 must be completed. You must also complete all other sections of this form relevant to your installation. If a voluntary opt out is implemented you will be asked at a later date to decide whether you want to opt out.

If you want to be included in a potential opt out under option 1 and carry out combustion activities, please give your verified thermal input capacity data. You must also supply your emissions data in the emissions data tab within this form, to demonstrate that your emissions are below the threshold.

Note: Your thermal input capacity must include all units at your installation, including those with a rating of <3MWth. Please provide a separate document as an attachment to show all the units included in your calculation of thermal input.

The Directive requires that any installation opting out of Phase III of the EU ETS is subject to measures that will achieve an equivalent contribution to emissions reductions. The Government has previously consulted on opt out based on the potential for the Carbon Reduction Commitment (CRC) and Climate Change Agreement (CCA) to provide equivalent measures.

You should identify which alternative scheme you will use and give the reference number you have for that scheme.

6.2. Carbon Leakage

Sectors deemed to be at risk of carbon leakage are those sectors that may suffer a material competitive disadvantage against competitors located in areas outside the EU that do not have similar emission reduction commitments, which could in turn lead to an increase in greenhouse gas emissions. A list of sectors and sub-sectors that could be effected by carbon leakage have been identified which relate to the **NACE/PRODCOM** codes.

The aim of identifying sectors deemed to be at risk of Carbon Leakage (CL) is to ensure that free allowances can be distributed appropriately to maintain competitiveness amongst European industries to avoid an increase in emissions. A sub-installation must distinguish products at risk of carbon leakage and not at risk of carbon leakage. Sectors deemed as exposed to carbon leakage will receive up to 100% of their allowances free of charge at the level of a benchmark.

In the heat data worksheet, operators must complete the relevant tables depending on whether their processes are subject to carbon leakage or not.

Where fuel data has been provided as an alternative to measurable heat, this data must be entered into the relevant tables.

NACE Codes and PRODCOM Codes.

In addition to production and other relevant data, you will also be required to supply NACE code and PRODCOM codes for your activities. These codes are required to ensure that the correct carbon leakage status for your sub-installation is used and to ensure that those sectors affected by carbon leakage can clearly be identified. It is imperative that you correctly assign the relevant NACE code and PRODCOM code, as this will need to be verified may affect your entitlement to free allocation.

The list of sectors at risk of carbon leakage list may be updated from time to time therefore if you break down your data as much as possible between NACE and PRODCOM codes, this will reduce the likelihood of further data being requested from you if a change to the list affects your installations. Operators should use the most recent 2007 list. A link to the 2007 PRODCOM list is supplied at various points in the ETS 300.

In order to establish whether activities at your installations are at risk of carbon leakage, please view the Commission Decision which can be found using the following link to the [Commission Website](#).

6.3. Allocation Rules

Section A 4 of the ETS300 V2 asks you to indicate which allocation sub-installations are relevant to your installation.

Section A4.1 Product Benchmark Sub-installation data

IMPORTANT. If you have provided data for a product benchmark, you must ensure that the data you supplied is in the correct units, otherwise this may lead to an error in the calculation of your free allocation. The units that must be used can be found in annex II and III of the Decision.

Rather than the products being divided by sector (as in version 1 of the ETS300), they are now grouped by data requirements. Where data submitted in version 1 is still valid, you do not need to re-submit this, however you should ensure that it meets the CIMs.

The products are now split into the following categories as follows:

- **Standard Products:** *Pre-baked anodes, Aluminium, White cement clinker, Grey cement clinker, Facing bricks, Pavers, Roof tiles, Spray dried powder, Dry-pressed wall and floor tiles, High heat resistant refractory products, Low heat resistant refractory products, Low Density Clay Blocks, High density Clay Blocks, Float glass, Bottles and jars of colourless glass, Bottles and jars of coloured glass, Continuous Filament Glass fibre products, Plaster, Dried Secondary Gypsum, Coke, Sintered ore, Hot metal, Newsprint, Uncoated fine paper, Coated fine paper, Tissue, Long Fibre Kraft Pulp, Coated Carton Board, Sulphite Pulp, TMP and Mechanical Pulp, Sintered DoLime Nitric acid, Adipic acid, Soda ash, Phenol acetone, E-PVC, S-PVC*

- **Products where exchangeability of fuels and electricity is applicable:** *Plasterboard, EAF carbon steel, EAF High Alloy Steel, Iron Casting, Mineral Wool, Carbon black, Ammonia, Styrene*

- **Products with Special Rules:** *High Value Chemicals, Vinyl Chloride Monomer, Synthesis gas, ethylene oxide/glycol, hydrogen, lime, dolime and Aromatic chemicals*

- Refineries

6.3.1 Additional Products

In some cases data was not required for certain products as they did not have agreed benchmark values at the time when we sent the request for baseline data in 2010. In accordance with the hierarchical approach, any operator of an installation that produces a benchmarked product must supply data for this installation. The hierarchy must be applied strictly. If it is not then this may result in a reduced allocation of allowances.

The additional products are listed below. Next to each product type in brackets is the name of the tab within the ETS300 where you will find the new table for the additional products. Each table is specific to the product and you should identify which additional product you produce, and the quantity you produced in each year of the relevant baseline period. The definition of the product and the processes and emissions covered can be found in Annex II and Annex III of the Commission Decision².

- Sintered Dolime (Standard Product)
- Dried Secondary Gypsum (Standard Product)
- Short Fibre Kraft Pulp (Standard Product)
- Long Fibre Kraft Pulp Standard Product)
- Unbleached Sulphite Pulp (Standard Product)
- Testliner and Fluting (Standard Product)
- Uncoated Carton Board (Standard Product)
- Coated Carton Board (Standard Product)
- Vinyl Chloride Monomer (Special product benchmark)
- Phenol / Acetone (Standard Product)
- S-PVC (Standard Product)
- E-PVC (Standard Product)
- Iron Casting (Product Benchmark (exch fuels))
- Plasterboard (Standard Product & Product Benchmark (exch fuels))
- Styrene (Chemicals)
- Synthesis Gas (Special Product benchmarks)
- Ethylene Oxide / Ethylene Glycol (Special Product benchmarks)

Where you previously provided data relating to the fall back approaches (heat, fuel, process emissions) for the production of these products, you will need to resubmit your ETS300 with the new data, and remove any data from the fall back approaches that relate to the production of these additional products.

² http://ec.europa.eu/clima/documentation/ets/docs/decision_benchmarking_15_dec_en.pdf

6.3.2 Changes to product definitions/ products that no longer have benchmarks

We collected data from Operators of installations on the basis of our understanding of the proposed benchmarks at that time. Following the vote on the allocation rules, some product definitions have been changed and some products no longer have benchmarks.

6.3.3 Changes to Product Definitions

There have been some changes to the product definitions, which you need to update in your submission. Where the data you have supplied is covered by the new definition, please simply submit the ETS300 with the corrected data **without the need for re-verification**.

If you need to make any amendments to the data, this will need to be re-verified.

- Sinter is now referred to as sintered ore.
- Primary Aluminium is now referred to as just aluminium
- Clinker has been separated out into grey clinker and white clinker
- Sulphite pulp, TMP and mechanical pulp now includes unbleached pulp (previously it was just bleached). This is covered in the additional products above.
- Hydrogen is no longer considered under the CWT approach. Instead it is now located under the special product benchmark.
- The plasterboard product definitions have been changed such that there is now only one plasterboard product. Previously, there were two benchmarks which incorporated plasterboard, one for “gypsum blocks, plasterboards and coving” and one for “glass reinforced plasterboard”.

6.3.4 Deleted Benchmarked Products

The following products were originally proposed as having product benchmarks, but these have now been rejected.

- Casted primary aluminium
- High heat resistant products
- Low heat resistant products
- “Gypsum blocks, plasterboards, fibreboards and coving” and “GRG plasterboard”
- Dry pressed floor tiles

Any installation which supplied data for the above products must provide alternative data according to the hierarchy. If these products do not match any of the new product definitions or additional product benchmarks that have been developed, the fallback approaches will need to be used.

6.4 Exchangeability of Fuels and Electricity

For certain product benchmarks where heat or mechanical energy produced from fuels is exchangeable you must supply the annual electricity usage in relation to that product. The tables in the ETS300 have the scope to supply electricity data for the relevant baseline period. Please select the relevant product type in the drop down list and supply the annual electricity usage related to that product. This data must be supplied for the following products (the relevant tab of the form where the products can be found is shown in brackets).

- Refinery products (Refineries)
- EAF Carbon Steel (Product Benchmark (exch Fuel))
- EAF High Alloy Steel (Product Benchmark (exch Fuel))
- Iron Casting (Product Benchmark (exch Fuel))
- Mineral Wool (Product Benchmark (exch Fuel))
- Plasterboard (Product Benchmark (exch Fuel))
- Carbon Black (Product Benchmark (exch Fuel))
- Ammonia (Product Benchmark (exch Fuel))
- Steam Cracking / High Value Chemicals (Special Product Benchmarks)
- Aromatics (Special Product Benchmarks)
- Styrene (Product Benchmark (exch Fuel))
- Hydrogen (Special Product Benchmarks)
- Synthesis Gas (Special Product Benchmarks)
- Ethylene oxide/ ethylene glycols (Special Product Benchmarks)

In addition to the electricity data, you must also supply the direct emissions from the product sub-installation, including emissions from the net heat imported for the production of the product, as required by article 14(1).in order to enable us to calculate the level of free allocation the installation is eligible for.

In the relevant tab where emissions data is required, there are three tables where against each product selected, you must provide, the gas emitted and the relevant verified emissions figure. In addition, you must also supply details of the net heat imported from outside of the installation as relevant. This data will be used to produce a correction factor, which is also displayed in the sheet.

The allocation will be worked out according to the following calculation:

	Ratio of direct emissions against total (direct and indirect) emissions
	x
Allocation =	Benchmark Value of the product
	x
	Historical activity level of production at the sub installation

Indirect emissions will be calculated by multiplying electricity usage by 0.465, however you only need to supply your electricity usage. Heat imported will be multiplied by the heat benchmark value, which is 62.3 allowances/TJ

6.5 Product Specific Rules

For a number of products in the chemicals and lime sectors, you are required to submit additional data as there are specific rules used to correct the allocation for the installation. In order to make the relevant sections appear in the ETS300, please select the relevant tick box in the Special Product Benchmark tab. In addition, you will be asked to supply any information relevant to exchangeability of fuels and electricity as applicable, as detailed in section paragraph 6.4 above.

6.5.1 Hydrogen

The table for specific rules for hydrogen will ask you to supply us with the following information:

1. Quantity of Hydrogen produced
2. Historical production value fraction of Hydrogen expressed as a percentage

Note: the historic annual production data of hydrogen production refers to historical hydrogen content expressed as normalised cubic metres per year referring at 0°C and 101.325kPa

6.5.2 Synthesis Gas

The table for specific rules for Synthesis gas will ask you to supply us with the following information

1. Quantity of Synthesis gas produced
2. Production volume fraction of pure Hydrogen

Note: the historic annual production data of synthesis gas production refers to historical hydrogen content expressed as normalised cubic metres per year referring at 0°C and 101.325kPa

6.5.3 Vinyl Chloride Monomer

The Vinyl chloride monomer benchmark does not cover the use of hydrogen in its production and direct emissions generated during its production. The allocation must be adjusted to account for direct emissions, the hydrogen related emissions and historical heat consumption. Therefore this information is asked for in a separate table within the benchmarking spreadsheet on selection of the VCM producer tick box.

The table for specific rules for Vinyl Chloride Monomer will ask you to supply us with of the following information:

1. Quantity of VCM produced
2. Quantity of Hydrogen used as a fuel
3. Direct emissions from production of VCM

6.5.4 Ethylene Oxide/ Ethylene Glycol

The table for specific rules for Ethylene oxide require you to supply us with the following information:

1. Historical activity level of Monoethylene glycol
2. Historical activity level of Diethylene glycol
3. Historical activity level of Triethylene glycol
4. Historical activity level of Ethylene Oxide

Factors specified in the allocation rules will then be applied to these volumes to calculate the relevant allocation.

6.5.5 Lime

The table for specific rules for lime will ask you to supply us with of the following information:

1. Quantity of lime produced
2. Calcium Oxide content in the lime produced
3. Magnesium Oxide content in the lime produced

This data is then used to calculate the corrected historical activity level for Lime.

6.5.6 Dolime

The table for specific rules for dolime will ask you to supply us with of the following information:

1. Quantity of dolime produced
2. Calcium Oxide content in the dolime produced
3. Magnesium Oxide content in the dolime produced

This data is then used to calculate the corrected historical activity level for Dolime.

6.5.7 Steam Cracking- High Value Chemicals (HVCs)

The steam cracking benchmark does not cover the so called supplemental feed, high value chemicals that are not produced in the main process as well as the related emissions, but, where applicable, supplemental feed should be considered for the free allocation of emission allowances.

The table for specific rules for HVCs requires you to supply us with the following pieces of information:

1. Sum of direct emissions and Hydrogen related emissions
2. Supplementary feed of Hydrogen
3. Supplementary feed of Ethylene
4. Supplementary feed of other HVCs than Hydrogen and Ethylene

For all other products with specific rules discussed in this guidance, we cannot calculate the level of free allocations you may be eligible to receive; therefore you must supply the additional information.

6.5.8 Aromatic Chemicals

In this section, you are asked to provide production data for the various CWT functions relevant to the production of aromatic chemicals. This production data is then used to calculate the CWT historical activity level.

6.5.9 Refinery Products

In this section, you are asked to provide throughput data for the relevant CWT functions. This section should largely mirror the CONCAWE spreadsheet, to allow you to copy and paste data into the relevant cells.

6.6 Heat Data

You should use this section if your installation produces heat that theoretically can be measured, even if the heat is not actually measured. You should only input data that is not associated with the production of products covered by product benchmarks, or if your sector is not covered by any of the product benchmarks available.

In the ETS300, if new or corrected data is being submitted, operators are required to split the data into either data that is subject to carbon leakage or data that is not subject to carbon leakage. Information on which products are classed as at risk to carbon leakage can be found at the following link:

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2010:001:0010:0018:EN:PDF>

The ETS300 provides separate tables within the “heat” worksheet where this data should be input.

If no new or corrected data is submitted then the existing data will be used. Existing data be split using the relevant NACE and PRODCOM codes.

Where measurable heat is produced, but that heat is not measured, fuel data can be used as a proxy. Fuel which is used for the production of measurable heat may receive a lower allocation level than you may be eligible to receive as the benchmarks for fuel and heat are set at different levels. As such, operators are invited to supply further information to clarify what their fuel is used for. If the fuel is used to produce measurable heat, operators may provide efficiency factors for their plant.

Where heat can be measured but has not been, we have added a section to enable you to specify the measured efficiency factor for the appliance being used to supply heat. This factor must be verified by a verifier.

If no efficiency factor is supplied, a default efficiency factor of 70% is to be entered by the operator, as specified in Article 7(8) of the Commission Decision.

The CIMs Decision defines ‘measurable heat’ as a net heat flow transported through identifiable pipelines or ducts using a heat transfer medium, such as, in

particular, steam, hot air, water, oil, liquid metals and salts, for which a heat meter is or could be installed;

The heat-related historical activity level shall refer to the median annual historical import from an installation covered by the Union scheme, production, or both, during the baseline period, of measurable heat consumed within the installation's boundaries for the production of products, for the production of mechanical energy (excluding that used for the production of electricity), for heating or cooling (with the exception of the consumption for the production of electricity), or exported to installations or other entity not covered by the Union scheme (with the exception of the export for the production of electricity) expressed as terajoule per year.

For the heat benchmark sub-installation, the preliminary annual number of emission allowances allocated free of charge for a given year shall correspond to the value of the heat benchmark for measurable heat multiplied by the heat-related historical activity level for the consumption of measurable heat.

This heat data must be net of condensate. If further clarification is required, this can be obtained from the Commission's guidance on the allocation methodologies (Guidance note 2)

6.7 Cross Boundary Heat

This section is to be completed where heat is transferred across the installation boundary, whether it be from the producer or to the consumer. This section is mainly to be used as a cross check, to ensure that the correct installation receives the allocation. If an installation is eligible to receive the heat benchmark, they should enter their heat data in the "heat data" worksheet.

Measurable heat flows have all of the following characteristics:

- They are net meaning that the heat content in the condensate or transfer medium returning to the heat supplier is subtracted
- The heat flows are transported through identifiable pipelines or ducts

AND

- The heat flows are transported using a heat transfer medium, e.g. steam, hot air, water, oil, liquid metals or salts

AND

- The heat flows are or could in principle be measured by a heat meter (where a heat meter is any device that can measure the amount of energy produced based upon flow volumes and temperatures)

The different types of heat flows that we need information for and may attract allocations of allowances are:

1. Heat flows from an ETS installation to another ETS installation or entity, such as a CHP plant selling heat to a pulp and paper plant.

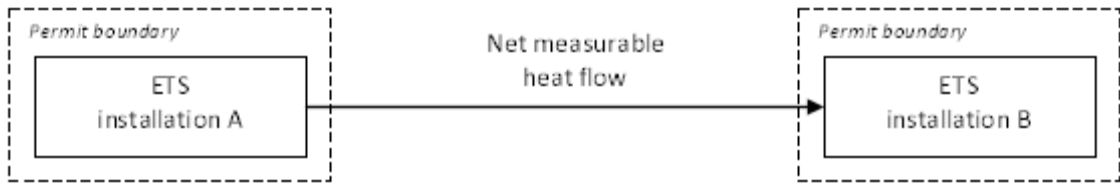


Figure 3: Heat flows from an ETS installation to another ETS installation.

Preliminary Allocation – As a general rule, free allocation is given to the heat consuming installation.

The carbon leakage factor to be used is the carbon leakage exposure factor for the heat consumer.

2. *Heat flows from an ETS installation to a non-ETS installation or entity, such as a CHP plant selling heat to a chocolate factory which has a total rated thermal input lower than 20MW.*

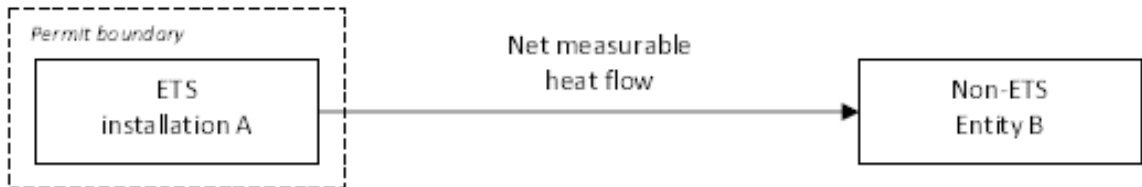


Figure 4: Heat flows from an ETS installation to a non-ETS installation.

Preliminary Allocation – In this situation, free allowances are given to the heat producer for the heat exported.

Non-ETS entities are by default deemed not exposed to carbon leakage. The carbon leakage exposure factor for carbon leakage exposed sectors can only be used if the heat exporter provides satisfactory evidence that it exports the heat to a non-ETS entity that is exposed to a significant risk of carbon leakage: the operator will for example, provide a list of his customers consuming the heat, along with the NACE codes of these customers and the amounts of heat delivered to them.

If the heat is exported to more than one non-ETS entity with different exposure factors, then the heat exporting sub-installation needs to be split in two sub-installations.

Private Households – A special situation exists if the non-ETS entity consists of private households and the ETS installations provide heat to these private households. Further detail of this situation is described later.

3. *Heat flows from a non-ETS entity or installation to an ETS installation, such as a CHP plant which has a total rated thermal input lower than 20 MW selling the heat produced to a ceramics plant.*

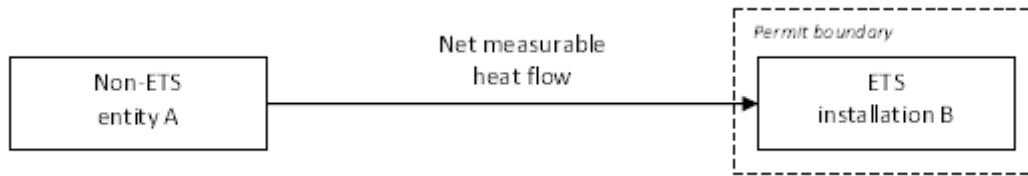


Figure 5: Heat flows from a non-ETS entity to an ETS installation.

Preliminary Allocation – The consumption of the heat outside ETS is not eligible for free allocation.

The carbon leakage exposure factor to be used is the one for the heat consuming installation.

4. *Heat flows involving multiple heat exporters and importers*, such as several CHPs selling heat to a district heating network, which is distributing the heat in part to a dairy industry included in the ETS, in part to another dairy industry not included in the ETS, and in part to private households.

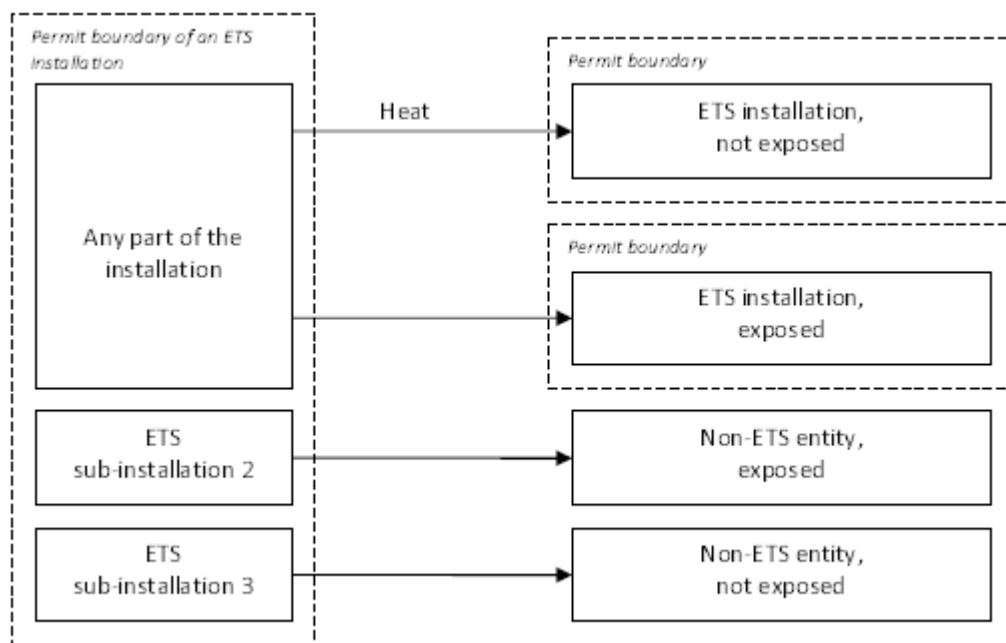


Figure 6: An ETS installation exports heat to both ETS sub-installations and non-ETS entities with different carbon leakage exposure factors.

Preliminary Allocation – Free allocation is determined using the cases discussed above.

Heat Flows from an ETS exporter to a heat distributor

Definition of a heat distributor – An entity which acts as an intermediary between heat producers and heat consumers. This means that:

- The distributor is neither producing nor consuming the heat
- There is no direct contractual relation between the heat producer and the heat consumers concerning delivery of heat.

Despite the existence of an intermediate party in that distributed heat there may exist direct heat delivery contracts between heat producers and consumers. In that case, the intermediate party is not considered as a heat distributor and the standard rules for heat flows apply (allocation to ETS heat consumers unless heat is imported from non-ETS heat producers, allocation to ETS heat producers if consumers are not covered by the ETS).

The installation that acts as an intermediate party may also be producing heat itself. In such cases the installation will be virtually split into two parts: an ETS heat exporter and a heat distributor which transfers heat (including the part of the own heat production) from a producer to a consumer. Therefore, the standard rules for heat flows also apply for that specific amount of heat (allocation to ETS heat producer as the heat is regarded as delivered to a non-ETS entity).

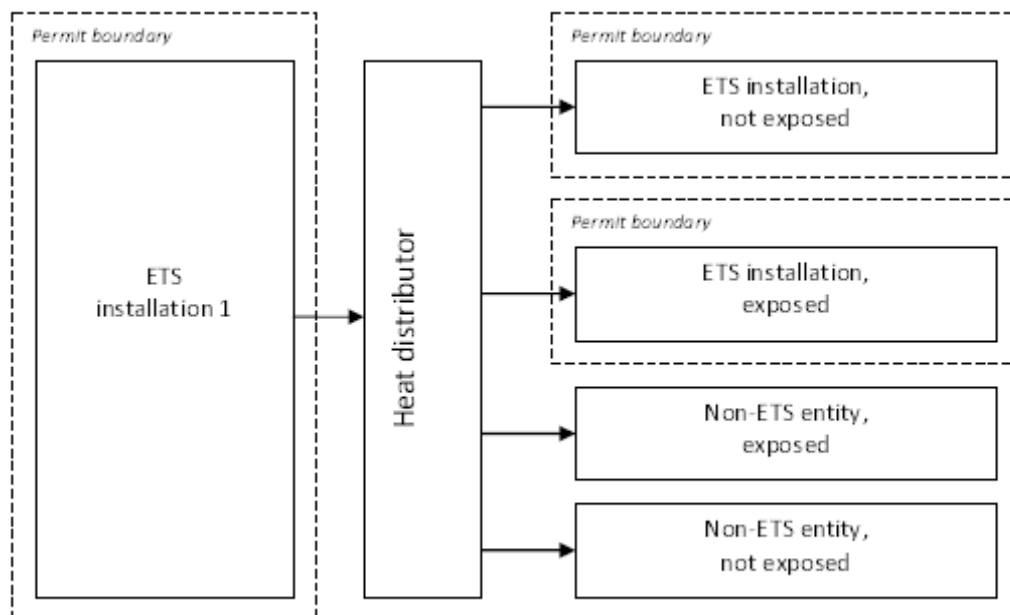


Figure 7: Heat flows from an ETS installation to an non-ETS distributor.

Preliminary Allocation – For the purpose of allocation, the heat-distributor is regarded as a non ETS entity. Consequently, free allowances are given to the heat producer for the heat exported to the heat distributor. Installations and entities receiving heat from the heat distributor do not receive free allocation.

The allocation rule for heat exporters to a non-ETS heat distributor is applied independently from the number of heat producers and consumers.

The carbon leakage exposure factor to be used is the carbon leakage factor for non carbon leakage exposed sectors unless evidence on the carbon leakage exposure of the heat consumer can be provided (amounts of heat delivered and Prodcom/ NACE codes of the consumers).

Such data can only be delivered by the heat distributor on a voluntary basis as there are no legal obligations for these entities in the context of the data collection. The following data are in principle needed and should be provided to the ETS installations concerned:

- Amount of heat to non-ETS installations or entities (not private households, differentiated: CL/non-CL exposed) and
- Amount of heat to private households.

6.8 Heat flows from an ETS exporter to private households

A special situation exists if the non-ETS entity consists of private households and ETS installations provide heat to private households through a district heating network with or without an independent distributing entity.

The Commissions Decision, article 3(q) defines private households as follows:

“a residential unit, in which persons make arrangements, individually or in groups, for providing themselves with measurable heat;”

In practical terms, this means that private households are:

- Buildings predominantly used by individuals for residential purposes, e.g. houses, apartments, flats, bungalows, apartments mostly used as residences etc.
- Buildings partly used by individuals for residential purposes, e.g. apartment buildings to the extent used as residences.

AND NOT

- Any other buildings, e.g. hospitals, nursing homes, company buildings, shops, supermarkets, municipal buildings, churches, banks, hotels, museums etc.

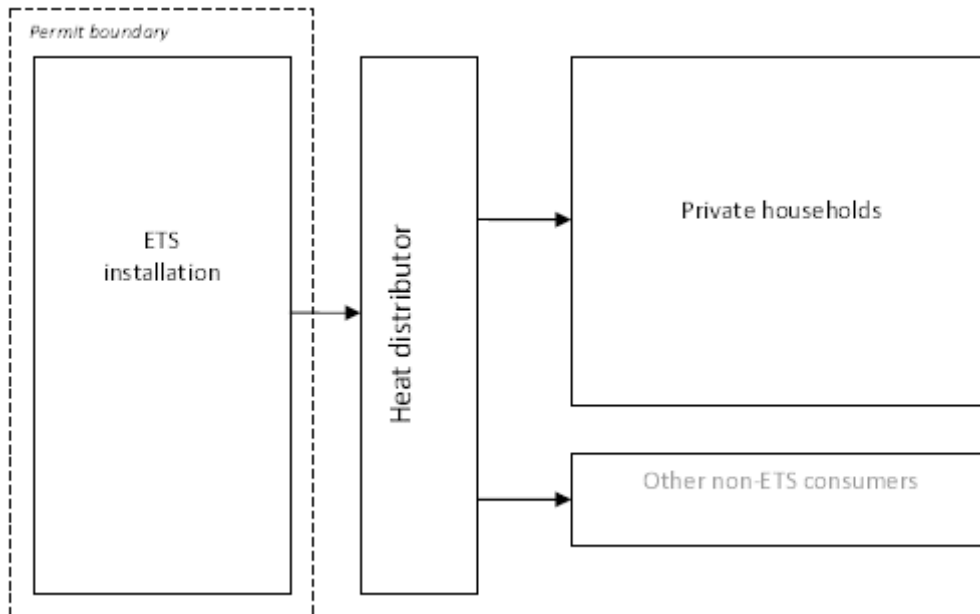


Figure 8: Heat flows from an ETS installation to a non-ETS distributor or a non-ETS installation.

Preliminary Allocation – According to the specific allocation rule for heat export to households, on request of an ETS Heat exporter, the preliminary allocation (prior to the application of the CL exposure factor) to the ETS heat exporter in respect of the heat delivered to private households is the highest of the following:

- The historical activity level for heat delivered to households (median of the historical annual heat delivery to households in the baseline period relevant of the installation) times the heat benchmark value,

OR

- The historical emissions related to the heat delivered to households times a correction factor. The historical emissions are the median annual historical emissions in the period from 1st January 2005 to 30th December 2008. The correction factor is 100% in 2013, 90% in 2014 decreasing to 30% in 2020.

For guidance on the determining of emission related to heat delivered to private households please refer to Guidance Document n°6 on the harmonized free allocation methodology for the EU-ETS post 2012: Cross-Boundary Heat Flows.

Heat flows from non-ETS entities or installations to other non-ETS entities or installations are not relevant for allocation and therefore not discussed.

6.9 Fuel Mix

In 2010, we collected fuel data from installations and this fuel data covered the following situations:

- Fuel used to produce measurable heat, but this heat had not been measured or no data exists
- Fuel used for anything other than for production of measurable heat.

At the time, we did not ask you to differentiate between the different uses of the heat, although we did ask you to break the data down by unit type. Where fuel is used to produce measurable heat, but no heat data exists, the operator may use fuel data and the efficiency factor of the unit as a proxy. This data must be entered in the heat data sheet, to ensure the correct benchmark is applied.

Please note that there is no free allocation for flaring from the fuel mix section, unless the flaring is explicitly for safety purposes only, and this is specified in a relevant permit. Relevant permits (such as permits issued under the Environmental Permitting Regulations or the Pollution Prevention and Control Regulations (Scotland and Northern Ireland)) must explicitly state that the flaring is required for safety reasons, otherwise the flaring will not be entitled to any free allocation. Without supporting evidence to demonstrate this (such as an extract from the relevant permit), no free allocation will be given. Please see section 10 below for further information on flaring activities.

6.10 Process Emissions

One or two process emissions sub-installations need to be defined if the installation has process emissions outside the boundaries of a product benchmark, where process emissions are defined as:

- Type a: non-CO₂ greenhouse gas emissions listed in Annex I of Directive 2003/87/EC; N₂O is the only non-CO₂ greenhouse gas included in EU-ETS for non-benchmarked products (only for emissions from the production of glyoxal and glyoxylic acid). N₂O has a Global Warming Potential of 310.
- Type b: CO₂ emissions as a result of any of the activities listed in Table (and *not* as result from the combustion of incompletely oxidized carbon produced in these activities; as such 'indirect CO₂ emissions' are in principle covered by type c);
- Type c: Emissions stemming from the combustion of incompletely oxidized carbon produced as a result of any of the activities listed in Table for the purpose of the production of measurable heat, non-measurable heat or electricity MINUS emissions from the combustion of an amount of natural gas with equal energy content as those gases; *See Guidance Document 8 on Waste Gases and process emissions sub-installation for additional information on the definition of waste gases, the distinction between emissions of type b and c and the corresponding allocation*

Whether one or two sub-installations based on the process emissions approach need to be defined depends on the carbon leakage status of the products whose production process emits the process emissions: emissions from the production process of a product deemed to be exposed to a risk of carbon leakage must be included in a different sub-installation than emissions from the production process

of a product not deemed to be exposed to a risk of carbon leakage (see *Guidance Document 5 on carbon leakage* for more details on this topic).

Table 2: Definitions and examples of activities covered by the process emissions sub-installations definition (Art. 3 (h) of the CIMs)

Definition of activity	Example
Chemical or electrolytic reduction of metal compounds in ores, concentrates and secondary materials	Production of copper from copper carbonate minerals
Removal of impurities from metals and metal compounds	Emissions from the oxidation of impurities of scrap emitted as part of a recycling process
Decomposition of carbonates, excluding those for the flue gas scrubbing	Production of magnesia.
Chemical synthesis where the carbon bearing material participates in the reaction, for a primary purpose other than the generation of heat	Acrylic acid production, acetylene production (partial oxidation), acrylonitrile production (ammoxidation), formaldehyde production (partial oxidation/dehydrogenation)
Use of carbon containing additives or raw materials for a primary purpose other than the generation of heat	Emissions from the oxidation of organic additives to increase the porosity of ceramics products
Chemical or electrolytic reduction of metalloid oxides or non-metal oxides such as silicon oxides and phosphates	Production of silicium, reduction of phosphate ore

6.11 Waste Gases

Commission Guidance Document n^o8: Waste gases and process emissions sub-installation states: “Waste gases are generally defined as gases which emerge from incomplete combustion or other chemical reaction in an EU-ETS installation and which comply with all of the following criteria:

- Waste gases are not emitted without further combustion due to a significant content of incompletely oxidised carbon
- The calorific value of waste gases is high enough for the waste gas to burn without auxiliary fuel input, or to contribute significantly to the total energy input when mixed with other fuels of higher calorific value
- The waste gas is produced as a by-product of a production process”

We need the operator to supply the following information in this section:

- Is a waste gas produced within an ETS installation but outside of a product benchmark sub-installation boundary?
- What volume of waste gases is used?
- What is the Net Calorific Value for that waste gas?

6.11.1 Waste Gas Allocation

The allocation related to waste gases is split into two parts, which can be treated by different types of sub-installations:

- Allocation related to the production of waste gases
- Allocation related to the consumption of waste gases.

One important element to keep in mind is that the allocation relating to the production of the waste gas will be allocated:

- To the **producer** of the waste gas in the case of a waste gas produced within the boundaries of a product benchmark (included within the product benchmark
- To the **consumer** of the waste gas in the case of a waste gas produced outside the boundaries of a product benchmark

Allocation related to the consumption of the waste gas will always be allocated to the consumer of the waste gas.

In many cases however, the waste gases will be consumed on-site, and therefore the consumer and the producer will be the same installation.

Allocation relating to the production of the waste gas

For the allocation related to the production of waste gases, only emissions additional to the emissions that would come from the combustion of the reference fuel natural gas are accounted for. The remaining emissions can, depending on the use of the waste gas, be allocated based on an allocation methodology relevant for the waste gas consumption.

Waste Gases produced within the boundaries of a product benchmark

If waste gas is produced within the boundaries of a product benchmark, the product benchmark includes the allocation relating to the production of the waste gas and the allocation related to safety flaring. Hence, allocation for the production of the waste gas is granted to the producer of the waste gas.

The consumer of the waste gas receives no additional allocation for the production of the waste gas. The consumer can receive allocation for the consumption of the waste gas.

Note that the producer and consumer can be the same installation.

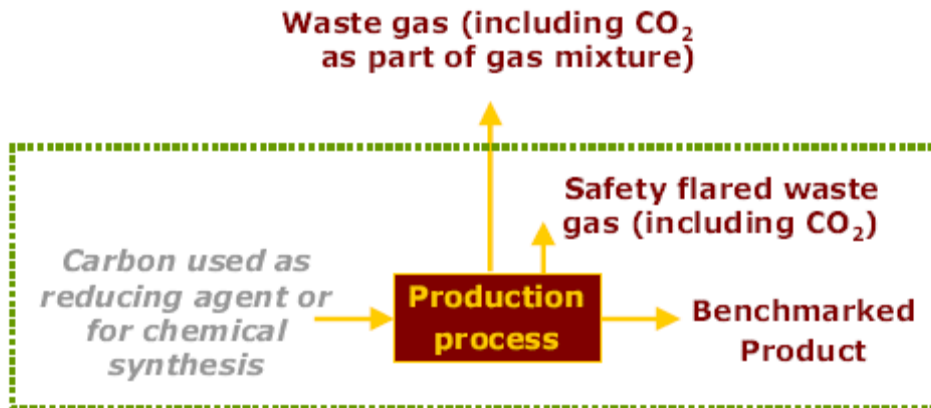


Figure 9: Emissions of waste gases within the boundaries of a product benchmark.

Waste gases produced outside the boundaries of a product benchmark

If the waste gas is produced outside the boundaries of a product benchmark, and if this waste gas is not ultimately flared, a fall-back approach is applied (see figure 10). The emissions related to the production of waste gas that is used for the production of measurable heat or electricity will be regarded as a process emissions sub-installation. Emissions from waste gases that are flared are not considered process emissions sub-installations and will not be eligible for free allocation, except in the case of safety flaring (see flaring section below).

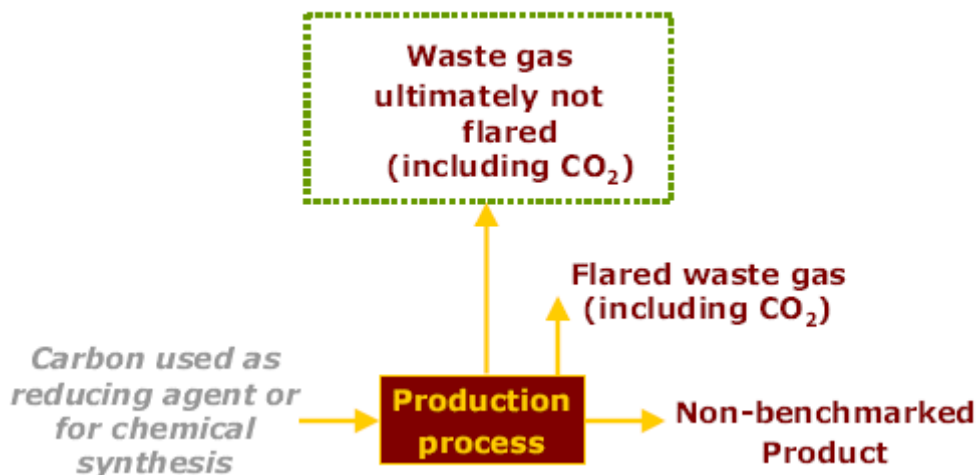


Figure 10: Emissions of waste gases outside the boundaries of a product benchmark. The green dashed line shows the boundary of the process emissions sub-installation.

As the emissions related to the waste gas occur when the waste gas is combusted the allocation will be given to the **consumer** of the waste gas. The free allocation is obtained by multiplying the historical activity level ($HAL_{WasteGas}$) with a factor of 0.97

The historical activity level of this sub-installation is determined as follows:

$$HAL_{WasteGas} = \text{Median}_{\text{BaselinePeriod}} [V_{WG} \times NCV_{WG} \times (EF_{WG} - EF_{NG} \times \text{Correction}_n)]$$

Where

HAL_{WasteGas}	is the Historical Activity Level of the sub-installation related to the production of waste gases not covered by a product benchmark (expressed in tCO ₂ e)
V_{WG}	is the volume of waste gas that is not flared (expressed in NM ³ or tonnes)
NCV_{WG}	is the Net Calorific Value of the waste gas (expressed in TJ/NM ³ or TJ/t)
EF_{WG}	is the emissions factor of the waste gas (expressed in tCO ₂ /TJ)
EF_{NG}	is the emission factor of natural gas (56.1 tCO ₂ /TJ)
Correction_n	is a factor that accounts for the difference in efficiencies between the use of waste gas and the use of the reference fuel natural gas, the default value of this factor is equal to 0.667

In case the emission factor of the waste gas is lower than the emission factor of natural gas times the correction, HAL_{WasteGas} should be considered as being zero.

The content of CO₂ in the waste gas is treated as part of the waste gas stream. Therefore, the values for the volume, the Net Calorific Value and the emissions factor of the waste gas are referring to the total waste gas stream including CO₂.

A default correction factor (Correction_n) of 0.667 should be used unless the operator can provide acceptable data proving that a different factor should be used. Different factors should only be used if the uses of waste gases and efficiencies related to these uses are known

The correction factor has been based on standard efficiency values taken from Commission Decision of 21 December 2006 establishing harmonised efficiency reference values for the separate production of electricity and heat in application of Directive 2004/8/EC of the European Parliament and of the Council. The correction factor was obtained by dividing the standard efficiency factor of waste gas use by the standard efficiency factor of natural gas use.

Allocation relating to the consumption of waste gas

Regardless of composition of the waste gas and its origin the use of a waste gas is treated as any other fuel, therefore:

- When it is used to produce electricity or when it is flared there will be no allocation for this action (except in the case of safety flaring, see flaring section below for more details)
- When it is used in the production of a benchmarked product, the allocation is taken into account in the benchmark of this product
- When it is used to produce measurable heat, the consumption of this heat will be allocated based on the heat benchmark
- When it is used as a combustion fuel for the production of non-measurable heat and not used for electricity production, the sub-installation consuming this fuel will receive an allocation based on the fuel benchmark

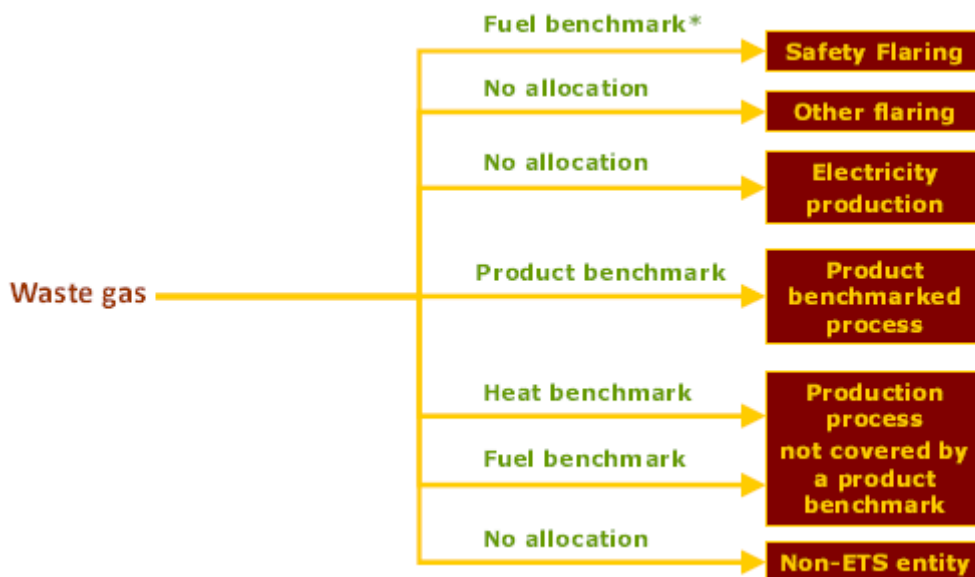


Figure 11: Allocation for the consumption of waste gases; * Safety flaring only receives allocation based on a fuel benchmark in case the flared waste gas is produced outside the boundaries of a product benchmark.

6.11.2 Total Allocation for the production and consumption of waste gases

Waste gases produced within the boundaries of a product benchmark

Figure 12 gives an overview of allocation methodologies to be used in case of production of waste gases inside the boundaries of a product benchmark:

- The allocation for waste gas production is taken into account by the product benchmark. This allocation goes to the producer of the waste gas.
- The allocation for waste gas use (if applicable) goes to the user of the waste gas.

In many cases the waste gas will be consumed on site and therefore the consumer and the producer will be the same installation.

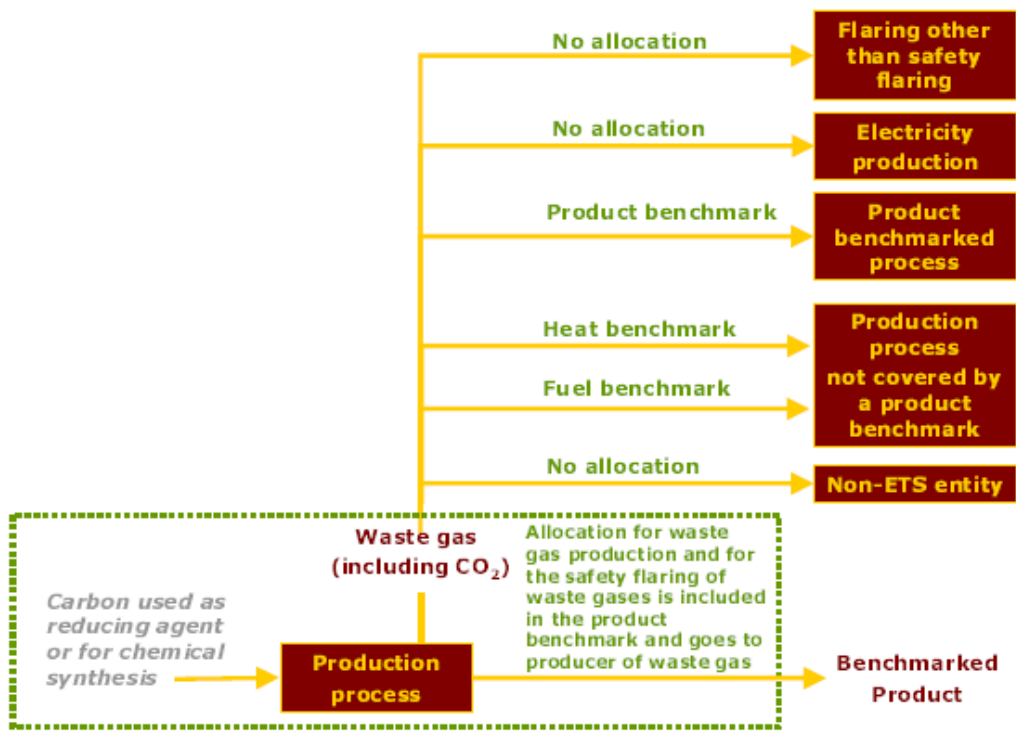


Figure 12: Overview of allocation in case of production of waste gases within the boundaries of a product benchmark.

Waste Gases produced outside the boundaries of a product benchmark

Figure 13 gives an overview of allocation methodologies to be used in case of production of waste gases outside the boundaries of a product benchmark:

- The allocation for the production of waste gases that are ultimately not flared is based on the approach for the process emission sub-installation (see equation 1; section 4.1). This allocation goes to the user of the waste gas. If the waste gas is used by more than one ETS installation, the allocation is distributed over these installations based on the amounts of waste gases used by the different ETS installations.
- The allocation for waste gas use (if applicable) goes to the user of the waste gas. Figure 13 shows which allocation methodology should be used for different types of consumers.

In many cases, the waste gases will be consumed on-site, and therefore the consumer and the producer will be the same installation.

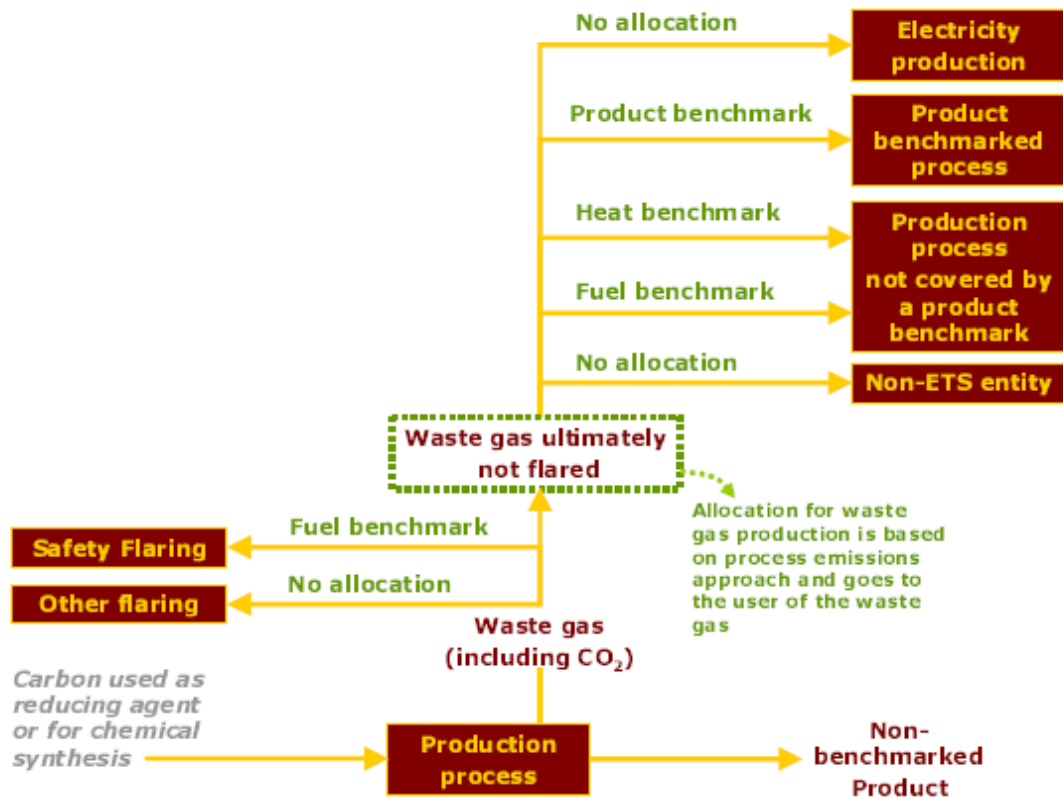


Figure 13: Overview of allocation in case of production of waste gases outside the boundaries of a product benchmark. The green dashed line indicates the boundaries of a process emissions sub-installation.

Care must be taken that no allocation is given twice relating to the same carbon content: once for the waste gases via the process emission sub-installation, and once via a fuel benchmark sub-installation.

- Fuel used as a reducing agent or for the chemical syntheses should not be considered as fuel input into a fuel benchmark sub-installation.
- Any fuel that will ultimately end up in the waste gases should not be allocated via a fuel benchmark sub-installation.

To avoid double counting, the historical activity level of the fuel benchmark sub-installation covering the fuel input into the production process causing the waste gases should be determined as follows:

$$HAL_{fuel} = \text{Median}_{baseline}[Fuel_{Process} - V_{WG} \times NCV_{WG} \times \alpha]$$

Where

HAL_{fuel} is the Historical Activity Level of the fuel sub-installation
 $\text{Median}_{Baseline}$ is the median value over the baseline period
 $Fue_{Iprocess}$ is the total amount of fuel consumed in the production process excluding fuel used as reducing agent or chemical syntheses (expressed in TJ)

V_{WG} is the total volume of waste gas exiting the production process (expressed in Nm³ or tonnes)
 NCV_{WG} is the Net Calorific Value of the waste gas (expressed in TJ/Nm³ or TJ/t)
 α is the share of waste gases originating from the fuel

The Historical Activity Level of the fuel benchmark sub-installation covering safety flaring should be determined as follows:

$$HAL_{fuel} = Median_{baseline}[Fuel_{SafetyFlaring} + V_{WG} \times NCV_{WG} \times \beta]$$

where

HAL_{fuel} is the Historical Activity Level of the fuel sub-installation
 $Median_{Baseline}$ is the median value over the baseline period
 $Fuel_{SafetyFlaring}$ is the total amount of fuel necessary for safety flaring; i.e. the fuels necessary to keep a pilot flame running and fuels required to successfully combust the flared gas (expressed in TJ)
 V_{WG} is the total volume of waste gas exiting the production process (expressed in Nm³ or tonnes)
 NCV_{WG} is the Net Calorific Value of the waste gas (expressed in TJ/Nm³ or TJ/t)
 β is the share of total waste gases that is flared for safety reasons

Note that the safety flaring and the fuel input to the production process could be covered by the same fuel benchmark sub-installation. In that case the historical activity level would be:

$$HAL_{fuel} = Median_{baseline}[Fuel_{Process} - V_{WG} \times NCV_{WG} \times \alpha + Fuel_{SafetyFlaring} + V_{WG} \times NCV_{WG} \times \beta]$$

Summary of allocation methodologies in case of waste gases

The following table summarises the allocation for the production of waste gases within or outside the system boundaries of a product benchmark and the various types of waste gas consumption.

Production	Consumption	Type of Consumption	Allocation for production to producer	Allocation for consumption to consumer
Inside system boundary of Product BM	Inside system boundary of product BM	Product BM		
		Safety Flare		
		Flare		
	Outside System Boundary of Product BM	Measurable Heat		
		Non-Measurable Heat		
Electricity				

Outside system boundary of Product BM	Inside system boundary of product BM	Product BM	Formula shown above	Product BM
	Outside system boundary of Product BM	Measurable heat	Formula shown above	Heat BM
		Non-measurable heat	Formula shown above	Fuel BM
		Safety Flare	None	Fuel BM
		Flare	None	None
		Electricity	Formula shown above	None

6.12 Flaring

Further relevant for the free allocation of allowances to waste gases are the issues of flaring and safety flaring. Safety flaring is defined in Art. 3(p) as

“the combustion of pilot fuels and highly fluctuating amounts of process or residual gases in a unit open to atmospheric disturbances which is explicitly required for safety reasons by relevant permits for the installation”.

In other words, flaring can be considered as safety flaring if all three following conditions are met:

1. The flaring is required by relevant permit for safety reasons AND
2. The combustion takes place in a unit open to atmospheric disturbances (the combustion in other units is not covered) AND
3. The amounts of process or residual gases are highly fluctuating.

The third requirement can be regarded as fulfilled if the flare does not operate continuously. Examples of flares that are not continuous are intermittent flares for either planned or unplanned activities such as maintenance and tests or unplanned events such as emergency situations. Continuously operating flares can be regarded to fulfil the third requirement if it can be demonstrated that the combusted amounts of residual gases are highly fluctuating on a day to day basis, i.e. that the residual gases are not produced in standard quantities resulting under normal operation. For this purpose the flared amounts over the entire baseline period should be considered and statistically analysed.

Please note that requirements in a permit are not sufficient to qualify a flare as safety flare as in particular the criterion of high fluctuation needs to be met. Safety flaring does not necessarily require that the residual gases flared are regarded as waste gases.

The emissions related to flaring include:

- a. Emissions from the combusted flared gas
- b. Emissions from the combustion of fuels necessary to operate a flare, which are of two types:

- i. The fuels necessary to keep a pilot flame running
- ii. The fuels required to successfully combust the flared gas.

In case of safety flaring of gases not resulting from processes covered by product benchmarks, the combusted flared gas and the fuels necessary to operate the flare are eligible for free allocation, based on the fuel benchmark allocation methodology.

In case of other types of flaring, emissions from both origins are not eligible for free allocation.

7. Significant Changes in Capacity

Extensions

Under Article 3(i), significant capacity extension is defined as:

A significant increase in a sub-installations initial installed capacity whereby all of the following occur:

(i) one or more identifiable physical changes relating to its technical configuration and functioning other than the mere replacement of an existing production line take place, and

(ii) the sub-installation can be operated at a capacity that is at least 10% higher compared to the initial installed capacity of the sub-installation before the change, or

(iii) the sub-installation to which the physical changes relate has a significantly higher activity level resulting in an additional allocation of emission allowances of more than 50000 allowances per year representing at least 5% of the preliminary annual number of emission allowances allocated free of charge for this sub-installation before the change.

Reductions

Significant reduction is defined in Article 3(j) as:

“one or more identifiable physical changes leading to a significant decrease in a sub-installation's initial installed capacity and its activity level of the magnitude considered to constitute a significant capacity extension”

Essentially this means that the criteria used for significant extensions are the opposite for reductions.

For installations that have undergone a significant expansion or reduction between January 2005 and 30th June 2011, as described above, the methodology to be followed for calculating the level of free allocation the installation is entitled to, requires the following data to be submitted:

Baseline data before the change

Article 9(9) of the Commission Decision states that the historical activity levels are to be determined based on the sum of the median values determined in accordance with the Paragraph 1 of Article 9 before the capacity change occurs.

Installed capacity data

The installed capacity is to be determined by taking the average of the 2 highest monthly production volumes during the period that the installation has been in normal operation. The average of these 2 values will be taken as the initial monthly capacity of the plant. The initial installed capacity will be this value multiplied by 12 (months).

Where this is not possible, the operator shall undergo experimental verification which is described below.

If the highest monthly production values can not be determined because data from the relevant baseline period are missing (i.e. because the installation operated less than 2 months in the relevant baseline period or records were lost) then, the operator should explain the circumstances that led to that choice within the methodology report, subject to verification by the verifier. The final opinion would always be the one of the Regulator). If the reason is determined by the Regulator to be insufficient, then conservative estimates of production (e.g. sales figures, extrapolated data from other months or estimates based on installation-level data broken down to sub-installation level) will be used to determine the capacity (see the Commission's Guidance Document 3 on data collection for more guidance on conservative estimates).

In that case, in the course of the baseline data collection, the operator will conduct an experimental verification of the sub-installation's capacity under the supervision of an independent third party. The verification will relate to a 48 hours continuous test, carried out following the operational patterns of normal operation of the installation. The independent third party will be present during this test and will compare the production level and the parameters relating to the produced product to typical values in the sector, as well as to available data, if any, relating to previous production patterns at the installation. In particular, parameters relating to the quality of the produced product will be taken into account to ensure that the quality of the production during the test is in line with the quality of the product normally produced at the installation.

The initial monthly capacity of the plant will be the average production during the 2 days of experimental verification multiplied by 30 days. The initial installed capacity of the plant will be this value multiplied by 12 months.

For each sub-installation where a **significant expansion** has occurred, operators are required to determine the historical activity level for the relevant baseline period (which can be years 2005 to 2008 or 2009 to 2010) before the change took effect. If the change does not impact on other sub-installations, only the activity data related to these sub-installations needs to be provided, however please indicate that no changes have occurred to the capacity of these sub-installations in the relevant comments field.

Final installed capacity

Operators must also provide the installed capacity after the significant capacity change has occurred. This is determined using the 2 highest monthly production volumes within the first 6 months following the change. This is covered in Article 7(4) of the Commission decision.

Added or Reduced Capacity

This is the difference between the initial installed capacity and the final installed capacity, as described in Article 9(9) of the Decision.

HAL_{change} in case of capacity extensions

The historical activity level of the added capacity is the product of the added capacity with the average historical capacity utilisation of the installation concerned of the years prior to the start of changed operation ($HCUF_{initial}$).

$$HAL_{change} = C_{added} \times HCUF_{initial}$$

The average historical capacity utilisation $HCUF_{initial}$ is to be determined by dividing the average of the activity levels of all full calendar years prior to the relevant physical change leading to the (first) significant capacity extension by the initial installed capacity.

$$HCUF_{initial} = (\text{average annual production prior to change})/C_{initial}$$

For significant extensions in 2005, the calculation of the average historical capacity utilisation should be based on monthly data.

The $HCUF_{initial}$ is calculated at sub-installation level.

The average historical capacity utilisation $HCUF_{initial}$ is only calculated once and might be applied to more than one significant capacity change.

HAL_{change} in case of capacity reductions

In case of capacity reductions, the historical activity level related to the reduced capacity is calculated similar to the one for the added capacity:

$$HAL_{change} = -1 \times C_{reduced} \times HCUF_{initial}$$

Example:

An installation produces clinker in 3 cement kilns whose current annual production of clinker is approximately 75000 tonnes. One of these 3 kilns was added on the 1st March 2007, which increased the annual production rate from 50000 tonnes to 75000 tonnes. The operator must therefore provide the following information to determine their allocation:

- the quantity of clinker produced from the 2 kilns for 2005 to 2008.
- the 2 highest months of production from 2005 to the 1st March 2007, in order to calculate the initial installed capacity.

- the 2 highest monthly production volumes within the first 6 months following the start of the new kiln on the 1st March 2007 as a basis for determining the installation's overall final installed capacity after the change.
- The added capacity of the new kiln, which is the difference between the initial installed capacity and the final installed capacity.
- The historical capacity utilisation factor, which is the ration (expressed as a fraction of the actual throughput to the maximum theoretical throughput based on the 2 highest months production).

The methodologies are based on a hierarchal approach, and deviation from preferred methodologies will need to be backed up by evidence.

Where sub-installations have undergone a significant change, this should be indicated by ticking the relevant tick-box when prompted. This will bring up the relevant sections that you need to complete towards the bottom of the page.

8. Installations With < 2 Years data

If an installation, as a whole, has started normal operation after 1st January 2007 (e.g. the installation started its normal operations on the 2nd or later), it has been operating less than 2 calendar years in the baseline period 2005 to 2008. To calculate the HAL, the installation will have two possibilities:

- Either choose the 2009 to 2010 baseline
- Or
- Calculate the HAL of each sub-installation as follows (in line with Article 9(6) of the CIMs):
-

$$\text{HAL} = \text{Capacity} \times \text{RCUF}$$

Where:

- Capacity is the initial installed capacity
- RCUF is the relevant capacity utilization factor (see hereafter)

If an installation, as a whole, has started normal operation after 1st January 2009 (e.g. the installation started its normal operations on the 2nd), HAL needs to be calculated according to the second approach.

The initial installed capacity is determined by the methodologies described in section 5.

The standard method (determination based on the two highest monthly activity volumes) applies when data for the two highest monthly activity levels are available. This is considered to be the case when the normal operation of an (incumbent) installation started on or before 30 June 2011. In other cases (when the start of normal operation is after 30 June 2011), the initial capacity should be determined by experimental verification (see section 5 of the commission guidance for further information). Independent from the method used, the initial capacity has to be determined before 30 September 2011.

In order to allow the Competent Authorities to determine the RCUF in line with Article 18(2), the installation will provide “duly substantiated and independently verified information on the installation’s intended normal operation, maintenance, common production cycle, energy efficient techniques and typical capacity utilization in the sector concerned compared to sector-specific information.” The operator will provide the relevant capacity utilization factor (RCUF) of each sub-installation as a % of the capacity. Information on the installation’s normal operation, maintenance and production cycles available from the determination of the capacity should be used. For the determination of the RCUF, following aspects have to be considered:

- The installation's intended normal operation: expected production volumes based on the design capacity, guaranteed on the basis of technical documentation /datasheets by the supplier), and operational hours (use of information from business plans, permits, etc.). If available, production data should be used to validate these expected production volumes.

- Maintenance: The availability of the production lines has to be estimated (based on information from business plans, permits, relevant technical documentation, etc.). The estimated downtimes are to be taken into account when estimating the expected production levels.

- Common production cycle: Based on information from business plans, permits, relevant technical documentation, etc. it needs to be checked if continuous operations are technically possible, intended according to the demand for the products (e.g. seasonal or non-seasonal demand) and legally possible (limitations in the relevant permits).

For heat and fuel benchmark sub-installations, in addition, energy efficient techniques should be considered when the heat or fuel consumption is estimated based on projections for production figures.

For process emission sub-installations, the emission intensity of input materials as well as greenhouse gas efficient techniques (e.g. low-carbon input qualities, abatement techniques) should be considered when the process emissions are estimated based on projections for production figures.

If needed, the CA should adjust the preliminary value of the RCUF assuming that such greenhouse gas efficient techniques were used.

The resulting RCUF should be compared against the typical capacity utilisation in the sector concerned. Any major deviation needs to be justified. No values for the RCUF equal or higher than 100% must be accepted.

The calculation will be verified by an independent third party.

For further guidance on this matter please see the Section 6.4 of the Commission Guidance Document 2 on Allocation Methodologies.

9. Total Installation Fuel, Emissions Data and Transferred CO₂

The allocation rules require all installations, with the exception of those which are only supplying benchmarked product data for your installation, to supply emissions data and fuel data for your installation for the relevant baseline period.

This section allows you to provide the emissions from your installation in the relevant emissions table. This data is from all greenhouse gas emissions sources at your installation (including sources used to generate electricity) and not just those that are eligible for free allocation. Emissions must also be attributed to the relevant sub-installation as appropriate.

In subsequent tables these total emissions must be split between emissions from fuels which are the first table in this section and process emissions which are the second table in this section. For each table you must say which greenhouse gas is involved in the emission and state whether the emissions being reported have been measured or calculated.

In addition, you must also supply the total energy input from fuels, the total energy input from fuels within the installation that are not used for the production of measurable heat, and the energy input from fuels within the installation that are used for the production of measurable heat.

For installations that are currently captured by Phase II of the EUETS, this data is similar to that which you supplied in your annual emissions reports for each reporting year.

Where there is no change to the scope of the installation from Phase II to Phase III, the data can simply be used from the annual emissions report, however where the scope of the installation has changed, or you are not currently a participant of the EU ETS then all previously un-submitted data will need to be verified.

Where relevant, Operators should also supply information relating to transferred or stored CO₂. This section is only mandatory for installations that transfer CO₂ to or from other installations or non-ETS entities, in particular in the case of ammonia production or for the purpose of carbon capture, transport and geological storage. *Annex I section 5.7 of the MRGs shall be taken into account as a reference.*

This section does not cover:

- Import of waste gases:
- Carbon bound in products: (e.g. bulk organic chemicals or by-products of steel production)

Concerning production processes, such as the ammonia and soda ash, it shall be assumed that all CO₂ resulting from the production processes is emitted to the atmosphere, irrespective of any potential use of the CO₂ as feedstock in chemical production processes. Operators should specify:

- a) Name of the CO₂ stream
- b) Identification of connected installations: this is the name of the installation with which CO₂ is exchanged (i.e. imported or exported)
- c) CO₂ transfer or storage data: relevant provisions in the MRG shall be taken into account. *In the data collection template the CO₂ transfer the following data can be provided:*
- The amount of CO₂ from fossil origin that is transferred or stored in tonne of CO₂ per year
 - The amount of CO₂ from biogenic origin that is transferred or stored in tonne of CO₂ per year
 - Energy content in TJ per year of the substance transferred or stored (e.g. export of waste gases). This is only relevant if the CO₂ is transferred as (part of) a gas that has an energy content.

10. Methodology Report

In accordance with Article 7(7) of the CIMS, **all** operators are required to submit a methodology report detailing a description of the installation, the compilation methodology applied, different data sources, calculation steps and where applicable, assumptions made and the methodology applied to attribute emissions to the relevant sub-installations.

There is a separate tab in the ETS300 for you to provide this required information. Each section of the report is broken down into the relevant sections to your data so you only have to complete the section applicable to you.

Certain sections are applicable to all operators and are always visible. All operators must provide the information relevant to the data, whether it forms part of this submission, or the previous submission where that data is still valid.