EU EMISSIONS TRADING SYSTEM

GUIDANCE NOTE 3

Government Guidance for Operators on Inclusion Criteria for Phase III (2013 - 2020) [Excluding aviation]

Version 2.1, July 2010

Change log

Issue/version no.	Date	Summary of changes
1	February 2010	Original
2	May 2010	Updated to reflect EU Commission Guidance on Interpretation of Annex I of the EU ETS Directive. **Sections 2.5, 2.9 (CHP example only) and 3.2** are revised.
2.1	July 2010	Clarification of introductory text for section 2.4 (Incineration of hazardous or municipal waste)

PURPOSE

The purpose of this guidance is to describe the principal changes to the revised EU ETS Directive with regards to what activities will be included in the trading system from 2013.

The revised EU ETS Directive 2009/29/EC[1] has broadened the scope of the EU ETS for Phase III (2013 - 2020). The key changes are:

- Incorporation of new sector activities and gases – e.g. bulk organic chemicals, primary aluminium production; inclusion of N_2O and perfluorocarbons; carbon capture and storage;

- Addition of a broad definition of combustion, capturing all burning of fuel;

- No free allocation for any electricity production except in the case of combustion of waste gases;

- Exclusion of small emitters and hospitals, subject to UK public consultation and approval by the European Commission; and,

- Exclusion where biomass is exclusively used (fossil fuels may be used for start-up and shut-down).

The revised Directive will be transposed into UK law by a series of national legislative steps:

- Statutory Instrument 3130, The Greenhouse Gas Emissions Data and National Implementation Measures Regulations 2009, addresses our National Implementation Measures and the expanded scope of the Directive. This requires operators of installations that will be introduced into the EU ETS from the start of Phase III in 2013 to report emissions data, which will be submitted to the European Commission. The data will be used to adjust the Community-wide cap in Phase III. All operators that are entitled to free allowances, (i.e. not electricity generators), are required to report their production or other relevant data which will be used to determine levels of free allocation to installations. Some free allocations may be determined by a heat benchmark, a fuel mix benchmark or in some cases modified grandfathering.

- By 31st December 2012, legislation will be in place implementing fully the remaining requirements of the revised Directive.

The allocation methodology for free allowances will be dealt with in a separate note to industry.

This guidance note may be updated in light of guidance issued by the European Commission on the interpretation of Annex 1 of the EU ETS Directive.

[1] See: http://ec.europa.eu/environment/climat/emission/ets_post2012_en.htm

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1 INTRODUCTION

1.1 I was included in Phase II. Am I still included in Phase III?

If your installation was included in the EU ETS in Phase II and continues to carry out an activity listed in Annex I of the revised Directive ("Annex I") (see Annex A of this guidance), it will be included in Phase III. Additional combustion activities may be captured as a result of the addition of a combustion definition and the associated emissions will be included for Phase III (see Question 2.3).

Your installation **may** drop out of the EU ETS if the operation of your activity falls below new emission and thermal capacity thresholds for small emitters or you burn exclusively biomass (see Questions 3.1 and 3.2).

1.2 How do I know if I am included?

The first step is to check whether you are carrying out one or more of the activities listed in Annex I. This includes the new activities included in Phase III.

If an activity listed is being carried out above the stated threshold and results in the specified emissions then it is covered by the EU ETS.

You should note that where several activities falling under the same sub-heading (i.e. carrying out the same listed activity) are carried out in the same installation, the capacities of each activity are added together, whether or not they are technically connected.

However, in relation to the calculation of the total rated thermal input of an installation, units below 3MW are not included in the aggregation. The aggregation and de minimis provisions are discussed further in Question 2.7.

1.3 What is the definition of an 'operator'?

An "operator" is the person who has control over the operation of the installation. This is a question of fact in each case, but the operator must demonstrably have the authority and ability to ensure that the permit is complied with.

A pragmatic approach may be adopted to assess whether an operator has that authority or ability. This may be achieved by assessing the ability of the operator/proposed operator against the following factors – does that person:

- Manage site operations through having day to day control of plant operation including the manner and rate of operation?;
- Ensure that permit conditions that will be imposed or that apply will be effectively complied with?;
- Hire and fire key staff?;
- Make investment decisions?; and
- Ensure that operations are shut down in an emergency?

Where more than one operator runs different parts of the listed activities carried out in the installation, the permit application for each part should demonstrate that the appropriate person has been identified as the operator for that part. Any necessary inter-reliance between the different operators and their parts of the installation should be demonstrated. The operators must together be able to operate the installation in a satisfactory way that meets the requirements of the permit.

Therefore, if a company runs a paper mill, and owns a CHP unit (with a rated thermal input exceeding 20MW) that is operated by an energy utilities company, then it will be a question of fact whether the paper mill or the energy utilities company is the operator of the CHP unit, and therefore would be the appropriate entity to hold the permit relating to the CHP.

In deciding who the operator is, it may be relevant to consider who the operator is for the purposes of other relevant environmental permits or agreements in respect of that installation.

2 ANNEX I ACTIVITIES

2.1 What activities are covered by the EU ETS?

The activities covered are set out in Annex I and include energy activities (including combustion installations, coke ovens and mineral oil refineries); production and processing of ferrous and non ferrous metals, mineral industries (including cement, lime, glass, ceramics and gypsum related activities); production of pulp and paper; chemicals and carbon capture and storage. In addition to carbon dioxide (CO_2), perfluorocarbons (PFCs) from the primary aluminium sector and nitrous oxide (N_2O) from the production of nitric, adipic, glyoxal and glyoxylic acid are included. The EU ETS also covers aviation activities.

Where any Annex I activity is carried out on a site, all units in which fuels are combusted on that site are considered to fall within the scope of the activity itself. This however excludes units for the incineration of hazardous or municipal waste. So, all releases of greenhouse gases listed against the Annex I activity (i.e. CO_2, N_2O or PFCs) and all releases from the relevant combustion units must be monitored and reported.

2.2 What is considered to be the "same site"?

For the purposes of the EU ETS, the following characteristics will be considered in determining whether units or activities are on the same site:

- the area chosen or used for a recognized purpose;
- the geographical location of the units or activities;
- the presence or otherwise of a continuous boundary geographically defined by markers such as a fence or a wall etc.;
- the presence or otherwise of a common over-arching management responsible for the care of the site, such as maintenance, security, development etc.;
- the fact that the same legal entity owns or leases the land and controls all units or activities;
- the proximity of the units or activities to each other.

A site does not necessarily become two sites merely because a physical barrier such as a stream separates two parcels of land.

2.3 What is the definition of "combustion"?

Combustion of fuels in installations with a total rated thermal input exceeding 20MW (except in installations for the incineration of hazardous or municipal waste) are subject to the EU ETS.

The revised Directive states that "Combustion" means any oxidation of fuels, regardless of the way in which the heat, electrical or mechanical energy produced by this process is used, and any other directly associated activities, including waste gas scrubbing.

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

Combustion of a fuel for any purpose above the threshold, subject to the de minimis rule (see Question 2.7) and the threshold for a small emitter (subject to public consultation and Commission approval - see Question 3.1) are caught by the EU ETS.

2.4 Incineration of hazardous or municipal waste

Installations for the incineration of hazardous or municipal waste are specifically excluded from the EU ETS. Individual units within an installation are excluded if their primary purpose is to incinerate hazardous or municipal waste and they do not exclusively serve the Annex I activities carried out at the installation.

In the case of combustion activities, if the primary purpose of an installation is the incineration of hazardous or municipal waste, then it is exempt from EU ETS. An installation's primary purpose is considered to be the incineration of hazardous or municipal waste where such waste is combusted, with or without heat recovery and where the installation will shut down in the event that the supply of waste is interrupted for any period of time. The use of support fuels such as natural gas on auxiliary burners during the combustion of the hazardous or municipal waste does not in itself bring that activity into the scope of EU ETS.

Example:
A solid fuel combustion unit and boiler that produces process steam. The plant is fuelled by refuse (municipal waste) derived fuel (RDF), with a fossil fuel back-up in the event the RDF supply is interrupted. The primary purpose of the installation is the generation of energy i.e. to raise process steam. Therefore, it is not exempt from EU ETS.

The Directive states that where an Annex I activity is being carried out, all *units* in which fuels are combusted, other than units for the incineration of hazardous or municipal waste, shall be included in the greenhouse gas emissions permit.

Where there is an incineration unit on a site, the first question is whether or not it is part of the process of one of the Annex I activities. If the unit's only purpose is to serve an Annex 1 activity, it is considered to form part of the process and so is included in the EU ETS by virtue of being part of the activity description in Annex I. However, if it incinerates waste from other sources in addition to serving the Annex I activity, then it is considered not to form part of the process.

If the unit is not part of the process of an Annex I activity, the second question is whether or not the primary purpose of the unit is to incinerate hazardous or municipal waste. If the answer is yes, then the unit is specifically excluded from the EU ETS.

Example:
A gas burning oxidiser is an integral part of an acrylonitrile production plant and receives vent gases containing VOCs and hazardous liquid waste from the acrylonitrile plant. Acrylonitrile production is listed under Annex I as "Production of bulk organic chemicals by cracking, reforming, partial or full oxidation or by similar processes, with a production capacity exceeding 100 tonnes per day". As the thermal oxidiser is part of the acrylonitrile process, it is caught as part of that process and is therefore subject to EU ETS.

2.5 How do I find the rated thermal input of my combustion installation?

Thermal input in the context of EU ETS means all input in the form of fuels. Thus, if a furnace can use both electrical heating or heating by combustion of fuels, only the fuel related input is used for the calculation. In cases where various proportions of heat input can be used, the maximum of fuel related input is assumed.

The maximum rated thermal input is normally specified by the manufacturer and is displayed on the technical device with the consent of an inspection body. Where different fuels or fuel

mixes can be used, leading to different maximum thermal inputs, the highest possible thermal input should be used.

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

In some cases gross calorific values (GCV) are used for specifying nameplate capacity. Thus, for practical and simplicity reasons only, the use of GCV in these cases is considered acceptable.

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

2.6 Should CO_2 already in a fuel ("inherent" CO_2) be included in the emissions reported from combustion activities?

The European Commission's 2007 monitoring, reporting and verification (MRV) Guidance published on 31 August 2007[2] states that "inherent CO_2 which is transferred into an installation under the EU ETS as part of a fuel (e.g. blast furnace gas, coke oven gas or natural gas) shall be included in the emission factor for that fuel." This means that "inherent" CO_2 must be included in the emissions reported from combustion activities.

Subject to approval by the regulator and the forthcoming Monitoring and Reporting Regulation due for adoption by the European Commission on the 31st December 2011, inherent CO_2 originating from a source stream but subsequently being transferred out of an installation as part of a fuel may be deducted from the emissions of that activity - independently of whether or not it is supplied to another EU ETS installation.

2.7 When should capacities be aggregated to determine whether an Annex I activity is being carried out?

In relation to the thresholds in Annex I referring to production capacities or outputs, where several activities falling within the same description are carried out in the same installation, the capacities of the activities must be added together.

In relation to the thresholds in Annex I referring to total rated thermal input, the rated thermal capacities of all units in which fuels are combusted within the installation must be added together. However, combustion units with a rated thermal input under 3MW and units using exclusively biomass shall be excluded for the purposes of this calculation. This allows very small units to be excluded from the aggregation calculation and reduces the number of small emitters falling within the scope of the EU ETS.

A combustion unit may be defined as a piece of equipment in which combustion is carried out for a particular purpose; (e.g. a boiler, turbine, oven, furnace, kiln etc). Where there are a number of burners within a unit the capacity should be taken as the whole unit, not the individual capacity of each burner. Each individual combustion unit must therefore exceed 3MW thermal capacity for aggregation purposes.

"Installation" shall be taken to mean "site" in this context. This is because the scope of the installation is dependent on the scope of the Annex I activity and therefore cannot be established until it is determined whether or not an Annex I activity is being carried out.

[2] See: http://ec.europa.eu/environment/climat/emission/mrg_en.htm

Example:

- A university has 3 x 2MW boilers and 4 x 4MW generators. The total capacity of the site is 22MW. However, application of the de minimis rule excludes the 2MW boilers, reducing the eligible capacity to 16MW. Therefore the site is not covered by the EU ETS.
- A paint-shop oven has 5 burners, each less than 0.5MW, the off-gases from which pass through a 2MW gas-fired thermal oxidiser which exhausts through a heat exchanger and the burners. The total number of combustion units in this arrangement is two and each unit is below 3MW. The oven and the thermal oxidiser will therefore be excluded for the purpose of aggregation.

If the threshold of 20MW for combustion is exceeded, then all combustion units including those below 3MW will be caught as part of the activity.

2.8 I have stand-by generation or boiler capacity on site. Should I include them in the aggregation?

Yes, the thresholds described in the Directive refer to the capacity of an installation or, in the case of combustion installations, to the rated thermal input. Therefore, stand-by generation or boiler capacity should be included in the aggregation for a combustion installation calculation *provided* that it is technically feasible for the stand-by generators or boilers to be run concurrently with the main generators or boilers on site.

If all the capacity cannot physically be operated at the same time as a result of a robust and not easily removed limitation, then the thermal input of the combustion installation should be calculated by aggregating the rated thermal input of all generators/boilers on site that can be run concurrently.

If there are several combinations, the combination which results in the greatest rated thermal input will be used to determine whether the activity falls within the scope of the EU ETS. If in the future, the physical restriction is changed such that the operable thermal capacity is increased, then the operator will need to apply for a permit should the change bring the installation above 20MW rated thermal input.

2.9 Do any activity thresholds take precedence over other thresholds in determining inclusion?

Several activities are listed in Annex I for which the capacity threshold where specified, is not expressed as total rated thermal input, but as "production capacity", "melting capacity" or just "capacity". The Directive states that, “If a unit serves an activity for which the threshold is not expressed as total rated thermal input, the threshold of this activity shall take precedence for the decision about the inclusion” in the EU ETS.

The capacity thresholds not expressed as total rated thermal input, only take precedence and do not exclude the application of another threshold expressed as total rated thermal input.

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

1. If both thresholds are exceeded for the activity, then the threshold not expressed as total rated thermal input takes precedence over the other, and the installation is included in the EU ETS as performing the activity corresponding to that threshold (i.e. as performing “manufacture of glass” in the case mentioned above).

2. If only one of the thresholds is exceeded (e.g. the 20MW total rated thermal input threshold), the installation is included in the EU ETS as performing the related activity (in this example, as performing the activity “combustion of fuels”).

3. If none of the thresholds are exceeded, then the installation is not included in the EU ETS.

Example:
An installation producing ceramic products operates 3 units, i.e. two ceramics kilns and one CHP plant. All 3 units serve the ceramics activity. The kilns exclusively serve the ceramics activity but the CHP plant also produces electricity for another activity on a different site.

If the ceramics installation exceeds 75 tonnes per day, the installation is included in the EU ETS. In the permit, the Annex I activity "Manufacture of ceramic products" must be listed. Regardless of the total rated thermal input of the CHP plant, the CHP unit must also be included as part of the ceramics activity as it serves the ceramics activity. In any event, it would be captured by the principle set out in Question 2.1 of this guidance that, where an Annex I activity is being carried out on a site, all units in which fuels are combusted (except units for the incineration of hazardous or municipal waste) are considered to fall within the scope of the activity itself.

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

There are other activities where the capacity threshold is expressed as "where combustion units with a total rated thermal input exceeding 20MW are operated". In these cases, process emissions are caught in addition to combustion emissions. The following example relates to a situation where more than one such activity is carried out on a site.

Example:
A foundry produces parts from cast iron (using combustion units with a rated thermal input of 15MW) and from aluminium (again using combustion units with a rated thermal input of 15MW). Two activities are carried out - “production or processing of ferrous metals” and “production or processing of non-ferrous metals”. Each activity is below its individual capacity threshold. However, both activities have capacity thresholds expressed as total rated thermal input and the statement in the Directive that “If a unit serves an activity for which the threshold is not expressed as total rated thermal input, the threshold of this activity shall take precedence” does not therefore apply. As such, all the combustion units in the foundry must be aggregated to determine if the activity “combustion of fuels” is being carried out. The total rated thermal input exceeds the threshold of 20MW and therefore the foundry is subject to EU ETS under “combustion of fuels”.

3 EXCLUSIONS

3.1 What is a small emitter and are they excluded from the EU ETS?

The revised Directive makes provision for Member States to exclude installations which have reported to the regulator emissions of less than 25,000 tonnes of carbon dioxide equivalent and, where they carry out combustion activities, have a rated thermal input below 35MW, excluding emissions from biomass, in each of the 3 years preceding the notification (i.e. 2008-2010) and which are subject to measures that will achieve an equivalent contribution to emission reductions. This exclusion is subject to Member State discretion as well as Commission approval.

Small emitters
Government has launched a public consultation to seek views on excluding small emitters (as well as hospitals – see below) from Phase III. Subject to the outcome of this consultation, the Government will then need to demonstrate to the Commission that relevant emissions from small emitters would be covered by equivalent national measures (such as Climate Change Agreements or the Carbon Reduction Commitment). UK policy on opting out small emitters is therefore ultimately subject to Commission approval. In the meantime you are strongly advised to comply with regulator data requests relating to Phase III of the EU ETS until it is certain that you will be exempted.

Hospitals
Hospitals may also be excluded from the EU ETS provided that the Commission agrees that they are subject to equivalent national measures (and subject to the public consultation process referred to above). In this case, hospitals will not have to demonstrate that their emissions fall below a particular emissions or thermal capacity threshold.

3.2 What happens if the fuel I use is exclusively biomass?

Installations which use exclusively biomass as the fuel in their combustion activities or any other process are specifically excluded from the EU ETS. This is the case even if fossil fuel is used for start-up and shut-down purposes.

In addition, *units* exclusively using biomass (including those which use fossil fuels only for start-up and shut-down purposes) are excluded from the aggregation rule (see Question 2.7). This exclusion is only relevant for the decision of whether or not the activity is covered by the EU ETS. If the threshold of 20MW for combustion is exceeded as a result of the aggregation of other units on the site, then the units which exclusively use biomass are also included.

Start-up burners are separate ignition/pilot burners used during start-up of a combustion unit, which are necessary for avoiding unstable combustion situations by ensuring re-ignition of the fuel, and for controlled shut-down of the combustion unit. Usually this should be clearly stated by the manufacturer of that unit. The existence of a dedicated start-up burner may serve as an indicator that biomass is exclusively used within this unit.

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

There is no definition of biomass in the revised Directive but the 2007 Monitoring and Reporting Guidelines (MRG)[3] a helpful definition. Biomass is currently defined in the MRG as non-fossilised and biodegradable organic material originating from plants, animals and micro-organisms, including products, by-products, residues and waste from agriculture, forestry and related industries as well as the non-fossilised and biodegradable organic fractions of industrial and municipal wastes, including gases and liquids recovered from the decomposition of non-fossilised and biodegradable organic material.

[3] Commission Decision of 18 July 2007 establishing guidelines for the monitoring and reporting of greenhouse gas emissions pursuant to Directive 2003/87/EC of the European Parliament and of the Council

4 DEFINING THE SCOPE OF INSTALLATIONS

4.1 What is the definition of an “installation”?

An “installation” is defined in the Directive as “a stationary technical unit where one or more activities listed in Annex I are carried out and any other directly associated activities which have a technical connection with the activities carried out on that site and which could have an effect on emissions and pollution”.

As stated in Question 2.1, where any Annex I activity is carried out on a site, all units in which fuels are combusted on that site (except units for the incineration of hazardous or municipal waste) are considered to fall within the scope of the activity itself. Therefore, the stationary technical unit will comprise of all units considered to fall within the scope of the activity.

Any directly associated activities (DAAs) must then be considered. DAAs must: have a technical connection with the Annex 1 activities carried out in the stationary technical unit; and could have an effect on emissions and pollution.

A technical connection does not necessarily entail a fixed physical connection, e.g. in the form of pipework, wiring, conveyors, etc., although where there is such a connection, it would appear clear that a DAA is technically connected. Rather, "technical" means that there is a link in terms of intended process operation and materials flow. For instance, two activities are technically connected if they are operated as part of what can reasonably be viewed as a single overall operation, even if the nature of the connection is by means other than a permanent physical link. Thus, a connection by means such as transport via mobile machinery (e.g. fork lift trucks) or by manual handling, could still count.

DAAs may or may not be on the same site as the stationary technical unit. You should contact your regulator for further guidance on DAAs.

4.2 What is “stationary”?

As set out in Question 4.1, the STU will comprise of all units considered to fall within the scope of the activity, but this only includes “stationary” units, as clarified in this section. Every unit that is required to be stationary during operation is considered part of the STU. For example, some types of installations are sometimes stationary only for a few months, then they are moved to another place. However, during operation, they are stationary. These units are considered as stationary units for the purpose of EU ETS and are therefore part of the installation.

Furthermore emergency and backup electricity generators may be installed in movable containers but cannot be removed from the installation for safety reasons. Such units are considered “stationary” and part of the installation.

Excluded from the EU ETS are “true” mobile machinery (trucks, bulldozers etc), i.e. machinery which has the purpose of being mobile at the moment of performing its task.

5 ALLOCATION OF ALLOWANCES

5.1 I produce electricity. Why is this important?

There will be no free allocation of allowances for any electricity production. The only exception to this is if you produce electricity from waste gases and the production of the waste gases cannot be avoided in the industrial process; e.g. coke oven gas, blast furnace gas. All of your allowances must either be purchased from auction or from the secondary carbon market.

You are eligible for free allowances for the heat component.

Example:
A company operates a CHP plant primarily to produce heat and power for use in their onsite manufacturing, warehousing and office facilities. They also sell electricity (and heat) to a third party renting buildings on their site and at times export small amounts of power to the grid. For all electricity which is generated by the CHP, no free allowances will be available. However, the company will be eligible for free allowances for the heat component from the CHP plant.

5.2 What allowances will I be entitled to?

Where feasible, allowances will be allocated against a benchmark based on the 10% most efficient installations in each sector. This means that the majority of installations will not get enough free allowances to cover their existing emissions. The shortfall in allowances must either be addressed through process changes or abatement activities or purchased from auction or from the secondary carbon market.

Those sectors not exposed to a significant risk of carbon leakage will receive 80% free allocation; i.e. 80% of the benchmarked allocation. This will decline to 30% in 2020 and zero by 2027.

Those sectors significantly exposed to carbon leakage will receive 100% free allocation; i.e. 100% of their benchmarked allocation.

Where benchmarks are not feasible, EU agreement on alternative methods for setting free allocations for installations will follow the principles of benchmarking e.g. apply across the EU and will encourage emissions reductions.

ANNEX A:

EXTRACT FROM ANNEX I OF THE REVISED EU ETS DIRECTIVE 2009/29/EC - CATEGORIES OF ACTIVITIES TO WHICH THIS DIRECTIVE APPLIES (STATIONARY INSTALLATIONS ONLY)

Categories of activities to which this directive applies:

Activities	**Greenhouse gases**
Combustion of fuels in installations with a total rated thermal input exceeding 20 MW (except in installations for the incineration of hazardous or municipal waste)	Carbon dioxide
Refining of mineral oil	Carbon dioxide
Production of coke	Carbon dioxide
Metal ore (including sulphide ore) roasting or sintering, including pelletisation	Carbon dioxide
Production of pig iron or steel (primary or secondary fusion) including continuous casting, with a capacity exceeding 2,5 tonnes per hour	Carbon dioxide
Production or processing of ferrous metals (including ferro-alloys) where combustion units with a total rated thermal input exceeding 20 MW are operated. Processing includes, inter alia, rolling mills, re-heaters, annealing furnaces, smitheries, foundries, coating and pickling	Carbon dioxide
Production of primary aluminium	Carbon dioxide and perfluorocarbons
Production of secondary aluminium where combustion units with a total rated thermal input exceeding 20 MW are operated	Carbon dioxide
Production or processing of non-ferrous metals, including production of alloys, refining, foundry casting, etc., where combustion units with a total rated thermal input (including fuels used as reducing agents) exceeding 20 MW are operated	Carbon dioxide
Production of cement clinker in rotary kilns with a production capacity exceeding 500 tonnes per day or in other furnaces with a production capacity exceeding 50 tonnes per day	Carbon dioxide
Production of lime or calcination of dolomite or magnesite in rotary kilns or in other furnaces with a production capacity exceeding 50 tonnes per day	Carbon dioxide
Manufacture of glass including glass fibre with a melting capacity exceeding 20 tonnes per day	Carbon dioxide
Manufacture of ceramic products by firing, in particular roofing tiles, bricks, refractory bricks, tiles, stoneware or porcelain, with a production capacity exceeding 75 tonnes per day	Carbon dioxide
Manufacture of mineral wool insulation material using glass, rock or slag with a melting capacity exceeding 20 tonnes per day	Carbon dioxide
Drying or calcination of gypsum or production of plaster boards and other gypsum products, where combustion units with a total rated thermal input exceeding 20 MW are operated	Carbon dioxide

Production of pulp from timber or other fibrous materials	Carbon dioxide
Production of paper or cardboard with a production capacity exceeding 20 tonnes per day	Carbon dioxide
Production of carbon black involving the carbonisation of organic substances such as oils, tars, cracker and distillation residues, where combustion units with a total rated thermal input exceeding 20 MW are operated	Carbon dioxide
Production of nitric acid	Carbon dioxide and nitrous oxide
Production of adipic acid	Carbon dioxide and nitrous oxide
Production of glyoxal and glyoxylic acid	Carbon dioxide and nitrous oxide
Production of ammonia	Carbon dioxide
Production of bulk organic chemicals by cracking, reforming, partial or full oxidation or by similar processes, with a production capacity exceeding 100 tonnes per day	Carbon dioxide
Production of hydrogen (H_2) and synthesis gas by reforming or partial oxidation with a production capacity exceeding 25 tonnes per day	Carbon dioxide
Production of soda ash (Na_2CO_3) and sodium bicarbonate ($NaHCO_3$)	Carbon dioxide
Capture of greenhouse gases from installations covered by this Directive for the purpose of transport and geological storage in a storage site permitted under Directive 2009/.../EC	Carbon dioxide
Transport of greenhouse gases by pipelines for geological storage in a storage site permitted under Directive 2009/.../EC	Carbon dioxide
Geological storage of greenhouse gases in a storage site permitted under Directive 2009/.../EC	Carbon dioxide

ANNEX B:

EU ETS REGULATORS

- Environment Agency if the installation is located in England and Wales (ethelp@environment-agency.gov.uk)

- Scottish Environment Protection Agency if the installation is located in Scotland (emission.trading@sepa.org.uk)

- Department of Energy and Climate Change if the installation is located offshore (UK-wide) (emt@decc.gsi.gov.uk)

- Northern Ireland Environment Agency if the installation is located in Northern Ireland (emissions.trading@doeni.gov.uk)