

EU EMISSIONS TRADING SYSTEM

GUIDANCE NOTE 4 (PHASE III)

Guidance on baseline data verification

Updated for Phase III to incorporate guidance
on verification of historic production and
allocation methodology requirements

Version 2

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- Annex 1 Main Directive sections concerning issue of Phase III allowances in the UK
- Annex 2 Regulator approved list of criteria for site visit waivers

1 Introduction

This document provides guidance on the verification of baseline data required from Operators in response to Commission Decision¹ *determining transitional Union-wide rules for the harmonised free allocation of emission allowances pursuant to Article 10a of Directive 2003/87/EC*². All references to EU ETS Directive articles in this document are to the original Directive (2003/87/EC), as amended by Directive 2009/29/EC, unless explicitly stated otherwise.

Article 8(1) of Decision states: “Member States shall only accept data that has been verified as satisfactory by a verifier”. The Decision requires verifiers to be competent and independent of the operator.

Baseline data verification is important for ensuring that the overall Community-wide quantity of allowances and installation-level allocations are calculated in a fair and appropriate manner. Verification aims to avoid distortions that may arise from misstatements (errors, misrepresentations or omissions) in the baseline data, or from incorrect interpretation of baseline data requirements.

Operators are required to submit verified baseline data to enable the UK to publish its National Implementation Measures (NIMs) and submit them to the European Commission, in accordance with Article 11 of the EU ETS Directive.

This document has been updated to include verification requirements of data to be collected in 2011, following the approval of the Commission Decision and to replace requirements that are no longer applicable. For details of the data to be provide, you should refer to our Baseline Data Collection Supplementary Guidance Note (April 2011)

Further sections of this guidance note cover:

- Section 2: Regulatory background
- Section 3: Specific requirements for determination and reporting of data
- Section 4: General requirements for baseline data verification
- Section 5: General principles for verification
- Section 6: UK Recognition of verifiers
- Section 7: Administrative issues
- Annex 1: Main Directive sections concerning issue of Phase III allowances in the UK
- Annex 2: Regulator approved list of criteria for site visit waivers

This document should be read in conjunction with:

- Guidance Note 3 (Guidance for Operators on Inclusion Criteria for Phase III 2013-2020)³. Guidance Note 3 is only relevant to EU ETS installations; it does not cover aviation activities.

¹ The draft Decision was approved by the Climate Change Committee on 15 December 2010 and cleared European Parliamentary scrutiny on 8th April 2011. The Decision is expected to be formally adopted May 2011.

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

² See: http://ec.europa.eu/environment/climat/emission/implementation_en.htm

³ See: <http://www.environment-agency.gov.uk/business/topics/pollution/32244.aspx>

- the Commission Decision *determining transitional Union-wide rules for the harmonised free allocation of emission allowances pursuant to Article 10a of Directive 2003/87/EC* (also known as the Community-wide Implementation Measures, CIMs, or ‘allocation rules’)
- UK Guidance on Baseline data collection (February 2010)⁴
- UK Guidance on Baseline data collection - supplementary guidance note (April 2011)⁵
- Commission Decision 2007/589/EC *establishing guidelines for the monitoring and reporting of greenhouse gas emissions pursuant to Directive 2003/87/EC*, as amended.
- The European Commission’s Guidance Document 4 *Verification of NIMs Baseline Data Reports and Methodology Reports*⁷.

It should also be considered in conjunction with:

- Statutory Instrument 2009 No. 3130 *The Greenhouse Gas Emissions Data and National Implementation Measures Regulations 2009*⁸ (“the 2009 Regulations”),
- UK’s EU ETS Annual Verification Guidance⁹

Operators should send their Phase III Data Return Forms (ETS300) and related verification opinions to their respective regulator, and not to the Department of Energy and Climate Change (DECC) or other government departments. **Queries** relating to data requirements should be addressed in writing (via email) to EUETSPHASE3HELP@environment-agency.gov.uk, and also including the relevant regulator (if not the Environment Agency). **Site specific queries**, such as site waivers, **will be dealt with by the relevant regulator**.

Please note that the requirements described in this document **are not** necessarily the same as those that are required for Phase II monitoring, reporting and verification of on-going annual EU ETS emissions by operators, which must be carried out in accordance with the UK’s ‘Guidance on Annual Verification for the EU ETS’.

2 Regulatory Background

2.1 The EU Emissions Trading System

The EU ETS is a system for greenhouse gas emissions allowance trading within the European Community to reduce greenhouse gas emissions ‘in a cost effective and economically efficient manner’. The main mechanism for doing this is through the allocation and trading of greenhouse gas emissions allowances throughout the EU.

During the initial phases of the EU ETS (Phase I: 2005-2007; Phase II: 2008-2012), the allocation of installation level allowances has been in accordance

⁴See: <http://www.environment-agency.gov.uk/business/topics/pollution/32244.aspx>

⁵See: <http://www.environment-agency.gov.uk/business/topics/pollution/32244.aspx>

⁶See: http://ec.europa.eu/clima/documentation/ets/monitoring_monitoring_en.htm

⁷See: http://ec.europa.eu/clima/documentation/ets/benchmarking_en.htm.

⁸See: <http://www.legislation.gov.uk/ukxi/2009/3130/contents/made>

⁹See: http://www.decc.gov.uk/en/content/cms/what_we_do/change_energy/tackling_clima/emissions/eu_ets/euets_phase_ii/monitoring/monitoring.aspx

with individual Member State National Allocation Plans (NAPs). This will change for Phase III (2013-2020) as a result of Directive 2009/29/EC.

Revisions under Directive 2009/29/EC aim to achieve greater harmonisation across EU Member States regarding the Phase III issue of free allowances. This will be undertaken according to “transitional Community-wide rules for harmonised free allocation” (Article 10a). Where feasible, these rules are to be based on ex-ante benchmarks (rather than the emissions history of installations). Allocations will be calculated on a product basis rather than for inputs in order to maximise the incentive for efficient production and reduced emissions.

Although product based benchmarking is the preferred method for allocating allowances for free, the revised Directive states that this should be to the ‘extent feasible’. Fallback approaches will be applied where a product benchmark does not exist. The allocation methodologies will be applied via the following hierarchy of approaches:

- Product benchmarks (e.g. tonnes CO₂/tonne product); the benchmark level is set at the average of the top 10% most greenhouse gas efficient installations within a sector or sub-sector in 2007 and 2008, and is the first allocation methodology that should be applied by installations.
- Heat benchmark is applied where no product benchmark exists or can be applied. Measurable heat output¹⁰ has to have been or could have been metered during the baseline period in order to apply this allocation methodology. Where heat could have been measured but was not, a proxy value may be derived from the corresponding energy (i.e. fuel data) input multiplied by the measured efficiency of the heat production but with further factors applied.
- Fuel input benchmark is used where neither the product or heat benchmark can be applied e.g. where heat output could not have been metered.
- Finally, where there are emissions that are not covered by any of the other allocation methodologies and they relate to non-fuel process emissions they will be allocated on the basis of the proportion of their historic emissions.

It is important that all installations follow the allocation methodology hierarchy set out above. Operators will be required to provide evidence to their verifiers of the reasons that (a) particular allocation methodology(ies) could not be applied and that the chosen allocation methodology is appropriate for that installation.

2.2 Transposition

Directive 2009/29/EC sets a two stage requirement for its transposition into national law. The general transposition deadline is 31 December 2012. However, amended Articles 9a(2) and 11 were to be transposed by 31 December 2009. Statutory Instrument 2009 No. 3130 The Greenhouse Gas Emissions Data and National Implementation Measures Regulations 2009 meets the first stage transposition in the UK.

¹⁰ Heat means steam, hot water, thermal oil or hot air, liquid metals and salts.

2.3 Requirements for Article 11 compliance

Annex I of this guidance provides a more detailed summary of the main considerations of Articles 10, 10a and 11 of the revised ETS Directive. Emboldened text is used to emphasise the dates of various commitments and particularly pertinent sections concerning the current baseline verification requirement.

It is suggested that the most relevant statements in Article 11 are:

- *Each Member State shall publish and submit to the Commission, by 30 September 2011, the list of installations covered by this Directive in its territory and any free allocation to each installation in its territory calculated in accordance with the rules referred to in Article 10a(1) and Article 10c*
- *Member States may not issue allowances free of charge to installations whose inscription in the list has been rejected by the Commission*

And, some of the particular key points concerning Article 10a are:

- *By 31 December 2010, the Commission shall adopt Community-wide and fully-harmonised implementing measures for the allocation of allowances*
- *The starting point shall be the average performance of the 10% most efficient installations in a sector or subsector in the Community in the years 2007 to 2008*
- *The regulations pursuant to Articles 14 and 15 shall provide for harmonised rules on monitoring, reporting and verification of production-related greenhouse gas emissions with a view to determining the ex-ante benchmarks*
- *Subject to specifically listed caveats, no free allocation shall be given to electricity generators, to installations for the capture of CO₂, to pipelines for transport of CO₂, or to CO₂ storage sites*

The submission of production and other relevant data required from operators during 2010 enabled the UK to prepare for drafting of the UK NIMs and the data requirements were based on information known at the time. These requirements were principally covered by Regulation 4 of the 2009 Regulations.

The combined submission of 2010 data and additional 2011 data will constitute the UK NIMs, according to EU ETS Directive Article 11. This necessitates accurate product and other related data to be supplied by operators and verified by competent and independent verifiers.

2.4 2011 Additional data collection

The CIMs confirm the data requirements for the UK requires to prepare the NIMs. We anticipate that the majority of operators eligible for free allowances will need to provide additional data to their competent authority (regulator) during 2011. Details of the additional data collection are provided in supplementary guidance to the baseline production and other relevant data.

In light of the agreed baseline data requirements, operators may choose to supply new data to replace those previously submitted, additional data that supplements the previous submission or data that has been submitted to correct a previous submission. Data submitted in 2010 that have already been verified and which remain valid and in accordance with the rules will not need to be re-verified.

2.5 Further Information

Further information about the EU ETS and how the UK intends to implement its Phase III requirements is available on the DECC website at:

http://www.decc.gov.uk/en/content/cms/what_we_do/change_energy/tackling_clima/emissions/eu_ets/phase_iii/phase_iii.aspx

3 Specific requirements for determination and reporting of data

3.1 Introduction

The CIMs specify the following requirements. More detail is provided in the supplementary data guidance.

3.2 Historic production data and other relevant data required under Article 11

Certain data are needed to allow competent authorities to calculate the free allowances that installations in Phase III may be entitled to, in order to facilitate their appropriate inclusion in the UK NIMs. Table 1 sets out the data corresponding to the “free-allocation” methodologies outlined in Section 2.1 above.

Table 1: Data required according to allocation methodology

Methodology	Data required
Product benchmark	Production data - annual product output levels (related to the particular product benchmark) Installed capacity
Heat benchmark	Annual heat production data and annual emissions data
Fuel input benchmark	Annual consumption of fuel and annual emissions data
Historic emissions	Annual emissions data

The following requirements also apply:

- As applicable, the annual totals of the required historic production and other relevant data shall be derived in relation to the relevant EU ETS installation activities for the calendar years 2005 to 2008 inclusive, or 2009 to 2010 if higher¹¹.
- Where an installation has been commissioned during the period 2005 to 2008, the data from the time of commissioning (assigned within each relevant calendar year). Where an installation has less than two years data, the Operator's allocation will be based on installed capacity data and relevant capacity utilisation factors (RCUF). The data and subsequent calculations that determine the RCUF must be verified.
- In the absence of a monitoring and reporting regulation under Article 14, including in relation to specific reference to activity data, the data determined shall be as much as reasonably possible in compliance with the requirements of Commission Decision 2007/589/EC (the MRG).
- Compliance with the MRG shall include due consideration of the Annex I general guidelines, especially in relation to:
 - relevant definitions, e.g. standard conditions (Section 2);
 - the monitoring and reporting principles (Section 3);
 - the derivation of activity data (Section 5);
 - the requirements for uncertainty assessment (Section 7);
 - the requirements regarding the operator's control system and control activities (Sections 10.1-10.3), especially in relation to quality assurance (and calibration and maintenance of relevant equipment; Section 10.3.2) and validation of data (data sense checks; Section 10.3.3);
 - where applicable, the general requirements for determining activity-specific data and factors (Section 13);
 - possible concessions allowed for installations with low emissions (Section 16).
- Where data requirements relate to combustion, Annex II of the MRG may also be of relevance, including for indication of EU ETS accepted uncertainties and the appropriate methodology.
- Where data requirements relate to other processes, Annexes III to XI, Annex XIII and Annexes XIX to XXIV¹² of the MRG may be of additional relevance, including for indication of EU ETS accepted uncertainties and the level of methodologies.
- In some cases, the current baseline requirement may be the same as data already verified and reported to the regulator as part of the same installation's annual EU ETS emissions reports for 2005 to 2008, or 2009 to 2010 (e.g. tonnes of coal consumed). Subject to no new information arising about the material correctness of these data, they should immediately satisfy the current requirement as well.
- In all cases, the operator should demonstrate in the methodology report (which is incorporated into ETS300) the basis on which the required data has been derived and that it amounts to good professional practice, bearing in mind the retrospective nature of requirements and the uncertainties that are typically required for

¹¹ The CIMs provide operators with the option to use calendar years 2009 to 2010, instead of 2005 to 2008. However, all submitted data must cover the same baseline period.

¹² The Climate Change Committee approved the amendment of the MRG and inclusion of new annexes for new sectors and gases on 15 December 2010.

provision of EU ETS emissions data. Data should be notified with the maximum accuracy and completeness possible.

- **Data Gaps:** In keeping with the last paragraph of Section 5.2 of Annex I of the MRG and the CIMs, data gaps (for example due to missing records) shall be filled by applying good professional practice ensuring a conservative estimate of the missing data. The estimates should be based on best industry practice, and recent scientific and technical knowledge. In accordance with Article 7(8) of the CIMs, “Where data are partly available, conservative estimate means that the value extrapolated shall be not more than 90% of the value obtained by using the data available”. Such occurrences should be clearly logged for added verifier consideration.
- **Reporting:** In accordance with the requirements of the CIMs, operators are required to report production and other relevant data in “a manner that enables an appropriate use of it by the competent authority”. The UK has developed a standard reporting template, ETS300, for this purpose. The 2011 version of the template has been revised to enable operators to provide the data collection requirements for 2011. This template has been designed to minimise the burden on operators by use of appropriate tick-boxes and drop-down lists to identify requirements, including the specific sector production and other relevant data needs for a given installation as efficiently as possible.
- **It should be noted that electricity generators whose sole purpose is to produce electricity, and are not entitled to free allowances in accordance with Article 10a and 10c of the Directive, are not required to submit additional data.** All other Operators will have to submit additional data on the standard reporting template, ETS300. Supplementary guidance on the completion of ETS300 has also been produced.

4 General requirements for baseline data verification

4.1 Introduction

All Phase III data submitted should be reported in accordance with the regulator’s specified reporting requirements and should be free from material misstatement where a misstatement is an error, misrepresentation or omission in the data reported.

It is recognised that there will be inevitable limitations to the level of accuracy that can be achieved in older data where historical records may be poor or missing, or have been measured using equipment of unknown accuracy. Data used should be of highest achievable accuracy¹³. Consequently, the European Commission has aimed to develop a process that confirms the

¹³ European Commission Guidance Document 3 Annex I provide indicators of what constitutes data of highest achievable accuracy.

reliability of the data as far as is reasonably possible and reduces the possibility of distortions, without being overly onerous for participants.

Baseline data may only be accepted if verified as satisfactory by a verifier. The CIMs define a verifier as:

“a competent and independent person or verification body with responsibility for performing and reporting on the verification process, in accordance with the detailed requirements established by Member States pursuant to Annex V of Directive 2003/87/EC”

The European Commission’s guidance on baseline data verification states that verification of the baseline data should follow the Member States approach to verification of annual emissions under the existing EU ETS. In the UK we use verifiers that are accredited or approved by the United Kingdom Accreditation Service (UKAS). In the process of accreditation or endorsement by UKAS, verifiers must be able to satisfy UKAS that they are independent, competent and impartial before accreditation may be awarded.

4.2 Correction of errors in reported data

Verification of baseline data is intended to identify and correct any errors in data provided by operators so that the data used for adjusting the Community-wide quantity of allowances and for determining individual levels of free allowances for the NIMs are fit for purpose including as accurate as possible. Misstatements in the baseline data that cause ‘over-reporting’ could unfairly distort the allocation given to a particular installation and affect allocations given to other installations this is because over-reporting, either by accident or deliberately, may reduce the proportion of allowances available for others given that there is a finite cap of allowances. On the other hand, ‘under-reporting’ of baseline data could result in the installation not being allocated as many free allowances as it is entitled to.

If it is later discovered that submitted Phase III baseline data submitted are false or misleading, and as a result there has been an over-allocation to the installation concerned, the CIMs provide for a supplementary decision to reduce the number of allowances to be issued in respect of that installation.

The potential effects of misstatements in baseline data for larger producers/emitters are proportionally more significant, both within a sector and in some cases between sectors, than for smaller producers/emitters.

4.3 General verification methodology

Phase III baseline verification should adhere to the requirements laid down in Section 10.4 of Annex I of the Commission Decision 2007/589/EC (the MRG). These stipulate that verification should include a strategic analysis, a risk analysis, the verification itself (a planned verification programme and data sampling plan based on the outcomes of the strategic and risk analyses), internal report documentation (recording the different stages and decisions and their justifications) and an external report (the submitted verification

opinion). The main objective of Phase III baseline verification is the identification and correction of misstatements. Consideration of the references in Section 10.4 to non-conformances is of secondary importance unless they have material effect on the reported baseline data.

Article 8(3) of the CIMs lists the minimum requirements for verification in addition to those set out in the MRG.

It should be noted that the European cooperation for Accreditation guidance EA-6/03¹⁴, and the UK's EU ETS Annual Verification Guidance provide useful additional sources of information regarding appropriate interpretations and expectations associated with EU ETS-related verification and accreditation. However, these documents must be considered within the context of baseline data verification and may not be fully applicable for the purposes of Phase III baseline collection.

5 General principles for verification

5.1 Introduction

Verification of Phase III baseline data will require an assessment of the operator's methodology report and verification of the data to ensure that the emissions and data reported for each installation are:

- free from material misstatements;
- calculated in accordance with appropriate methodology; and
- submitted according to requirements of the CIMs;
- submitted according to the regulator's standard reporting template requirements.

5.2 General principles

Assessment of the methodology report and verification of the baseline data should be carried out in accordance with Article 8 of the CIMs and this guidance bearing in mind the principles outlined in this section. These have been adapted from Section 3 of Annex I of the MRG.

5.2.1 Completeness

The baseline data shall appropriately cover the process and combustion emissions from relevant emission sources and source streams associated with the installation as covered in the scope of Phase III, in accordance with this guidance and Guidance Note 3.

5.2.2 Consistency

¹⁴See: <http://www.european-accrreditation.org/n1/doc/EA6-03.pdf>

As far as is practicable, and taking into account potential incompleteness of some historical records, emissions, production and other relevant data over the baseline years shall be monitored and calculated consistently. The verifier should ensure that methodologies are consistent over the years being verified. This applies to data for all years in the baseline period.

5.2.3 Transparency

Data shall be obtained, recorded, analysed and documented in a manner that is transparent for the purposes of verification.

5.2.4 Trueness

The baseline data should so far as possible be neither over, nor under, true values.

5.2.5 Cost effectiveness

The baseline data verification process should be as cost-effective as possible, recognising the need to minimise potential distortions in allocations, while not being overly onerous on operators. In selecting a monitoring methodology, the improvements from greater accuracy shall be balanced against the additional cost. Monitoring and reporting shall aim for the highest achievable accuracy, unless this is technically not feasible or will lead to unreasonable costs.

5.2.6 Faithfulness

The verification opinion should be capable of being depended upon.

5.3 Assessment of Methodology Report

The approach to compilation of data for Phase III baseline data must be documented in a methodology report by the operator. This is the evidence to verifiers that the approaches taken ensure that the data is reliable, credible and of the highest achievable accuracy. To minimise the burden on operators and verifiers, the UK has incorporated the methodology report in the UK baseline data collection template (ETS300). Verifiers are required to assess the appropriateness of the methodology report and use the methodology report as a basis to verify the data against.

Where a verifier finds that the methodology report is incomplete, contains errors or contradicts the requirements of the CIMs, the operator is required to correct the methodology report and associated baseline data.

The findings of the assessment of the methodology report are to be included in the verification report submitted by the operator to the competent authority.

5.4 Materiality

The Phase III baseline data and related disclosures shall be free from material errors or misstatements, avoid bias in the selection and presentation of information, and provide a credible and balanced account of an installation's emissions, production data or other relevant data, as applicable.

A specified materiality level influences the thoroughness with which the verifier reviews the baseline data and checks supporting records for errors and misstatements. The Commissions guidance on verification requires a materiality threshold of 5%. We recommend that for Phase III baseline verification purposes, verifiers use the same materiality levels set for annual emissions verification in Section 10.4.2 of Annex I of the MRG, namely 5% for Category A and B installations and 2% for Category C installations. Category A and B installations are those with average annual emissions over the relevant period, 2005-2008, equal to or less than 500 kilotonnes of fossil CO₂-equivalent (inclusive of any transferred CO₂). Category C installations are those with average annual emissions over the relevant period, 2005-2008, of greater than 500 kilotonnes of fossil CO₂-equivalent (inclusive of any transferred CO₂).

Materiality is an expression of the relative significance of any individual matter in the context of an installation's historical baseline data. Assessment of materiality by a verifier will typically include consideration of both the amount and nature of the misstatements, errors and inaccuracies. For example, a relatively small omission or error repeated frequently could, once accumulated, have a material impact on the annual baseline data. A verifier will assess the materiality both of any individual error or misstatement and of the aggregate of uncorrected errors or misstatements. The required materiality level should guide the verifier in their strategic analysis, risk analysis and actual verification programme. Verifiers should also work on the basis of providing their final opinions based on reasonable assurance as defined in Section 2.5(e) of Annex I of the MRG.

A verifier may class a misstatement in the total annual emission as being material if it leads to aggregate misstatement of more than 5% or 2% (depending on category of installation). This does **not** mean that operators can report their emissions so that they are 5% higher. The materiality level essentially provides a boundary around the degree of error or misstatements that could affect the figure, so that errors or misstatements are picked up and resolved.

The operator should address all identified misstatements as soon as possible. Misstatements that are resolved before issue of the final verification statement shall be logged in the verifier's internal verification documentation. Any remaining must be noted in the final verification statement that is submitted to the regulator. Where these do not amount to a material misstatement, the verifier may issue a verification statement based on a 'verified with comments' opinion. Where additional information does not resolve outstanding data concerns, and remaining misstatements are considered to amount to a material misstatement, the verifier shall state that the baseline report has not been verified as satisfactory and issue a 'not verified' opinion.

5.5 Verification of source completeness

Operators are responsible for ensuring that the information submitted in response to the regulatory requirements and the regulator's standard templates for baseline data are complete. The data provided must relate to the scope of the EU ETS in Phase III (see Guidance Note 3 for further information).

Verifiers may request a letter from the operator confirming that the relevant Phase III data reports and any supporting evidence contains all the relevant information for the scope of the installation, including coverage of all relevant emission sources and source streams.

Operators are required to submit verified historic baseline data that reflects the configuration of the installation during the relevant period, the required baseline data reporting years, 2005 to 2008 (or 2009 to 2010 if higher). Operators are obliged to provide complete access to the documents and records requested by their verifier.

Verifiers need to check and confirm that the Phase III baseline data reported by operators are consistent with other records and evidence. Inconsistencies may need to be corrected in the operator's report before signing off a final verification opinion. This may depend on the size and nature of the concern in relation to the materiality assessment. The need for a site visit to investigate source completeness will be mainly dependent on the verifier's installation-specific risk assessment, the complexity of the baseline data requirement and the required materiality level.

5.6 Verification of activity data

5.6.1 Introduction

Activity data includes information about fuel use, production rates, material use rates and fuel types that have been used to calculate CO₂ emissions from combustion and process plant. It also includes the production data and other relevant data required by the competent authority to calculate the installation's entitlement to free allowances in Phase III.

In general, the verification of activity data needs to ensure:

- fuel use records support the reported fuel input data;
- production rates and material use records support the reported process emissions calculations;
- production rates, product records and other relevant data (as required) support the reported production and other relevant data requirements; and
- the percentage of biomass (biomass as defined by Section 2.4 of Annex I of the MRG) is appropriately taken into account.

Where the monitoring methodology chosen by the operator contains requirements for activity data collection, these should also be considered in the verification. Verifiers should especially check that the reported quantities of baseline data are relevant to the scope of the installation's EU ETS activities (and not something wider).

5.6.2 Dealing with missing or poor data records

Further to earlier reference to the last paragraph of Section 5.2 of Annex I of the MRG, concerning action in the event of minor data gaps and the data that is reported, it is recommended that other forms of poor or missing records will sometimes need to be considered as part of the required baseline verification.

Where available, meter calibration and other records should be taken into account in the verification. In order to apply a 5% or 2% materiality level to reported data, verifiers will need to perform a thorough assessment of data records.

Where there are inadequate or incomplete data records and a 5% or 2% materiality threshold (as required) cannot be met, verifiers should state in their verification opinion their best estimate of the percentage materiality level met by the reported data (and supporting data). A high level of uncertainty of metering systems should not be regarded as sufficient reason alone to issue a 'not verified' opinion. The inherent uncertainty of an acceptable methodology (e.g. the 'permissible uncertainty' threshold associated with an appropriately applied tier of the MRG) should not be included in a verifier's consideration of materiality, although it is appropriate to take into account any additional uncertainties due to deteriorating maintenance or calibration of such systems. The verifier is encouraged to segregate uncertainty and error assessments as part of the verification assignment and make clear comments in the verification opinion as appropriate.

Verifiers should check that the most appropriate data, either from installation meters, records, suppliers' energy bills, invoices, customer sales documentation, etc. have been used to calculate the required baseline data. 'Appropriateness' can be judged on the basis of meter accuracy (where calibration and other records are available), the location of meters used to determine fuel and raw materials in or products out (including heat), and the legal and fiscal standard of records such as sales documentation. The operator's selection should be used in the first instance, unless the verifier considers it to be inappropriate.

5.7 Verification of data calculations

This section explains how verifiers will need to verify data calculations that have been carried out in accordance with the monitoring method chosen by the operator. Typically, operators will have calculated data from activity data records, such as fuel use records, rather than using CO₂ stack emissions monitoring results.

5.7.1 General

In general, verification should follow the UK's EU ETS Annual Verification Guidance¹⁵, ensuring that:

¹⁵See: <http://www.environment-agency.gov.uk/business/topics/pollution/32244.aspx>

- where applicable, installation-specific fuel calorific values or default calorific values have been used in accordance with acceptable methods;
- the emission factors used in the calculations are consistent with the methodology chosen by the operator (and, where appropriate, the required uncertainty in the calculated data);
- net calorific values (NCVs) are used with activity data and emission factors that are also on a net basis. If an installation uses gross calorific values (GCVs) then these must be used with emission factors and activity data that are also in gross terms;
- CO₂ stack emissions monitoring (if used to provide emissions data) was carried out in accordance with standard methodologies;
- the method has been applied consistently over the baseline period, as far as practicable;
- calculations and conversions used to calculate the baseline data are free from errors and typographical mistakes;
- emissions from biomass fuels (as defined by Section 2.4(f) in Annex I of the MRG) are zero-rated;
- other baseline data is calculated accordingly regarding biomass use;
- data are rounded to the nearest tonne (or alternative unit required as part of the regulator's reporting templates) at the end of the calculations;
- process emissions are clearly separated from combustion emissions and;
- other data are disaggregated to the level required by the regulator's standard reporting templates/electronic system.

Verifiers will need to check that historic emissions have been calculated correctly in accordance with a specific monitoring method. Monitoring methods used to calculate the reported Phase III baseline data should if at all possible follow MRG requirements discussed above.

5.7.2 Calorific Values

Verifiers will need to verify that the most appropriate fuel calorific values have been used in the calculations. Installation-specific, measured calorific values should be used in the first instance (preferably based on EN ISO 17025 accredited calibration/analyses). Operators may resort to country specific factors (for the calendar year concerned, i.e. 2005-2008, or 2009-2010) if site-specific ones are not available.

5.7.3 Emissions factors

As for calorific values, first preference should be to use suitably derived installation-specific factors. This is where factors are derived in accordance with Section 13 of Annex I of the MRG, and use of appropriate standard sampling methods, appropriate sampling/analysis frequencies to give suitably representative results and analyses underpinned by EN ISO 17025 accreditation. In general, the default emissions factors advised in Table 4 of Annex I of the MRG should **not be** used, as these are international values, largely based on the 2006 IPCC guidelines, and not considered as appropriate as UK-specific values where they are available. UK-specific factors for 2005-2010 can be found under the sub-title 'The country specific

factor list' on the DECC EU ETS MRV website¹⁶. Operators must use factors most relevant to their activities and the calendar year concerned (i.e. 2005-2008, or 2009-2010).

5.7.4 Experimental verification of sub-installation capacity

Operators are required to submit the installed capacity of each product benchmark sub-installation, in accordance with CIMs Article 7(3). Where it is not possible to determine this by averaging the two highest monthly production volumes in the period from 1 January 2005 to 31 December 2008, then it may be determined by experimental verification of capacity (CIMs Article 7(3)(b)). However this is a separate task from baseline data verification. The European Commission's guidance document No. 2 and 4 should be referred to for guidance on experimental verification of the sub-installation.

Note that experimental determination of capacity is not permitted for the cases where installations have undergone a significant change in capacity.

5.8 The verification opinion

5.8.1 General

A standard verification opinion template¹⁷ has been published separate to this guidance. This must be completed by the verifier to confirm verification of an installation's submission in association with production and other relevant data required in accordance with Article 11¹⁸. The returned verification opinion must be linked to confirmed final version submissions of the operator's baseline reporting form. The signed-off opinion statement will include confirmation of verified total quantities (where applicable) and allow comments relating to the operator's baseline data reports. Such comments provide opportunity for the verifier to raise any outstanding concerns about the reported data or the methodology (such as meter uncertainty, data gaps, etc.).

Upon completion of the verification, the verifier will need to submit a signed-off 'verification opinion' to the operator. This is required to confirm the relevant version of the baseline data reporting form provided by the operator. The signed-off document should be converted to pdf format. The operator must then submit the baseline data report (incorporating the methodology report) and verification opinion statement to their relevant regulator by the date specified in the data request letter.

Reasons for unverified emissions data should follow the UK's EU ETS Annual Verification Guidance for annual emission reporting or the European Commission's Guidance Document 4 for verification of NIMs Baseline Data Reports and Methodology Reports.

¹⁶ See: http://www.decc.gov.uk/en/content/cms/what_we_do/change_energy/tackling_clima/emissions/eu_ets/euets_phase_ii/monitoring/monitoring.aspx

¹⁷ Phase 3 Baseline Data Verification Opinion Statement: <http://www.environment-agency.gov.uk/business/topics/pollution/32244.aspx>

¹⁸ See: <http://www.environment-agency.gov.uk/business/topics/pollution/32244.aspx>

Justifications for issuing an 'Opinion with comments' should also follow the 'Guidance for Annual Verification' for annual emission reporting or the European Commission's Guidance Document 4 for verification of NIMs Baseline Data Reports and Methodology Reports.

5.8.2 Verification of groups of installations

Group verification is not accepted under Phase III baseline data requirements.

5.8.3 Site visits

Site visits must be undertaken by a verifier to all installations unless this can be clearly demonstrated to be unnecessary within the verifier's risk analysis for the verification required (including in relation to the relevant materiality level involved for the installation concerned). The purpose of a site visit is to inspect the operation of meters and monitoring systems, conduct interviews and collect sufficient information and evidence. The UK competent authorities, having due regard for guidance document EA 6/03, have determined an approved list of criteria (Annex 2) when considering the need for site visits, as part of the 2011 baseline data collection and verification activities. Verifiers must assess whether these criteria for waiving site visits apply as part of their risk analysis. The risk analysis must be included with the verification opinion statement. If it is not, the competent authority may not accept the additional data as duly verified.

Justifications for waiving an associated site visit outside the criteria in Annex 2 must be documented and presented to the regulator to approve before agreeing whether or not to exempt the installation from the requirement.

A verifier shall not waive a site visit if they have not carried out any other verification at that installation before.

It is not anticipated that justifications for waiving site visits from non-UKAS accredited or approved verifiers will be accepted.

It is not anticipated that a lack of time will be seen as justifying no site visit. Evidence of previous satisfactory verification of the data required for the same installation and activities and for the same 2005 to 2008 (or 2009 to 2010) calendar years (such as previously reported verified ETS7 annual emissions data) may be accepted as long as no significant further data are involved. Further consideration of site visit requirement is given in Section 4.3.2 of the UK's EU ETS Annual Verification Guidance.

5.8.4 Preparing for verification - specific guidance for operators

5.7.4.1 Collating data and information for the verifier

To speed up the verification process, operators should have prepared necessary documents and information for the verifiers in advance. Such information and records are referred to as an 'evidence pack', as outlined in 'Preparing for Verification – A Quick Reference Guide for Operators'¹⁹

¹⁹See: http://www.decc.gov.uk/en/content/cms/what_we_do/change_energy/tackling_clima/emissions/eu_ets/euets_phase_ii/monitoring/monitoring.aspx

5.7.4.2 Previous verification and audits

While previous audits and verifications can provide useful information that should make the verification process more straightforward, they cannot always be used in the place of Phase III baseline data verification (specifically they should not be 'relied' upon). This is because the previous verifications or audits may have been performed for different purposes and may have involved different requirements (e.g. CCA and CHPQA verified data). The only exception to this may be previous accredited verification of the same required data as part of a satisfactory EU ETS annual verification for the same required years, 2005 to 2008 (or 2009 to 2010).

6 UK Recognition of verifiers

6.1 Accredited verifiers

Annex V of Directive 2003/87/EC and the CIMs define a verifier as being a "competent and independent person or verification body with responsibility for performing and reporting on the verification process."

The UK recognises that verifiers who have been accredited or approved by the United Kingdom Accreditation Service (UKAS) have demonstrated that they are independent, impartial, competent and able to carry out verifications according to this guidance, relevant legislation and EA-6/03 Recognition of verifiers under the EU ETS Directive.

It is not easy to obtain accreditation and it involves a thorough check of the verifier's experience and their work.

By using accredited verifiers the verifications should be of as consistent and comparable quality and standard as possible.

For the purpose of the Phase III baseline data collection, the benefits of using an accredited verifier include:

- Greater confidence from the operator and regulator in the quality and consistency of verification;
- Greater confidence that the operator will receive the correct number of free allowances;
- Increased potential for saving by potentially removing the need for a site visit.

6.2 Which verifiers are accredited?

Verifiers who have successfully demonstrated their competence to undertake Phase III historic emissions and baseline verifications and have been accredited by UKAS are listed on DECCs website at:

http://www.decc.gov.uk/en/content/cms/what_we_do/change_energy/tackling_clima/emissions/eu_ets/euets_phase_ii/monitoring/monitoring.aspx

If you are interested in becoming an accredited verifier you should contact Phil Shaw at UKAS (phil.shaw@ukas.com).

Overseas verifiers who wish to undertake baseline data verification in the UK should apply to UKAS for 'acceptance', in accordance with European co-operation for Accreditation (EA) agreements. UKAS will consider these applications on a case-by-case basis.

7 Administrative issues

7.1 Contact details

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) (environmentalmanagementteam@decc.qsi.gov.uk);

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

7.2 What if an operator disagrees with the verifier's opinion?

It is preferable for any disagreements to be resolved between the operator and the verifier, using this Phase III guidance, the European Commission's guidance document 4 (on baseline verification), and to the MRG, where appropriate. If disagreements persist, the operator can contact their regulator if they relate to technical or policy issues (such as the scope of the installation, data quality etc.). It is reiterated that Phase III baseline data should be submitted to the regulator using the standard forms provided.

7.3 What if an operator doesn't get their baseline data verified?

Failure to submit a verified baseline data report (including the methodology report) may result in the following:

- Compromised ability to include the installation correctly in the National Implementation Measures to be submitted to the European Commission, including in relation to the installation's potential entitlement to receive free allowances in Phase III²⁰.
- Omission of the installation from the NIMs submission together with notification of entitled free allowances may result in failure to secure the installation any free allowances from the start of Phase III.

7.4 What if an operator has difficulty obtaining verification by the specified deadline?

The consequences for an operator that does not submit a verified data and methodology report by a timescale that allows the UK to submit its NIMs, are the same as those outlined in Section 7.3 above.

Operators should contact their Regulator for advice (see 7.1 for contact details) as soon as they become aware of potential delays.

7.5 What are the likely costs of verification?

The costs of verification depend upon factors such as the required materiality level; the complexity of the installation and emission sources; the scale of the emissions; the ready availability of records and information; and details of previous verifications or audits. A general estimate of verification costs for different installations cannot therefore be provided. However, the Government has aimed to make the requirements for Phase III baseline verification as cost-effective as possible.

²⁰ Article 8(4): *Member States shall not allocate emission allowances free of charge to an installation where data relating to this installation has not been verified.*

Member States may only decide to allocate emission allowances free of charge to an installation where data relating to the installation has not been verified as satisfactory, if they are satisfied that the data gaps leading to the verifier's judgement are due to exceptional and unforeseeable circumstances that could not have been avoided even if all due care had been exercised and that are beyond the control of the operator of the installation concerned"

Annex 1

Main Directive sections concerning issue of Phase III allowances in the UK

The following draws attention to the main parts of the EU ETS Directive 2003/87/EC, as amended by 2009/29/EC, considered most relevant to Phase III issue of allowances from a UK perspective. Emboldened text is used to emphasise the dates of various commitments and particularly pertinent sections in relation to baseline verification interests. The actual Directive should be consulted for a full assessment of requirements.

Article 10 Auctioning of allowances

1. Article 10 (Recital 17): 2013 onwards, Member States shall auction all allowances which are not allocated free of charge in accordance with Article 10a (see below) and 10c (option for transitional free allocation for the modernisation of electricity generation). **The Commission shall determine and publish the estimated amount of allowances to be auctioned by 31.12.10.** 88% of allowances to be auctioned shall be distributed among Member States according to relative emission shares in the Community system for 2005 or the average of 2005-2007, whichever is highest (or using 2007 in the case of Member States not participating in 2005). (10%, for certain Member States re Community growth and solidarity, based on income per capita in 2005; and 2% to Member States where their 2005 emissions <20% of their Kyoto base year). **Commission adoption of a Regulation on auctioning by 30 June 2010²¹.**
2. N.B. Recital 19: Full auctioning should be the rule for the power sector, and no free allocation to CCS. (Electricity generators may receive free allowances for district heating and cooling, and heating and cooling produced via high efficiency cogeneration as defined by Directive 2004/8/EC).

Article 10a Transitional Community-wide rules for harmonised free allocation

3. Article 10a1, first sub-paragraph: **By 31.12.10, the Commission shall adopt Community-wide and fully harmonised implementing measures for allocation of allowances** taking into account:
 - Article 10a4: **Free allocation** for district heating and high efficiency cogeneration (defined by Directive 2004/8/EC), for heating and cooling, adjusted by the Article 9 factor.
 - Article 10a5: The maximum annual amount of allowances **for calculating allocations to installations** that are not electricity generators, or CCS, or new entrants, shall not exceed the sum of:
 - (a) *the annual Community-wide total quantity, as determined pursuant to article 9, multiplied by the share of emissions from installations.....in the period 2005 to 2007, from installations covered by the Community scheme in the period from 2008 to 2012; and*
 - (b) *the total average verified emissions from installations in the period from 2005 to 2007 which are only included in the Community scheme*

²¹ See: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2010:302:0001:0041:EN:PDF>

from 2013 onwards.....adjusted by the linear factor, as referred to in article 9.

- Article 10a7: 5% of the Community-wide allowances determined according to Article 9 and 9a are set aside for new entrants. **N.B. The Commission shall adopt harmonised rules for the application and definition of new entrants by 31.12.10.**
 - Article 10a12: Subject to Article 10b (Commission report by 30.6.10 taking account of the outcome of international negotiations), **installations exposed to significant risk of carbon leakage shall be allocated 100% allowances free of charge 2013-2020.** (Article 10a14: Dependent on ability to pass on direct costs of required allowances and indirect costs from higher electricity prices, without significant loss of market share to less carbon efficient installations outside of the Community).
 - Article 10a19: No free allocation shall be given to an installation that has ceased its operations, unless it is demonstrated that the installation will resume operation in a specified and reasonable period of time. N.B. Article 10a20: The Commission shall include measures, in the harmonised implementation measures, for defining installations that partially cease to operate or that significantly reduce capacity, and measures for adapting the level of free allowances they are awarded.
4. Article 10a1, other points:
- The measures under the first sub-paragraph shall determine ex-ante benchmarks.....taking account of the most efficient techniques, substitutes, alternative production processes, high efficiency cogeneration, efficient recovery of waste gases, use of biomass and capture and storage of CO₂ (also note Recital 23).
 - **No free allocation for any electricity production except** in relation to article 10c (option for transitional free allocation for the modernisation of electricity generation) and **electricity produced from waste gases.** N.B. Recital 23 refers to free allocation for combustion of waste gases or to the originator of the waste gases.
 - **For each sector and subsector, in principle, the benchmark shall be calculated for the products rather than for inputs** to maximise greenhouse gas emission reductions and energy efficiency savings throughout the whole production process.
 - On approval of an international agreement leading to mandatory reductions comparable to the Community, the Commission shall review measures for free allocation so that it only takes place where fully justified in light of the agreement.
5. Article 10a2, first sub-paragraph: **The starting point for setting ex-ante benchmarks shall be the average performance of the 10% most efficient installations in a sector or subsector in the years 2007-2008.**
6. Article 10a2, second sub-paragraph: ***The regulations pursuant to Articles 14 and 15 shall provide for harmonised rules for monitoring, reporting and verification of production-related greenhouse gas emissions with a view to determining the ex-ante benchmarks.***
7. Article 10a3: Subject to Article 10a4 (district heating and high efficiency cogeneration), Article 10a8 (300 million allowances in the NER available until 31.12.15 to help stimulate up to 12 commercial demonstration projects re CCS/innovative renewable energy technology) and Article 10c (option for

transitional free allocation for the modernisation of electricity generation), **no free allowances shall be given to electricity generators, to installations for the capture of CO₂, to pipelines for transport of CO₂, or to CO₂ storage sites.**

8. Article 10a6: Member States may adopt financial measures for sectors and subsectors exposed to significant risk of carbon leakage due to costs relating to GHG emissions passed on in electricity prices; based on ex-ante benchmarks of the indirect (i.e. electricity-related) emissions of CO₂ per unit of production.
9. Article 10a11 (and Recital 21): Subject to Article 10b (support to certain energy intensive industries in the event of carbon leakage taking account of a Commission report by 30.6.10 reflecting the outcome of international negotiations), **the amount of allowances allocated free of charge under Article 10a, paragraphs 4-7, in 2013 shall be 80% of the quantity determined in accordance with the measures referred to in Article 10a1, decreasing by equal amounts each year to 30% free allocation in 2020 and with view to no free allocation in 2027.**
10. Article 10a12: Subject to Article 10b, **in 2013 and subsequent years up to 2020, installations in sectors and subsectors exposed to significant risk of carbon leakage shall be allocated, pursuant to Article 10a1, allowances free of charge at 100% of the quantity determined in accordance with the measures referred to in Article 10a1.** N.B. Also note Recitals 24 and 25.

Article 11 National Implementation Measures

11. Article 11.1: **Member States shall publish and submit to the Commission by 30.9.11 the list of installations and any free allocations to each installation calculated according to the rules referred to in Article 10a1.**
12. Article 11.2: By the 28 February each year, the competent authorities shall issue the quantity of allowances that are to be allocated for that year, calculated in accordance with Articles 10, 10a and 10c.
13. Article 11.3: **Member States may not issue allowances free of charge under Article 11.2 to installations whose inscription in the Article 11.1 list has been rejected by the Commission.**

N.B. Recital 23 proposes transitional free allocation to installations through harmonised Community-wide rules (ex-ante benchmarks) in order to minimise distortions of competition in the Community.

N.B. Article 3(u): The definition of 'electricity generator' means 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".

Annex 2

Regulator approved list of criteria for site visit waivers

Verifiers carrying out verification of Phase III additional baseline data and not intending to carry out a site visit, must assess and document as part of their risk analysis that the following criteria for site visits waivers apply:

- The verifier is accredited or endorsed by UKAS for the scope of the verification work; and
- They have prior knowledge of the site and carried out the site visit for the 2010 baseline data collection; and
- The operator is correcting baseline data previously submitted during 2010, or
- The operator is supplying additional data such as capacity or emissions data where the regulator will not use the data for determining allocations, or
- The operator is supplying data that has already been verified as part of previous verifications (such as composition data of products).