

Proposals for future development of the EU Emissions Trading Scheme - Phase II & beyond

Introduction to IMPEL

The European Union Network for the Implementation and Enforcement of Environmental Law is an informal network of the environmental authorities of EU Member States, acceding and candidate countries, and Norway. The European Commission is also a member of IMPEL and shares the chairmanship of its Plenary Meetings.

The network is commonly known as the IMPEL Network

The expertise and experience of the participants within IMPEL make the network uniquely qualified to work on certain of the technical and regulatory aspects of EU environmental legislation. The Network's objective is to create the necessary impetus in the European Community to make progress on ensuring a more effective application of environmental legislation. It promotes the exchange of information and experience and the development of greater consistency of approach in the implementation, application and enforcement of environmental legislation, with special emphasis on Community environmental legislation. It provides a framework for policy makers, environmental inspectors and enforcement officers to exchange ideas, and encourages the development of enforcement structures and best practices.

Information on the IMPEL Network is also available through its web site at: http://ec.europa.eu/environment/impel/

Proposals for future development of the EU ETS - Phase II &	Number of the report
beyond	2007/9
Project Manager: – Lesley Worswick, Environment Agency, England	Report adopted at
and Wales	Lisbon plenary
Authors:-	November 2007
Ben Grebot (Entec UK Ltd)	
Alistair Ritchie (Entec UK Ltd)	
Daren Luscombe (Entec UK Ltd)	
Nick Wood (Entec UK Ltd)	
Lucia Lavric (Entec UK Ltd)	
Project Group Members	Number of Pages
See Annex 2.	Report: 38
	Annexes: 98

EXECUTIVE SUMMARY

Member State governments, regulators, operators and verifiers have been on a steep learning curve over the last two years since commencement of the EU Emissions Trading Scheme (EU ETS). The experience gained during this time will be invaluable in shaping the future development of the scheme.

Furthermore the Commission announced that it will undertake a review of the Directive and this presented an opportunity for Member State Competent Authorities to influence the future development of the scheme by feeding back practical experiences and expertise following the first 2 years of implementation. The issues covered in the review include: scope of the directive; harmonisation; compliance and verification issues and linkage to third countries and other trading schemes.

Workshop I of this study was held in March 2007 and was primarily focussed on regulators priorities for the review of the Directive. Discussions at this workshop formed the basis of a report submitted to the Commission which outlined the key priorities in each of the areas for review. Information included in this report has been taken into account as part of the preparation of the impact assessment.

In addition, the Commission has revised its Monitoring and Reporting Guidelines (MRG) to provide greater clarity for Phase II¹. There are however, still areas that require further interpretation, clarification and tools for the evaluation of compliance with the MRG. Following the first IMPEL workshop, the ETS Technical Support Group (ETSG) prepared a series of papers to provide further guidance for the interpretation and application of MRG 2007:

1. Uncertainty Assessment

a. Uncertainty assessment of quantity measurements

_

¹ Commission Decision of 18 July 2007 C(2007/589/EC) 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 (notified under document number C(2007) 3416). Available at: http://ec.europa.eu/environment/climat/emission/mrg_en.htm

- b. Uncertainty Assessment of activity specific factors
- c. Excel sheet for uncertainty assessment of activity specific factors
- 2. How to interpret non-conformities in the MRG
- 3. Equivalence of non-accredited laboratories to EN ISO 17025:2005
- 4. Guidance on data flow activities and the control systems
- 5. Transferred CO₂
- 6. Commercially traded fuels and materials
- 7. Monitoring Plan Requirements UK Monitoring Plan Template
- 8. Small installations emitting less than 25 ktonnes of CO2
- 9. Assessment of unreasonable costs
- 10. Determining the quantity and assessing the uncertainty of source streams partially covered by EU ETS
- 11. Deviation from required tier and how to avoid applying the fall back approach
- 12. Using normal cubic meters

These formed the basis of discussions at the second workshop held as part of this study (Workshop II) in September 2007.

Project Aims & Objectives

The project objectives were as follows:

- 1. To critically analyse implementation of the ETS Directive and identify regulator priorities to feed into the Commission's review of the Directive (Workshop I); and
- 2. To identify (Workshop I) and develop guidance on priority interpretation issues and areas for clarification and the evaluation of compliance with the requirements arising from the revision of the MRG in time for commencement of Phase II (Workshop II).

The Environment Agency of England and Wales (EA) initiated the project and commissioned Entec UK Ltd to assist with the work.

Overview of Workshops

This report provides an overview of the discussions that took place at the two IMPEL workshops in Edinburgh hosted by the Scottish Environmental Protection Agency (SEPA) on 15-16th March 2007 and 10th September 2007.

The outputs from Workshop I are presented in Section 2 of this report and outline the participating regulators' priorities for the review of the EU Emissions Trading Scheme

² Directive 2003/87/EC of the European Parliament and of the Council of 13 October 2003 establishing a scheme for greenhouse gas emission allowance trading within the Community and amending Council Directive 96/61/EC. Available at: http://ec.europa.eu/environment/climat/emission/implementation_en.htm

Directive $(2003/87/EC)^2$ as well as the IMPEL group's key priorities for further guidance/interpretation of the Monitoring and Reporting Guidelines II.

The outputs from Workshop II are presented in Section 3 of this report and outline the IMPEL group's discussions, views and comments on the notes for further guidance/interpretation of the Monitoring and Reporting Guidelines II that have been prepared by the ETSG.

Disclaimer

This report on Proposals for future development of the EU ETS - Phase II & beyond is the result of a project within the IMPEL Network. The content does not necessarily represent the view of the national administrations or the Commission.

PROPOSALS FOR FUTURE DEVELOPMENT OF THE EU ETS - PHASE II & BEYOND

Contents

EXECUTIVE SUMMARY	V
Project Aims & Objectives	vi
Overview of Workshops	
Proposals for future development of the EU ETS - Phase II & beyond	1
1 Introduction	1
1.1 This Report	1
1.2 Project Aims & Objectives	1
1.3 Policy Context	1
1.4 Structure of this report	2
2 Workshop I	5
2.1 Workshop Objectives	5
2.2 Pre-workshop Questionnaire	5
2.3 Workshop Programme	5
2.4 Overview of Discussions: Priorities for Directive Review	6
2.4.1 Introduction	6
2.4.2 Scope of Directive	6
Definition of Combustion Installation	
Small Installations	
Other Sectors & Gases	10
Carbon Capture & Storage (CCS)	11
2.4.3 Compliance & Verification	12
Status of the MRG	
Centralisation	
MRV Requirements for Small Installations	14
2.4.4 Further Harmonisation & Increased Predictability	14
Setting of the Cap	14
Auctioning	
Benchmarking	16
2.4.5 Linking with Third Countries Trading Schemes	17
2.5 Overview of Discussions: MRG II	
2.5.1 Introduction	
2.5.2 Priority Issues	18
Emissions Trading Technical Support Group (ETSG)	18
Summary of discussions	
Priorities for further guidance/interpretation	20
2.5.3 Summary	21
2.6 Additional Workshop Conclusions	21
2.6.1 Learning from other Member States	21
2.6.2 Additional Proposals	
3 Workshop II	23
3.1 Workshop Objectives	23
3.2 Pre-workshop Consultation	23
3.3 Workshop Programme	23
3.4 Discussion of ETSG Outputs	23
3.4.1 Introduction	23
3.4.2 Overview of Discussions	23
Uncertainty Assessment	23
Non-Material Non-Conformities	24
Non-Accredited Laboratories Equivalence	25
Section 10 Control Requirements	26
Transferred CO ₂	27
Sampling Frequency	
Commercially Traded Fuels	

Content of Monitoring Plans	29
Interpreting Section 16 Derogations for Small Installations	
Unreasonable Costs	
Installation Boundaries – Non-EU ETS Sources	
Deviation from the Required Tier	
MRG Requirement Regarding Nm ³	33
4 Workshop Conclusions	
4.1 Workshop I	
4.2 Workshop II	
4.3 Future Workplan	
4.3.1 ETSG Outputs	
4.3.2 Future IMPEL Projects	
ANNEX 1: Pre-Workshop I Questionnaire Responses	
ANNEX 2: List of Delegates	1
WORKSHOP I	1
WORKSHOP II	2
ANNEX 3: Workshop programmes	1
WORKSHOP I	1
WORKSHOP II	
ANNEX 4: Post-workshop I actions	1
Finland's Verification Experience (information provided by Seppo Oikarinen 12th June 2007)	1
Additional Proposals	
ANNEX 5: Compendium of ETSG Technical Guidance Notes	1

PROPOSALS FOR FUTURE DEVELOPMENT OF THE EU ETS - PHASE II & BEYOND

1 Introduction

1.1 This Report

This report provides an overview of the discussions that took place at the two IMPEL workshops in Edinburgh hosted by the Scottish Environmental Protection Agency (SEPA) on 15-16th March 2007 and 10th September 2007. The outputs from Workshop I outline the participating regulators' priorities for the review of the EU Emissions Trading Scheme Directive (2003/87/EC)³ as well as the IMPEL group's key priorities for further guidance/interpretation of the Monitoring and Reporting Guidelines II. The outputs from Workshop II outline the IMPEL group's discussions, views and comments on the notes for further guidance/interpretation of the Monitoring and Reporting Guidelines II that have been prepared by the ETSG.

1.2 Project Aims & Objectives

The project objectives were as follows:

- 1. To critically analyse implementation of the ETS Directive and identify regulator priorities to feed into the Commission's review of the Directive (Workshop I); and
- 2. To identify (Workshop I) and develop guidance on priority interpretation issues and areas for clarification and the evaluation of compliance with the requirements arising from the revision of the MRG in time for commencement of Phase II (Workshop II).

The Environment Agency of England and Wales (EA) initiated the project and commissioned Entec UK Ltd to assist with the work.

1.3 Policy Context

Member State governments, regulators, operators and verifiers have been on a steep learning curve over the last two years since commencement of the EU Emissions Trading Scheme (EU ETS). The experience gained during this time will be invaluable in shaping the future development of the scheme.

Furthermore the Commission announced that it will undertake a review of the Directive and this presented an opportunity for Member State Competent Authorities to influence the future development of the scheme by feeding back practical experiences and expertise following the first 2 years of implementation. The issues covered in the review include: scope of the directive; harmonisation; compliance and verification issues and linkage to third countries and other trading schemes.

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

³ Directive 2003/87/EC of the European Parliament and of the Council of 13 October 2003 establishing a scheme for greenhouse gas emission allowance trading within the Community and amending Council Directive 96/61/EC. Available at:

Workshop I of this study was held in March 2007 and was primarily focussed on regulators priorities for the review of the Directive. Discussions at this workshop formed the basis of a report submitted to the Commission which outlined the key priorities in each of the areas for review. Information included in this report has been taken into account as part of the preparation of the impact assessment.

In addition, the Commission has revised its Monitoring and Reporting Guidelines (MRG) to provide greater clarity for Phase II⁴. There are however, still areas that require further interpretation, clarification and tools for the evaluation of compliance with the MRG. Following the first IMPEL workshop, the ETS Technical Support Group (ETSG), as a sub workgroup reporting to IMPEL, prepared a series of papers to provide further guidance for the interpretation and application of MRG 2007:

- 1. Uncertainty Assessment
 - Uncertainty assessment of quantity measurements
 - Uncertainty Assessment of activity specific factors
 - Excel sheet for uncertainty assessment of activity specific factors
- 2. How to interpret non-conformities in the MRG
- 3. Equivalence of non-accredited laboratories to EN ISO 17025:2005
- 4. Guidance on data flow activities and the control systems
- 5. Transferred CO₂
- 6. Commercially traded fuels and materials
- 7. Monitoring Plan Requirements UK Monitoring Plan Template
- 8. Small installations emitting less than 25 ktonnes of CO2
- 9. Assessment of unreasonable costs
- 10. Determining the quantity and assessing the uncertainty of source streams partially covered by EU ETS
- 11. Deviation from required tier and how to avoid applying the fall back approach
- 12. Using normal cubic meters

These formed the basis of discussions at the second workshop held as part of this study (Workshop II) in September 2007.

1.4 Structure of this report

This report is structured around the following sections:

⁴ Commission Decision of 18 July 2007 C(2007/589/EC) 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 (notified under document number C(2007) 3416). Available at: http://ec.europa.eu/environment/climat/emission/mrg_en.htm

- Section 2 summarises the key objectives and structure of Workshop I (including details of the pre-workshop questionnaire) as well as an overview of the discussions that took place;
- Section 3 summarises the key objectives and structure of Workshop II as well as an overview of the discussions of the discussions that took place;
- Section 4 presents an overview of the key conclusions from each workshop as well as potential future IMPEL projects;
- Annex 1 presents details of the key messages from the pre-workshop questionnaire completed by delegates prior to Workshop I;
- Annex 2 provides a list of IMPEL members that attended Workshops I and II:
- Annex 3 provides a summary of the programme for Workshops I and II;
- Annex 4 presents the post-workshop actions completed following Workshop I; and
- Annex 5 provides the compendium of technical guidance notes produced by the ETSG.

2 Workshop I

2.1 Workshop Objectives

The key objectives of Workshop I were to undertake facilitated brainstorming of

- Priorities for the Directive review; and
- Priorities for implementation of MRG II.

Outputs from the discussions held at Workshop I included:

- 1. A report to the Commission on regulator priorities for Directive review; and
- 2. A list of priority issues to be taken to the IMPEL EU ETS technical support group for development of interpretative guidance.

2.2 Pre-workshop Questionnaire

A pre-workshop scoping questionnaire was developed and circulated amongst the IMPEL members in order to scope out the key issues and priorities for the review of the Directive. The responses received were also used to help structure the discussions at the workshop itself. In total, twelve responses were received from nine different Member States:

- UK (England & Wales and Scotland x 2);
- Italy;
- Sweden;
- Romania x 2;
- Bulgaria;

- Netherlands;
- Germany (verbal response by telephone);
- Ireland; and
- Finland.

The questionnaire was structured around the four main areas for the review of the Directive (scope, harmonisation, compliance and enforcement and linking with third countries trading schemes). A summary of the pre-workshop key messages is provided in Annex 1.

2.3 Workshop Programme

The workshop was held in Edinburgh on 15th and 16th March 2007. A list of all of the attendees is provided in Annex 2. The workshop was split between the two days with day one focusing primarily on priorities for the review of the Directive whilst discussions on day two concerned the MRG II and priorities for further interpretation. A series of breakout sessions (facilitated by Entec) were held on day one to explore issues around the scope of the Directive, compliance and verification, harmonisation and linking with third countries trading schemes. Delegates were split into two groups for these discussions. The remaining sessions of the workshop were delivered to the group as a whole. The final programme for the workshop is presented in Annex 3.

2.4 Overview of Discussions: Priorities for Directive Review

2.4.1 Introduction

Day one of the workshop was devoted to discussions on the review of the Directive. An initial group session was held to discuss the questionnaire feedback and gather preliminary thoughts on the Directive review. A series of more detailed breakout sessions were then undertaken with the group split into two in order to discuss and agree on regulator priorities to be communicated to the Commission for consideration. The sessions were organised around the four main themes for the review:

- Scope of Directive
 - → Definition of combustion installation
 - → Small installations
 - \rightarrow Other sectors and gases
 - → Carbon capture and storage
- Compliance and verification
 - → Status of the MRG
 - → Centralisation
 - → MRV requirements for small installations
- Further harmonisation and increased predictability
 - \rightarrow Setting of the cap
 - → Auctioning
 - → Benchmarking
- Linking with third countries trading schemes

A series of questions developed specifically for each of these topics were used to structure the sessions. These are presented at the start of each of the following sections. The aim of each session was to understand what issues there are in relation to the topics above that the Directive review could address and what evidence is there to demonstrate this. In addition, ways in which these issues could be addressed and their potential impacts (in terms of costs and benefits to regulators, verifiers, companies, governments etc.) were also discussed.

A summary of the discussions that took place around each topic and the identified priorities for the Directive review are presented in the following sections.

2.4.2 Scope of Directive

Definition of Combustion Installation

Questions

- 1. Should there be a change to the definition of combustion installation?
- 2. Should standby generation capacity be included?
- 3. Does the definition of installation boundary need to be improved?
- 4. Should there be a harmonised definition of process emissions?

Summary

A summary of the discussions that took place in relation to the definition of combustion installation are presented below in Box 2-1.

Box 2-1 Summary of discussions in relation to the definition of combustion installation

Definition of combustion installation

- There are a number of Member States that are currently not using the broad definition (for example, Germany, France, the Netherlands and the UK).
- There was support for more clarity regarding what should be included within the definition of combustion activity and what should be excluded. In particular, with respect to large combustion installations, for which the ETS inclusion was not harmonised in the MS (such as heat treatment in the iron and steel sector, combustion installations in the chemical industry etc.). A clear definition of the term combustion installation is required, if necessary even by extending Annex 1 of the directive. More specifically, there was support for a move for all to the 'broad' definition, combined with a de minimis threshold for the purposes of aggregation to exclude facilities with very small individual combustion units (for example, hospitals).
- The benefits of a clearer ('broad') definition are that competition distortions are avoided and it would substantially decrease the resource needed to:
 - decide what is included (for example, in one MS it hasn't yet been decided if gas radiators are included in the scheme – whereas it would be clear under a broad definition); and
 - \rightarrow develop guidance.

In addition, it would avoid the need for (and additional cost of) sub-metering at an installation

The de minimis for aggregation would work by only including individual combustion units above a certain capacity
within the overall aggregated capacity. If the total overall aggregated capacity at an installation was 20MWth or
over, then the installation would be covered by the EU ETS and all individual combustion units at the installation
would be included in the installation regardless of how small they were (for the purpose of determining emissions
and allowances).

Standby generation capacity

- There were considered to be no particular issues regarding standby generation.
- It was felt that standby units should continue to be covered by the EU ETS (provided they are over the relevant thresholds for inclusion), and should not be given special status due to the difficulty of defining and verifying such units.

Definition of installation boundary

- Examples were given of how installations are sometimes not correctly covered, through differences in national implementation rather than issues with the Directive itself. These include:
 - (1) A site with multiple ownership where the regulator considers the capacity owned by each operator rather than the capacity of the whole installation. In the example given, the capacity of boilers owned by one operator (an energy contractor) was 11MWth, and so fell outside the scope of the Directive. However, the aggregate capacity was over 20MWth and so would have been inside the scope of the Directive.
 - (2) Defining installation as a site. For example, a district heating system with boilers on different sites but which are interconnected would not be regarded as one installation but each site would be regarded as an installation, with the possibility of the system (or parts of it) falling outside the scope of the Directive.
 - (3) In one MS, an example was given about how the licensing of an installation under IPPC dictates its definition under EU ETS. For example if a chemical installation is licensed as a chemical installation under IPPC then no part of it is covered by EU ETS, even if it has combustion units over 20MWth. However, if the installation is part licensed as a chemical installation and part licensed as a combustion installation then the combustion installation would be covered by EU ETS.
- No suggestions were proposed for possible improvements to the definition of installation boundary but it was agreed that this should be explored outside of the workshop.
- It was agreed that examples should be presented on how to interpret installation boundary in order that
 interpretations by different regulators across different MSs could be more consistent. These could include for
 example: large sites with roads passing through and long pipelines etc; large district heating schemes with
 connected boilers on different sites; sites with multiple ownership of units etc. These examples could be
 formalised in Annex 4 of the Directive.
- Paper being developed by Jaap Bousema (VROM, NL) and Don Mackay (SEPA, Scotland) after the workshop looking at examples of how to interpret installation boundaries (in progress).

Harmonised definition of process emissions

There were considered to be no particular issues regarding process emissions. Although in one MS a producer of
carbon black is investing in a lot of legal resources to argue that they are excluded from the scheme, whereas in
another MS they are included in the scheme. Several delegates expressed the opinion that there should be no
distinction between process and combustion emissions.

Small Installations

Questions

- 1. How would you further improve the cost-effectiveness of the participation of small installations in the scheme?
- 2. Is an emissions threshold preferable to a capacity threshold? How might it work?

Summary

A summary of the discussions that took place in relation to small installations are presented below in Box 2-2.

Box 2-2 Summary of discussions in relation to small installations

Improving the cost-effectiveness of the participation of small installations in the scheme

- Concern was expressed that a number of installations may have high capacities, but have low capacity utilisation
 rates and hence low emissions or a number of standby units which bring them into the scheme. For these
 installations, the administrative costs per tonne of CO₂ covered are relatively high and there is concern that
 coverage of such installations is not cost-effective.
- There was strong support for the introduction of an emissions threshold under which installations would fall out of the scope of the Directive. Detailed proposals for this are to be developed outside of the workshop (see Annex 4), however key criteria would be:
 - → emission threshold of, for example, 25,000tpa;
 - → the threshold is based on verified emissions over a specified historic reference period (for example, Phase II) to avoid disproportionate influence of unrepresentative years;
 - → once excluded the operator would need to provide evidence to confirm that the installation should remain excluded (for example, fuel bills); and
 - → the burden of proof would be on the operator to demonstrate that they should be excluded and remain excluded.
- A simple process could be developed by the Commission (or even IMPEL) for assessing whether or not an
 installation should be included/excluded from ETS.
- This would apply only to existing installations. For new installations, it is considered that capacity utilisation rates
 are likely to be high and therefore there is less likelihood that there will be large installations operated at low
 utilisation rates. Furthermore, for new installations it is not possible to verify emissions data, however alternative
 methods could be developed.
- Concerns were expressed by one delegate that an emissions threshold:
 - → will not considerably improve the cost effectiveness, as excluded operators outside the ETS will still have to carry out some monitoring;
 - → will be rather complex to administrate in particular as regards installations exceeding the threshold within the ETS period; and
 - → could lead to strategic 'gaming'; in particular, if there are large companies operating several installations above and below the threshold (for example, in the ceramics sector) there may be an incentive to shift production towards smaller and more inefficient (standby) installations.
- In the Netherlands, an emissions threshold of 25,000tpa has reduced the number of installations in the scheme from 510 to 208 with a 3% reduction in overall emissions.
- In Scotland, work by SEPA indicates this threshold would reduce the number of installations covered by the scheme by over 62% (52 sites) yet only reduce total emissions covered by the scheme by 1.87% (based on 2005 data).
- Italian 2005 verified emissions data shows that 478 installations emitting less than 25kt CO₂ accounted for only 2,1 % of total verified emissions.
- VROM have undertaken a study on the administrative costs of industries in the Netherlands (January-March 2007).
 It addresses the changes in administrative costs that go with EU ETS II in comparison with EU ETS I, including the MRG2.
- In Sweden there are plans to do a study on administrative costs for small and large installations this is expected to be available by Summer 07 [Action: Ulla Jennische to forward report to Lesley Worswick (EA) and Ben Grebot (Entec)]
- In England and Wales, the Environment Agency have been undertaking work on the administrative costs of compliance with EU ETS (report available). In addition, a review of the potential impacts of a 25kt emission threshold for the EU (minus Bulgaria, Malta and Romania) has been undertaken based on 2005 data taken from CITL. This assessment estimates that approximately 59% of installations have reported emissions <25kt yet they account for less than 2.5% of total emissions.
- Specific proposals are suggested for biomass plants
 - (1) It is proposed to exclude combustion units firing purely on biomass from the scope of the Directive. These units do not contribute to emissions within the scope of the EU ETS (although it is important to note that not all biofuels are in fact carbon neutral). Removing them could result in a noticeable reduction in the number of installations (and hence administrative costs) covered by the Directive. For example, in Sweden it is estimated that this would result in over 100 installations falling outside the scope of the Directive. Paper developed by Ulla Jennische (EPA, Sweden) after the workshop looking at number of pure biomass installations to support recommendation on exclusion (see Annex 4).

(2) It is also proposed that biofuel usage at multifiring combustion plants is not monitored (although biomass can already be monitored with a lower tier approach and only has to be reported as a memo item).

Is an emissions threshold preferable to a capacity threshold? How might it work?

- An emissions threshold is felt to be a more relevant type of threshold than capacity, given that the purpose is to try to exclude installations that are not significant in terms of their emissions, but which might otherwise be included due to their capacity. This could relate to standby units, or old plant that is run at low utilisation rates.
- Whilst a capacity threshold would be easy to validate, an emissions threshold could also be easy to validate if based on verified emissions over a complete phase.
- A capacity threshold could lead to some installations being excluded which have significant emissions as they fully utilise their capacity, and in comparison see installations with large capacity, but low utilisation remaining in the scheme.

Other Sectors & Gases

Questions

- 1. Do you support the inclusion of the following sectors and gases:
 - N₂O from production of nitric acid
 - CO₂ from production of aluminium
 - CO₂ & N₂O from production of CH₄ from coal mines ammonia/other fertilisers
- 2. How should MRV be approached for those sectors you would include?
- 3. What other sectors/gases would you like to see included and why?
- 4. Are there any sectors that should be excluded?

Summary

A summary of the discussions that took place in relation to other sectors and gases are presented below in Box 2-3.

Box 2-3 Summary of discussions in relation to other sectors and gases

Support for the inclusion of the following sectors and gases: N₂O from production of nitric acid; CO₂ & N₂O from production of ammonia/other fertilisers; CO2 from production of aluminium; CH4 from coal mines

- Issues raised by delegates include:
 - There was some support for inclusion of N₂O from production of nitric acid. N₂O from nitric acid plants has been considered for opt-in by two member states and might be a candidate for inclusion into the ETS.
 - Ammonia plants should be included, regardless of whether process or combustion emissions are involved. These plants are very large CO₂ emitters and therefore there is considerable potential for emission reductions. In ETS phases I and II there has been considerable lack of clarity, whether ammonia plants have to be considered as combustion installations and therefore have to be included into the ETS, in particular with regard to process emissions. A clarification could also be reached by explicitly mentioning these plants in Annex 1 of the revised Directive.
 - There are concerns about the inclusions of N₂O from adipic acid plants: In Europe there are 5 plants, all of which will be equipped with efficient abatement technology in 2008. Therefore the benefit of the inclusion into the ETS may be rather limited.
 - There was some support for the inclusion of CO₂ and N₂O from production of ammonia/fertilisers etc; and PFC and CO2 from production of aluminium. if primary aluminium were to be included then it should be ensured that secondary aluminium is covered by a broad interpretation of combustion installation.

- These views seemed to be based on common sense judgement rather than a systematic cost-benefit analysis. The need for cost-benefit analysis to support such decisions was identified.
- In Germany, a paper is being developed in March 07 on bringing in additional sectors.
- Questions were posed about what extra benefit would be expected from bringing in these sectors into the EU ETS when they are already covered by IPPC and subject to BAT based permit conditions for non-CO₂ greenhouse gases. The view was expressed that for the very specific case of N₂O from nitric acid plants an inclusion into the ETS might have some benefit with regard to a quicker implementation of N₂O abatement technology. An inclusion into the ETS must take into account BAT levels, for example by an appropriate benchmark derived from BAT, and developments in BAT in the light of technical advances, for example from the revision of the BREFs. This point was not answered and would need to be, to ensure proper consideration of the costs and benefits of extending the scope of the directive.
- However, it was felt that CH₄ from coal mines should not be included within the scope due to the difficulty of monitoring/verification as a result of the number of places where gases can be emitted.
- Overall, however, the view was expressed by some delegates that the inclusion of other sectors and gases was a political rather than regulatory issue so was not relevant to them.
- N₂O may impact on local air quality; control limits may be required which may affect ability to trade (overlap with IPPC).

How should MRV be approached for those sectors?

It is essential that MRV for any new sectors should follow a similar consistent process to CO₂

What other sectors/gases would you like to see included and why?

- Shipping due to significant emissions (Details available on EEA and EC websites). Also the developments in bringing aviation into EU ETS set a precedent for shipping, which is similar in terms of mobile sources with various types of movements.
- Non-ferrous metals was also mentioned as a sector for possible inclusion, although a broad combustion definition should capture most CO₂ emissions from this sector.

Are there any sectors that should be excluded?

No sectors were identified that should be excluded.

Carbon Capture & Storage (CCS)

Questions

- 1. Do you have any views on CCS and whether or not it should be mandatory subject to caveats?
- 2. Do you have views on what these caveats should be?

Summary

A summary of the discussions that took place in relation to carbon capture and storage are presented below in Box 2-4.

Box 2-4 Summary of discussions in relation to carbon capture and storage

Do you consider CCS should be mandatory subject to caveats?

- · There was limited knowledge of this technique and hence limited discussion.
- A large study in the Netherlands was identified, highlighting the options, technical constraints and possibilities of CO₂ being captured and stored in empty oil fields. A future project at Peterhead power station was also identified.
- In the UK, there is a specific team progressing a number of work streams regarding CCS.
- A number of issues were raised including:
 - high costs of implementation of CCS (based on a recent presentation at the European Commission (ECCP meeting));
 - lower energy efficiency due to considerable energy input required for separation, transport and storage;
 - scope for leakage in future;
 - concerns over how to monitor emissions and storage;
 - market distortions if power companies sell significant quantities of allowances;
 - potential groundwater impacts;
 - long term handling and liability of CO₂; etc.

Do you have views on what these caveats should be?

No views were expressed in relation to this point.

2.4.3 Compliance & Verification

Status of the MRG

Questions

1. Should the MRG be laid down in Regulation and why?

Summary

A summary of the discussions that took place in relation to the status of the MRG are presented below in Box 2-5.

Box 2-5 Summary of discussions in relation to the status of the MRG

Should the MRG be laid down in Regulation and why?

- Delegates expressed the view that monitoring and reporting methods are expected to evolve and improve in time
 as more experience is gained. This needs to be reflected in any system. At the moment the flexibility in being able
 to develop the MRG is seen to be important, although in future it is possible that it could become a regulation once
 the application of the MRG is more demonstrated in practice.
- Other concerns regarding potential regulation related to MS specific differences in implementation (for example, through the use of general binding rules). The Directive already requires the Commission to ensure that the Directive has been implemented correctly by Member States.
- The benefits of regulation would be that there would be no difference across MSs in the transposition of the MRG.
 Currently, the MRG has to be brought into legislation in a legal act with the risk that different MSs may transpose in
 different ways. The view was expressed that even with a regulation there would still be differences in
 implementation.

- A consistent approach to monitoring and reporting across the EU is considered essential in order to support the development of IT systems.
- Inconsistencies between MSs in terms of monitoring and reporting will undermine the probity of the scheme; this
 will become even more apparent in Phase III as the caps get tighter. Differences between MSs in applying the
 same legal text will induce operators to seek the most lenient options and could lead to tensions and impacts on
 trust with EU-ETS.
- The main concern regarding the MRG was regarding its content and not its status. There was agreement that a
 main area for improvement was on avoiding different interpretations through increased harmonisation,
 transparency and consistency.
- Several delegates expressed no opinion on whether or not the MRG should be laid down in a regulation or not.

Centralisation

Questions

1. What is your view on centralised verification or accreditation?

Summary

A summary of the discussions that took place in relation to centralisation are presented below in Box 2-6.

Box 2-6 Summary of discussions in relation to centralisation

What is your view on centralised verification or accreditation?

- · Key issues raised by delegates include:
 - Significant variations in performance between different verifiers. For example, in Finland a review of the performance of verifiers was undertaken for the first year of the scheme and this highlighted a large difference between verifiers. Although guidelines for verification had been developed, they were published after verifiers had agreed contracts and the prices had been set so low that they were unable to follow them (see Appendix E for further details). In Italy, a similar study was undertaken analysing verification reports (more detailed than the simple verification statement) and checking them against other sources (for example, emission reports); this too found significant differences between verifiers in terms of number of man days spent during site visits, verification opinions, criteria in defining non-conformities etc. Many of these differences were found to be consistently related to sector specialisation and installation complexity, but still showed some opportunities for actions and clarifications which are being taken forward.
 - Differences in how verifiers get checked by the accreditation bodies
 - Operators exerting influence over verifiers. One example identified involved a verifier complying with operator instructions which led to an approximate 0.5 million tonnes over allocation.
 - Operators changing verifiers if they don't like their output
 - The need for the registry to do checks on trends when data is entered using detailed information and data collected through the emission reports (and for verifiers to also do trend analysis which is covered in MRGII). This should identify step changes for investigation. One example was given where a verifier made a mistake and later owned up to it, after realising that the units for fuel consumption were incorrect resulting in a significant error in the allocation.
 - Verifiers being given insufficient time to do their work, which leads to a poorer quality job.
 - Ensuring sufficient availability of verifiers across the MSs
 - The level of accreditation is different in different MSs some accreditation bodies are firm, some are less firm

 there is not a level playing field
 - As the price of carbon goes up in future, it will be even more important for accreditation and verification to be performed to the highest standards.

- It was agreed that action is required to ensure independent, high quality and consistent verifications at an installation level, working to common standards.
- Most delegates agreed that the best way of achieving this would be to have a central EU level accreditation body responsible for ensuring that verification is performed to a sufficiently high and consistent standard. Specific roles could include:
 - → carrying out audits/peer reviews of national accreditation bodies;
 - → reviews/cross-comparisons between national accreditation bodies;
 - → checks that verifiers were planning to spend a sufficient number of days at an installation and are doing a satisfactory job; and
 - → sharing best practice.
- This would reduce pressure on verifiers to spend less days at an installation.
- Introducing templates/proformas for verifiers was considered to be a good idea. Some Member States (for example, Finland and Germany) have developed IT tools to ensure the transparency and quality of verification.
- These actions would need to be supported by strong sanctions imposed at an EU level.
- Other delegates, however, felt that centralised verification would not be feasible (for example, due to language difficulties) and would not be necessary.

MRV Requirements for Small Installations

Questions

1. If there were no de minimis, would you change the MRV requirements for small installations and what do you propose?

Summary

A summary of the discussions that took place in relation to MRV requirements for small installations are presented below in Box 2-7.

Box 2-7 Summary of discussions in relation to MRV requirements for small installations

If there were no de minimis, would you change the MRV requirements for small installations and what do you propose?

- The costs of compliance (of MRV) for small emitters were seen to be a significant issue.
- It was commented that overall administrative costs (for all installations, not just small installations) in Germany were
 about three times higher than in the Netherlands, and that the Netherlands felt that even their costs could be
 reduced. In general, areas for achieving further cost reduction include further simplification; improvement of tools
 and use of IT.
- MRGII introduces additional derogations for small installations (waving verifiers visit, using bills etc). Some
 delegates believe MRGII is sufficient, although others believe further improvements would be necessary. A view
 was expressed that it could be possible to undertake a sector based risk review to identify whether or not MRV
 requirements should change.
- Proposed changes described in this report regarding a capacity threshold for aggregation and an emissions threshold will have a significant overall benefit on small installations and improving the robustness of the scheme.
- Sector based general binding rules could be developed for small installations rather than a site-by-site basis.
 Templates for monitoring and reporting should be developed. Templates have already been considered by the EA in England and Wales as well as some other Member States.

2.4.4 Further Harmonisation & Increased Predictability

Setting of the Cap

Ouestions

1. What are your views on the setting of a single EU-wide cap and why?

Summary

A summary of the discussions that took place in relation to setting of the cap are presented below in Box 2-8.

Box 2-8 Summary of discussions in relation to setting the cap

What are your views on the setting of a single EU-wide cap and why?

- Although there was support for an EU wide cap, there was very limited discussion on this point given that this is a political rather than regulatory role
- Differences in cap setting between MSs could result in competition distortions. It is therefore important that cap setting is harmonised.
- Concerns were raised over how a single EU-wide cap would be distributed amongst the MSs. It cannot be split
 equally as there are large variations in economic development/growth as well as abatement potential between
 different MSs.
- The Commission needs to have a more accurate and transparent approach for the setting of caps. A single harmonised method should be developed that all MSs have to apply.

Auctioning

Questions

- 1. What are your views on auctioning?
- 2. What percentage of auctioning should be undertaken?
- 3. Should the amount of auctioning be different for different sectors and why?

Summary

A summary of the discussions that took place in relation to auctioning are presented below in Box 2-9.

Box 2-9 Summary of discussions in relation to auctioning

What are your views on auctioning?

- · There was general support for auctioning and, in theory, a large percentage of allowances could be auctioned.
- In sectors, which can pass prices to the costumer, such as the electricity sector, a large percentage of auctioning will be a favourable approach, as this will decrease windfall profits. However, concerns were raised that full auctioning might not be feasible for all sectors, as there is potential for operators in sectors exposed to international competition to move production outside the EU if a high percentage of, or full, auctioning of allowances was to take place. An example was given of a major company moving production from one MS to another in order to get better allowances under Phase I of the scheme. This illustrates that EU ETS is already impacting on decisions of firms where to locate production, even without potential future impacts of auctioning. However, it was noted that site specific issues, such as availability and costs of personnel, infrastructure, company taxation and subsidies, may in fact have more impact on the site selection than an issue such as emissions trading.
- This highlighted a challenge for authorities to understand in an objective way the impacts of such a policy, considering industry concerns seriously but critically. Developing legislation to regulate this could be complicated.

- In Ireland, the ETS department has been funded by auctioning (approximately 1% was held back to fund this).
- · Further concerns over auctioning included:
 - MSs losing the ability to control overall allocations at a sectoral level (unless there were sectoral auctions)
 - Big operators buying up more allowances than necessary to exert power over small firms
 - If the market is controlled by a few large companies, there is a risk of influencing auctioning and price of certificates:
- Currency risk although it is not clear that this risk is higher with auctioning than other allocation methods

What percentage of auctioning should be undertaken? Should the amount of auctioning be different for different sectors and why?

• It was proposed that aviation should be the first sector to have 100% auctioning. A suggestion was made that auctioning could be based on growth above the baseline.

Benchmarking

Questions

1. Would you support the introduction of sectoral benchmarking and why?

Summary

A summary of the discussions that took place in relation to benchmarking are presented below in Box 2-10.

Box 2-10 Summary of discussions in relation to benchmarking

Would you support the introduction of sectoral benchmarking and why?

- There was little discussion of this subject, given the limited experience of the delegates of benchmarking.
- Some delegates expressed an opinion that benchmarking is technically very complicated and data intensive. However, others indicated that at least technically it should work for sectors with homogeneous products, such as electricity, mineral products and even for iron and steel industry (e.g. by classifying steelworks into comparable units, such as blast furnaces, sinter plants, coke oven plants, etc.).
- Others indicated that it may not be politically acceptable to some MSs (for example, less developed MSs).
- A description of benchmarking was given, based on experience in developing benchmarks in the UK. For the UK's
 Phase II NAP, allocations for new entrants and incumbents lacking sufficient historical data receive benchmarked
 allocations. These are based on research undertaken for DTI (reports available at
 http://www.dti.gov.uk/energy/environment/euets/phase2/new-entrants/benchmarks-review/page29366.html), to
 develop benchmarks for the full range of sectors where new entrants are thought to be possible, including the
 following sectors:

Large electricity producers

CHP

Small generation activities

Other combustion

Offshore oil and gas

Onshore gas distribution compressors

Onshore gas LNG imports

Onshore gas storage

Onshore oil and gas terminals

Engines fired on gas from abandoned coal mines

Petroleum refining

Iron and Steel (Integrated Steelworks)

Iron and Steel (EAF Steelmaking)

Cement

Lime

Gypsum

Ceramics

Glass

Paper dryers

Petrochemicals

The typical benchmark formula is: allocation = capacity * benchmark emission factor * capacity utilisation rate * other factors

- Some of these benchmarks are already potentially relevant at an EU level without modification; whilst others would require modifications to certain standardised parameters or other elements of the benchmark formulae. Such modifications would require additional research covering aspects such as capacity definitions, capacity utilisation rates, emission factors etc). Whilst these benchmarks were developed primarily for new entrants, the parameter values are often based on best performing incumbents and hence it would be feasible to apply them to incumbents, although this would require further consideration.
- The key to developing these benchmarks was the application of a set of clear evaluation criteria including:
 - → feasibility
 - can the input data to the benchmark be verified?
 - are benchmarks based on best practice? Can factors be replicated by a third party?
 - are benchmarks based on readily available data?;
 - → incentives for clean technology for new entrants
 - are benchmarks standardised avoiding differentiation of raw materials, technologies and fuels?;
 - → competitiveness and impact on investment
 - is the proposed benchmark likely to meet needs for a future new entrant? If not, what is the potential impact in emissions and monetary terms?;
 - → consistency with incumbent allocations
 - how would an allocation using the proposed Phase II benchmark compare against Phase I allocations and relevant emissions?.
- Similar, and perhaps additional, criteria would need to be applied in developing EU wide benchmarks for incumbents and new entrants. Furthermore, the priorities or weightings of the different criteria would also need to be agreed.
- Based on this experience it is considered that benchmarking is technically feasible at an EU level, subject to the above mentioned comments about the areas of further work that would be required.
- Benchmarks have also been developed in several other Member States, primarily for new entrants, although less
 information is currently available on these. In the Netherlands, for example, a different type of approach has been
 developed to benchmark emissions at an installation level, whereby allocation = historic emissions * (benchmark
 energy consumption/actual energy consumption) * other factors.
- Some MS already used benchmarking for allocation in NAP II. For example, in Italy a benchmark has already been used for sectoral distribution to clinker, lime and coke production, whereby allocation was calculated based on historic production; for electricity production allocation was calculated with explicit fuel dependent benchmarks.
- Concerns were raised about the lack of data for establishing transparent EU wide benchmarks. On the one hand
 industry might have strong interests to have weak benchmarks and on the other hand data security restrictions may
 prevent MS using confidential data for the development of EU wide benchmarks.

2.4.5 Linking with Third Countries Trading Schemes

Questions

1. What are your views on linking EU ETS to schemes in third countries and why?

Summary

A summary of the discussions that took place in relation to linking are presented in Box 2-11.

Box 2-11 Summary of discussions in relation to linking with third countries

What are your views on linking EU ETS to schemes in third countries and why?

- It was commented that there are rapid developments elsewhere in the world on similar schemes to the EU ETS, with events moving particularly fast in the USA. Other key schemes are in Australia and Japan. A PWC report "Building trust in emissions trading: Global trends in emission trading" presents further information.
- Key issues were felt to be consistency and compatibility between schemes to ensure similar safeguards and stringency.
- Benefits were anticipated in terms of strengthening global climate policy linkages and reducing distortions in competition.
- A key challenge was considered to relate to MRV credibility and the need to build a global common currency.

2.5 Overview of Discussions: MRG II

2.5.1 Introduction

The main focus of day two was on MRG II and priorities for further interpretation by the ETSG. These sessions were primarily based around a series of presentations. A voting session was then held to determine delegates' key priorities for further interpretation.

The following presentations were given to help structure the discussions:

- Overview of monitoring and reporting issues identified by the Commission to be considered in the review of the Directive (as presented in the Commission's recent Communication November 2006 on priority areas for the review of the Directive⁵);
- Overview of the role of the Emissions Trading Technical Support Group (ETSG);
- Overview of key changes to MRG II and priority issues for further interpretation carried forward from the previous project (prior to the workshop itself, a paper summarising the main changes proposed in EU ETS MRG II was circulated to the group); and
- Feedback on the responses provided by delegates to the pre-workshop questionnaire in relation to key MRG II issues.

In addition, a presentation was given on the Emissions Trading Scheme Workflow Automation Project (ETSWAP).

2.5.2 Priority Issues

Emissions Trading Technical Support Group (ETSG)

In earlier discussions, the ETSG identified issues for further elaboration (i.e. definitions, technical issues and procedures from the MRG II that need further guidance and/or interpretation). These included the following:

⁵ Communication from the Commission to the Council, the European Parliament, the European Economic and Social Committee and the Committee of the Regions. Building a global carbon market - Report pursuant to Article 30 of Directive 2003/87/EC. Brussels, 13.11.2006. COM(2006)676 final. Available at: http://ec.europa.eu/environment/climat/emission/review_en.htm

- Uncertainty assessment of measurement instruments, calibration/maintenance, combination of measurement instruments/ measurement system and error propagation law;
- Tiers of approaches/fall back approach;
- Requirements for small installations;
- Unreasonable Costs:
- Guidance on minimum requirements of Monitoring Plan;
- Implications of new definition of combustion plant; and
- Determination of activity specific data and factors (section 13 MRG 2007).

Further issues that the ETSG identified as needing to be addressed were presented and are summarised below:

- Content of the monitoring plan;
- Monitoring plan for small installations;
- Unreasonable costs/technically feasibility;
- Commercially (standard) traded fuels/ materials;
- Table 1 clarification;
- Transfers of CO₂;
- Uncertainty analyses;
- Control & verification–issues to be addressed in EA 6/03;

- Implications of new definition of combustion plant;
- Determination of activity specific data and factors;
- Clarification of use of non-accredited labs;
- Gas chromatographs and gas analysers (section 13 MRG2007);
- Reporting format.

Summary of discussions

A summary of the discussions that took place in relation to MRG are presented below:

- The ETSG currently consists of members from the Netherlands (Ministry of VROM and the NEa), Germany (DEHst), Austria (UBA), UK (Environment Agency for England and Wales), Eurelectric and Europia/CEFIC. Delegates from other Member States were invited to contribute towards the ETSG so that work produced by the group receives input from a wider range of countries and will carry more weight with the Commission.
- The ETSG had limited resources and time available to address all issues in time for the second workshop in Edinburgh in September. Therefore, it was important to agree on the key priorities for further interpretation that can be realistically addressed by the ETSG;

- Some of the work areas being addressed by the ETSG were already quite far advanced (for example, uncertainty analyses) and would be circulated amongst the group for comment.
- The Netherlands had prepared guidance on the MRG for industry; this was offered to other Member States if it may be of interest.
- The EA Working Group on EU-ETS Verification has updated EA 6/03. The revised document had recently been issued to cover the remainder of Phase I. A more thorough revision of the EA 6/03 will be made between the time of the workshop and the end of the year to expand scope, clarifications etc and to bring EA 6/03 fully in line with the revised MRG.
- Finland had considered what may be termed an unreasonable high cost. Its approach is based on the average allowance price for 2005/06 (2 year average) based on the daily spot price (~€18.5 per tonne).
- A new set of Frequently Asked Questions (FAQs) for monitoring and reporting are being developed by the Commission and should be available in May 2007.
- In addition, the Commission was considering safeguards in relation to verifiers in a new study due to be commissioned. The terms of reference were not available at the time of the workshop. The study itself was due to be presented at the WGIII/CCC meeting of 28 June 2007.

Priorities for further guidance/interpretation

In order to try and identify delegates' key priorities for further guidance and interpretation for the ETSG to address, delegates were invited to vote on their top five issues for consideration (it must be noted that the participating administrative bodies were represented by a different numbers of delegates). A list of issues was presented based on responses to the pre-workshop questionnaire as well as discussions at the workshop itself. The list of issues along with the outcome of the vote itself is presented in Figure 2.1.

E Н F С Α Ν **Priority Issues** М 0 ı В J Κ G 10 14 16 18 **Number of votes** Uncertainty analysis - a common understanding on what Small installations - thresholds & MRV requirements the uncertainty analysis entails how to assess compliance with thresholds and derogations Expansion, change & monitoring plan Biomass & alternative fuels - application of no tier requirements/format - need for a pan European template Ι. to promote consistency approaches 'Commercially traded fuels and materials' - how to define C. Section 10 Control & Verification - section is complicated J. and ambiguous. Need a common understanding K. Unclear guidelines for transferred CO₂ - how to address D. Definition of installation boundary - non-EU ETS sources Lack of availability of ISO 17025:2005 accredited Unreasonable costs & technical feasibility - fallback F. laboratories approaches - how to apply Category A/B/C installations - further guidance on F. Section 13.5 Use of non-accredited laboratories - how to determining categorisation allow a lighter touch whilst ensuring equivalence is met N. Explanation of materiality with respect to verification Flares – ability to meet monitoring tier requirements Ο. Standard methods for sampling of materials (Section 13)

Figure 2.1 IMPEL priorities for further guidance/interpretation of MRG II

2.5.3 *Summary*

The ETSG agreed to take on board the discussions held in this session and consider the most effective way to address the group's priorities for further interpretation prior to the second workshop held in Edinburgh in September 2007.

The overall message from discussions in these sessions was the need for harmonisation across the EU in terms of interpretation of MRG and its application.

2.6 Additional Workshop Conclusions

2.6.1 Learning from other Member States

An important conclusion from the workshop was the issue of learning from other Member States (for example, through sending people to other countries to learn how they deal with ETS). In particular, New Member States and the Accession and Candidate Countries are encouraged to take the opportunity to learn how other

Member States have implemented and regulated ETS if they feel they need further information. This can be achieved by working together for a few weeks or so, and initiated by informal invitations between Member States.

2.6.2 Additional Proposals

Following the discussions held in the breakout sessions on priorities for Directive review it was agreed for selected IMPEL members to consider some more specific issues and prepare a short summary paper. These are summarised below:

- 1. Proposal on how an emission threshold would work in practice (Lesley Worswick England & Wales)
- 2. Biomass collate data on number of pure biomass installations to support recommendation on exclusion (Ulla Jennische Sweden)
- 3. Examples of installation boundary definitions (Jaap Bousema Netherlands)

Papers 1 and 2 are presented in Annex 4. Paper 3 is still under development.

3 Workshop II

3.1 Workshop Objectives

The key objectives of Workshop II were to undertake facilitated discussion of the guidance notes prepared by the ETSG on a series of monitoring issues with the aim of reaching agreement so that the papers could be finalised (see Section 1 for details of the papers prepared by the ETSG). Where agreement could not be reached on a specific note, post workshop actions required to finalise the paper were identified.

3.2 Pre-workshop Consultation

Prior to the workshop the package of papers prepared by the ETSG was circulated to the IMPEL members so that they could prepare comments to discuss. To assist the IMPEL members and provide focus on the most important issues, the ETSG also prepared a series of questions and discussion points related to each paper. These are presented in Section 3.4 alongside a summary of the main discussion points.

3.3 Workshop Programme

The workshop was held in Edinburgh on 10th September 2007. A list of all of the attendees is provided in Annex 1. A series of breakout sessions were held to discuss some of the more complex or potentially contentious guidance notes prepared by the ETSG (uncertainty assessment, non-material non-conformities, non-accredited lab equivalence and Section 10 control requirements). Delegates were split into two groups for these discussions. The remaining sessions of the workshop were delivered to the group as a whole. The final programme for the workshop is presented in Annex 3.

3.4 Discussion of ETSG Outputs

3.4.1 Introduction

Discussions at the workshop were based around a series of presentations which provided an overview of each of the papers plus the key questions and issues for discussion. A summary of the discussions for each of the papers is presented in the following sections alongside a brief summary of the content of the paper (provided by the ETSG).

3.4.2 Overview of Discussions

Uncertainty Assessment

Uncertainty assessment of quantity measurement in relation to EU ETS requirements Guidance Note I (ETSG note No. II.1)

This Guidance note outlines a practical way to assess the uncertainty of measurement instruments and measurement systems that are used to measure the quantity of a source stream (practical interpretation of the error propagation law formula), where such assessment is required.

Questions

- 1. Do you understand where uncertainty assessment is and is not required (is this sufficiently and properly emphasised in the note)?
- 2. Do you agree with the practical method described in the note and the Annex attached to this note (this is as starting point for situations where uncertainty assessment is required)?
- 3. Do you have any objections to or suggestions on the practical method described in the note or the Annex?
- 4. Do you have any alternatives to the practical method?

Summary

A summary of the discussions that took place in relation to the papers on uncertainty assessment is presented below in Box 3.1.

Box 3.1 Summary of discussions in relation to ETSG notes on uncertainty assessment

- Uncertainty assessment requires clarification this need was very obvious at a recent workshop with operators in England and Wales when 95% of the questions were related to uncertainty.
- The importance of understanding when uncertainty assessment is not required is critical and was agreed to be well explained in the note. An operator should go further than the approach outlined in the note if the steps in the note cannot be met or the operator wishes to go further. In addition, the Competent Authority may challenge the operator to go further. If an operator wishes to apply different figures to those in Annex 1 then they will need to provide justification for any changes. The onus should always be on the operator.
- Although there may be some concerns that the approach outlined in the note is too simplistic, it is important to
 remember that it is there to provide a good starting basis and should help those operators who lack detailed
 knowledge of the issues and/or resources. The level of detail required for uncertainty assessment should be
 proportionate to the specific situation.
- The majority of IMPEL members and the representative from the Commission (Marco Loprieno) agreed that the note provided a very clear and good common sense approach to uncertainty assessment.
- The Frequently Asked Questions on the Commission's Monitoring and Reporting Guidelines (MRG) are due to be revised. This guidance note (or elements of it) could be considered for inclusion in the FAQs as an approach that could be adopted.
- The potential to evaluate the effectiveness of this approach after it has been used during the validation process (for example, after year 1) was discussed. It will be important to keep all of the papers under review and update them where/when necessary particularly if any problems are encountered.
- It was agreed that the approach outlined in the paper and the uncertainty figures provided in the note should be subject to technical peer review (including by scientific institutions with responsibilities on uncertainty assessments for the most common measurement instruments) before it is finalised [ACTION: ETSG circulated note to relevant bodies for comment on approach and annex by end of September and October, respectively]
- It was agreed that a general disclaimer should be prepared to be included with this and the other guidance notes indicating that they represent best practice and are only there to provide an example of how it may be undertaken (i.e. the note provides a common approach which is not legally binding) [ACTION: Matthias Wolf (Germany) prepared disclaimer for inclusion with ETSG notes to be sent to Lesley Worswick by end of September]
- It was suggested that the term 'conservative/substantiated measures' is defined more clearly and an example is
 provided to support the understanding of the concept in a text box [ACTION: ETSG to consider comment on
 'conservative/substantiated measures']
- It was also suggested that the term "specific factors" from Step 2 Guidance Note I of Uncertainty assessment of quantity measurements should be defined more clearly and a example to be provided to support the understanding of the concept, eventually in a text box [ACTION: ETSG to consider comment on 'specific factors']

Non-Material Non-Conformities

How to interpret non-conformities in the MRG (ETSG note No. XI)

This note focuses on whether non-conformities should be submitted in the verification report and how operators should be required to address non-conformities according to section 10.4 MRG. This is of particular concern regarding the section 10.4.2(e) requirement that "Member States shall ensure that the operator addresses non-conformities and misstatements after consultation of the Competent Authority in a timeframe set by the Competent Authority".

Questions

- 1. Do you agree with the guidance and interpretation provided in this note?
- 2. Do you have any objections to or suggestions on the guidance and interpretation provided in this note?
- 3. Do you have any alternative suggestions on the guidance and interpretation provided in this note?
- 4. Do you support submitting non-conformities in the verification report? If yes which option for doing that would you prefer?
- 5. Do you have a particular preference for the options that are listed in the note on how to deal with non-conformities?

Summary

A summary of the discussions that took place in relation to the paper on non-material non-conformities is presented below in Box 3.2.

Box 3.2 Summary of discussions in relation to ETSG note on non-material non-conformities

- Overall, the majority of the group agreed with the general approach outlined in the guidance note. However, some delegates raised the issue that the note was too open and should specify a particular option rather than a series of options to promote harmonisation.
- It was noted that there is a requirement on the Regulators to consider non-conformities. Taken in isolation, they may not be an issue, but a number of non-conformities may present a concern to the Regulator
- The legislation in Finland requires verifiers to inform operators of non-conformities they identify. Verifiers are
 encouraged to check operator's monitoring systems as early as possible in the process so that any issues are
 identified sooner rather than later. The Competent Authority should be made aware of non-conformities via the
 internal management report.
- It was suggested that a definition of "important non-conformities" would be useful; this is likely to be in the line of non-conformities that can affect emissions data although this could add a layer of unnecessary complexity. Therefore it was agreed that the reference in the interpretation document would be to 'non-conformities' rather than 'all non-conformities' so that trivial non-conformities would not need to be reported
- In the UK, operators have to submit a report every year (30th June) outlining how they will address non-conformities. This has worked well.
- The majority of delegates expressed agreement for most non-conformities to be submitted in the verification report.
 All non-conformities that may impact upon emission calculations and emissions data should be reported.

 Preference was stated towards Options 2 and 4 (with the removal of the word 'all' non-conformities) [ACTION:
 ETSG to reflect on discussions at workshop and amend guidance note to recommend specific option]
- Provided the group is happy with the revised guidance note, the note (or elements of it) could be considered in the revision of EA 6/03 and/or for inclusion in the Commission's FAQs as an approach that could be adopted.

Non-Accredited Laboratories Equivalence

Equivalence of non-accredited labs to EN ISO 17025:2005 (ETSG note No. IV)

This note provides a list of questions that can be used to check whether a non-accredited laboratory has implemented the most critical requirements of EN ISO 17025:2005. This is meant to be a practical tool to interpret section 13.5 MRG pursuant to which an operator has to demonstrate the non-accredited laboratory used, meets requirements equivalent to EN ISO 17025:2005. This is in addition to the need for the operator to demonstrate validation and on-going inter-comparison of each relevant analytical method to be applied by the non-accredited laboratory against results from a laboratory accredited to EN ISO 17025:2005.

Questions

- 1. Do you agree with the checklist and guidance to the checklist in this note?
- 2. Do you have any objections to or suggestions on the checklist?
- 3. Do you have any alternative questions to the checklist of questions submitted in this note?

Summary

A summary of the discussions that took place in relation to the paper on non-accredited laboratories equivalence is presented below in Box 3.3.

Box 3.3 Summary of discussions in relation to ETSG note on non-accredited labs equivalence

- The revised MRG states that the preference should always be for an accredited laboratory.
- There are two main sets of non-accredited laboratories: those operated by the operator in-house and external laboratories. The emphasis should always be on the operator to demonstrate equivalence of any non-accredited laboratories.
- IMPEL members agreed with the checklist and had no comments/additional questions to include. It was suggested that the checklist is peer-reviewed by experts in this field with the view of reducing it such that the critical questions are more obvious [Action: ETSG to arrange for peer review comments to be returned by end October]
- Issues raised by delegates included the following:
 - → Some operators may view this as an easier way of gaining accreditation than applying for EN ISO 17025:2005 which can be more burdensome could be creating a loophole. This is why it is important that good QA/QC for outsourced activities is developed within an installation in accordance with section 10 MRG requirements
 - May be possible to accredit one common laboratory against which operators may use to check their own laboratories (currently being planned in Finland).
 - → Group recognised that Competent Authorities may not have the competences and financial/human resources to carry out site visits to check equivalence. This area of work may then need to be outsourced.
 - → Operators should pay for site visit made by Competent Authority if charging the operator is possible in national legislation.
- The group agreed that the onus is on operators to prove that accredited laboratories are not available and then
 demonstrate equivalence of a non-accredited laboratory. This should then be checked by the Competent Authority.
 The verifier also has a role to check the ongoing performance of a non-accredited laboratory.
- [ACTION: ETSG to update note to take into account comments from IMPEL members]

Section 10 Control Requirements

Guidance on data flow activities and control system (ETSG note No. III)

This note provides practical guidance on how to interpret the requirements on data flow activities and the control system that are prescribed in section 10 of the MRG.

Questions

- 1. Do you agree with the guidance on the section 10 MRG requirements?
- 2. Do you have any objections to or suggestions on the guidance?
- 3. Do you have any alternatives to the guidance on the section 10 MRG requirements?
- 4. In section 5.2.1 of the note two options are mentioned to ensure that the risk assessment is done accurately. The option is to either submit the risk assessment in the MP or by requiring operators to set-up a procedure for risk assessment. Do you have any preference for either option?

Summary

A summary of the discussions that took place in relation to the paper on section 10 control requirements is presented below in Box 3.4.

Box 3.4 Summary of discussions in relation to ETSG note on section 10 control requirements

- The IMPEL group agreed with the overall approach outlined in the guidance note.
- The majority of IMPEL members stated a preference for the second option outlined in the guidance note i.e. for
 operators to set-up a procedure for risk assessment and reference this in the monitoring plan. The Competent
 Authority and verifier can then scrutinise this and request further information if required. Some members
 questioned whether a detailed risk assessment could be included as an annex to the monitoring plan while the
 monitoring plan should only include a synthetic description of the risk assessment (description of the process
 stages) [ACTION: ETSG to update guidance note to specify preferred option]
- Further work to develop a paper on how a detailed risk assessment should be carried out [Action: ETSG but
 outside the timeframe of this project]

Transferred CO₂

Competent Authority approval for subtraction of CO_2 in fuel transferred out of an EU ETS installation (ETSG note No. XII)

This note emphasises Competent Authority responsibilities regarding approval for subtraction of inherent CO₂ in a fuel transferred out of an installation.

Questions

- 1. Do you agree with the guidance and interpretation provided in this note, in particular the need for added Competent Authority vigilance concerning transfer of genuine fuels?
- 2. Do you have any objections to or suggestions on the guidance and interpretation provided in this note?
- 3. Do you have any alternative suggestions on the guidance and interpretation provided in this note, in particular recommendations concerning criteria for better and more consistently assessing genuine fuels?

Summary

A summary of the discussions that took place in relation to the paper on transferred CO₂ is presented below in Box 3.5.

Box 3.5 Summary of discussions in relation to ETSG note on transferred CO₂

- The IMPEL group agreed with the overall approach outlined in the guidance note and that Competent Authorities need to apply vigilance concerning the transfer of fuels.
- Two additional points were raised that could be added to the checklist in the guidance note for assessing whether
 or not an output stream is being transferred out of an installation for use as a genuine fuel [ACTION: ETSG to
 include these points in the guidance note, where relevant]:
 - → Check to see whether emissions have already been allocated to output stream; if not (i.e. already subtracted) then no need to check
 - → Ensure that the output stream is used as a fuel by the installation to which it is transferred to and check that it is added to their emissions

Sampling Frequency

Uncertainty assessment of activity-specific factors in relation to EU ETS requirements – Guidance note II (ETSG note No. II.2)

This Guidance clarifies how to assess the uncertainty of activity-specific factors like the emission factor, net calorific value etc. The question addressed in this note is how to ensure that one third of the maximum uncertainty that applies to the quantity measurement of the source stream is met for the activity-specific factor.

Questions

- 1. Do you agree with the practical method described in the note and the excel sheet belonging to this note?
- 2. Do you have any objections to or suggestions on the practical method described in the note or the excel sheet?
- 3. Do you have any alternatives to the practical method?

Summary

A summary of the discussions that took place in relation to the paper on sampling frequency is presented below in Box 3.6.

Box 3.6 Summary of discussions in relation to ETSG note on sampling frequency

 The IMPEL group agreed with the approach outlined in the guidance note and had no comments. Therefore the note may be finalised without change.

Commercially Traded Fuels

Note on commercially traded fuels and materials (ETSG note No. VII)

This note indicates when an operator is allowed to use invoice data for determining the annual amount of commercially traded fuel or material as well as the net calorific value for commercially traded fuels. It provides guidance on how to interpret the MRG provisions on commercially traded fuels or materials laid down in section 7.1 MRG and Annex II MRG.

Questions

- 1. Do you agree with the guidance and interpretation of the MRG requirements in this note?
- 2. Do you have any objections to or suggestions on the guidance and interpretation of the MRG requirements in this note?
- 3. Do you have any alternative suggestions on the guidance and interpretation of the MRG requirements in this note?

Summary

A summary of the discussions that took place in relation to the paper on commercially traded fuels is presented below in Box 3.7.

Box 3.7 Summary of discussions in relation to ETSG note on commercially traded fuels

 The IMPEL group agreed with the approach outlined in the guidance note and had no comments. Therefore the note may be finalised without change.

Content of Monitoring Plans

Monitoring plan requirements (ETSG note No. V)

This note clarifies the monitoring plan requirements laid down in section 4.3 MRG. It is accompanied by the UK template for a monitoring plan and its guidance. This template is designed to accommodate the full requirements of section 4.3, as well as the simplified requirement allowed for installations of low emissions under section 16, and also installations wishing to apply the fall-back approach under section 5.3.

Questions

- 1. Do you agree with the guidance and interpretation of the monitoring plan requirements in this note?
- 2. Do you feel that the template for the Monitoring Plan provides a useful tool to secure appropriate information from operators in relation to section 4.3 and more general MRG requirements?
- 3. Do you have any objections to or suggestions on the note or the UK template for a monitoring plan?
- 4. Do you have any alternatives to the guidance and interpretation provided in this note and the various elements in the UK template for a monitoring plan?

Summary

A summary of the discussions that took place in relation to the paper on monitoring plans and example template spreadsheet is presented below in Box 3.8.

Box 3.8 Summary of discussions in relation to ETSG note on monitoring plans

- The excel template has been trialled in Scotland and England with operators and received very positive feedback. It provides an alternative to a paper report and simplifies the process as all of the questions are set out in an ordered and logical format. Examples are also included to assist completion.
- The IMPEL group agreed with the approach outlined in the guidance note and had no comments. Therefore the note may be finalised without change.
- It was considered that the UK template provides a good starting point for the ETSWAP or any other national workflow automation project, and is an illustration of how efficient the submission of the MP and its validation can be organised.

Interpreting Section 16 Derogations for Small Installations

*Small installations emitting less than 25 ktonnes CO*₂ (*ETSG note No. X*)

This note provides guidance on how to interpret section 16 MRG and when to waive certain MRG provisions for small installations.

Questions

- 1. Do you agree with the guidance and interpretation provided in this note, in particular concerning:
 - a. potential waiving of site visit requirements as part of verification?
 - b. the proposed requirements for simplified monitoring plans?
- 2. Do you have any objections to or suggestions on the guidance and interpretation provided in this note?
- 3. Do you have any alternative suggestions on the guidance and interpretation provided in this note?

Summary

A summary of the discussions that took place in relation to the paper on interpreting section 16 derogations for small installations is presented below in Box 3.9.

Box 3.9 Summary of discussions in relation to ETSG note on interpreting section 16 derogations for small installations

- Some delegates disagreed with the assumptions on waiving site visits. It was felt that this shouldn't be up to the verifier; only the Competent Authority should be able to make this decision. A verifier needs specific detailed knowledge of the site and this can only be achieved via a site visit.
- In the UK, verifiers make the decision of whether or not to waive a site visit. The Competent Authority has however, the option to veto this decision.
- Most delegates expressed support for the second option outlined in the guidance note i.e. verifier's decision to
 waive a site visit is dependent upon the operator gaining advanced Competent Authority approval. This option
 would help to protect a verifier from commercial pressure from the operator. The first option (verifier's decision is
 final) could only work with a strong accreditation system in place.
- A 3rd option was presented: The practice in Germany to define (strict) criteria for waiving/necessity of site visits. A
 verifier has to conduct a site visit at least once (without exception) as a minimum. He must conduct a repeat visit if
 changes made at the installation following his last site visit could impact on the annual emission amount.
 Regardless of whether changes have been made, the verifier must continue to make site visits in future years.
- It was agreed that criteria for waiving a site visit should be developed for inclusion in the guidance note to include examples where this could apply [ACTION: ETSG to develop criteria for waiving of site visit and include in guidance note]
- It was agreed that both options should be kept in the final guidance note with a note to the effect that option 1 should only be applied if the Competent Authority is assured that there is sufficient accreditation; if not, then option 2 should be adopted [ACTION: ETSG to update note accordingly]

Unreasonable Costs

Note on assessment of unreasonable costs (ETSG note No. VI)

This note is an integration of the Dutch and German methods to assess unreasonable costs and is a practical interpretation of section 2 (4) (a) MRG.

Ouestions

- 1. Do you agree with the guidance and interpretation provided in this note, in particular concerning:
 - a. assessing the unreasonable costs in case of uncertainties in quantity measurements of the source stream (section 1 of the note)?
 - b. assessing other types of unreasonable costs as laid down in section 2 of this note?
 - c. periodic assessment every two years to the Competent Authority whether the costs are still unreasonable or improvement of the monitoring methodology should be made?
- 2. Do you have any objections to or suggestions on the guidance and interpretation provided in this note?
- 3. Do you have any alternative suggestions on the guidance and interpretation provided in this note?

Summary

A summary of the discussions that took place in relation to the paper on unreasonable costs is presented below in Box 3.10.

Box 3.10 Summary of discussions in relation to ETSG note on unreasonable costs

- An error in the guidance note relating to the formula applied in Germany was identified [ACTION: ETSG to correct formula presented in report]
- Finland has applied a similar approach to the Netherlands but with a fixed allowance price based on the average price for 2005-06 (€18.5 per tonne of CO₂)
- Unreasonable costs will need to be assessed on a regular basis if the situation changes (for example, the price of allowances)
- It was agreed that the guidance note would be updated based on IMPEL members' comments (for example, benefits to be incorporated) [ACTION: ETSG to update note accordingly]

Installation Boundaries - Non-EU ETS Sources

Determining the quantity and assessing the uncertainty of source streams partially covered by EU ETS (ETSG note No. VIII)

This note describes how to monitor the quantity of a source stream partially covered by EU ETS. It also explains how to assess the uncertainty of the quantity measurement in that case.

Questions

- 1. Do you agree with the four alternatives put forward in section 3 of the note to take the non-EU ETS amount of a source stream into account?
- 2. Do you have any objections or suggestions concerning the four alternatives?
- 3. Do you have any alternatives to the suggested alternatives?
- 4. Do you agree with the uncertainty calculation explained in section 4 of the note?
- 5. Do you agree with the legitimacy of allowing over-estimation where it is the only feasible/reasonable option, noting MRG reference to "conservative" and definition in terms of not allowing under-estimation of annual emissions to occur?

Summary

A summary of the discussions that took place in relation to the paper on installation boundaries is presented below in Box 3.11.

Box 3.11 Summary of discussions in relation to ETSG note on installation boundaries

- This note is only relevant to those Member States that have not applied the broad definition of combustion (for example, the Netherlands and UK).
- The IMPEL group agreed with the approach outlined in the guidance note and had no comments. Therefore the note could be finalised without change.

Deviation from the Required Tier

Deviation from the required tier - how to avoid the fall back approach (ETSG note No. IX)

The purpose of this note is to clarify when the Competent Authority could allow an operator to deviate from the required tier and how (if unavoidable) the fall back approach could be used as an exceptional, temporary solution in case tier 1 cannot be met for one or more source streams.

Questions

- 1. Do you agree with the guidance and interpretation provided in this note? In particular, do you agree:
 - a. with the concept of late compliance in exceptional and temporary circumstances?
 - b. that the Competent Authority should only accept the fall-back approach in exceptional circumstances on a temporary basis, and assess annually whether it remains applicable?
- 2. Do you have any objections to or suggestions on the guidance and interpretation provided in this note?
- 3. Do you have any alternative suggestions on the guidance and interpretation provided in this note?

Summary

A summary of the discussions that took place in relation to the paper on deviation from the required tier is presented below in Box 3.12.

Box 3.12 Summary of discussions in relation to ETSG note on deviation from the required tier

- It was agreed that the Competent Authority should only accept the fall-back approach in exceptional circumstances and on a temporary basis.
- The IMPEL group agreed with the approach outlined in the guidance note and had only the following comment:

Annual assessment of the fallback approach is a very good idea. The suggestion for an annual review whether the fall back approach is still acceptable is not specifically mentioned in the MRG and companies could attest that. However it could be seen as a further interpretation of the section 4.3 MRG requirements that monitoring methodology shall be changed if this improves the accuracy of the reported data and the section 4.3 MRG requirement that the CA shall check and approve the monitoring plan before the start of the reporting period. It was suggested that this point should be further clarified and substantiated in the note.

MRG Requirement Regarding Nm³

Using normal cubic meters (ETSG note No. XIII)

This note recommends discretion to convert gaseous volumes to Nm³ as defined by the MRG at the stage of final reporting rather than earlier during the calculation of emissions. It is imperative however, that calculations involve functions based at the conditions of temperature and pressure.

Questions

1. Do you agree that conversion to Nm³ should be allowed at the stage of final reporting subject to approval of the Competent Authority?

Summary

A summary of the discussions that took place in relation to the paper on Nm^3 is presented below in Box 3.13.

Box 3.13 Summary of discussions in relation to ETSG note on Nm³

The IMPEL group agreed with the approach outlined in the guidance note and had no comments. Therefore the note could be finalised without change.

4 Workshop Conclusions

4.1 Workshop I

Table 4.1 summarises the key conclusions in relation to the review of the Directive based on discussions held at Workshop I.

Table 4.1 Summary of priorities for Directive Review

Issue

Priorities for Directive Review

SCOPE OF THE DIRECTIVE

Definition of Combustion

Support for broad definition of combustion with a de minimis capacity threshold for purposes of aggregation to exclude facilities with very small individual combustion units (for example, hospitals)

- → If individual source capacity is above the threshold then it counts towards aggregation total.
- \rightarrow If this is above 20 MW then all activities are included regardless of size.

There was support for more clarity regarding what should be included within the definition of combustion activity and what should be excluded. In particular, with respect to large combustion installations, for which the ETS inclusion was not harmonised in the MS. A clear definition of the term combustion installation is required, if necessary even by extending Annex 1 of the Directive.

No issues with standby capacity - should be included.

Paper being developed by Jaap Bousema (VROM, NL) and Don Mackay (SEPA, Scotland) after the workshop looking at examples of how to interpret installation boundaries (in progress).

· Small Installations

Existing plants – included if above capacity threshold but exclude if emissions are below a specified limit (for example, <25kt) (paper developed by Lesley Worswick (EA, England and Wales) on how an emission threshold could work in practice - see Annex 4).

- → The emission level should be established over a defined reference period (verified emissions).
- → Burden of proof on operators.
- ightarrow Simple process for demonstration that installation should remain excluded e.g. fuel bills

No emission threshold applicable for new plant unless some way can be found of demonstrating emissions will be lower than the threshold.

Note: concerns were raised that an emission threshold may be difficult to implement/regulate and might give incentives to companies to shift production to inefficient installations.

Biomass – exclude units operating on pure biomass and exclude biomass fraction of dual fuel units. Paper developed by Ulla Jennische (EPA, Sweden) following the workshop looking at number of pure biomass installations to support recommendation on exclusion (see Annex 4).

Other Sectors & Gases

There needs to be a clear and systematic cost-benefit analysis of whether or not to include any additional sectors and gases.

Carbon Capture & Storage

No clear priorities identified at the workshop as it was outside the expertise of the delegates.

However, issues were raised by some delegates concerning the reliability and accountability of this technology for its inclusion in the EU-ETS.

Issue	Priorities for Directive Review
COMPLIANCE & VERIFICATION	
Status of the MRG	Mixed views on whether or not it should be laid down in a Regulation:
	→ Don't change the status – keep the flexibility of the current system (but content needs to be improved and refined to avoid different interpretations)
	→ Change to regulation – to ensure consistency as this requires MS to implement the legal text without changes in their own legislation
	ightarrow Commission already has the authority to ensure that MS are applying the MRG
 Centralisation 	Centralisation not required for verifiers but accreditation quality control is needed
	Centralised body for quality assurance of accreditation bodies in MSs responsible for ensuring that verification is performed to a sufficiently high and consistent standard and that high standards are continuously achieved. Should include peer reviews of the functioning of the accreditation bodies and their performance as well as comparisons between verification bodies to ensure a harmonised performance and output throughout the EU.
	→ Strong sanctions need to be imposed at an EU level
MRV Requirements for Small Installations	Best addressed through MRG II which introduces additional derogations for small installations. Further refinements needed to the MRG.
	Potential to develop further tools & templates for small installations (which could also be applicable to all installations)
FURTHER HARMONISATION & INC	CREASED PREDICTABILITY
Setting of the Cap	A more accurate and transparent approach needs to be developed for the setting of national caps. A single harmonised method should be developed that all MSs have to apply in a consistent manner.
Auctioning	No clear priorities identified at the workshop.
Benchmarking	No clear priorities identified at the workshop.
LINKING WITH THIRD COUNTRIES	S TRADING SCHEMES
• Linking	No clear priorities identified at the workshop.

4.2 Workshop II

The table below provides a summary of whether agreement was been reached for each of the ETSG guidance notes and/or any outstanding actions following the workshop that were required to finalise the note.

Table 4.2 Summary of outcome of discussions on each ETSG guidance note and any outstanding actions

ETSG Guidance Note	Agreement?	Outstanding Actions
		Approach and uncertainty figures provided in note to be technically reviewed (by end September and October, respectively) [Action: ETSG]
Uncertainty assessment	✓	 ETSG to consider comment on 'conservative / substantiated measures' [Action: ETSG]
,		ETSG to consider comment on 'specific factors' from step 2 - Assess the additional uncertainty of context specific factors (note: Annex I – Uncertainty assessment of quantity measurements) [Action: ETSG]
Non-material non-conformities	√ ⁶	 Guidance note to be updated to recommend specific option preferred by the group [Action: ETSG]
Non-accredited laboratories equivalence	Χ	 Guidance note needs to be updated to take into account comments made by IMPEL members [Action: ETSG]
Section 10 control requirements	√	 Guidance note to be updated to recommend specific option preferred by the group [Action: ETSG]
Section to control requirements	•	 Guidance paper to be prepared on carrying out risk assessments [Action: ETSG]
Transferred CO ₂	✓	 Additional points to be considered for inclusion in checklist in guidance note [Action: ETSG]
Sampling Frequency	✓	
Commercially traded fuels	✓	
Content of monitoring plans	✓	
Interpreting Section 16 derogations	X	 Criteria for waiving site visit to be developed for inclusion in note [Action: ETSG]
for small installations	^	 Guidance note to be updated based on discussions at workshop [Action: ETSG]
Unreasonable costs	√	 Formula applied by Germany has been presented incorrectly in the note and needs to be amended [Action: ETSG]
		Some updates needed to guidance note [Action: ETSG]
Installation boundaries - non EU ETS sources	✓	
Deviation from the required tier - how to avoid the fall back approach	✓	 Clarify point on annual assessment of fallback approach [Action: ETSG]
MRG requirement regarding Nm ³	✓	

Written comments with regard the ETSG guidance notes were also provided by representatives from Austria following the workshop as they were unable to attend.

4.3 Future Workplan

4.3.1 ETSG Outputs

_

⁶ Agreement on this note was reached subject to the ETSG rewording the guidance as agreed at the workshop.

Following Workshop II, the ETSG took into account discussions and comments made by the IMPEL members (see Table 4.2 for key outstanding actions) and its meeting of 19 October 2007, the ETSG amended and updated the guidance notes accordingly, where relevant, to produce a final set of documents (see Annex 5).

The possibility of including some elements of selected guidance notes in the Commission's Frequently Asked Questions (FAQs), which are due to be revised, was discussed at the workshop.

4.3.2 Future IMPEL Projects

The final presentation and discussion at Workshop II related to potential future IMPEL projects. A number of potential projects were proposed including the following:

- 1. Compliance establishment of regulators compliance forum/compliance workshop. Could start January 2008 and would involve the following steps:
- i) Identify all relevant regulators
- ii) Questionnaire to identify issues relevant at local/regional level
- iii) Compliance conference/workshop 2008 focussing on:
 - Compliance issues for second trading period
 - Workshops on what regulators want/need from a Competent Authority forum e.g. E-mail helpdesk? Web site? Regular meetings?
 - Programme of work/meetings focussed on regulators/Competent Authorities needs
- 2. IRI IMPEL review initiative. This would be based on the existing IMPEL Review Initiative, modified to account for specifics of emissions trading. It would involve a review group of EU ETS experts visiting other Member States to critically analyse and review scheme implementation. Year 1 (Germany has volunteered + maybe 1 other) review, pilot and establishment of future rolling programme;

As time was limited at the end of the workshop only the two potential projects described above could be discussed. There was general consensus from the group that both projects would be useful and interesting and therefore they will be developed further.

ANNEX 1: PRE-WORKSHOP I QUESTIONNAIRE RESPONSES

Box A-1 Summary of pre-workshop questionnaire responses

Scope of Directive

Definition of combustion

- · Support for a broad definition of combustion installation to ensure consistency across the EU
- Support for the inclusion of standby generation capacity with a de minimis threshold
- Support for an improved installation boundary definition although some reservations
- Generally supportive of a harmonised definition of process emissions to reduce uncertainty although some reservations

Small installations

- Improving cost-effectiveness of participation of small installations via the application of a de minimis threshold in conjunction with broad definition
- · Installations below threshold out of scheme and are generally subject to other national requirements
- · Mixed views on whether there should be an emissions or capacity threshold or both

Other sectors and gases

- Generally supportive for the inclusion of some additional sectors and gases although some reservations
- MRV should follow a similar consistent process

Carbon capture and storage

 Limited support for CCS to be made mandatory; identified need for more detailed consideration as relatively new and emerging area

Other issues identified

• Exemptions for 100% biofuelled installations

Further harmonisation and increased predictability

Setting of the cap

- · Majority supportive for a single EU-wide cap to improve harmonisation and reduce competition distortions
- Issues raised over how it would work in practice

Auctioning

 General support for auctioning although some reservations over structure and procedure including the actual % to be auctioned

Benchmarking

- · General support for benchmarking in the absence of full auctioning providing it is robust and implemented uniformly
- Benchmarking would support more energy efficient industries

Other issues identified

- New entrant definition & allocation methodology
- Monitoring & reporting procedures
- Verification & accreditation
- · Compliance & enforcement e.g. implementation of due dates & civil penalties

Robust compliance and enforcement

Status of the MRG

- Majority supportive of the MRG being laid down in a Regulation to ensure harmonisation and consistency across the EU
- Some opposition to any changes as the current situation is deemed to be sufficient
- · Some concerns raised over the 'user friendliness' of the MRG if it were to be laid down in a Regulation

Centralisation

- Varied opinions on whether verification and/or accreditation should be centralised
- Practical difficulties of centralisation were raised (for example, languages and knowledge of a Member States' legislative framework)
- Potential alternatives raised include harmonised rules for accreditation and a centralised EU body for auditing Member States' practices and accreditation bodies

MRV requirements for small installations

- Opposing views on whether there should be a change to the requirements for small installations in the absence of a
 de minimis:
 - → Small installations already have sufficient MRV dispensations
 - → Requirements for small installations should be reduced further to increase simplicity

Linking with third countries trading schemes

- Number of issues raised by respondents to the questionnaire:
 - → Consistency
 - → Compatibility of schemes ensuring overall goal is achieved
 - → Strengthening global climate policy linkages
 - → Competition distortion
 - → Acceptance of credits verified from linking projects within the scheme

ANNEX 2: LIST OF DELEGATES

WORKSHOP I

Name	Organisation/Country
Ben Grebot	Entec UK
Alistair Ritchie	Entec UK
Nick Wood	Entec UK
Daren Luscombe	Entec UK
Lesley Worswick	EA, England & Wales
Howard Leberman	EA, England & Wales
Rob Gemmil	EA, England & Wales
Stephen Boyle	SEPA, Scotland
Don Mackay	SEPA, Scotland
Herbert Wiesenberger	Umweltbundesamt, Austria
Goknil Yamanoglu	Ministry of Environment & Forestry, Turkey
Mehrali Ecer	Ministry of Environment & Forestry, Turkey
Sebastian Tarnoky	National Environmental Guard, Romania
Daniela Panait	Ministry of Environment & Water Management, Romania
Hortensia Dumitriu	National Environment Agency, Romania
Elaine Farrell	EPA, Ireland
David Harrop	Defra, UK
Fabio Romani	Ministry for the Environment, Land & Sea, Italy
Ruediger Schweer	Hessian Ministry of the Environment, Rural Development & Consumer Protection, Germany
Matthias Wolf	UBA, Germany
Fredrik Zetterlund	EPA, Sweden
Ulla Jennische	EPA, Sweden
Chris Dekkers	VROM, Netherlands
Jan van der Plas	VROM, Netherlands
Jaap Bousema	VROM, Netherlands
Kalin Iliev	Ministry of Environment & Water, Bulgaria
Ivan Terziyski	Ministry of Environment & Water, Bulgaria
Rui Cabrita	General Environmental Inspectorate, Portugal
Jaroslav Suchy	Ministry of the Environment, Czech Republic
Seppo Oikarinen	Ministry of Trade & Industry, Finland

WORKSHOP II

Name	Organisation/Country
Ben Grebot	Entec UK Ltd
Daren Luscombe	Entec UK Ltd
Lucia Lavric	Entec UK Ltd
Marco Loprieno	European Commission
Lesley Worswick	Environment Agency, England & Wales
Howard Leberman	Environment Agency, England & Wales
Rob Gemmill	Environment Agency, England & Wales
Andrew Hitchings	Environment Agency, England & Wales
Stephen Boyle	Scottish Environment Protection Agency, Scotland
Don Mackay	Scottish Environment Protection Agency, Scotland
Kathryn Bradshaw	Scottish Environment Protection Agency, Scotland
Asa Hedmark	Scottish Environment Protection Agency, Scotland
Mike Cunningham	Scottish Environment Protection Agency, Scotland
Ivan Terziyski	Ministry of Environment & Water, Bulgaria
Evren Turkmenoglu	Environment Agency, Turkey
Nicoleta Mihaela Rosu	National Environmental Protection Agency, Romania
Carmen Slanovschi	Ministry of Environment and Sustainable Development, Romania
Elaine Farrell	Environmental Protection Agency, Ireland
Mariano Morazzo	Ministry for the Environment, Land and Sea, Italy
Chiara Di Mambro	Ministry for the Environment, Land and Sea, Italy
Ruediger Schweer	Hessian Ministry of the Environment, Rural Development & Consumer Protection, Germany
Matthias Wolf	Federal Environment Agency, Germany
Doris Tharan	Federal Environment Agency, Germany
Ulla Jennische	Swedish Environmental Protection Agency, Sweden
Martine Meerburg	Ministry of Housing, Spatial Planning and the Environment, Netherlands
Machtelt Oudenes	Ministry of Housing, Spatial Planning and the Environment, Netherlands
Chris Dekkers	Ministry of Housing, Spatial Planning and the Environment, Netherlands
Seppo Oikarinen	Ministry of Trade & Industry, Finland

ANNEX 3: WORKSHOP PROGRAMMES

WORKSHOP I

Day 1 - Directive	Review
9.30	Registration
10.00	Welcome and introduction aims and Objectives
	Lesley Worswick, EA
10.10	Opening Address by hosts
	Janice Milne, SEPA
10.25	Overview of Directive Review putting the IMPEL project into context
	Stephen Boyle, SEPA
10.40	Feedback of questionnaire analysis & initial comments
	Alistair Ritchie, Entec
11.15	Break
11.30	Session 1 [SCOPE OF DIRECTIVE]
12.30 - 13.30	Lunch
13.30	Session 2 [SCOPE OF DIRECTIVE]
14.30	Break
14.45	Session 3 [COMPLIANCE & VERIFICATION]
16.15	Break
16.30	Session 4 [HARMONISATION & LINKING]
17.30	Close
	Review (continued) & MRG II
8:15 - 8:30	Arrival
8.30	Plenary session to agree key messages for Directive Review from Day 1 discussions
0.45	Alistair Ritchie, Entec
9.15	Overview of Monitoring & Reporting Issues identified by the EC for the review of
	the Directive
0.20	Nick Wood, Entec
9.20	Overview of role of ETSG
0.20	Chris Dekkers, VROM
9.30	Feedback on MRG II Overview of priority issues for further interpretation carried
	forward from last project
10.00	Rob Gemmill, EA
10.00	Feedback on questionnaires
10.10	Nick Wood, Entec
10.10	Question & answer session. Discussion on key priorities for technical support
11.00	group to address Break
11.15	Prioritisation Workshop
11.45	Report back and agreement on priorities for interpretation/guidance development
12.15	ET SWAP Project Update
12.13	Chris Dekkers, VROM
12.45	Next steps: overview of forward workplan and Workshop 2
12.73	Lesley Worswick, EA
13.00	Close
13.00	Ciose

WORKSHOP II

Welcome, introductions, updates

- 08.00 Registration & coffee
- 08.20 Welcome and introduction to the day Entec
- 08.30 Opening address Scottish Executive
- 08.40 Overview of activities since the last workshop Lesley Worswick (EA)
- 08.50 Update on the Directive Lucia Lavric (Entec) & Marco Lopprieno (EC)
- 09.00 Introduction to the work of the ETSG Chris Dekkers

Presentation and discussion of ETSG outputs

- 09.15 Session one presentation Rob Gemmill & Machtelt Oudenes
 - Uncertainty assessment RG
 - Non-material non-conformities MO
 - Non-accredited labs equivalence -RG

10.00 Coffee

10.30 Session I discussion (facilitated small group discussion): uncertainty assessment, non-material non-conformities and equivalence for non-accredited labs.
12.00 Plenary

12.30 Lunch

- 13.30 Session II presentation and discussion Machtelt Oudenes
 - Section 10 control requirements (10 mins) MO
 - Session two discussion (facilitated small group discussion) (40 mins)
- 14.20 Session III presentation and discussion Rob Gemmill
 - Transferred CO2 overview of key aspects (10 mins) RG
 - Sampling frequency overview of key aspects (10 mins) RG
 - Commercially traded fuels (10 mins) RG
 - Session three discussion (plenary) (20 mins)

15.10 Tea

- 15.25 Session IV presentation & discussion Rob Gemmill & Chris Dekkers
 - Content of monitoring plans (10 mins) RG
 - Interpreting S16 derogations for small installations (10 mins) RG
 - Unreasonable costs (10 mins) CD

- Installation boundaries non EU ETS sources (10 mins) CD
- Deviation from the required tier how to avoid the fall back approach (5 mins) RG
- MRG requirement regarding N m3 (5mins) RG
- Session four discussion (plenary) (20 mins)

16.35 Other issues/further work/future projects LO

17.00 Close

ANNEX 4: POST-WORKSHOP I ACTIONS

Finland's Verification Experience (information provided by Seppo Oikarinen 12th June 2007)

The study was undertaken by Mr. Mikko Hongisto at the Technical Research Center of Finland (TRCF). TRCF is owned by the State of Finland and is totally independent of EU_ETS verification i.e. does not practise verification activities.

Mr. Mikko Hongisto has become one of the best experts on EU_ETS verification in Finland. The Finnish Guidelines for Verification have been developed by him. He is busy revising the 1st version according to experiences from 2006-07 verification.

Detailed information on the study has been provided including two presentations Mr. Hongisto has given in Brussels (5 June 2006) and Helsinki (2-3 October 2006).

These presentations and other supporting information are available on request from Lesley Worswick (<u>lesley.worswick@environment-agency.gov.uk</u>).

Additional Proposals

1. Emissions Threshold (prepared by Lesley Worswick, England & Wales)

EU ETS Directive review - how might an emissions threshold work in practice?

Background

The IMPEL EU ETS III project held its first workshop in Edinburgh on 15th and 16th March 2007. 27 delegates, representing 13 Member and accession states in the EU, attended the workshop. One of the aims of the workshop was to identify regulator priorities for the review of the EU ETS Directive. This paper takes forward one of the suggestions for simplifying the scheme i.e. the introduction of an emissions threshold.

The problem

The costs of compliance for small emitters participating in the EU ETS are disproportionate compared to their emissions. Work commissioned to assess the costs of compliance with the EU ETS in England and Wales suggested that installations emitting less than 10,000 tonnes CO₂ (carbon dioxide) per year release less than 1% of all emissions. If they were removed from the Scheme, the impact on the Scheme's overall emissions reduction potential would be negligible; however, the reduction in overall administrative burden would be significant.

The AEAT study estimates the annual operational cost (excluding one-off and voluntary costs) for small emitters is in the range £1-2 per tonne CO_2 compared to less than 1 pence per tonne CO_2 for the largest emitters⁷.

 $^{^7}$ Costs of Compliance with the EU Emissions Trading Scheme, AEAT study commissioned by the Environment Agency Summary Report June 2006

Currently installations are required to participate in the scheme by virtue of their installed capacity. This can have no bearing on the actual level of emission they generate.

Specifically in relation to combustion installations, the current capacity-based threshold also means that installations with high capacity but very low utilisation rates (and hence low emissions) are also caught by the scheme. There are a number of examples of this in the UK:

Installation name	Permit ID	Installed Capacity	2006 annual emission
Transco	117	134MWth	147t
RAF Fylingdales	1037	20MWth	49 t
BT	1220	80 MWth	316t

A solution

An emissions threshold is a simpler alternative to a capacity threshold as it can apply across the range of industry sectors, thereby excluding truly the smallest emitters from the scheme. An emissions threshold is a more relevant type of threshold than capacity, given that the purpose is to try to exclude installations that are not significant in terms of their emissions, but which might otherwise be included due to their capacity. This could relate to standby units, or plant that is run at low utilisation rates.

Application of this rule is simple for those installations clearly falling above or below the emissions threshold but historically emissions at many installations do vary. Careful consideration also needs to be given to the treatment of installations on the border of the thresholds where the annual variation means that they may be below the threshold one year but above it the next. Therefore there would need to be very clear rules for the application of the threshold. For example, for a 5-year Phase, if the maximum or average annual emission from all sources within the installation for the 3 years, ending 24 months (or however long is required to set caps for the next Phase) before the start of a phase, or for the entire previous phase, is less than the agreed threshold value, then the installation is excluded for the whole of the following phase. Justification could be supported by verification initially and then 'light touch' evidence required for each subsequent phase.

This would incur some burden on those operators who are below the emissions threshold in terms of proving their annual emissions do not exceed the threshold; however it would not necessarily mean they need to monitor their emissions. The calculation of emissions could be based on fuel receipts. All operators receive fuel bills. This would be particularly simple if the 'all in' principle were employed, whereby all fuel used on site contributes to the reportable emissions figure.

Where should the threshold be set?

Table 1 gives a summary of installation numbers and relevant emissions for thresholds set at 10kt and 25kt. The data is taken from the CITL for 2005. The data set does not

therefore include Malta, Bulgaria or Romania. The data is only as accurate as the CITL data.

Across the EU a 10kt threshold would remove 4091 (39%) installations representing 0.73% of 2005 reported emissions. For the UK a threshold set at 10kt would remove 384 (49%) installations in the UK, representing 0.61% of total UK reported emissions.

If the threshold were set at 25kt, then the effect would be to remove 503 (64%) UK installations (1.35 % of 2005 reported emissions) and 6204 (69%) EU installations, with the equivalent loss of just 2.47 % of emissions.

125 installations in the UK will be removed from the scheme in Phase II either as a result of a change in interpretation of the definition of ceramics or the application of a 3MW de minimis threshold for the purposes of aggregation of combustion sources. Of these installations 105 have annual emissions below 10kt and 123 below 25 kt.

Proposal

Issues relating to simplification cannot be considered in isolation. The IMPEL workshop concluded that the best solution for streamlining the scheme from a regulatory point of view would be a move to a fully broad definition of combustion, with a capacity threshold for inclusion of 20 MWth (possibly incorporating a de minimis capacity threshold for aggregation purposes, similar to that used by the UK for Phase II), combined with provision to opt out of the scheme if an installation emissions are below a defined threshold. 25 kt was the preferred threshold for emissions, although the process could be applied to any emissions threshold.

In principle therefore all installations meeting the activity definitions are included in the scheme. The onus is on the operator to demonstrate that their emissions are below the threshold if they wish to opt out.

Steps

- Broad definition of combustion applies.
- All combustion emissions within an installation are included.
- Sites with a thermal input > 20 MW qualify for the Scheme any units below 3 MWth (or other similar capacity threshold) could be excluded for aggregation purposes.
- If an installation's average or maximum (see below) annual verified emissions for the first 3 or 4 years of the previous Phase are below the threshold(s), then they can apply to opt out from the following Phase of the scheme. This is optional. Note that this assumes a 5-year Phase length continues beyond Phase II. If Phase length is extended in the future then the assessment period would need to be reconsidered.
- In deciding whether to apply to opt out of the scheme, operators would need to consider any forward projections and business plans. Whilst historical emissions could all be below the threshold, they may plan to expand or increase utilisation in the future. It therefore could be in the business interest not to opt-out in order to

ensure they receive an allocation and do not need to later apply to become a new entrant to the scheme when any expansion takes place.

- Once out of the scheme the installation remains out for the entire next Phase
 provided the operator can demonstrate that their emissions remain below the
 threshold (s). Where installations expand and exceed the threshold(s) they should reenter the scheme.
- Installations which have opted out, will still be required to report annual carbon dioxide emissions for purposes of demonstrating that their emissions continue to be below the threshold, but the calculation of these emissions will take a very light touch approach based on installation energy bills and set factors. No independent verification will be required and a small percentage of the installations will be audited at random by the regulators to ensure compliance.
- Installations found to have wrongly reported their average emissions will have enforcement action taken against them and they will be required to re-enter into the scheme with no allocations for the Phase. They could also automatically lose the right to apply for opt-out due to de minimis in the future, although this may be considered severe given that they have already been punished by receiving no allocation.
- During the penultimate year of each Phase, all installations with a capacity of greater than 20 MW will have their average emissions calculated and installations with an emissions below the threshold will be given the option to opt-out of the scheme:
- Once the total number of installations has been determined the Phase NAP and FAD
 can be finalised (assuming the process remains as it has for the first 2 phases of the
 scheme).

Should the threshold be based on an annual maximum or an average?

An annual maximum is clear and simple to apply. However it would penalise those operators whose emissions remain below the threshold for the majority of the time but for whatever reason peak in one year. This could be considered unreasonable.

However, an average may result in gaming by some operators. For example, an operator could emit well above the threshold for 2 years and then close or shift production to another installation for part of the final year.

A hybrid solution would be to apply an average for the reference period but combine this with an annual maximum at, say +10% of the average threshold. So for an emission threshold of 25kt, this would mean that the average emission over the reference period must not exceed 25kt, and the maximum allowable annual emission would be 27.5kt. Further analysis is required on this point.

How many years' data should be used?

This very much depends on how the cap setting process will work in the future. Historically, Member States have been required to submit their National Allocation Plans to the European Commission for approval 18 months before the beginning of the next Phase. If this remained the case going forward, then only the first 3 years data of

the preceding phase would be used, so that those installations above the threshold could have their allocation determined in time for the NAP.

How can new entrants demonstrate that they meet the threshold criteria?

For new installations it is not possible to verify emissions data until they have been operational.

The IMPEL group also felt that capacity utilisation rates are likely to be high for new entrants and therefore there is less likelihood that there will be large installations operated at low utilisation rates. Consequently new entrants could be considered ineligible for the opt out provision for their first Phase of operation.

However, if it is felt that new entrants (new and expanding installations) should not be treated any differently than existing installations, then new entrants should be required to produce a realistic, possibly verified, projection of expected emissions, based on expected fuel use and set factors.

How to deal with new entrants is one of the major issues which does seem to be difficult to solve. On the one hand market distortions should be avoided, but on the other hand projections are not really a reliable basis for exclusion. Projections could turn out to be wrong, and a process for dealing with such eventualities would be required.

How would installations, which enter the scheme for the first time as a result of a move to a broad definition of combustion, be dealt with?

These installations would be required to join the scheme unless they could provide (verified) emissions data to demonstrate that their emissions are below the threshold - this could be similar to the baseline verification required when the scheme commenced. Some existing installations may expand due to a move to a broad definition. Again, if they could provide verified data to demonstrate that any additional emissions would not take them over the threshold, they could apply to opt out.

It could be argued that requiring verified data for new entrants is not 'light-touch' in which case, it may be acceptable to allow operators to 'self-certify' their data. In this case, 3rd party verification would not be required, but operators would be required to submit their evidence supporting their opt out application and sign a document confirming its accuracy. They would be subject to the audit and enforcement procedures described below.

If operators are opted out of the scheme how can we require them to submit monitoring data - they won't have a permit

There are a number of ways in which obligations can be imposed onto opt-outs. Some suggestions on how this could be achieved are as follows:

i) all operators could be required to hold a permit, however the permit held by an operator who is below the threshold and therefore opted out could include a condition(s) exempting them from all requirements of the scheme, other than the requirement to submit their annual emission 'evidence'. Failure to comply with the requirement to submit their annual emission 'evidence' would result in their permit being varied to require them to comply with the full scheme requirements from that date.

- all operators are permitted but those operators who successfully apply to opt out are granted 'opt-out' certificates which include conditions requiring them to submit their annual emissions 'evidence'. Should they fail to comply with their opt out certificate conditions, the certificate is withdrawn and the permit conditions automatically apply from the date of withdrawal.
- operators who opt out of the scheme *have no permit* but are issued with an opt out certificate. The conditions of the opt out could be laid down in legislation (although if they changed it would be an onerous task to amend them) or the legislation could provide for conditions to be imposed in the certificates themselves. Breach of these conditions could be made an offence and the operator could be required to apply for a permit at this point.
- operators who do not meet the emission threshold fall outside the scope of the Directive or national legislation and therefore *do not require a permit*. National legislation could provide that these operators have to submit data at certain intervals and/or when required by the regulator. The regulator could monitor and verify all or a proportion of the information provided. The regulator would also have the necessary powers to investigate any operators that it thinks may fall within the Regulations. Any operator that did not have a permit and carried on emitting over the threshold would be in breach of the legislation and guilty of an offence.

In all of the above cases, automatic civil penalties could be levied for failure to submit data on time. Option (iv) appears to be the simplest solution which poses the least burden on operators and a relatively low burden on the regulator provided a risk based approach to checking data received from operators were applied.

How would we ensure operators were not providing false or misleading data?

Operators would be required to submit an evidence each year to demonstrate that their emissions remain below the threshold. They would be required to 'self-certify' that their evidence is accurate. The regulators would undertake random, risk-based audits of operator's evidence of a percentage of operators each year. This could initially focus on those installations closest to the threshold. The costs could be recovered by recharging for audits undertaken.

When would an operator re-enter if they exceed the threshold?

The opt out would apply for an entire Phase provided emission remain below the threshold, but any operator exceeding the threshold would re-enter the scheme as soon as possible after the annul reporting period. The reporting period would need to be defined. It may be 1 year if they exceed an annual threshold or however many years

(e.g. a 3 year period) which average emissions is determined over. Any operator who provides false or misleading data would be required to re-enter immediately but would have no allocation and would therefore be required to purchase allowances. Any cost associated with their re-entry should be covered by the operator through a permit application costs. Normal rules apply.

What happens if an operator's emissions increase above the threshold after they have opted out?

They would be required to re-enter the scheme during the phase. The problem would be that they have no allocation of allowances so they would either have to purchase allowances (this may be an incentive to maintain emissions below the threshold) or apply to the new entrant reserve if they have expanded.

The following table summarises the proposal:

For example: Phase III: 2012-2020	Existing installations	New installations
1. Across all installations (combustion installation > 20 MW, assigned sectors like steel-installations exceeding 2.5 tonnes per hour)	< 25 kt CO ₂ then the installation may opt out of EU ETS	< 25 kt CO ₂ then the installation may opt out of EU ETS
2. How? This is the most difficult issue we have to examine.	■ Average reported annual CO₂ emissions for the agreed period before the commencement of Phase III if the data is available; ■ Relating to the part of the industrial site included in emissions trading in Phase III; If the data is demonstrated not be representative, the operator must provide a conservative, substantiated estimate of the emissions to the satisfaction of the competent authority. This could be done by (if available) using underlying data from earlier emission reports (from earlier years).	Realistic estimation of emissions needs to be made based on i.e expected fuel use and standard factors - if available: data used to determine allowance allocation from NER
3. During Phase III	The operator of the installation is legally required to apply for an EU ETS permit and NER allocation if annual emissions exceed threshold(s) If the data from that particular year is demonstrated not be representative, the operator	The operator of the installation is legally required to apply for an EU ETS permit and NER allocation if annual emissions exceed threshold(s) If the data from that particular year is demonstrated not be representative, the operator
	must provide a conservative, substantiated estimate of the	must provide a conservative, substantiated estimate of the

emissions to the satisfaction of the competent authority.	emissions to the satisfaction of the Competent Authority.
The competent authority will audit these installations (i.e. at random)	The competent authority will audit these installations (i.e. at random)

Table 1: effect of emissions thresholds set at 10kt and 25kt

	Total number	Total reported	Missing ⁸	Zero ⁹			No. installa	ation	s <10kt		No. installations <25kt							
	Installations	Emissions			Total 10	%	Reported ¹¹	%	Emissions ¹²	%	Total ³	%	Reported ⁴	%	Emissions ⁵	%		
Austria	199	33372841	2	0	64	32	62	32	271127	0.81	107	54	105	53	980120	2.94		
Belgium	321	55363232	9	5	97	30	88	27	412104	0.74	169	53	160	50	1635412	2.95		
Cyprus	13	5078877	0	0	1	7	1	7	7812	1.54	8	62	8	62	125713	2.47		
Czech Rep	404	82454636	10	9	165	41	155	38	648420	0.79	265	66	255	63	2229513	2.7		
Denmark	388	26475718	8	21	243	63	235	61	506396	1.91	316	81	308	80	1628340	6.15		
Estonia	49	12621824	6	0	24	49	18	37	88429	0.7	29	59	23	47	175717	1.39		
France	1089	131257908	9	24	305	28	296	27	1530222	1.17	624	57	615	56	6785686	5.17		
Finland	602	33099660	11	134	440	73	429	71	494411	1.49	488	81	477	79	1255217	3.79		
Germany	1858	474501309	9	39	676	36	667	36	2706194	0.57	1092	59	1083	58	9455412	1.99		
Greece	152	71265793	16	1	46	30	30	20	162147	0.23	73	48	57	38	601010	0.84		
Hungary	239	26039009	4	2	91	38	87	36	415705	1.6	142	59	138	58	1254178	4.82		
Ireland	117	22441006	6	0	49	41	43	37	195964	0.87	75	64	69	59	614784	2.74		
Italy	971	225544136	41	1	280	29	279	28	1586654	0.7	462	48	461	48	4562077	2.02		
Latvia	101	2854492	10	4	60	59	50	50	161814	5.67	82	82	72	71	486608	17.1		
Lithuania	101	4733494	8	4	58	57	49	49	183326	3.87	78	77	69	68	476998	10.1		
Luxembourg	15	2603349	0	0	1	6	1	6	5892	0.23	2	13	2	13	17261	0.66		
Netherlands	211	80351292	1	4	20	9	19	9	51575	0.06	51	24	50	24	678923	0.85		
Poland	797	187887653	32	7	192	24	160	20	714008	0.38	409	51	377	47	4462461	2.38		
Portugal	243	36413004	1	12	123	51	122	50	531290	0.16	171	70	170	70	1299838	3.57		
Slovakia	175	25231769	0	1	98	56	98	56	524937	2.1	123	66	123	70	938939	3.72		
Slovenia	98	8720550	1	1	48	49	47	48	197746	2.27	69	70	68	69	521190	5.98		

Number of installations with no reported emissions

Number of installations with reported emissions of '0 tonnes' for 2005

Total number of installations with reported emissions <10kt / 25kt, including those with missing data

Total number of installations with reported emissions <10kt / 25kt, excluding those with missing data but including those with zero reported emissions

¹² Total quantity of CO₂ emitted by those installations which reported < 10kt / 25kt

	Total number	Total reported	Missing ⁸	Zero ⁹		No. installations <10kt							No. installations <25kt					
	Installations	Emissions			Total 10	%	Reported ¹¹	%	Emissions ¹²	%	Total ³	%	Reported ⁴	%	Emissions ⁵	%		
Spain	830	183620415	13	27	214	26	201	24	953922	0.52	419	51	406	49	4351766	2.36		
Sweden	728	19381682	28	111	581	80	570	78	777110	4	716	98	605	83	1349050	6.96		
UK	788	242476625	18	78	402	51	384	49	1470354	0.61	521	66	503	64	3274344	1.35		
Totals	10489	1993790274	243	485	4278	41%	4091	39%	14597559	0.73%	6491	62%	6204	59%	49160557	2.47%		

2. Questionnaire regarding the use of biomass (prepared by Ulla Jennische, Sweden)

On April 16th 2007 the Swedish EPA sent a questionnaire regarding the use of biomass to the participants of the IMPEL EU ETS project.

Answers were received from Finland, Ireland, Scotland, England & Wales and Sweden. Bulgaria declared they had no information to submit.

The information returned indicated that there are 61 pure biomass installations and 506 installations with streams of pure biomass. Most of the installations are combustion installations (in the energy sector or at process industries) but there are pure bio mass streams within the mineral industry, pulp and paper and in one iron and steel plant as well.

The majority of the installations are situated in Finland and Sweden.

3. Installation Boundary (prepared by Jaap Bousema, Netherlands, & Don Mackay, Scotland)

To be completed.

ANNEX 5: COMPENDIUM OF ETSG TECHNICAL GUIDANCE NOTES

See separate document.