

[www.defra.gov.uk](http://www.defra.gov.uk)

# Consultation on the European Commission's proposed Directive on Industrial Emissions (Integrated Pollution Prevention and Control)(Recast) – Combustion Plants

May 2008



Llywodraeth Cynulliad Cymru  
Welsh Assembly Government



Department of  
the Environment  
[www.environment.gov.uk](http://www.environment.gov.uk)



The Scottish  
Government



Department for Environment  
Food and Rural Affairs

Department for Environment, Food and Rural Affairs  
Nobel House  
17 Smith Square  
London SW1P 3JR  
Telephone 020 7238 6000  
Website: [www.defra.gov.uk](http://www.defra.gov.uk)

© Crown copyright 2007

Copyright in the typographical arrangement and design rests with the Crown.

This publication (excluding the royal arms and departmental logos) may be re-used free of charge in any format or medium provided that it is re-used accurately and not used in a misleading context. The material must be acknowledged as crown copyright and the title of the publication specified.

Information about this publication and further copies are available from:

Industrial Pollution Control  
Defra  
Area 3C, Ergon House  
17 Smith Square,  
London  
SW1P 3JR  
Tel: 020 7238 1687

Email: [control.pollution@defra.gsi.gov.uk](mailto:control.pollution@defra.gsi.gov.uk)

This document is also available on the Defra website at:

<http://www.defra.gov.uk/corporate/consult/emissions-combustion/>

Published by the Department for Environment, Food and Rural Affairs

## 1. Introduction

- 1.1. This consultation document has been prepared by the Department for Environment, Food and Rural Affairs (Defra) in consultation with other Government departments, the Scottish Executive, the National Assembly for Wales, the Northern Ireland Administration, and their agencies.
- 1.2. The document requests information and comments from interested parties, including industry and non-governmental organisations (NGOs)<sup>1</sup> (see Annex A for a list of consultees), on three components of the European Commission's proposed Directive on industrial emission (integrated pollution prevention and control) (Recast)<sup>2</sup> Those components are:
  - new "minimum emission limit values" for large combustion plants, taking effect from 1 January 2016;
  - the ending from 1 January 2016 of the current provision for large combustion plants to be included in a national emissions reduction plan; and
  - the subjection of existing smaller combustion plants to IPPC from a date to be determined but possibly 1 July 2015.
- 1.3. We are particularly interested in your views on the appropriateness and workability of the proposals. A number of specific questions are set out throughout the document and summarised at the end.
- 1.4. A consultancy report setting out what amounts to a Partial Impact Assessment (IA) examining the costs and benefits of these components accompanies this consultation paper.

### How to respond to this consultation

- 1.5. The commencement date of this consultation is 29 May 2008. Since this consultation will inform the position the UK takes when negotiation of the proposed Directive gets fully under way in September 2008, the closing date for responses is 25 July 2008. Written responses to inform the Government on this proposal should be sent to:

David Demain  
Industrial Pollution Control  
Department for Environment, Food and Rural Affairs  
Area 3C, Ergon House  
17 Smith Square

---

<sup>1</sup> For a list of consultees see: <http://www.defra.gov.uk/corporate/consult/emissions-combustion/>

<sup>2</sup> See: <http://ec.europa.eu/environment/air/pollutants/stationary/ippc/proposal.htm>

London SW1P 3JR

Email: [control.pollution@defra.gsi.gov.uk](mailto:control.pollution@defra.gsi.gov.uk)

Tel.: 020 7238 1687

- 1.6. When responding, please state whether you are responding as an individual or representing the views of an organisation. If responding on behalf of an organisation, please make it clear who the organisation represents, and where applicable, how the views of members were assembled.

## **Outcome**

- 1.7. Early responses would be most welcome. We aim to publish a summary of consultation responses by the end of 2008.

## **Confidentiality**

- 1.8. In line with Defra's policy of openness, at the end of the consultation period copies of the responses we receive may be made publicly available through the Defra Information Resources Centre. The information they contain may also be published in a summary of responses.
- 1.9. If you do not consent to this, you must clearly request that your response be treated confidentially. Any confidentiality disclaimer generated by your IT system in e-mail responses will not be treated as such a request.
- 1.10. You should also be aware that there may be circumstances in which Defra will be required to communicate information to third parties on request, in order to comply with its obligations under the Freedom of Information Act 2000 and the Environmental Information Regulations.
- 1.11. The Information Resource Centre will supply copies of consultation responses to personal callers or in response to telephone or e-mail requests (tel: 020 7238 6575, mailto: [defra.library@defra.gsi.gov.uk](mailto:defra.library@defra.gsi.gov.uk)). Wherever possible, callers should give the library at least 24 hours notice of their requirements. An administrative charge will be made to cover photocopying and postage costs.
- 1.12. If you wish to make a complaint, or query the consultation process, please write to:

Marjorie Addo  
Consultation Co-ordinator  
Department for Environment, Food and Rural Affairs  
Zone 7DC, Nobel House

17 Smith Square  
London SW1P 3JR

E-mail: [consultation.coordinator@defra.gsi.gov.uk](mailto:consultation.coordinator@defra.gsi.gov.uk)

## Consultees

- 1.13. We are seeking information and comments from industry, other non-governmental organisations, consumer groups, trade associations, and any other interested parties<sup>3</sup>.
- 1.14. Please tell us if you know of others who would be interested in receiving this consultation document.
- 1.15. Hard copies are also available by request from Government - please contact David Demain (see paragraph 1.5). Additional copies of this document can be made without seeking permission.

## Help with enquires

- 1.16. If you would like help with queries, or require further information about this consultation, please contact:

Muna Ahmad: [muna.ahmad@defra.gsi.gov.uk](mailto:muna.ahmad@defra.gsi.gov.uk) (Tel.: 020 7238 1684)

## Government Code on Consultations

- 1.17. A copy of the Government Code on Consultations has been published by the Cabinet Office. A copy is at <http://www.berr.gov.uk/bre/consultation%20guidance/page44459.html>

## 2. Background and preliminary points

- 2.1. The Commission launched in November 2005 a review of the IPPC Directive<sup>4</sup>. The general objective of the review was stated as 'to evaluate the scope to improve the functioning of the Directive and its interaction with other legislation, in particular related to industrial emissions, while not altering the main underlying principles and the level of ambition set in the Directive'.

---

<sup>3</sup> For a list of consultees see: <http://www.defra.gov.uk/corporate/consult/emissions-combustion/>

<sup>4</sup> *Directive...concerning integrated pollution prevention and control*, whence "IPPC". The Directive is now 2008/1/EC, the codified version which entered force in February 2008 and thereby repealed the original Directive, 96/61/EC.

- 2.2. The review culminated in the publication on 21 December 2007 of a Commission Communication<sup>5</sup> that accompanied the Commission's proposal for a Directive on industrial emissions (integrated pollution prevention and control)(recast), and an impact assessment<sup>6</sup>.
- 2.3. The proposal caused some initial consternation because it is some 240 pages long and contains large amounts of text shown in grey shading, "strike out" or both. Several weeks after its appearance, the Commission placed on its web site a guidance document<sup>7</sup> explaining the full significance of these markings. For present purposes, the following is the key feature:

A substantive amendment is any amendment "**which affects the substance of the earlier act as opposed to purely formal or editorial changes**". This includes for instance creating a new legal obligation, restricting rights, making certain requirements more/less stringent or changing the scope of the act. The substantive changes (both additions and deletions) have to be grey shaded. These elements of the recast are discussed and agreed during the co-decision process subject to the rules presented under section 4(b) of this note' [which says that] 'in principle, the parts of the text concerned only by codification (i.e. which are not substantive amendments) **are not open for discussion or amendment during the legislative process.**'

- 2.4. In other words, only the grey-shaded text is regarded as material for the co-decision process. Whilst the UK does not necessarily agree that the limitation is as sharply defined as that, it is clear that the grey-shaded material will be the main focus of discussions, and it is axiomatic that it contains additions or amendments to the seven Directives<sup>8</sup> incorporated into the recast which may be of concern in various ways to stakeholders. Subsequently, in a paper dated 17 April 2008<sup>9</sup>, a "Consultative Working Party" ("CWP" hereinafter), consisting of representatives of the respective legal services of the European Parliament, the European Council and the European Commission, gave an opinion on the Commission's proposal which identifies an additional

---

<sup>5</sup> COM(2007) 843 – *Towards an improved policy on industrial emissions*

<sup>6</sup> All these documents are available at <http://ec.europa.eu/environment/air/pollutants/stationary/ippc/proposal.htm> .

<sup>7</sup> At <http://ec.europa.eu/environment/air/pollutants/stationary/ippc/pdf/recast/guidance.pdf> .

<sup>8</sup> Those are the IPPC Directive and Directive 1999/13/EC on solvents emissions, Directive 2000/76/EC on waste incineration, Directive 2001/80/EC on large combustion plants and Directives 78/176/EEC, 82/883/EEC and 92/112/EEC related to the titanium dioxide industry.

<sup>9</sup> A copy of this can be obtained from Defra. See paragraph 1.5 for contact details

10 instances where text should have been grey-shaded. These instances are taken into account in this consultation paper.

- 2.5. A separate consultation paper, **Consultation on “substantive amendments” in the proposed recast (“the grey bits”)** addresses the grey-shaded material, Article by Article in the proposed recast Directive as a whole<sup>10</sup>.
- 2.6. This consultation paper deals in more detail with the substantive amendments which directly affect combustion plants. These are principally in Chapter III (*pages 41 -52*)<sup>11</sup>, the introductory paragraphs and point 1.1 of Annex I (*page 103*) and Annex V (*pages 115 – 140*), but those in Article 16 (*page 30*) and its related Articles are also directly relevant.
- 2.7. This consultation paper must also be read in conjunction with the consultant’s report **Phase I of the Impact Assessment of Proposals for a Revised IPPC Directive – Part 1: Combustion Plants** which is at <http://defra.gov.uk/corporate/consult/emissions-combustion> . Consultees’ views are sought on how well that assessment relates to their own experiences. Consultees are asked to contribute further quantification of envisaged impacts upon operators, their customers and suppliers (see also paragraph 4.9 below).

### **3. Annex V of the proposed recast Directive**

- 3.1. It has been apparent for some time that Annex V – in particular, its Parts 1 and 2 - is causing much concern to many stakeholders. This section of this consultation paper sets out several points which consultees need to understand in drawing up their responses. Since Annex V contains a large and rather bewildering array of substantive and other amendments, a “clean” version has been prepared by Defra to show how Annex V would appear if all the amendments and deletions shown in the proposal were incorporated. See Appendix B of this consultation paper. It is for illustrative purposes only to aid consultees’ consideration. Consultees should also consider Annex V as it appears on pages 115 to 140 of the Commission’s proposal in order to understand how the provisions of the current Large Combustion Plants Directive would be recast.
- 3.2. At the outset of their consideration, consultees should note the deletion of the table on pages 115 to 121, although “substantive”, merely removes material which, since it refers to a 1980 baseline, is already obsolete and would certainly be if Annex V comes into play from 1 January 2016. They should also note that, in the opinion of the

---

<sup>10</sup> See: <http://www.defra.gov.uk/corporate/consult/emissions-greybits/>

<sup>11</sup> Page numbers throughout this consultation paper refer to the page numbers in the .pdf document at <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2007:0844:FIN:EN:PDF> .

CWP, the headings 'Coal and lignite', 'Biomass' and 'Peat' in paragraph 2 of Part I on page 125 and the words 'and CO' in the third line of note (4) on page 129 should be marked as substantive amendments.

- 3.3. Parts 1 and 2 of Annex V respectively set out emission limit values ("ELVs") for "existing" and "new" combustion plants subject to Chapter III. That is to say, those Parts (and the rest of the Annex) apply **only** to plants with a rated thermal input of 50MW or more, as set out in Article 31. "Existing" plants are those which have a permit or for which a permit application has been made<sup>12</sup> by 1 January 2016, as set out in Article 33(2), whilst Article 33(3) makes those which are not covered by Article 33(2) "new" plants.
- 3.4. Furthermore, **consultees must understand that Parts 1 and 2 of Annex V would come into consideration ONLY when the "derogation" in Article 16(3) applies**<sup>13</sup>. In the normal circumstances to which Article 16(2) would apply the ELVs to be set in permits could not exceed the BAT-associated emissions levels ("BAT-AELs") set out in the relevant BAT reference documents.
- 3.5. In fact, the ELVs set out in Parts 1 and 2 correspond to the upper figure in the corresponding BAT-AELs set out in the current Large Combustion Plants BREF<sup>14</sup>. Invocation of the derogation would therefore have no practical consequence if it were to be sought in current circumstances. However, consultees must bear in mind the points in the paragraphs which follow.
- 3.6. The BAT-AELs could change at any time, both before and after 1 January 2016. The work programme for the European IPPC Bureau currently envisages a start in 2010 on a review of the current Large Combustion Plants BREF. That could result in a revised BREF containing different BAT-AELs being finalised by 2012. It would be open to the Bureau, at the instigation of the European Commission, to embark upon a further review at any time thereafter. And Article 22(3) would require the competent authority to reconsider and where

---

<sup>12</sup> Provided the plant for which a permit has been applied for is put into operation by 1 January 2017.

<sup>13</sup> The "derogation" provided by Article 16(3) is that 'the competent authority may, in specific cases, on the basis of an assessment of the environmental and economic costs and benefits taking into account the technical characteristics of the installation concerned, its geographical location and the local environmental conditions, set emission limit values that exceed the emission levels associated with the best available techniques as described in the BAT reference documents. Those emission limit values shall however not exceed the emission limit values set out in Annexes V to VIII, where applicable.'

<sup>14</sup> Available through <http://eippcb.jrc.es/pages/FActivities.htm> .

necessary update the ELVs of existing permits within four years of the finalisation of any further revised BREF.

- 3.7. Under the provisions of Article 73(3), ELVs would have to be set for all existing large combustion plants in accordance with Article 16(2) or, exceptionally, Article 16(3) with effect from 1 January 2016. The BAT-AELs as set out in the BREF **current at that time** - which will very probably not be the current version - would dictate the degree of ELV tightening which might ensue.
- 3.8. Article 16(3) indicates that “exceptional circumstances” may arise from ‘an assessment of the environmental and economic costs and benefits taking into account the technical characteristics of the installation concerned, its geographical location and the local environmental conditions’, but beyond that there is no guidance on more precisely what would justify the “derogation”, although Article 16(3) goes on to provide that the Commission ‘may’ (not “shall”) establish criteria for the granting of derogations, and if it decides to establish such criteria then it would use the regulatory procedure with scrutiny<sup>15</sup> to develop such measures.
- 3.9. It is already open to the competent authority to set ELVs corresponding to the lower end of the BAT-AEL range or, in exceptional circumstances, to a level below that range if the circumstances demand it<sup>16</sup>. That would continue to be so under the proposed recast Directive. It is also already open to the competent authority to reconsider and if necessary update ELVs at any time.. That too would remain so under Article 22 of the proposed recast Directive.
- 3.10. Therefore, **consultees must NOT regard the ELVs in Parts 1 and 2 of Annex V as the most stringent that could face the operators of large combustion plants**. Rather, those ELVs must be seen as the most benign, with a real prospect of tighter limits being dictated by Article 16(2). And even if the Article 16(3) “derogation” is invoked in the face of tightened BAT-AELs following a BREF review, there can be no certainty that the competent authority would automatically default to the Annex V ELVs.
- 3.11. Consultees should therefore consider very carefully the implications of the situation they would face from 2016 in respect of ELVs for large combustion plants under the proposed recast Directive.

---

<sup>15</sup> The “regulatory procedure with scrutiny is considered in more detail in the separate “Substantive Amendments” consultation at <http://www.defra.gov.uk/corporate/consult/emissions-greybits/>

<sup>16</sup> Note that Article 10 of the current IPPC Directive (2008/1/EC) requires ‘stricter conditions than those achievable by the use of {BAT}’ when that is necessary to comply with an environmental standard set in European Community legislation’. Article 19 of the proposed recast Directive would maintain that requirement unchanged.

In summary:

- ELVs could not normally be set in excess of the BAT-AELs set out in the LCP BREF current at 1 January 2016;
- adoption of an updated BREF at any time after 1 January 2016 would require alignment of ELVs with its updated BAT-AELs within four years of adoption;
- in exceptional circumstances (yet to be elaborated), less stringent ELVs could be set as a result of an article 16(3) derogation for specific installations, but it cannot be assumed that any or all would automatically be those set out in Parts 1 and 2 of Annex V; and
- irrespective of BREF updates, the competent authority could at any time reconsider ELVs.

3.12. Consultees should bear in mind that the last of the points in the previous paragraph is already the case. They should also bear in mind that the first of these points applies to all installations covered by IPPC: large combustion plant operators would in that respect be in no different situation to operators of other installations.

3.13. Consultees' views are therefore sought on Parts 1 and 2 of Annex V of the proposed recast Directive, taking into account all the points made in the preceding paragraphs of this section. In particular, they should consider how useful any specification of "minimum" ELVs is, given that other factors may drive competent authorities at any time to set tighter limits.

3.14. Views are also sought on Parts 3 and 4 of Annex V, particularly on whether the textual simplification would deliver a worthwhile consequential practical simplification in respect of monitoring and compliance. It must be noted that, **unlike Parts 1 and 2, these Parts would apply to all large combustion plants.** It should also be noted that, also unlike Parts 1 and 2, Parts 3 and 4 would, under Article 68, be open to amendment through the regulatory procedure with scrutiny<sup>17</sup>.

#### 4. Chapter III of the proposed recast Directive.

4.1. For convenience, material from the separate "grey bits" consultation is reproduced in paragraphs 4.2 to 4.6 below. Consultees may choose to respond to the points raised in them in the context of this consultation paper, particularly taking into account the impact assessment report which accompanies this paper.

---

<sup>17</sup> See footnote 15.

- 4.2. *This Chapter of the proposed recast Directive sets out to incorporate the provisions of the current large combustion plants Directive (LCPD) – 2001/80/EC. Like that Directive, the provisions in this Chapter apply to combustion plants with a rated thermal input of 50 MW or more, irrespective of the type of fuel used. An adaptation in the first and second lines of Article 31 confirms that it applies to combustion plants designed for production of energy.*
- 4.3. *However, Article 31 goes on to list combustion plants to which the Chapter does not apply. Substantive amendments to that list have the effect of subjecting (a) all gas turbines of 50 MW rated thermal input or more, other than those used on offshore platforms, and (b) plants powered by diesel petrol or gas engines to the provisions of the Chapter.*
- 4.4. *Article 32(1) confirms the “plant = windshield” interpretation of aggregation which the Commission confirmed in relation to the current LCPD and which is accordingly incorporated in the UK’s implementation<sup>18</sup> of that Directive.*
- 4.5. *The extensive “substantive amendments by deletion” in pages 44 to 49 and on page 52 of the proposed recast Directive mainly reflect substantive amendments elsewhere in the text, but consultees should set out any concerns they may have about them.*
- 4.6. *However, consultees’ views are particularly sought on the deletion of Article 4(6) of the current LCPD which provides for the establishment of the national emission reduction plan (“NERP”)<sup>19</sup> which the UK implemented with effect from 1 January 2008. In the absence from the proposed recast Directive of any continuance or replacement provision, it appears that the NERP could not continue beyond 1 January 2016, the date from which, according to Article 73(3), the provisions of Chapter III would take effect<sup>20</sup>.*
- 4.7. Consultees will note that Scenarios 3 and 4 of those considered in the impact assessment report both envisage the reinstatement of a NERP provision. These scenarios have been studied to aid the Government’s consideration of the proposal and must not be

---

<sup>18</sup> See the UK National Plan at <http://www.defra.gov.uk/environment/airquality/eu-int/eu-directives/lcpd/pdf/lcpd-nationalplan-update1.pdf> .

<sup>19</sup> See footnote 18.

<sup>20</sup> The Communication which accompanied the proposed recast Directive (at <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2007:0843:FIN:EN:DOC>) said in its section 3.3. that ‘The Commission will further explore the use of IPPC-compatible, market-based instruments such as an emission trading scheme for NO<sub>x</sub>/SO<sub>2</sub>, with a view to the potential development of a legal instrument laying down EU-wide rules on this issue.’ However, no proposal has yet been made.

taken as necessarily indicative of the position it will take during negotiations.

4.8. In commenting upon Chapter III and its associated Annex V, consultees will note that, as the proposal stands, the recast provisions would come into effect from 1 January 2016, irrespective of the eventual dates from which other parts of the recast would do so. Consultees' views are therefore particularly sought on whether this date is appropriate, bearing in mind:

- changes in operation of combustion plants already in progress or planned as a result of the requirements of the current IPPC and large combustion plants Directives;
- the “step change” in minimum ELVs for NO<sub>x</sub> from that date which is set out in Annex VI of the current large combustion plants Directive;
- the probability that a revised national emission ceilings Directive<sup>21</sup>, in setting ceilings not to be exceeded by 2020, will in any case be a significant influence upon regulatory requirements in respect of emissions of SO<sub>2</sub>, NO<sub>x</sub> and dust from combustion plants;
- the “Climate action and renewable energy package” announced by the European Commission<sup>22</sup> on 23 January 2008, in particular;
  - the proposed Directive on the promotion of the use of energy from renewable sources<sup>23</sup>;
  - the proposed Directive on carbon capture and storage<sup>24</sup> which contains a proposal to require new combustion plants above 300 MW to be “capture ready”<sup>25</sup>; and
  - the proposed amendment of the EU Emission Trading scheme<sup>26,27</sup> which would come into effect from 2013.

---

<sup>21</sup> See [http://ec.europa.eu/environment/air/pollutants/rev\\_nec\\_dir.htm](http://ec.europa.eu/environment/air/pollutants/rev_nec_dir.htm)

<sup>22</sup> See [http://ec.europa.eu/environment/climat/climate\\_action.htm](http://ec.europa.eu/environment/climat/climate_action.htm) .

<sup>23</sup> See [http://ec.europa.eu/energy/climate\\_actions/index\\_en.htm](http://ec.europa.eu/energy/climate_actions/index_en.htm)

<sup>24</sup> See [http://ec.europa.eu/environment/climat/ccs/eccp1\\_en.htm](http://ec.europa.eu/environment/climat/ccs/eccp1_en.htm) .

<sup>25</sup> The Department for Business, Enterprise and Regulatory Reform (BERR) expects to publish a consultation on the proposed Directive shortly.

<sup>26</sup> See [http://ec.europa.eu/environment/climat/emission/ets\\_post2012\\_en.htm](http://ec.europa.eu/environment/climat/emission/ets_post2012_en.htm)

- 4.9. The factors summarised in paragraphs 3.11 and 4.8 may combine to present operators of large combustion plants with potentially difficult investment decisions. Consultees are therefore asked to set out practical examples of any such difficulties they envisage and the effect of those difficulties upon their customers. Consultees are also asked to contribute views on how those investment decisions may affect demand and sourcing for fuel or other raw materials for the installations concerned.

## **5. Lowering the threshold for inclusion of combustion plants**

- 5.1. The substantive amendment of point 1.1 of Annex I would lower the threshold for subjection of combustion plants to IPPC from 50 to 20 MW rated thermal input. Moreover, the “aggregation” rules in the paragraph at the head of Annex I would, as now, require consideration of plants below that numerical threshold which, in aggregate within an installation, would exceed the new threshold. However, some alleviation of aggregation is proposed in those paragraphs and consultees’ views are particularly sought on whether the aggregation “rules” in those paragraphs are (i) appropriate and (ii) practicable.
- 5.2. Taking into account the findings of the accompanying impact assessment report, consultees’ views are sought on the proposed lowering of the threshold. Consultees will note that Scenario B in that report envisages **not** applying full IPPC to plants below 50 MW: this scenario has been studied to aid the Government’s consideration of the proposal and must not be taken as necessarily indicative of the position it will take during negotiations. Consultees should also note that Scenario C with its three sub-scenarios reflects uncertainty about what would be deemed to be BAT-AELs for plants in the 20 -50 MW range since a BREF is lacking. Here again, those sub-scenarios should not be taken as indicative of the Government’s view.
- 5.3. In commenting upon the proposed lowering of the threshold, consultees should note that the European Commission envisages the requirements of the proposed recast Directive being applied to installations with a rated (aggregate) thermal input of between 20 and 50 MW from July 2015. Consultees’ views are therefore particularly sought on whether this date is appropriate, bearing in mind the relevant considerations set out in paragraph 4.8 above.

## **6. Next steps**

- 6.1. The deadline for responses to this consultation is 25 July 2008. They will inform the development of a formal UK Government position for use

---

<sup>27</sup> See consultation paper at <http://www.defra.gov.uk/corporate/consult/euets-2013amendments/index.htm>

as the co-decision process advances through the autumn and winter of 2008 and thereafter.

- 6.2. We will aim to publish a summary of consultation responses by the end of 2008.

### **Summary of Questions**

Question 1: How well does the impact assessment which accompanies this consultation document relate to your own experiences?

Question 2: Can you contribute further quantification of envisaged impacts upon operators, their customers and suppliers?

Question 3: What are your views on Parts 1 and 2 of Annex V of the proposed recast Directive, taking into account all the points made in this document?

Question 4: How useful is any specification of “minimum” ELVs, given that other factors may drive competent authorities to set tighter limits?

Question 5: What are your views on the deletion of Article 4(6) of the current LCPD which provides for the establishment of the NERP, which the UK implemented with effect from 1 January 2008?

Question 6: As the proposal stands, the recast provisions would come into effect from 1 January 2016 for large combustion plant, irrespective of the eventual dates from which other parts of the recast would do so. Do you believe this date is appropriate, bearing in mind what is mentioned in this consultation paper?

Question 7: Can you set out practical examples of potentially difficult investment decisions you envisage and the effect of those difficulties upon your customers?

Question 8: Can you contribute views on how those investment decisions may affect demand and sourcing for fuel or other raw materials for the installations concerned?

Question 9: Are the aggregation “rules” in the paragraphs at the head of Annex I and point 1.1 of Annex I (i) appropriate and (ii) practicable?

Question 10: Do you have any views on the proposed lowering of the threshold for subjection of combustion plants to IPPC from 50 to 20 MW rated thermal input?

Question 11: Do you think the July 2015 date for the proposed recast Directive being applied to installations with a rated (aggregate) thermal input of between 20 and 50 MW is appropriate?



## **APPENDIX A - Glossary**

Defra – Department for Environment, Food and Rural Affairs

NGO – Non-Governmental Organisation

IPPC – Integrated Pollution Prevention and Control

IA – Impact Assessment

BAT – Best Available Technique

BREF - Best Available Techniques Reference Document

ELVs – Emissions Limit Values

RPS – Regulatory Procedure with Scrutiny

BAT-AELs – Best Available Techniques Associated Emission Levels

LCPD – Large Combustion Plant Directive

NERP – National Emissions Reduction Plan

CO – Carbon Monoxide

NO<sub>x</sub> – Nitrogen Oxide

## APPENDIX B

**This Appendix shows Annex V of the proposed recast Directive as it would appear if all the amendments and deletions shown in the proposal were incorporated. This has been prepared by Defra for illustrative purposes only to aid consultees' consideration. Consultees should also consider Annex V as it appears on pages 115 to 140 of the Commission's proposal in order to understand how the provisions of the current Large Combustion Plants Directive would be recast.**

\*\*\*\*\*

### ANNEX V

#### Technical provisions relating to combustion plants

##### Part 1

##### Emission limit values for combustion plants referred to in Article 33(2)

1. All emission limit values shall be calculated at a temperature of 273,15 K, a pressure of 101,3 kPa and after correction for the water vapour content of the waste gases and at a standardized O<sub>2</sub> content of 6% for solid fuels, 3% for boilers using liquid and gaseous fuels and 15% for gas turbines and gas engines.

In case of combined cycle gas turbines (CCGT) with supplementary firing, the standardized O<sub>2</sub> content may be defined by the competent authority, taking into account the specific characteristics of the installation concerned.

2. Emission limit values (mg/Nm<sup>3</sup>) for SO<sub>2</sub> for boilers using solid or liquid fuels

<u>Rated thermal input (MWth)</u>	<u>Coal and lignite</u>	<u>Biomass</u>	<u>Peat</u>	<u>Liquid fuels</u>
50-100	400	200	300	350
100-300	250	200	300	250
> 300	200	200	200	200

Combustion plants using solid fuels which were granted a permit before 27 November 2002, and which do not operate more than 1500 hours per year as a (rolling average over a period of five years), shall be subject to a an emission limit value for SO<sub>2</sub> of 800 mg/Nm<sup>3</sup>.

3. Emission limit values (mg/Nm <sup>3</sup> ) for SO <sub>2</sub> for boilers using gaseous fuels In general	35
Liquefied gas	5

Low calorific gases from coke oven	400
Low calorific gases from blast furnace	200

4. Emission limit values (mg/Nm<sup>3</sup>) for NO<sub>x</sub> for boilers using solid or liquid fuels

Rated thermal input (MWth)	Coal and lignite	Biomass and peat	Liquid fuels
50-100	300 450 in case of pulverised lignite combustion		300   450
100-300	200	250	200
> 300	200	200	150

Combustion plants using solid fuels with a rated thermal input not exceeding 500 MW which were granted a permit before 27 November 2002 and which do not operate more than 1500 hours per a year ( as a rolling average over a period of five years), shall be subject to a an emission limit value for NO<sub>x</sub> of 450 mg/Nm<sup>3</sup>.

Combustion plants using solid fuels with a rated thermal input of 500 MW or more, which were granted a permit before 1 July 1987 and which do not operate more than 1500 hours per year as a rolling average over a period of five years, shall be subject to an emission limit value for NO<sub>x</sub> of 450 mg/Nm<sup>3</sup>.

5. Emission limit values (mg/Nm<sup>3</sup>) for NO<sub>x</sub> and CO for gas fired combustion plants

	NO <sub>x</sub>	CO
Gas fired boilers	100	100
Gas turbines (including CCGT), using natural gas(1) as fuel	50 <sup>(2)(3)</sup>	100
Gas turbines (including CCGT), using other than natural gas as fuel <sup>(4)</sup>	90	100
Gas engines	100	100

**Notes:**

(1) Natural gas is naturally occurring methane with not more than 20 % (by volume) of inerts and other constituents.

(2) 75 mg/Nm<sup>3</sup> in the following cases, where the efficiency of the gas turbine is determined at ISO base load conditions:

(i) gas turbines, used in combined heat and power systems having an overall efficiency greater than 75 %;

(ii) gas turbines used in combined cycle plants having an annual average overall electrical efficiency greater than 55 %;

(iii) gas turbines for mechanical drives.

(3) For single cycle gas turbines not falling into any of the categories mentioned under note (2) , but having an efficiency greater than 35 % - determined at ISO base load conditions - the emission limit value for NO<sub>x</sub> shall be 50x\*η/35 where η is the gas turbine efficiency at ISO base load conditions expressed as a percentage.

(4) These emission limit values also apply to gas turbines using light and middle distillates as liquid fuels .

For gas turbines (including CCGT), the NO<sub>x</sub> and CO emission limit values set out in the table contained in this point apply only above 70 % load.

Gas turbines for emergency use that operate less than 500 hours per year are not covered by the emission limit values set out in this point . The operator of such plants shall record the used operating time.

6. Emission limit values (mg/Nm<sup>3</sup>) for dust for boilers using solid or liquid fuels

<u>Rated thermal input (MWth)</u>	<u>Coal and lignite</u>	<u>Biomass and peat</u>	<u>Liquid fuels</u>
50-100	30	30	30
100-300	25	20	25
> 300	20	20	20

7. Emission limit values (mg/Nm<sup>3</sup>) for dust for boilers using gaseous fuels

In general	5
Blast furnace gas	10
Gases produced by the steel industry which can be used elsewhere	30

## Part 2

### Emission limit values for combustion plants referred to in Article 33(3)

1. All emission limit values shall be calculated at a temperature of 273,15 K, a pressure of 101,3 kPa and after correction for the water vapour content of the waste gases and at a standardized O<sub>2</sub> content of 6% for solid fuels, 3% for boilers using liquid and gaseous fuels and 15% for gas turbines and gas engines

In case of combined cycle gas turbines with supplementary firing, the standardized O<sub>2</sub> content may be defined by the competent authority, taking into account the specific characteristics of the installation concerned.

2. Emission limit values (mg/Nm<sup>3</sup>) for SO<sub>2</sub> for boilers using solid or liquid fuels

<u>Rated thermal input (MWth)</u>	<u>Coal and lignite</u>	<u>Biomass</u>	<u>Peat</u>	<u>Liquid fuels</u>
50-100	400	200	300	350
100-300	200	200	300	250 in case of fluidized bed combustion]
> 300	150 [200 in case of circulating or pressurized fluidized bed combustion]	150	150 [200 in case of fluidized bed combustion]	150

3. Emission limit values (mg/Nm<sup>3</sup>) for SO<sub>2</sub> for boilers using gaseous fuels

In general	35
Liquefied gas	5
Low calorific gases from coke oven	400

Low calorific gases from blast furnace | 200 |

4. Emission limit values (mg/Nm<sup>3</sup>) for NO<sub>x</sub> for boilers using solid or liquid fuels

<u>Rated thermal input (MWth)</u>	<u>Coal and lignite</u>	<u>Biomass and peat</u>	<u>Liquid fuels</u>
50-100	300	400 in case of pulverised lignite combustion	250   300
100-300	200	200	150
> 300	150	200 in case of pulverised lignite combustion	150   100

5. Emission limit values (mg/Nm<sup>3</sup>) for NO<sub>x</sub> and CO for gas fired combustion plants

	<u>NO<sub>x</sub></u>	<u>CO</u>
Gas fired boilers	100	100
Gas turbines (including CCGT) <sub>(1)</sub>	50 <sub>(2)</sub>	100
Gas engines	75	100

**Notes**

(1) For gas turbines using light and middle distillates as liquid fuels, the emission limit values for NO<sub>x</sub> and for CO set out in this point also apply.

(2) For single cycle gas turbines having an efficiency greater than 35% - determined at ISO base load conditions - the emission limit value for NO<sub>x</sub> shall be  $50 \times \eta / 35$  where  $\eta$  is the gas turbine efficiency at ISO base load conditions expressed as a percentage.

For gas turbines (including CCGT), the NO<sub>x</sub> and CO emission limit values set out in this point apply only above 70 % load.

Gas turbines for emergency use that operate less than 500 hours per year are excluded from these emission limit values set out in this point . The operator of such plants shall record the used operating time.

6. Emission limit values (mg/Nm<sup>3</sup>) for dust for boilers using solid or liquid fuels

<u>Rated thermal input (MWth)</u>	
50- 300	20
> 300	10 20 for biomass and peat

7. Emission limit values (mg/Nm<sup>3</sup>) for dust for boilers using gaseous fuels

In general	5
Blast furnace gas	10
Gases produced by the steel industry which can be used elsewhere	30

**Part 3**

**Emission monitoring**

1. The concentrations of SO<sub>2</sub>, NO<sub>x</sub> and dust in waste gases from each combustion plant with a rated thermal input of 100 MW or more shall be measured continuously.

The concentration of CO in waste gases from combustion plants firing gaseous fuels with a rated thermal input of 100 MW or more shall be measured continuously.

2. The competent authority may decide not to require the continuous measurements referred to in point 1 in the following cases:

(a) for combustion plants with a life span of less than 10 000 operational hours;

(b) for SO<sub>2</sub> and dust combustion plants firing natural gas;

(c) for SO<sub>2</sub> from combustion plants firing oil with known sulphur content in cases where there is no waste gas desulphurisation equipment;

(d) for SO<sub>2</sub> from combustion plants firing biomass if the operator can prove that the SO<sub>2</sub> emissions can under no circumstances be higher than the prescribed emission limit values.

3. Where continuous measurements are not required, measurements of SO<sub>2</sub>, NO<sub>x</sub>, dust and, for gas fired plants, also for CO shall be required at least once per six months.

4. For combustion plants firing coal or lignite, the emissions of total mercury shall be measured at least once per year.

5. As an alternative to the measurements of SO<sub>2</sub> and NO<sub>x</sub> referred to in point 3, other procedures, verified and approved by the competent authority, may be used to determine the SO<sub>2</sub> and NO<sub>x</sub> emissions. Such procedures shall use relevant CEN standards or, if CEN standards are not available, ISO standards, national or international standards which will ensure the provision of data of an equivalent scientific quality.

6. The competent authority shall be informed of significant changes in the type of fuel used or in the mode of operation of the plant. The competent authority shall decide whether the monitoring requirements laid down in points 1 to 4 are still adequate or require adaptation.

7. The continuous measurements carried out in accordance with point 1 shall include the measurement of the oxygen content, temperature, pressure and water vapour content of the waste gases. The continuous measurement of the water vapour content of the waste gases shall not be necessary, provided that the sampled waste gas is dried before the emissions are analysed.

8. Sampling and analysis, of relevant polluting substances and measurements of process parameters as well as the quality assurance of automated measuring systems and the reference measurement methods to calibrate those systems shall be carried out in accordance with CEN standards. If CEN standards are not available, ISO standards, national or international standards which will ensure the provision of data of an equivalent scientific quality shall apply.

The automated measuring systems shall be subject to control by means of parallel measurements with the reference methods at least once per year.

The operator shall inform the competent authority about the results of the checking of the automated measuring systems.

9. At the emission limit value level, the values of the 95 % confidence intervals of a single measured result shall not exceed the following percentages of the emission limit values:

Carbon monoxide	10%
Sulphur dioxide	20%
Nitrogen oxides	20%
Dust	30%

10. The validated hourly and daily average values shall be determined from the measured valid hourly average values after having subtracted the value of the confidence interval specified in point 9.

Any day in which more than three hourly average values are invalid due to malfunction or maintenance of the automated measuring system shall be invalidated. If more than ten days over a year are invalidated for such situations the competent authority shall require the operator to take adequate measures to improve the reliability of the automated measuring system.

#### **Part 4**

##### **Assessment of compliance with the emission limit values**

1. In the case of continuous measurements, the emission limit values set out in Parts 1 and 2 shall be regarded as having been complied with if the evaluation of the measurement results indicates, for operating hours within a calendar year, that all of the following conditions have been met :

(a) no validated monthly average value exceeds the relevant emission limit values set out in Parts 1 and 2;

(b) no validated daily average value exceeds 110 % of the relevant emission limit values set out in Parts 1 and 2;

(c) in cases of combustion plants composed only of boilers using coal with a rated thermal input below 50 MW, no validated daily average value exceeds 150 % of the relevant emission limit values set out in Parts 1 and 2,

(d) 95 % of all the validated hourly average values over the year do not exceed 200 % of the relevant emission limit values set out in Parts 1 and 2.

The validated average values are determined as set out in point 10 of Part 3.

For the purpose of the calculation of the average emission values, the values measured during the periods referred to in Article 33(4) and (5) and Article 34 as well as during the start-up and shut-down periods shall be disregarded.

2. Where continuous measurements are not required, the emission limit values set out in Parts 1 and 2 shall be regarded as having been complied with if the results of each of the series of measurements or of the other procedures defined and determined according to the rules laid down by the competent authorities do not exceed the emission limit values.