

**EXPLANATORY MEMORANDUM TO
THE LARGE COMBUSTION PLANTS (NATIONAL EMISSION REDUCTION PLAN)
REGULATIONS 2007**

2007 No. 2325

1. This explanatory memorandum has been prepared by the Department of Food, Environment and Rural Affairs and is laid before Parliament by Command of Her Majesty.

2. Description

2.1 The Large Combustion Plants (National Emission Reduction Plan) Regulations 2007 (hereinafter “the Regulations”) will provide a legal basis for the operation a register designed to facilitate emissions trading under the National Emission Reduction Plan (NERP). Participation in the NERP is one option that existing large combustion plants have in order to comply with the Large Combustion Plants Directive (LCPD).

3. Matters of special interest to the Joint Committee on Statutory Instruments

There are none.

4. Legislative Background

4.1 The LCPD was adopted by the EC Council of Ministers in November 1988. It was subsequently revised in 2001 to reduce emission limit values (ELVs) on account of advances in combustion and abatement technologies. The revised LCPD was transposed into UK legislation through: the Large Combustion Plants (England and Wales) Regulations 2002/2688; the Large Combustion Plants (Scotland) Regulations 2002 (SSI:2002/493); the Large Combustion Plants Regulations (Northern Ireland) 2003 (N.I. S.I.2003/210).

4.2 The LCPD applies without prejudice to the Integrated Pollution Prevention and Control (IPPC) Directive, meaning that IPPC requirements take precedence, notably the requirement for ELVs to be set on the basis of the application of best available techniques (BAT) pursuant to article 9(3) of the IPPC Directive. Therefore, like all plants subject to the LCPD and to the IPPC Directive¹, each NERP plant will need a permit issued either under the Pollution Prevention and Control (England and Wales) Regulations 2000 or under the analogous secondary legislation for plants situated in Scotland and Northern Ireland².

5. Territorial Extent and Application

This instrument applies to the whole of the United Kingdom.

¹ The IPPC Directive applies, like the LCPD, to combustion plants with a rated thermal input equal to or greater than 50 MW.

² England and Wales – S.I. 2000/1973; Northern Ireland – Statutory Rule 2003 No. 46; Scotland – SSI 2000/323.

6. European Convention on Human Rights

As the instrument is subject to negative resolution procedure and does not amend primary legislation, no statement is required.

7. Policy background

7.1 The aim of the LCPD is to regulate emissions to air from new and existing large combustion plants. The emissions regulated are sulphur dioxide, nitrogen oxides and particulate matter. These pollutants are known to damage human health and contribute to acid deposition, which acidifies soils and freshwater bodies, damages plants and aquatic habitats, and corrodes building materials.

7.3 The LCPD applies to combustion plants with a rated annual thermal output equal to or greater than 50 MW. Plants covered include power stations and petroleum refineries, and other combustion processes in which the products of combustion are not used directly in a manufacturing process.

7.4 LCPD plants are separated into three groups based on the date they were first licensed:

- ‘new-new’ combustion plants: licensed after 27 November 2002;
- ‘new’ combustion plants: licensed between 1 July 1987 and 27 November 2002; and
- ‘existing’ combustion plants: licensed prior to 1 July 1987.

7.5 The importance of these distinctions lies in the compliance options available to the combustion plants. ‘New-new’ plants must comply with the ELVs directly when they start operating. ‘New’ plants had to comply with the ELVs as soon as the LCPD was transposed into UK legislation. ‘Existing’ combustion plants, however, have three potential compliance options:

- comply with the concentration-based ELVs;
- operate within the emissions trading scheme under the NERP; or
- “opt out” by committing to limit operations to no more than 20,000 hours from 1 January 2008 and in any case to close no later than 31 December 2015.

7.6 The NERP enables participants to trade emissions allowances for sulphur dioxide, nitrogen oxides, and particulate matter. Plant operators are at the same time prevented from emitting an amount of these pollutants than is greater than that for which they hold allowances.

7.7 The Regulations provide a legal basis for the establishment and operation of a register to facilitate trading under the NERP. The register, which will be operated by the Environment Agency, will contain:

- contact details of participating operators and large combustion plants;
- each plant’s emissions allocations for each calendar year and the resulting UK totals;
- each plant’s cumulative in-year mass emissions;
- each plant’s verified annual mass emission for each LCPD pollutant;

- each plant's current allocation for the current calendar year taking account of all transfers registered in respect of that year (also a notification of closure);
- the amount of emissions allowance which the operator of the participating plant wishes to transfer (if the Environment Agency is so notified);
- the amount of emissions allowance which the operator of the participating plant wishes to acquire (if the Environment Agency is so notified);
- for each past calendar year, beginning with 2008, the final allocations and reported mass emissions for each plant, and the resulting UK total emissions; and
- such other information relating to the operation of the NERP as the Secretary of State may direct the Environment Agency to include in the register.

7.8 Without the Regulations, the register would not be able to operate. This would increase the transactions costs that NERP participants would incur in trading emissions, particularly as a result of the increased time needed to identify operators with which to trade. It would also increase the risk of the market not clearing – a lack of information increases the risk of the market not clearing for precautionary reasons.

7.9 The detail of the NERP and the draft Regulations were subject to a 12 week public consultation between 27 February and 22 May 2007. The twenty-two responses showed majority support for the establishment for the NERP register and the Regulations (see Annex A for a summary of responses to the consultation).

7.10 The Environment Agency will update relevant operators following the coming into force of the Regulations.

8. Impact

8.1 The NERP was subject to a Regulatory Impact Assessment (see Annex B).

9. Contact

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Annex A

Department for Environment, Food and Rural Affairs

Summary of responses to Consultation on the Operation of the UK National Emission Reduction Plan under the Large Combustion Plants Directive (2001/80/EC) (27 February – 22 May 2007)

Introduction

1 On 27 February 2007, the UK Government and Devolved Administrations published a consultation document seeking views on the operation of the UK National Emission Reduction Plan (NERP) under the Large Combustion Plants Directive (LCPD). This paper summarises and responds to the twenty-two responses³ that were received to the consultation (see Annex A for a full list of respondents).

2 The Large Combustion Plants Directive (LCPD) (2001/80/EC) deals with emissions of sulphur dioxide, nitrogen oxides and particulates from Large Combustion Plants (LCPs) with a thermal rating equal to or greater than 50 MW. In the UK, operators of “existing” LCPs (i.e. those first licensed before 1 July 1987), have been given the option of meeting LCPD requirements either by accepting the concentration-based emission limit values (ELVs) specified in the LCPD or by participating in the UK National Emission Reduction Plan (NERP). The NERP is an emissions trading scheme for sulphur dioxide, nitrogen oxides and particulates.

The NERP-PPC relationship

Question 1: do you consider the relationship between the NERP and PPC permitting clear and workable?
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3 Eighteen respondents considered the relationship between the NERP and Pollution Prevention and Control (PPC) permitting to be clear and workable.

4 Friends of the Earth stated that where reference is made to the NERP register in a PPC permit, the precedence of best available techniques (BAT) based ELVs should be acknowledged to clarify the relationship to the public.

5 Government response: the precedence of IPPC requirements will be made apparent in the PPC permit.

Allocating and updating emissions allowances

Question 2: do you agree with the proposals for allocating and updating emissions allowances?

³ The Defra library will supply copies of consultation responses to personal callers or in response to telephone or email requests (tel: 020 7238 6575; email: defra.library@defra.gsi.gov.uk). Wherever possible, personal 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.

6 Seventeen respondents agreed with the proposals for allocating and updating emissions allowances.

7 British Energy, Drax and Scottish Power Energy Wholesale asked for clarity with regard to the definition of a 'closed' plant. The SEPA went further to argue that the factors taken into account by the regulator in deciding whether or not a plant has 'closed', should be stated in the LCP (NERP) Regulations (the Regulations) and expanded on in guidance. They did not view reliance on the definition in the UK National Plan as legally robust.

8 Friends of the Earth stated that it should also be made clear in the Regulations what happens when a plant is mothballed, as opposed to closed.

9 SABIC asked for further clarification on what can be considered a modification to an existing plant and what level of alteration constitutes a new plant?

10 Government response: a definition of a 'closed' plant will be provided in regulators' guidance on the NERP. As regards modification of an existing plant, guidance is set out in the IPPC "Practical Guide" and in more detailed guidance developed by the regulators.

11 The SEPA noted that the consultation document states that it is for the relevant regulator to determine the reduction in emissions allowance for plants that have 'closed.' The Regulations (regulation 9(1)) on the other hand require that it is the regulator in receipt of the notification of closure that makes this determination. They pointed out that this may cause problems in instances where a closure notification is submitted to the wrong regulator.

12 Government response: the Regulations will be amended to make the relevant regulator responsible for determining the reduction in emissions allowances for plants that have 'closed'.

13 British Energy stated that they would prefer a clear framework to be established in advance, so that operators can calculate the allowances they would receive during the year of closure.

14 International Power stated that guidance is required on the determination of emissions allowances on closure. In particular, they felt that any allocation used and not sold should not be clawed back. With regard to the position of an operator who acquires allowances from a plant that subsequently closes in the same year, they stated that guidance should make it clear that the operator of the closed plant is responsible for any shortfall in allowances to be clawed back and that the acquiring operator, providing they have acted in good faith, should retain title to the transferred allowances. SABIC also asked for further clarification on this latter issue.

15 Government response: companies contemplating closure should approach the relevant regulator at an early stage. Any operator buying allowances has the title to those allowance and these cannot be clawed back.

16 Concerning the derogation addressed in paragraph 4.4 of the consultation document, the SEPA noted that the date of 1 November differs from the date of 1 October included in the Regulations.

17 Government response: the Regulations will state that any operator who wishes to make use of the derogation will be required to notify the regulator as soon as possible and certainly by 1 October in the year preceding the calendar year in which the derogation will first apply.

18 Friends of the Earth stated that the design and operation of the NERP register must at all times take account of the need to be comprehensible to the public's right of access to information.

19 Government response: the public's right of access to information will be considered in designing the NERP register.

The transfer of emissions allowances

Question 3: do you agree with the way in which emissions allowances will be transferred?
Question 4: are there any aspects of the emissions allowances transfer process that have not been adequately addressed in the consultation paper?

20 Sixteen respondents agreed with the proposals for transferring emissions allowances.

21 Scottish and Southern Energy asked for clarity as to the trading deadline. Paragraph 5.1 of the consultation document states that "...any NERP operator...will be able to acquire from any other NERP plant...at any time **within the calendar year** in question" (similar text is included in the Regulations). They had however thought that the intention was to allow the registration of trades (and therefore trades themselves) up to 25 January in the following year.

22 Government response: trading will be allowed for current year's allowances until the end of March of the following year (see para. 49 for further discussion).

23 The SEPA and International Power noted that regulation 8(2) gives the time limit for notifying transfers as 25 January of the following calendar year. They stated that this could lead to information up to a year out of date appearing on the register. Friends of the Earth noted that possible delays in notifying the register operators could undermine the public's rights of participation and access to information. International Power suggested that a time limit of 5 working days would be appropriate.

24 Government response: the Regulations will provide that transfers must be notified to the Environment Agency within five working days. The Environment Agency will update the Register on their web-site every ten working days for information received during that period.

25 SABIC asked if all aspects of a transfer will be made public, including price? If this is not the case, what will set the market price allocations?

26 Government response: the price of the transfer will not be included on the Register – this is a matter for the buyer and the seller.

27 SABIC asked if the Regulator is the final arbiter in the case of disputes relating to transfers between operators? If not, how will disputes be settled?

28 Government response: the buyer and seller will be responsible for the contractual arrangements for the transfer of emissions, as well as any disputes relating to that contract.

29 SABIC asked how partial shutdown of a plant will be accounted for in terms of allocations reduction.

30 Government response: this will be covered in regulators' guidance.

31 SABIC asked if a charge will be levied to register transfers of allocations on the NERP database?

32 Government response: as stated in the consultation document, it will be for the Environment Agency, as register operator, to determine its costs, and in so doing, to consider whether or not specific provision for recovering them needs to be incorporated in its charging scheme, upon which it will consult separately.

33 SABIC asked who is liable for the accuracy of the information displayed on the NERP Register? For example, if a seller advertises and sells emissions credits, which it is subsequently found they did not have entitlement to, is anyone then liable to the buyer, and if so, who? Is it the seller or the registry?

34 Government response: transactions are purely a matter for the buyer and seller. The Register will state that the information shown is that as reported by the operators and that it is not verified. Also, operators cannot sell allowances to which they are not entitled as their account can never be zero or less.

Allocation compliance condition

Question 6: do you agree with the allocation compliance condition for plant operators participating in the NERP?
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35 Fourteen respondents agreed with the allocation compliance condition for the plant operators participating in the NERP.

36 Scottish and Southern Energy and British Energy asked for clarity on paragraph 6.1 of the consultation document, which states that: "Failure – or in the regulator's opinion, **the likelihood of failure** – to comply with this condition will, as with breach of any other permit condition, render the operator liable to enforcement action." They asked in particular how the "likelihood of failure" might be determined?

37 On this same issue, the SEPA stated that an assessment of the likelihood of an operator failing to have sufficient allowances would require an onerous and continuous assessment of a plant's emissions, and detailed knowledge of the operator's business plans. They argued that this seemed incompatible with the stated simple, low cost nature of the scheme.

38 Government response: regulators have a responsibility under the PPC regime to take action in instances where it is clear that an operator will not comply with a permit

condition. This responsibility must therefore exist in relation to compliance with emissions allocations under the NERP.

39 The SEPA stated that without the relevant amendment to the respective PPC Regulations, the regulators would be open to appeal if they refused to accept a surrender of a permit for a plant for a reason not provided for in the PPC Regulations.

40 Government response: the NERP allowances will become part of the PPC Permit, and are therefore another PPC requirement that has to be met before surrender of a permit.

Compliance and enforcement arrangements

Question 7: do you agree with the proposed compliance and enforcement arrangements for the NERP?
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41 Seven respondents agreed with the proposed compliance and enforcement arrangements for the NERP.

42 The Combustion Engineering Association and British Sugar stated that the January 31 deadline should be aligned with that for the European Union Emissions Trading Scheme (EU ETS), since in most cases the submissions will be based on the same data. This would move the NERP deadline to 31 March. If this was not feasible, they argued that the deadline should be moved to the end of February to coincide with the reporting of annual emissions.

43 Corus agreed with the end of February deadline, stating that it was in line with the pollution inventory returns, and would give more time for acquisitions/transfers to be completed and registered following the year end.

44 Government response: operators will be required to submit their Annual Report of emissions by the end of January in the following year (see para. 49 for further discussion).

45 The Combustion Engineering Association and British Sugar also suggested that allowances should have serial numbers (as with the EU ETS) to ensure traceability.

46 Government response: we are satisfied that the scheme will be robust without serial numbers.

47 UKPIA expressed concern that there appears to be no mechanism for correcting any errors found during validation by the Regulator by March 31. They stated that a procedure is needed to enable unintended errors and misunderstandings to be corrected.

48 Government response: as proposed in the consultation document, if the Annual Report of emissions fails the verification check, any such failure would constitute a breach of the operator's PPC Permit and result in enforcement action. This seems however a disproportionate response if the apparent breach results from a misunderstanding or a simple arithmetic error, and not a deliberate act on behalf of the operator.

49 To address this, while the operator will be required to submit their Annual Report of emissions by end January in the following year, and the respective regulator will verify the Annual Report by end February in the following year, operators will be able to trade the current year's emissions allocations until end March in the following year. This will enable operators found not to be compliant to become so.

50 Drax, UKPIA, INEOS, British Energy and Huntsman Tioxide stated concern that the 15 day reporting deadline by which operators have to report emissions on a regular basis, was too short. Drax, UKPIA and INEOS felt that 28 days would be more appropriate as it was in line with the requirements of PPC reporting. Huntsman Tioxide asked that the timescale be changed to 31 of the month following the reporting period.

51 Government response: operators will be required to report within one month of the end of the quarterly reporting period, in line with reporting requirements of the PPC regime. This means that operators will report emissions for the 4th quarter of the current year by end January of the following year, together with their Annual Report for the current year.

52 SABIC and the Scottish Environment Protection Agency asked for clarification on verification. Drax and Scottish and Southern Energy stated that verification should be part of that for existing PPC practices.

53 Government response: emissions will be verified in the same way that site inspectors verify emissions under the PPC regime. Regulators will issue further guidance on verification in due course.

54 Huntsman Tioxide stated that their LCP does not operate to full capacity, which means that the gas velocities in the stack are lower than the minimum gas velocities required by the Environment Agency's monitoring scheme, MCERTS.

55 Government response: this is a matter for the Environment Agency.

56 British Energy stated that because participants may not have information on the actual emissions of others in the scheme towards the end of the reporting period, the scheme should allow a limited degree of banking and borrowing between compliance years. This would have no long-term environmental impact, yet would allow operators some flexibility given the uncertainties that will exist concerning actual emissions. They also felt that banking and borrowing would provide operators with some flexibility to respond to variations in the market for their products towards the end of the year, and that it would enable continuity in the value of emissions allowances between years, which would provide a more stable market against which to make operating and investment decisions. SABIC similarly stated that allowing allocations to be transferred between years would avoid volatility in the market value of allocations at year end.

57 Government response: there will be no provision for banking and borrowing between emission years. Banking and borrowing would increase the complexity and cost of a scheme that has been designed to be a simple and low cost means of enabling compliance with the LCPD.

58 The UKPIA and the SEPA noted that the dates and actions set out in paragraphs 7.3 and 8.1 of the consultation document seem incompatible. Paragraph 8.1 of the consultation document refers to March 15 of each year, and paragraph 7.3 refers to March 31. Yet the action in paragraph 7.3 will need to be completed before that in paragraph 8.1.

59 Government response: the relevant regulator will verify the Annual Report of emissions by end February in the following year, and operators will be able to trade the current year's emissions allocations until end March in the following year. The Environment Agency must be notified of any transfers within five working days. The Environment Agency will update the Register every ten working days for information received during that period.

60 SABIC asked whether or not allowances will be made by the regulator for forces outside of an operator's control that result in a plant exceeding its allocations?

61 Government response: this will be for the relevant regulator to consider in accordance with its enforcement policy.

62 Friends of the Earth stated that strict compliance penalties must be put in place to ensure that operators are not tempted to consider non-compliance as an unofficial borrowing system for allowances.

63 Government response: enforcement is a matter for the regulator, and will be pursued using the provisions set out in the PPC Regulations for dealing with any breach of permit conditions.

Frequency of emissions reporting

Question 8: how often should operators be required to report to the NERP register the emissions from each permitted plant – monthly, quarterly or some other frequency?

64 Six respondents stated that operators should be required to report emissions to the NERP register on a monthly basis. It was emphasised that this would only be appropriate if the data was provided on a provisional basis, and that reporting requirements were aligned with those already in place for PPC.

65 Six respondents stated that operators should be required to report quarterly, in line with existing PPC requirements.

66 British Sugar stated that quarterly reporting would be too infrequent, given the need to 'clear the books' by the end of the year. The operator would be trying to judge the market on the cost of running an industry in December based on a register that was last updated based on July/August/September's information.

67 The Combustion Engineering Association stated that some of their members favoured monthly reporting and others quarterly.

68 SABIC and Huntsman Tioxide stated that operators should report every six months. Huntsman Tioxide added that its LCP has <100MW capacity, which means that they are only

required to monitor emissions every six months and will not be able to report monthly or quarterly.

69 Government response: in line with the reporting requirements of the PPC regime, operators will be required to report provisional emissions data on a quarterly basis, and within one month of the end of the quarter in question.

NERP register contents

Question 9: is the information to be included in the register clear and comprehensive, and sufficient in terms of the participant's decision to trade?

70 Thirteen respondents stated that information to be included in the register is clear and comprehensive, and sufficient in terms of the participant's decision to trade.

71 SemCorp stated that for reasons of commercial confidentiality, actual emissions data should only be published after the end of the year. Publication of cumulative in year emissions could highlight 'distress' buyers or sellers, which would not be beneficial to the smooth running of the market.

72 Government response: provisional emissions data, relating to quarterly reporting periods, will be published on the Register.

Switching between the NERP and ELVs

Question 10: should NERP participants have the flexibility to switch between the NERP and ELVs at 2016 and 2018 stages?

73 Sixteen respondents stated that operators should be able to switch from the NERP to ELVs at 2016 and 2018 stages. Eight of these respondents went further to state that operators should also be able to switch between ELVs and the NERP at these stages. Justifications for the ELV to NERP switch included:

- coal-fire power stations that are currently opted in under ELV could continue to operate at a low load factor, by switching to the NERP without fitting Selective Catalytic Reduction (SCR) NO_x abatement;
- this would enable opt-in stations to take a flexible lower load role, as a replacement for the closing opt-out stations;
- the switch could greatly reduce the 2016 generation capacity cliff-edge and enable a smoother ramp transition for opt-in closure;
- the switch would avoid unnecessary life extension to opt-in coal stations that would otherwise be required to pay back the significant investment in SCR;
- postponing the amount of new capacity required in 2016 provides a bridge to low carbon technologies that could be deployed by 2020;
- the switch would enable support to intermittent renewable generation, until further additional capacity is needed; and
- the switch would not have any detrimental environmental effects because the plant would still be bound to deliver the further NO_x emissions reductions required by the LCPD in

2016 onwards. The reductions would be achieved through a reduced load factor, rather than SCR.

74 British Energy, however, argued that operators should not be able to switch from ELVs to the NERP at 2016 and 2018 stages. They stated that this would cause considerable uncertainty over whether or not ELV coal plants without SCR abatement equipment would choose to close or to operate at a low load factor under the NERP. They felt that this uncertainty would be detrimental to investments in new capacity during a period when such new capacity will be required.

75 Government response: the operators of existing LCPs will have the option of switching between the NERP and ELVs or vice-versa at 2016 and 2018 stages. There is no overriding legal, environmental or economic justification to deny operators this flexibility in delivering LCPD compliance as efficiently as possible.

Partial Regulatory Impact Assessment

Question 5: do you agree with the options selected and analysis undertaken in the Partial Regulatory Impact Assessment?

76 Thirteen respondents agreed with the options selected and analyses undertaken in the Partial Regulatory Impact Assessment.

Other issues

77 The Joint Nature Conservation Committee repeated their advice to Defra that a full assessment of the implications of the NERP trading system for bio-diversity, including long-range effects, needs to be undertaken before a decision about the NERP can be made. They also stated that the assumption that the PPC regime will deliver ecosystem protection, will need to be assessed in the light of the environment agencies' assessment of power station emissions as part of their obligations under the Habitats Directive.

78 Government response: the PPC regulatory regime, which takes precedence over the NERP, will ensure that unacceptable environmental risks do not result from the operation of NERP plants.

79 In light of a recent ECJ ruling (Case C-6/04, European Commission v UK) and Defra's subsequent response to this, the Joint Nature Conservation Committee stated that as a matter of priority, Defra should seek advice as to whether the NERP represents a 'plan or project' under Article 6.3 of the Habitats Directive and if so, undertake an assessment of the implications of the NERP for the integrity of Natura 2000 sites.

80 Government response: the PPC permit application is a "plan or project" for these purposes, and permit conditions are considered accordingly in each individual case, thus providing for the protection of Natura 2000 sites.

81 The SEPA stated concern over the lack of clarity for the basis of the potential for the Environment Agency to charge SEPA for establishing and maintaining the register, and for

SEPA to re-charge these costs to operators. They added that clarification on this point in the Regulations would be beneficial.

82 The SEPA stated that the need to update the Register when a participating plant changes ownership is not covered by regulation 5 of the Regulations, and that any provision to address this should correlate with the timescales already laid down in the relevant PPC Regulations.

83 Government response: this is covered by the Regulations.

84 The SEPA stated that the proposal contained in paragraph 7.1 of the consultation document for compulsory electronic reporting appears to contradict regulation 6(2)(a) of the LCP (NERP) Regulations, which states that the information contained in the register does not necessarily need to be held electronically.

85 Government response: regulation 6(2)(a) will be amended to the effect that the Register will be held in electronic form.

86 The SEPA stated that there are several notable differences between the Regulations and the consultation document, including the consultation document appearing to place duties on the regulators without including the necessary powers in the regulations. For example: paragraph 6.1 in relation to taking into account 'likelihood of failure'; footnote 20 in relation to what should be taken into account when considering the surrender of a permit; and paragraph 7.1 in relation to submission of data other than via the annual report.

87 Government response: these issues will be addressed through the respective PPC regulations.

Next steps

88 The National Emissions Reduction Plan, including the Regulations, will be finalised in light of the comments received during the consultation process. The resulting NERP documentation will be published on the Defra web-site in due course. NERP participants will be kept informed of progress in implementing the NERP.

Annex B

Operation of the National Emission Reduction Plan under the Large Combustion Plant Directive: Final Regulatory Impact Assessment

1.0 Title of proposal

1.1 This final Regulatory Impact Assessment (RIA) evaluates options for the operation of an allowance trading scheme under the National Emission Reduction Plan (NERP) under the Large Combustion Plant Directive (LCPD) (2001/80/EC).

2.0 Purpose and intended effect

Objective

2.1 The scheme's key objective is to establish a trading scheme for allowances of sulphur dioxide (SO₂), nitrogen oxides (NO_x) and particulate matter (PM) that contributes to the aims of LCPD, while providing a viable alternative to the use of emission limit values (ELVs).

2.2 Selection of operational structure will, however, also involve a range of other considerations. These include the stability of the market, the transparency of activities, the equitable treatment of participants, and the potential for anti-competitive activities.

2.3 In balancing these objectives, it will be necessary to consider proportionality given that we are expecting this system to support the transfer of only a small proportion of the allocated emissions allowances between the 46 companies included in the NERP.

Background

2.4 The original LCPD was adopted by the EC Council of Ministers in November 1988. It was subsequently revised in 2001⁴ to reduce Emission Limit Values (ELVs) on account of advances in combustion and abatement technologies.

2.5 The aim of the revised LCPD has remained the regulation of emissions to air from new and existing large combustion plants. The emissions regulated are sulphur dioxide (SO₂), nitrogen oxides (NO_x) and particulate matter (PM). These pollutants are known to damage human health and contribute to acid deposition, which acidifies soils and freshwater bodies, damages plants and aquatic habitats, and corrodes building materials.

2.6 The revised LCPD applies to combustion plants with a rated annual thermal output equal to or greater than 50 MW. Plants covered include power stations, petroleum refineries, steelworks, and other industrial processes running on solid, liquid, or gaseous fuel.

2.7 LCPD plants are separated into three groups based on the date they were first licensed:

- 'new-new' combustion plants: licensed after 27 November 2002;

⁴ Available at: http://europa.eu.int/eur-lex/pri/en/oj/dat/2001/l_309/l_30920011127en00010021.pdf

- ‘new’ combustion plants: licensed between 1 July 1987 and 27 November 2002;
- ‘existing’ combustion plants: licensed prior to 1 July 1987.

2.8 The importance of these distinctions occurs in the compliance options available to the combustion plants. ‘New-new’ plants must comply with the ELVs directly when they start operating. ‘New’ plants had to comply with the ELVs as soon as the Directive was transposed into UK legislation⁵. ‘Existing’ combustion plants, however, have three potential compliance options:

- comply with the concentration-based ELVs;
- operate within the emissions trading scheme under the National Emission Reduction Plan (NERP); or
- “opt out” by committing to limit operations to no more than 20,000 hours from 1 January 2008 and in any case to close no later than 31 December 2015.

2.9 The UK transposition of the LCPD did not, however, establish the compliance options for ‘existing’ plants (article 4(3) of the LCPD).

2.10 On 9 September 2005, the European Commission agreed a form of the UK’s proposed combined implementation approach to compliance under Article 4(6), allowing in effect that existing plants, if not opted out, might choose between ELVs and NERP.

2.11 The UK submitted a final UK National Plan⁶ for complying with the requirements of article 4(6) to the European Commission in February 2006. The plan provided an outline view of the NERP proposed in the current consultation document. Following an evaluation letter from the Commission dated 4 September 2006, further clarification of the plan was submitted 2 February 2007.

2.12 This final RIA focuses on the operational options for setting up the NERP. It does not, however, consider the benefits associated either with the related reduction in the level of emissions, or the estimated savings to combustion plants from this compliance route relative to the use of ELVs⁷. It also does not present the total administrative burden of the LCPD as this is included in that baseline. Therefore, the administrative burdens identified relate to the variation between the presented options.

Rationale for government intervention

2.13 Following the transposition of the LCPD in 2002, there is a role for Government to ensure that the NERP is effective in meeting the LCPD requirements at low cost to participants so providing a viable alternative to the use of ELVs.

⁵ See: The Large Combustion Plants (England and Wales) Regulations 2002/2688; The Large Combustion Plants (Scotland) Regulations 2002 (SSI:2002/493); The Large Combustion Plants Regulations (Northern Ireland) 2003 (N.I. S.I.2003/210) .

⁶ See: www.defra.gov.uk/environment/airquality/lcpd

⁷ This evaluation is available in the transposition RIA available from: www.defra.gov.uk/environment/consult/lcpd/pdf/lcpd-consult.pdf

3.0 Consultation

3.1 Representatives of other Government Departments and the Devolved Administrations of Wales, Scotland and Northern Ireland have been appropriately involved in and consulted on the establishment of the NERP trading scheme. The NERP was also subject to a full public consultation.

4.0 Options

4.1 Three broad options for the operation of allowance trading under the NERP have been selected for a detailed evaluation within this final RIA. They are: (1) do nothing, where no additional information would be provided over the minimum requirements of LCPD; (2) indirect co-ordination, where some additional information is provided to ‘existing’ plants within the NERP; and (3) central co-ordination, where government plays an active role to try and ensure that the market for allowances clears. Each of these options is discussed in more detail below.

Option 1: Do nothing

4.2 Under this option only the information required under the LCPD would be provided to the operators within the NERP. This information was submitted to the European Commission in the UK National Plan on 28 February 2006⁸ and was updated in a further submission on 2nd February 2007. It tabulates NERP participants and their initial allocations of allowances, but would not be updated to identify activity during the operation of the NERP.

Option 2: Indirect co-ordination

4.3 This option would provide additional information to participants beyond the basic data provided in Option 1. The aim in providing such additional information would be to reduce the transaction costs incurred by incumbents in the market and help the smooth functioning of the NERP. Within this option, two sub-options are considered:

2a) Provision of latest figures on the number of allowances held by participants and hence potential level availability/requirement for trading. This is intended to aid participants in identifying potential trading partners, reduce negotiation time by providing additional transparency in the market and would give participants the option of highlighting their desire to trade⁹. The expected dissemination of this information is through a specific website that would be updated periodically.

2b) Provision of a forum in which participants can make and receive offers for available allowances. This option is intended to reduce both the search and the negotiation time¹⁰. The expected operation of this site would be through an online auction. Sellers would inform the auctioneer of the number of allowances they have to sell and the auctioneer would run a listing on which other participants in the NERP can bid. To reduce any

⁸ At: www.defra.gov.uk/environment/airquality/lcpd

⁹ This would not, however, identify how many allowances for which they were looking to trade.

¹⁰ Negotiation time is expected to be reduced as buyers only need set a reserve price and sellers decide if the final price is acceptable rather than entering into potentially lengthy negotiations.

potential for anticompetitive activities, this system would not provide information on either the buyer or seller of permits¹¹.

Option 3: Central co-ordination

4.4 This option would operate with a single broker having an active role in the market clearing, by negotiating and establishing all exchanges of allowances. In essence, a central body would negotiate with sellers to purchase all allowances and would then look to sell them to participants that require additional allowances. In such negotiations, the broker would be expected to identify a fair price with both sellers and buyers in the market and make a margin on the transactions that covered operational costs. This option would be expected to reduce both search costs for participants, as the broker would be the only authorised buyer/seller, and negotiation time as the broker could be expected to set the purchase and sale prices centrally.

5.0 Costs and Benefits

Introduction

5.1 The key sectors and groups affected by the NERP are:

- operators of large combustion plants participating in the NERP (participants); and
- the operator of the NERP (the NERP operator).

5.2 For the purposes of this final RIA, the impacts on these groups have been separated into quantified and qualitative impacts.

5.3 All the impacts are presented in terms of the net impact to society. Therefore, they do not include transfers between groups, such as transfers of allowances which are sold at a price above or below the abatement cost, or between sectors in the community as a result of the funding of the operational structure.

5.4 This analysis also makes the simplifying assumption that the market will clear, meaning that the demands of all the participants acting either as buyers or sellers of allowances are met. It is possible that the likelihood of clearance may be affected by the operational structure of the NERP; however, it has not been possible to factor this into the quantitative estimates.

5.5 To calculate the quantitative impact from different options, this analysis estimates the impact on the participants and operational costs separately¹². The methodology for estimating the impact on both of these groups is set out in the following sections.

5.6 The estimation methodology on the private sector impacts for Option 1 (the do nothing option) is set out in detail below. Then for each of the subsequent options any alterations to this methodology are set out in detail within the background to the costs and benefits before the impacts are quantified. Option 2a is the preferred option set out in the consultation.

¹¹ This may be expected to reduce the potential for anti-competitive activities as parties to the exchange would not be able to use information on the other party. For example, a seller would not be able to refuse to trade with a competitor in their downstream market.

¹² It is assumed that any central broker would be directly or indirectly operated by the public sector as given the market power such a body would have it would be necessary to have some constraints on its operation.

Table 1: Summary of costs and benefits

Option	Benefits	Costs
1	<p>- There would be no direct additional cost on the public sector who would only provide the minimal information.</p>	<p>- The private sector would incur transaction costs in the region of £28,000 per annum. - This option also increases the risk of the market not clearing as a lack of information increases the allowances withheld from the market for precautionary reasons.</p>
2a)	<p>- The participants are estimated to save around £11,000 per annum from reduced search and negotiation costs of looking for potential trading partners compared to Option 1. - This option would allow participants the chance to exchange other goods and services for permits rather than using money. - Participants have expressed a preference for this implementation route.</p>	<p>- There would be an additional policy cost to the NERP operator of:</p> <ul style="list-style-type: none"> • a one off cost to establishing the website in the region of £2,000; and • ongoing costs of between £400 and £550 per annum to collect and disseminate information. <p>- Non-monetary exchanges could potentially act against smaller participants. - This option would impose an administrative burden of around £1,100 per annum.</p>
2b)	<p>- The private sector is estimated to save around £21,500 per annum in search and negotiation costs. - Removing the identity of the buyers and sellers could reduce any potential for anticompetitive activities. - Transparency in this market would be improved as the cost of any transaction would be provided to the market.</p>	<p>- There would be additional policy costs to the NERP operator of:</p> <ul style="list-style-type: none"> • a one off cost to establishing the website of at least £40,000; and • ongoing costs of around £8,000 per annum. <p>- This option would impose an administrative burden of around £1,600 per annum. - This option is technically the most ambitious. Any IT difficulties could potentially impose substantial costs on both the public and private sectors. The infrequent number of transactions may make the price vary substantially.</p>
3	<p>- The private sector is estimated to save around £19,000 per annum in search and negotiation costs. - This option would be funded from revenues generated from the participants. Therefore it would impose no additional cost on the public.</p>	<p>- The NERP operator would incur a number of additional policy costs including:</p> <ul style="list-style-type: none"> • between £30,000 - £40,000 per annum in defining and establishing a 'fair' price; and • around £3,000 per annum in arranging the purchase and sale of allowances. <p>- This option would impose a total administrative burden of around £2,700 per annum. - The participant would also face the risk of purchasing allowances that were subsequently not needed. - This option creates the highest potential for the market not to clear as it relies on a central body setting prices.</p>

Costs

Option 1 – Do nothing

Quantified costs

5.7 This option has the minimal involvement by government and hence the only estimated costs are the transaction costs borne by the private sector. At a high level, the total transaction costs for the private sector have been estimated using the formula:

$$\text{Total transaction costs} = \text{The transaction cost per trade} \times \text{Number of transactions}$$

5.8 With transaction costs defined as:

$$\text{Transaction costs} = \text{Time spent arranging transactions} \times \text{Hourly cost of resources}$$

5.9 Time spent arranging transactions can then further be subdivided into two parts: the time taken to identify potential trading partners and time spent negotiating with potential partners.

5.10 The analysis under Option 1 (the do nothing option) is based on the following assumptions:

- it takes a business one hour to identify, contact, and ascertain the availability of allocations from a potential trading partner;
- having identified a potential partner, a business will take four hours to negotiate a small transaction (less than 1,000 allowances) and eight hours to negotiate a large transaction (over 1,000 allowances). It will also impose an equal time on the seller;
- three levels of activity are used high, medium and low. Where:
 - low activity involves the minimum transactions required to clear the market;
 - medium activity which is 20% above the low level;
 - high activity which is 35% above the low level;
- it considers three levels of aggregate supply, high, medium and low. Where:
 - in low supply the chance of a partner being able to supply is 20%;
 - in medium supply the chance of a partner being able to supply is 50%; and
 - in high supply the chance of a partner being able to supply is 80%.

5.11 The results of this modelling, separated between different demand and supply conditions, are presented in Table 2 below.

Table 2: Expected time to identify and complete required transactions

Total time (hours)		Supply conditions ¹³		
		low	medium	high
Participant activity	low	860	837	820
	medium	1032	1004	984
	high	1161	1130	1107

¹³ Calculated as $\left(T_S \times \frac{R_T}{P_S}\right) + (T_N \times R_T)$ T_S is the time to search for potential partners, R_T is the required number of transactions, P_S is the probability that the contacted business can supply allocations and T_N is negotiation time.

5.12 To estimate the cost of resources, this analysis has used the resource costs provided by the Cabinet Office for consideration of administrative costs within the Standard Cost Model¹⁴. This guidance provides a range of costs for different types of labour. For this modelling, it has been assumed that the resources employed to complete the searching and negotiating is equivalent to a functional manager. Therefore, the total hourly resource costs are set at £26.05, made up of labour costs of £20.04 and overheads amounting to £6.01.

5.13 By combining this cost of resources with the expected time spent arranging transactions, we reach a total transaction cost to the public sector, shown in Table 3.

Table 3: Transaction costs by demand and supply conditions

		Supply conditions		
		low	medium	high
Participant activity	low	£27,874	£22,403	£21,035
	medium	£33,448	£26,884	£25,242
	high	£37,629	£30,244	£28,398

5.14 This analysis shows that the average aggregate private sector transaction cost under this option is estimated to be £28,129 per annum. However, there is significant variation between the different demand and supply assumptions. With a low demand and high supply imposing a total annual cost of £21,035, while high demand and low supply create total annual costs of £37,629.

Qualitative costs

5.15 The key qualitative costs associated with this option are that while it imposes the smallest potential public costs, it imposes significant unnecessary costs on the private sector. In addition to the financial costs estimated above, this option does nothing to aid the co-ordination of this market.

Option 2a – Provision of current allowance information

Quantified costs

5.16 The key additional cost from the provision of this information occurs to the operator of the system associated with providing this information. The two additional activities involved for the provision of this information above those in Option 1 are the collection and publication of transaction information.

5.17 To estimate the cost of the collection and publication of this information, this modelling makes four key assumptions:

- the production of the new website would cost £2,000;
- collecting information takes on average 15 minutes per transaction;
- updating a website providing the number of allowances of each participant takes 10 minutes per transaction; and
- the hourly resource cost of collecting data is £14.46 and updating the website is £17.68¹⁵.

¹⁴ Available from: www.cabinetoffice.gov.uk/regulation/documents/scm/scm_annexes.pdf.

¹⁵ Resource costs sourced from the Cabinet Office Standard Cost model guidance available at http://www.cabinetoffice.gov.uk/regulation/documents/scm/scm_annexes.pdf. The cost for data collection is assumed to be by a civil service executive officer, with an hourly wage of £11.12 and overhead costs of £3.34 while and updating the website is by a IT operations technician, with an hourly wage of £13.60 and an overhead cost of £4.08.

5.18 By combining these assumptions with the number of transactions set out above the incremental cost to the public sector has been calculated. This modelling results in an average aggregate cost to the private sector of £488 per annum. However, it ranges between £413 and £557 depending on the demand conditions.

5.19 In addition, there would also be an additional administrative burden on participants to submit information to the NERP operator for dissemination. To submit this information, the participants need to prepare and then submit information on the transfer, the number of permits and the partner, to the NERP operator. Assuming that it takes 30 minutes to complete this process, this would result in an administrative burden on average of £1,079 per annum. This cost would however depend on the number of transactions and using the above assumption on activity it would be in the range of £912 to £1,231.

Qualitative costs

5.20 The key additional qualitative costs are:

- the exchange of allowances for other goods and services without the use of money (known as barter) may act against smaller competitors who are unable to offer such packages. This may happen as smaller competitors are likely to have a lower range of potential goods and services that they could exchange; and
- no external resolution mechanism is provided which may mean that any problems with exchanges may take a significant time to resolve.

Option 2b – Provision of negotiation forum

Quantified costs

5.21 The forum for transfers of allowances established under this option is assumed to be an auction type website where the buyer and seller are anonymous and participants input their own information. This removes the need for the website producer to update information but it is still collected imposing the same information collection costs as Option 2a.

5.22 In addition, this option imposes three additional costs relating to the production of an auction website, and the associated ongoing cost, of maintenance and dispute resolution. To estimate these costs, the following assumptions have been made:

- the additional cost to design and produce an auction website is a one-off cost of at least £40,000¹⁶;
- maintenance of the website takes one day a week of an IT operations technician; and
- ten per cent of transactions are disputed and resolution takes two hours of an Executive Officer's time.

5.23 The total public cost has therefore been calculated by combining these assumptions with the number of transactions as set out above. The result of this calculation shows that there is a one off cost of £40,000 and an average ongoing cost of £7,893.

¹⁶ A range of estimates were provided from IT suppliers to establish an electronic auction site. Based on this information the presented figure is the lowest estimate of the resource costs of provision.

5.24 This option would also create an additional administrative burden for the participants. In addition to the preparation and submission time set out in Option 2a, there would also be a cost to business in setting up an account with the website. This is assumed to add one hour for every four years to the cost of the participants. Adding this cost results in an average administrative burden across demand conditions of £1,618, in the range of £1,368 and £1,846.

Qualitative costs

5.25 This is technically the most ambitious option and therefore has the highest risk of technical failure. If this were to occur at the time of highest activity, i.e. a system collapse near the end of the year, this would create substantial costs to both the public and private sector. The public sector would face costs in resolving the technical issues while the participants would face uncertainty over the scheme clearing. Failure to resolve such issues in time could ultimately lead to risk of infraction proceedings by the European Commission if the UK is unable to show that it has achieved significant emission reductions in line with its published programme.

Option 3 – Central co-ordination

Quantitative costs

5.26 Central co-ordination of the market is assumed to occur through the establishment of a single authorised broker that would buy and sell all allowances. Under this option each participant would contact the broker if they need to either purchase or sell allowances. They would then negotiate a price and if agreeable to all parties the transaction would occur. This option therefore incurs incremental costs over Option 1 relating to such negotiation costs for both the participants and the NERP operator. The negotiation time however is assumed to be reduced as with a single broker the negotiating power of the participants would be substantially reduced. Negotiation time would however remain as the register operator would need to collect additional information from the supplier to inform its decisions on setting market prices.

5.27 Under this option the incremental costs on the NERP operator would occur from selecting a 'fair' price and from additional negotiating activities, both on the purchase and sale of allowances.

5.28 In setting a 'fair' price, the NERP operator would attempt to establish two prices, a purchase price and a sale price. In setting these prices the NERP operator would need to identify a price at which the market will clear (i.e. demand would equal supply) and that provides enough revenue to cover its costs. The continued monitoring and evaluation of the market, and agreement of these two prices are estimated to impose costs on the NERP operator of between £30,000 and £40,000 per annum.

5.29 The modelling of negotiation costs has been completed in accordance with the methodology set out for transaction costs in Option 1 with additional assumptions of:

- 50% reduction in negotiation costs;
- search costs reduced to 10 minutes, to identify the broker and collect contact details;
- 75% of negotiation costs being incurred by the private sector and 25% by the public sector. This is intended to reflect the fact that private sector businesses are likely to incur greater costs in preparing for any negotiation; and

- time is valued at £23.32 per hour, the estimated average cost of public service administrative professionals¹⁷.

5.30 The results of this modelling are presented in Table 4 below.

Table 4: Additional public sector resource costs

		Total cost
Participant activity	low	£2,099
	medium	£2,519
	high	£2,833

5.31 These costs are estimated to be on average £2,484, but this differs significantly between scenarios. For example, the high supply scenario is estimated to impose a cost of £2,099, while the low supply scenario is estimated to cost £2,833.

5.32 This option would also create significant additional administrative burdens for participants. In addition to the administrative costs set out in Options 2a and 2b, this option would also require participants to provide additional information to the NERP operator providing information for the transfer of funds. The provision of this information is estimated to increase the average administrative burden to £2,697 per annum, in the range of between £2,279 and £3,077.

Qualitative costs

5.33 The primary qualitative cost associated with central co-ordination is the level of risk that it would place on the broker. As the sole conduit for the transfer of allowances the broker would be open to two substantial risks; firstly, the risk in purchasing allowances where demand is uncertain; and secondly, the risk of challenge if the market does not clear. These two sources of risk in combination would require the broker to take out significant insurance protection (if such insurance were available), the cost of which would be passed on to the incumbents in larger differentials between acquisition and sale prices.

5.34 Setting the price of this market centrally also creates the highest probability that the market would not clear. As the price would be set centrally, it is likely to be less responsive to the demands of the participants. If this were to lead to a higher than optimal price then the broker would hold excessive allowances, leading to the costs set out above in 4.24, and if the price is too low, participants may not be able to purchase all the required allowances.

5.35 This option would also remove dynamic incentives for efficiency on the NERP operator which would act both as the only seller (a monopolist) and the only buyer (a monopsonist). Additional resources might therefore need to be employed to ensure the efficient running of the NERP operator.

Benefits

Option 1 – Do nothing

Quantified benefits

¹⁷ Cost taken from Standard Cost Model guidance - see footnote 11.

5.36 No additional quantitative benefits have been estimated for this option as it constitutes the base case scenario against which all the other options are considered.

Qualitative benefits

5.37 The key qualitative benefit from this option would be that the public sector does not face any additional costs from providing supplementary information to the market. This reduced cost to the public sector would result in lower associated fees to business for operating within the NERP and potentially result in lower costs to the ultimate consumers.

Option 2a – Provision of current allowance information

Quantified benefits

5.38 The primary benefit of this option would occur in the reduced transaction and negotiation costs to participants. In particular from reduced search costs for the private sector when looking for a potential trading partner. For the purposes of this final RIA we have assumed that the provision of up to date availability information would reduce the search time to 10 minutes, as the business would rapidly be able to identify potential partners once they know the availability allowances from other participants.

5.39 Negotiation costs are also assumed to be reduced because additional information has been released to the market. This information would inform the positions of both buyers and sellers and thereby reduce the time to reach an agreement.

5.40 This alteration has been put through the modelling as described under Option 1 and creates the estimated transaction costs to business presented in Table 5.

Table 5: Reduction in transaction costs for Option 2a

		Supply conditions		
		low	medium	high
Participant activity	low	£12,465	£8,362	£7,336
	medium	£14,958	£10,034	£8,804
	high	£16,828	£11,289	£9,904

5.41 Across all the supply and demand conditions these savings represent an average aggregate saving of £11,109. There is however a significant variance across different scenarios with a lowest value of £9,904 and a highest saving of £16,828.

Qualitative benefits

5.42 This option would create additional benefits over Option 1 that could not be captured quantitatively. These benefits include:

- this implementation option has been identified by participants as their preferred route;
- reducing unnecessary costs on businesses would increase the attractiveness of the NERP which may attract additional ‘existing’ large combustion plants (if such an option were to be established); and
- the system would place minimal restrictions on the activities of participants.

Option 2b – Provision of negotiation forum

Quantified benefits

5.43 As under Option 2a, the principal benefits of this option arise in reducing the transaction costs imposed on the private sector. For this option however we expect there to be a reduction in both the search costs and the negotiation costs. As with Option 2a) this modelling assumes that the search costs are reduced by 83% and the negotiation costs are reduced by 50%.

5.44 The reduction in negotiation costs is expected to arise as the anonymous bidding format reduces the required work for participants to set a reservation price for allowances. This is seen to occur as without knowing the identity of their trading partners, businesses will not have the opportunity to collect and process such additional information or the complexities associated with such information. The results of this modelling are presented in Table 6 below.

Table 6: Reduction in transaction costs for Option 2b

		Supply conditions		
		low	medium	high
Participant activity	low	£21,665	£17,106	£15,966
	medium	£25,998	£20,527	£19,160
	high	£29,248	£23,093	£21,555

5.45 Across all the supply and demand conditions these savings represent an average aggregate saving of £21,591. There is, however, a significant variance across different scenarios with a lowest value of £15,966 and a highest saving of £29,248.

Qualitative benefits

5.46 In addition to the quantified benefits set out above, there would be significant additional benefits including:

- removing the identity of the buyers and sellers would substantially reduce any potential for anticompetitive activities;
- transparency in this market, potentially increasing stability of the market as previous prices were known to participants; and
- reduction of any concerns over liquidity as a clear and transparent market would benefit market clearing.

Option 3 – Central co-ordination

Quantified benefits

5.47 Under this option we expect both transaction and negotiation costs to be reduced. The modelling is based on:

- 50% reduction in negotiation costs;
- 83% reduction in search costs, as with Options 2a and 2b; and
- 75% of negotiation costs being incurred by the private sector and 25% by the public sector.

5.48 The negotiation costs are assumed to be reduced in this option as the negotiation will only ever include the buyer or seller and the central co-ordinating body (the NERP operator). It is not, however, expected to reduce as far as in Option 2b as negotiations will still need to occur between the parties which may be more complex than bidding on an auction. The results of this modelling are presented in Table 7 below.

Table 7: Reduction in transaction costs for Option 3

		Supply conditions		
		low	medium	high
Participant activity	low	£19,320	£14,762	£13,622
	medium	£23,185	£17,714	£16,346
	high	£26,083	£19,928	£18,390

5.49 Across all the supply and demand conditions these savings represent an average aggregate saving of £18,871. There is however a significant variance across different scenarios with a lowest value of £13,622 and a highest saving of £26,083.

Qualitative benefits

5.50 The two key additional benefits are:

- that this operational structure could be self funding and therefore there may be no need for additional funding; and
- the purchase of any allowances that would not have been purchased in the free market might generate additional dynamic incentives for abatement.

6.0 Small Firms Impact Test

6.1 These proposals will impact exclusively on ‘existing’ large combustion plants as defined above, none of which are operated by small firms.

7.0 Competition Assessment

7.1 The competition filter has been applied to the options considered in this RIA and it is not anticipated that the implementation of the NERP will have any negative significant impact on entry or competition within any affected markets.

7.2 The operational structure of the NERP will have no direct impact on new entrants as this scheme is only available to ‘existing’ large combustion plants. The aim in providing differential treatment of ‘existing’ large combustion plants is to ensure competitive pressures remain in the market by avoiding disproportionate costs from accruing to ‘existing’ large combustion plants.

8.0 Enforcement, sanctions and monitoring

8.1 Each NERP plant’s PPC permit will contain a condition requiring its total annual emissions of each of the three LCPD pollutants not to exceed its own NERP allocation. Failure – or, in the regulator’s opinion, the likelihood of failure - to comply with this condition will, as

with breach of any other permit condition, render the participant liable to enforcement action. As for any compliance failure, the regulator will need to determine the form of enforcement action best suited to providing a speedy remedy.