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ASSESSMENT REPORT

MODIFICATION PROPOSAL P26 – Market – Driven Trading Neutrality Band

Prepared by the Pricing Issues Modification Group on behalf of the Balancing and Settlement Code Panel

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Reference	Document
Reference 1	Modification Proposal P26 'Market – Driven Trading Neutrality Band'
Reference 2	Initial Written Assessment of P26 'Market – Driven Trading Neutrality Band' (IWA_P26) V1.0
Reference 3	Requirements Specification for Modification P26: Trading Neutrality Band (020AAR) V1.0 6 September 2001
Reference 4	Panel Paper 030/013 Interim Report for Modification P26 'Market – Driven Trading Neutrality Band'
Reference 5	Modification Proposal P27 'Amendment to the Derivation of Imbalance Prices'
Reference 6	Requirements Specification for Modification P27: Amendment to the Derivation of Imbalance Prices (024AAR) V1.0 6 September 2001
Reference 7	Report to the DTI on the Review of the Initial Impact of NETA on smaller Generators August 2001, Ofgem

d Intellectual Property Rights and Copyright

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1 SUMMARY AND RECOMMENDATIONS

1.1 Recommendations

On the basis of the analysis, consultation and assessment undertaken in respect of this Modification Proposal during the Assessment Phase, and the resultant findings of this report, the Modification Group recommends that the BSC Panel should:

- **Note that the PIMG could not reach a consensus as to whether this Modification better faciliated achievement of the Applicable BSC Objectives;**
- **Determine whether the BSC Panel believes, based upon the contents of this Assessment Report, that the Modification better meets the Applicable BSC Objectives;**
  - **If the BSC Panel believes that this Modification better achieves the Applicable BSC Objectives, then the BSC Panel should approve the Modification, submit it to the Report Phase and recommend approval of the Modification to the Authority; and**
  - **If the BSC Panel does not believe that this Modification better achieves the Applicable BSC Objectives, then the BSC Panel should reject the Modification, submit it to the Report Phase and recommend rejection of the Modification to the Authority.**
- **Recommend to the Authority that the Alternative Modification be rejected;**
- **Where the Modification is Approved, recommend that the implementation of the Modification be included in the scope of an ELEXON BSC Systems Release Project;**
- **Note that no implementation date has been recommended by the PIMG as a consequence of the complexity of the current implementation schedules. A proposed implementation date can be determined as part of the Report Phase, with advice from the BSC Panel;**
- **Note the indicative implementation cost of £325,000 for implementation as a standalone development project. This comprises £250,000 for BSC Agent System development and £75,000 for ELEXON development and implementation within an ELEXON BSC Systems Release Project on a Settlement Day basis. Ongoing operational costs are estimated to be in the region of £4250 per month, comprising £500 in ELEXON costs and £3750 of Central Service Agent costs; and**
- **Note that if this Modification were to be implemented within the BSC Agent Systems in conjunction with Option 3 of Modification P27 'Amendment to the Derivation of Imbalance Prices', then the cost of the BSC Agent System development would be around £509,000 (as opposed to standalone costs of £335,000 for Modification P27 and £250,000 for Modification P26).**

1.2 Background

Modification Proposal P026 'Market – Driven Trading Neutrality Band' was raised by BizzEnergy.com Limited on the 25th June 2001. The Initial Written Assessment for Modification Proposal P026 'Market Driven Trading Neutrality Band' was subsequently submitted to the BSC Panel meeting of the 26th July 2001. The Panel recommended that Modification P26 be submitted to a three month assessment phase and requested that the Modification be progressed to the same timetable as Modification Proposal P27 'Amendment to the Derivation of Imbalance Prices' (Reference 5).

The Modification Proposal is seeking to amend the methodology for the application of Energy Imbalance Prices on Energy Imbalance volumes by the introduction of a 'Market - Driven Trading Neutrality Band'. The intent of such a Trading Neutrality Band is to allow, for each BSC Party and each Settlement Period, a defined volume of Energy Imbalance to be cashed out at a Neutral Price, with the remaining Energy Imbalance cashed out under existing arrangements, i.e. subject to either the System Buy Price or the System Sell Price, as appropriate.

The Modification Proposal defines the issue requiring the introduction of such Trading Neutrality Band as being one of market liquidity, granularity and efficiency, in that a BSC Party's ability to fine tune their trading position is dependent upon their ability to contract for small volumes of energy close to Gate Closure. The Modification Proposal expands on this issue by stating that currently the power exchanges have an implied minimum contract volume of 20 MWh as a result of the transaction costs for contracting for smaller volumes being too high to warrant the transaction. Similarly, aggregation services, where a BSC Party can buy a small portion of a power exchange trade, are available, but again the transaction costs are uneconomic for new entrants / small players.

The Modification Proposal indicates that the perceived lack of granularity in the spot markets is one of the contributing factors to the market being long, in that BSC Parties cannot buy / sell small enough quantities of energy to come closer to being in balance. Therefore, the Modification Proposal seeks to introduce a mechanism to effectively account for the unavailability of smaller contract volumes by allowing any subsequent imbalance, within the limit defined by the Trading Neutrality Band to be subject to a neutral price. Such neutral price could be market based, utilising costs of trades from a power exchange, or another neutral price representing the value of short term energy.

The Modification Proposal proposes that the Trading Neutrality Band be set annually by the BSC Panel, and that the volume so defined be representative of the liquidity and granularity of the spot market.

The Pricing Issues Modification Group (PIMG) met initially on the 21st August 2001 in order to determine the definition of the Modification in sufficient detail for a Requirements Specification to be drafted and to initiate the assessment procedure for the Modification.

This Requirements Specification for Modification P26 'Market – Driven Trading Neutrality Band' (Reference 3) defines the requirements for implementation of the Modification and Alternative Modification without any evaluation or assessment of the Modifications themselves, thus according with the Balancing and Settlement Code Section F 2.6.6. This Requirements Specification was issued for Industry (including the Transmission Company and the Central Service Agent) impact assessment on the 6th September 2001. The results of such impact assessment are included in this Assessment Report.

It should be noted that there is significant interaction between this Modification and Modification Proposal P27 'Amendment to the Derivation of Imbalance Prices' (Reference 5) as a result of both of the Modifications affecting the Energy Imbalance Price and cashflow calculation functionality. As a consequence of this, the Panel requested that these Modifications be progressed to the same timetable and such interaction taken into consideration by the PIMG when progressing both Modifications.

To this end, the Requirements Specification for P27 (Reference 6) was also submitted to Industry Impact Assessment on the 6th September 2001 and the Central Service Agent was requested to consider both Modifications as standalone Modifications, as well as to provide an addendum to the Impact Assessment indicating the costs and timescales if both Modifications were to be implemented together, as part of the same project.

The PIMG met again on the 27th September 2001 to complete the assessment of the Modification and Alternative Modification and to assess the impact assessments received in order to define the recommendations and the rationale for the Modification and Alternative Modification. The PIMG determined that there was a lack of operational information regarding the granularity in the spot markets and the availability of imbalance exposure risk management services. Therefore a questionnaire was sent for consultation in order to obtain the requisite information (Section 12.3 and ANNEX 3(c)).

The PIMG reviewed the responses and agreed this Assessment Report and the associated recommendations by e-mail.

1.3 Rationale for Recommendations

The PIMG determined that the Alternative Modification should be rejected, as the PIMG agreed that the Alternative Modification is not in accordance with the principle objective of the Modification, which is to overcome the issues of granularity. If a percentage of a small amount of Credited Energy is subject to the Trading Neutrality Band, then there is the potential for the Party to have to obtain even smaller volumes of trades in the prompt market, thus defeating the object of the original Modification.

The PIMG reviewed the Initial Consultation and Impact Assessment responses from Participants (summarised and discussed in section 12.1 and 12.2, and provided in full in ANNEX 3(a) and 3 (b)), and noted that, in terms of the responses, there was a relatively equal number of Parties supporting or rejecting the Modification. The responses to both the Initial Consultation and the Impact Assessment raised similar points regarding the Modification, namely:

- The Modification increases competition by benefiting small players and removing a barrier to entry;
- The Modification is necessary in order to address the lack of granularity in forward / spot markets;
- The Modification reduces the incentives on Parties to balance, potentially increasing Balancing Mechanism costs as a consequence of additional balancing actions required to compensate for this;
- The Modification improves the incentive to balance rather than go long (as is currently the case);

- There are no granularity / liquidity issues for trading small volumes, therefore there is no necessity for the Modification;
- The Modification may encourage the splitting of companies into affiliates in order to maximise the benefits of the Modification, thus reducing the administrational efficiency of the BSC; and
- The Modification reduces the incentives to develop sub 20 MW products and reduces competition in demand forecasting products.

The PIMG reviewed and addressed the points raised in these Participant responses, and this discussion is provided in Section 12.1 of this Assessment Report.

The PIMG reviewed Modification P26 with regards to it better meeting the Applicable BSC Objectives. The PIMG agreed that if the assertions of the Proposer with regards to granularity and liquidity of the forward / spot markets being insufficient to enable a smaller player to trade effectively and economically, were correct, then this Modification would better achieve the Applicable BSC Objective 3 (c) by increasing competition for smaller players. However, the PIMG felt that there was insufficient evidence with regards to granularity / liquidity and costs in the forwards / spot markets and therefore requested that this information be obtained from industry. To this end, a questionnaire was issued (the contents of which are detailed in Section 12.3, and the responses provided in ANNEX 3(c)). The questionnaire requested information on:

- The availability and cost of imbalance risk management services in general and specifically for small volumes;
- The availability, flexibility and cost of Seasonal Time of Day (STOD) contracts in general and specifically for small volumes; and
- The granularity, liquidity and cost of trading in general, and specifically for small volumes.

The responses from the questionnaire indicated that there is no consensus amongst Parties as to the granularity / liquidity and costs in the forwards / spot markets for small Players and associated smaller volume trades. However, it should be noted that smaller players generally reported high costs, lack of economic alternatives and a lack of liquidity, whilst larger players believed these problems were not apparent and in some cases were offering competitive risk management products.

Consequently, the PIMG was unable to reach a unanimous decision and make a clear statement as to whether this Modification in fact better met the Applicable BSC Objective 3(c).

Therefore the PIMG determined that a recommendation should be made to the Panel to the effect that the Panel should determine, from the arguments and evidence provided in this Assessment Report, whether this Modification better meets the Applicable BSC Objectives, and therefore whether this Modification should be approved or rejected.

2 INTRODUCTION

This Report has been prepared by ELEXON Ltd., on behalf of the Balancing and Settlement Code Panel ('the Panel'), in accordance with the terms of the Balancing and Settlement Code ('BSC'). The BSC is the legal document containing the rules of the balancing mechanism and imbalance settlement process and related governance provisions. ELEXON is the company that performs the role and functions of the BSCCo, as defined in the BSC.

An electronic copy of this document can be found on the BSC website, at www.elexon.co.uk

3 PURPOSE AND SCOPE OF THE REPORT

BSC Section F sets out the procedures for progressing proposals to amend the BSC (known as 'Modification Proposals'. These include procedures for proposing, consulting on, developing, evaluating and reporting to the Authority on potential modifications.

The BSC Panel is charged with supervising and implementing the modification procedures. ELEXON provides the secretariat and other advice, support and resource required by the Panel for this purpose. In addition, if a modification to the Code is approved or directed by the Authority, ELEXON is responsible for overseeing the implementation of that amendment (including any consequential changes to systems, procedures and documentation).

The Panel may decide to submit a Modification Proposal to an 'Assessment Procedure'[1]. Under this procedure, a Modification Group is tasked with undertaking a detailed assessment of the proposal to evaluate whether it better facilitates achievement of the Applicable BSC Objectives[2]. The group may also develop an alternative proposal if it believes that the alternative would better facilitate achievement of the objectives.

The Modification Group must prepare a report for the Panel, setting out the results of the assessment of the modification proposal and any alternative. The following matter should be included (to the extent applicable to the proposal in question)[3]:

(a) an analysis of and the views and rationale of the Modification Group as to whether (and, if so, to what extent) the Proposed Modification would better facilitate achievement of the Applicable BSC Objective(s);

(b) a description and analysis of any Alternative Modification developed by the Modification Group which, as compared with the Proposed Modification, would better facilitate achievement of the Applicable BSC Objective(s) and the views and rationale of the Group in respect thereof;

(c) an assessment or estimate (as the case may be) of:

  (i) the impact of the Proposed Modification and any Alternative Modification on BSC Systems;

  (ii) any changes and/or developments which would be required to BSC Systems in order to give effect to the Proposed Modification and any Alternative Modification;

  (iii) the total development and capital costs of making the changes and/or delivering the developments referred to in paragraph (ii);

  (iv) the time period required for the design, build and delivery of the changes and/or developments referred to in paragraph (ii);

  (v) the increase or decrease in the payments due under the BSC Agent Contracts in consequence of the Proposed Modification and any Alternative Modification;

  (vi) the additional payments (if different from those referred to in paragraph (v)) due in connection with the operation and maintenance of the changes and/or

[1] See BSC F2.6
[2] As defined in the Transmission Licence
[3] See BSC F2.6.4 and Annex F-1

developments to BSC Systems as a result of the Proposed Modification and any Alternative Modification;

(vii) any other costs or liabilities associated with BSC Systems attributable to the Proposed Modification and any Alternative Modification;

(d) an assessment of:

(i) the impact of the Proposed Modification and any Alternative Modification on the Core Industry Documents;

(ii) the changes which would be required to the Core Industry Documents in order to give effect to the Proposed Modification and any Alternative Modification;

(iii) the mechanism and likely timescale for the making of the changes referred to in paragraph (ii);

(iv) the changes and/or developments which would be required to central computer systems and processes used in connection with the operation of arrangements established under the Core Industry Documents;

(v) the mechanism and likely timescale for the making of the changes referred to in paragraph (iv);

(vi) an estimate of the costs associated with making and delivering the changes referred to in paragraphs (ii) and (iv),

together with a summary of representations in relation to such matters;

(e) an assessment of:

(i) the likely increase or decrease in BSC Costs (to the extent not already taken into account in paragraph (c) above) in consequence of the Proposed Modification and any Alternative Modification;

(ii) the changes required to Systems and processes of BSCCo in order to give effect to the Proposed Modification and any Alternative Modification; and

(iii) the BSC Costs which are expected to be attributable to the implementation of the Proposed Modification and any Alternative Modification, to the extent not taken into account under any other provision above;

(f) to the extent such information is available to the Modification Group, an assessment of the impact of the Proposed Modification and any Alternative Modification on Parties in general (or classes of Parties in general) and Party Agents in general, including the changes which are likely to be required to their internal systems and processes and an estimate of the development, capital and operating costs associated with implementing the changes to the Code and to Core Industry Documents;

(g) an assessment of the Proposed Modification and any Alternative Modification in the context of the statutory, regulatory and contractual framework within which the Code sits (taking account of relevant utilities, competition and financial services legislation);

(h) a summary of the representations made by Parties and interested third parties during the consultation undertaken in respect of the Proposed Modification and any

Alternative Modification and the views and comments of the Modification Group in respect thereof;

(i) a summary of the analysis and impact assessment prepared by the Transmission Company and the views and comments of the Modification Group in respect thereof;

(j) a summary of the impact assessment prepared by relevant BSC Agents and the views and comments of the Modification Group in respect thereof;

(k) a summary of any impact assessment prepared by Core Industry Document Owners and the views and comments of the Modification Group in respect thereof;

(l) a copy of the terms of reference and any report or analysis of external consultants or advisers engaged in respect thereof;

(m) a list of the key assumptions which the Modification Group has made in formulating its views;

(n) any other matters required by the terms of reference of such Modification Group;

(o) any other matters which the Modification Group consider should properly be brought to the attention of the Panel to assist the Panel in forming a view as to whether the Proposed Modification and any Alternative Modification would better facilitate achievement of the Applicable BSC Objective(s);

(p) subject to paragraph 2.6.8 and 2.6.9 of Section F of the BSC, the proposed text to modify the Code in order to give effect to the Proposed Modification and any Alternative Modification, together with a commentary setting out the nature and effect of such text and of other areas of the Code which would be affected by the changes;

(q) the Modification Group's proposed Implementation Date(s) for implementation (subject to the consent of the Authority) of the Proposed Modification and any Alternative Modification;

(r) an executive summary of the project brief prepared by BSCCo;

(s) a recommendation (where applicable) as to whether, if the Proposed Modification or Alternative Modification is approved, Settlement Runs and Volume Allocation Runs carried out after the Implementation Date of such Approved Modification in respect of Settlement Days prior to that date should be carried out taking account of such Approved Modification or not;

(t) the proposed text (if any) to modify the Memorandum and Articles of Association of BSCCo and/or the BSC Clearer in order to give effect to the Proposed Modification and any Alternative Modification, together with a commentary setting out the nature and effect of such text and of other areas of the Memorandum and Articles of Association and/or the Code which would be affected by the changes; and

(u) a summary of any changes which would be required to Code Subsidiary Documents as a consequence of such Proposed Modification or Alternative Modification.

This Assessment Report therefore addresses all of the above items to the extent relevant to the Modification Proposal in question.

4 MODIFICATION GROUP DETAILS AND TERMS OF REFERENCE

4.1 Modification Group Details

This Assessment Report has been prepared by the Pricing Issues Modification Group. The Membership of the Modification Group was as follows:

Member	Organisation
Dave Warner / Justin Andrews	ELEXON (Chair)
Mandi Francis	ELEXON (Analyst)
Richard Lavender	NGC
Duncan Jack	St. Clements Services
Damian Johnson	Amerada Hess
Maurice Smith / Rob Barnett	Campbell Carr
Afroze Miah (James Hawkins)	PowerGen
Danielle Lane	British Gas Trading
Simon Hadlington	British Gas Trading
Adam Higginson	Ofgem
Nick Elms	Enron

4.2 Terms of Reference

The Panel provided specific Terms of Reference for the Pricing Issues Modification Group with regards to Modification P26 'Market -–Driven Trading Neutrality Band', as follows.

"The Modification Group should assess P26 against the current Baseline, but endeavour to understand the interdependence with other pricing issues (including the results of the ISG pricing review), and shall include in the report:"

1. The interaction of this Modification Proposal with existing Modifications, specifically P4, P008, P12 and P015/P018;

   ANNEX 2 of this Assessment Report provides the full detail of this analysis.

2. The impact on the market / trading trends of the introduction of an 'Imbalance buffer zone'. An assessment of the incentives and the impact on trading needs to be undertaken to understand the impact this Modification potentially has on market operation;

   ANNEX 2 of this Assessment Report provides the full detail of this analysis.

3. The impact on BSC Agent Systems, specifically the significant impact on the Settlement Administration Agent (SAA);

The impact on the SAA is significant and is summarised in Section 7 of this Assessment Report, with the full Impact Analysis provided in ANNEX 4 of this report.

4. The scope of the Modification Proposal, and its impact on consequential processes, such as credit cover calculations;

   The Description of the Modification and Alternative Modification for P26 (Section 5, 5.3 and 5.4, respectively, of this Assessment Report) defines the extent of the impact of the Modification and Alternative Modification via a definition of the amendments required. The impact for the implementation of this Modification / Alternative Modification, is limited to the Energy Imbalance Cashflow and Residual Cashflow Reallocation Calculations. The Indebtedness calculation process is not affected, as described in Sections 5.3.7 and 5.4.7 for the Modification and Alternative Modification respectively, as a consequence of the nature of the process.

5. The definition of the mechanism for setting the Trading Neutrality Band, potentially this could be a fixed volume or a percentage based variable;

   This aspect is covered in more detail by the description of the Modification and Alternative Modification in Section 5 of this Assessment Report. The PIMG determined that the Trading Neutrality Band could be a fixed volume, as defined in the original Modification Proposal, and therefore presented as the original Modification, but the PIMG also defined the Trading Neutrality Band based on a combination of a fixed volume and a percentage, and this is presented as the Alternative Modification.

6. The methodology by which the Panel could change the parameters of the Neutrality band, if necessary;

   This aspect is covered in more detail by the description of the Modification and Alternative Modification in Section 5 of this Assessment Report, and by the legal text supporting amendments to the Balancing and Settlement Code provided in ANNEX 1 (Section T 1.5A).

7. The definition of the mechanism for setting the Neutral Price, which could be fixed or market based and, therefore, variable;

   This aspect is covered in more detail by the description of the Modification and Alternative Modification in Section 5 of this Assessment Report, and by the legal text supporting amendments to the Balancing and Settlement Code provided in ANNEX 1 (Section T 1.5B and 1.5C).

8. The reasons for the removal of the neutrality band within the Gas Market;

   An interim report on this aspect of this Modification was presented to the Panel Meeting of the 20th September 2001, extracts from which are attached in ANNEX 2 to this Assessment Report. The paper provides a relatively high level assessment of the removal of the tolerances in the gas market and indicates that such removal was a result of the fact that the tolerances were only intended to be a transitional arrangement and were intended to be replaced with other services, such as linepack, which were intended to enable shippers to manage their imbalances. The reduction and removal of the tolerances was interdependent upon the introduction of these services.

9. Clear information on prices and volumes and the effect of granularity in the forward exchanges;

   A questionnaire was issued for consultation in order to obtain this information, the results are summarised in Section 12.3, with the full responses provided in ANNEX 3 (c). The responses to the questionnaire did not provide a consensus regarding the costs or granularity of the forward / spot markets and therefore it is difficult to make clear or specific statements to any effect.

10. An assessment of the impact on the risk profile of different types and size of player of a fixed volume neutrality band;

    ANNEX 2 of this Assessment Report provides the full detail of this analysis. The implementation of a 20MWh fixed volume Trading Neutrality Band was applied to Settlement Periods 5 and 40 on Settlement Day 6th September 2001. Both the Settlement Day and the associated Settlement Periods were picked entirely at random.

    Generally:

    - For a Settlement Period the Energy Imbalance Volume is approximately 10% of the Account Credited Energy. Therefore players with an import / export of within +/- 200 MWh in a Settlement Period will have 100% of their imbalance covered by the TNB. However, larger players still have a good percentage of their Energy Imbalance falling within the TNB;
    - Parties with a long imbalance position will benefit most, with the risk of being hit by a negative System Sell Price mitigated almost entirely by the application of the Neutral Price to imbalance volumes within the Trading Neutrality Band. For the Settlement Periods analysed, the cashflows from the system (for positive Energy Imbalances) increased by an average of 250%; and
    - However, where the System Buy Price is high, the application of the Neutral Price reduces the charges to Parties. In Settlement Period 40 the System Buy Price was £113. The application of a relatively high Neutral Price (£20.25) reduced charges for Parties by around 80%[4].

11. An assessment of what other risk management arrangements are available to manage the risks the Proposer is seeking to address via this Modification; and

    A questionnaire was issued for consultation in order to obtain this information, the results are summarised in Section 12.3, with the full responses provided in ANNEX 3 (c). The responses to the questionnaire did not provide a consensus regarding the availability and costs of such services and therefore it is difficult to make clear or specific statements to any effect.

12. An implementation strategy based on the interdependence of all the pricing issues / approved Modification Proposals.

    Section 14 of this Assessment Report contains a summary of the Project Brief which provides the implementation strategy for this Modification and the Alternative Modification. The Project Brief is based upon the Impact Assessments received from ELEXON and the Central Service Agent.

[4] It should be noted that no analysis was undertaken to determine the affect of the changes to Energy Imbalance cashflow on the Residual Cashflow Reallocation. However, if payments from the system are increased and payments to the system (party charges) are reduced, then there is likely to be a considerable impact on RCRC calculations.

The discussion and assessment of each of these points has been undertaken in significant detail, and this detail is represented in ANNEX 2 of this Assessment Report. However, the discussions and assessment are summarised in this section against each of the points.

5 DESCRIPTION AND ASSESSMENT AGAINST THE APPLICABLE BSC OBJECTIVES

5.1 Assessment of the Modification and the Alternative Modification against the Applicable BSC Objectives

As part of the assessment of the Modification, the PIMG reviewed the objectives of the Modification against the Objectives of the BSC, as defined in the Transmission Licence Condition 7A, paragraph (3), as follows:

(a) The efficient discharge by the Transmission Company of the obligations imposed under the Transmission Licence;

(b) The efficient, economic and co-ordinated operation by the Transmission Company of the Transmission System;

(c) Promoting effective competition in the generation and supply of electricity, and (so far as consistent therewith) promoting such competition in the sale and purchase of electricity;

(d) Promoting efficiency in the implementation and administration of the balancing and settlement arrangements.

The Proposer asserts that the Modification will better achieve Objective (3) (c) by removing a barrier to entry. The Proposer asserts that granularity in the spot markets is such that contracts for the small volumes required are not available at reasonable cost (with 'reasonable' being quantified as a cost at which smaller players are able to compete effectively), i.e. the effective cost of energy is unreasonable (the effective cost of energy includes transaction costs, system costs, and trading desk costs). Therefore smaller players can only achieve balance at a disproportionate cost which is a barrier to entry to the competitive market. Removing this barrier therefore encourages competition.

The PIMG agreed that if the assertions of the Proposer with regards to granularity and liquidity of the forward / spot markets being insufficient to enable a smaller player to trade effectively and economically, were correct, then this Modification would better achieve the Applicable BSC objective 3 (c) by increasing competition for smaller players. However, the PIMG felt that there was insufficient evidence with regards to granularity / liquidity and costs in the forwards / spot markets and therefore requested that this information be obtained from industry. To this end, a questionnaire was issued (the contents of which are detailed in Section 12.3, and the responses provided in ANNEX 3(c)).

The responses from the questionnaire indicated that there is no consensus amongst Parties as to the granularity / liquidity and costs in the forwards / spot markets for small players and associated smaller volume trades. Consequently, the PIMG was unable to reach a unanimous decision and make a clear statement as to whether this Modification in fact better met the Applicable BSC Objective 3(c).

Therefore the PIMG determined that a recommendation would be made to the Panel to the effect that the Panel should determine, from the arguments and evidence provided in this Assessment Report, whether this Modification better meets the Applicable BSC Objectives.

The Transmission Company, in their consultation response and Impact Analysis asserted that the Modification was not consistent with Objective (3) (b) in that if such a Trading Neutrality Band were introduced, then Parties were incentivised not to balance, thus imposing a requirement for additional balancing actions to be taken by the Transmission Company in their role as System Operator. This increases Balancing Mechanism costs and reduces efficiency of operation.

The PIMG discussed this view and determined that based upon the current situation, which is to go long, that the Modification potentially reduced this incentive and therefore reduced the existing bias of the operational market. The PIMG noted that Modification P18A was intended to reduce the asymmetric price bias, but that it would not remove this completely. Therefore this Modification P26 may have the effect of making the current operational market marginally more efficient by reducing the net imbalance, as a consequence of Parties being able to sit within the Trading Neutrality Band, rather than being driven long.

The PIMG agreed that if the market were perfectly in balance, then the implementation of this Modification P26 would potentially have the effect of increasing the number of Balancing Actions required, as a result of Parties not being incentivised to balance accurately.

The PIMG reviewed some of the incentives / implications of the Modification as a consideration of the 'pros and cons' of the Modification, namely:

- **The Modification reduces the incentives to balance;**
- **The Neutral Price may not reflect the cost the Balancing Mechanism may be exposed to as a result;**
- **The Modification could inhibit the development of sub 20 MWh products and therefore hinder market evolution;**
- **The Modification reduces demand forecasting risk thus advantaging small players; and**
- **The Modification benefits small players, thus increasing competition, but is not unfair as the Trading Neutrality band applies to all.**

These points are evaluated in Section 12 of this Assessment Report.

5.2 Description of the Modification and the Alternative Modification

The following represents extracts from the Requirements Specification for Modification Proposal P026, 020AAR (Reference 3).

This section, in referencing the Requirements Specification provides the definition of the changes required to support the implementation of the solution to Modification Proposal P026, as defined within that Modification Proposal, i.e. the fixed volume Trading Neutrality Band, and associated Neutral Price. There is significant overlap between the amendments required to support this Modification and those required to support the Alternative Modification Proposal (a combined approach to the Trading Neutrality Band), however, these have been kept separate for clarity and therefore there is a significant amount of similarity.

The legal text to support these amendments is defined in ANNEX 1 of this Assessment Report and is referenced throughout the definition of the requirements for clarity.

Where interfaces are referenced, the references have been taken from the NETA Central Service Agent User Requirements Specification and Interface Design Definition. This is in order to provide a definition of the amendments to the interfaces that is consistent with the approach taken by the NETA Central Service Agent for the purposes of this Requirements Specification.

For the avoidance of doubt, it is intended that if this Modification or Alternative Modification is implemented, then, due to the nature of the amendments, the implementation should be on a Settlement Day basis. Therefore any impact assessment should take this approach into consideration.

Sections 5.5 and 5.6 of this Assessment Report provide a (background) summary of the PIMG determinations regarding the implementation of the Modification, specifically the basis of the recommendation for the initial composition of the Neutral Price. Section 5.6 provides the background to the determination of the Alternative Modification, specifically what the percentage based parameter was to be a percentage of.

5.3 The Proposed Modification – Fixed Trading Neutrality Band

5.3.1 The Trading Neutrality Band

The value of the Trading Neutrality Band ((TNBj, MWh) i.e. the amount of energy imbalance for a Party to be cashed out at a Neutral Price) will be determined by the BSC Panel on an annual basis, although that Panel may revise the value outside of that timetable with the approval of the Authority, and such revised value will be notified to each Party, the SAA and the Authority (BSC Section T 1.5A). It is intended that the value of the Trading Neutrality Band be consistent with the granularity of the spot markets and that the Panel will take this into consideration when revising such value.

On determination of a revised value of the Trading Neutrality Band, SAA is required to be notified of the amended value. It is proposed that the mechanism for notifying SAA will be via an existing manual interface utilised by ELEXON for notifying system parameters to SAA, namely SAA-I023 'Receipt of System Parameters'. It should be noted that the existing format of the interface enables specific Settlement Periods to be included in the range, however, it is intended that the Trading Neutrality Band be effective on a Settlement Day (rather than Settlement Period) basis.

5.3.2 The Neutral Price

The Neutral Price ((NPj, in £/MWh) i.e. the price applied to energy imbalance falling within the Trading Neutrality Band for a Party) is to be a single price applied to the Energy Imbalance covered by the Trading Neutrality Band. It is proposed that the Neutral Price be a £/MWh variable and that amendments to the Neutral Price between settlement runs be supported by the settlement calculations. It is proposed that the Neutral Price be open to Trading Disputes / Trading Queries by BSC Parties, if it is believed that it has been calculated / determined incorrectly and it is also proposed that revisions due to data amendments be supported. Therefore, any implementation must allow for potential resubmission of the data between Settlement Runs.

The Modification proposes that the Panel also determine the methodology for determining the Neutral Price (BSC Section 1.3 and BSC Section T 1.5B). The PIMG recommends that, at least initially, the Neutral Price be the 'policed' last trade price from the UKPX, for each Settlement Period.

5.3.3 Determining the Neutral Price

ELEXON will utilise the methodology so determined by the Panel to determine the Neutral Price for all Settlement Periods in a Settlement Day (BSC Section T 1.5C).

For the mechanism proposed by the Modification, UKPX should be requested (potentially under a formal contract) to provide the policed last trade price for all Settlement Periods of a Settlement Day to ELEXON, for ELEXON to provide onwards to SAA.

It is proposed that the Neutral Price be provided to SAA by ELEXON, by the end of the second working day after the Settlement Day (to allow time to obtain the Neutral Price). It is also proposed that ELEXON post the Neutral Prices for all Settlement Periods on the ELEXON website for information, to provide a parallel, regarding the provision of information, between the Neutral Price and the Energy Imbalance Prices calculated by the System. ELEXON will use

reasonable endeavours to generate and publish the Neutral Prices for a Settlement Day as soon as possible after receipt of the information needed to generate the Neutral Prices.

It seems inappropriate to publish the Neutral Prices on the BMRA, as BMRA is intended to be a 'near real time' reporting Agent for the Balancing Mechanism, and as such, will not utilise these Neutral Prices in the calculations it undertakes. Therefore as ELEXON is required to publish other Market Data (which Neutral Prices appear to fall into) it seems a more consistent approach to place them on the ELEXON Website.

5.3.4 Notifying the Neutral Price

ELEXON shall notify the Neutral Prices to the Settlement Administration Agent by the end of the second Business Day after the Settlement Day, for all Settlement Periods in a Settlement Day to SAA for use in settlement calculations. The timing constraints defined here are to enable the Neutral Price to be provided to SAA in time for use in the Interim Information Run.

It is proposed that this be undertaken via a new manual interface, defined as follows:

ELEXON to SAA.

Settlement Date

Settlement Period (1-50)

Neutral Price (£/MWh)

5.3.5 Application of the Trading Neutrality Band and Neutral Price in Energy Imbalance Cashflow Calculations

The intent of the Modification is that a specified amount (the Trading Neutrality Band) of energy imbalance for a BSC Party is cashed out at a Neutral Price for each Settlement Period. All energy imbalance in excess of the Trading Neutrality band is cashed out under the System Buy or System Sell Prices, as defined under the existing arrangements.

Therefore, in order to support the introduction of the Trading Neutrality Band, settlement calculations, as defined in Section T of the Balancing and Settlement Code, will have to be amended for all Settlement Runs. The determination of the Energy Imbalance for each Energy Account will remain as currently defined, however, the determination of energy imbalance cashflows (Section T 4.7) is required to be amended to support the cashout of the Trading Neutrality Band at the Neutral Price.

5.3.6 Accounting for the Trading Neutrality Band in Residual Cashflow Allocations

In the Residual Cashflow Reallocation Proportion calculation, defined in BSC Section T 4.10.2, the calculation should be amended so that each party's QCE is adjusted by a factor, derived on an account basis, to reflect the effect of the TNB on their imbalance exposure.

5.3.7 Accounting for the Trading Neutrality Band in Energy Indebtedness Calculations

Modification P2 'Revision of the Methodology for Assessing Credit Indebtedness' proposes that the calculation of indebtedness for credit-checking purposes should be enhanced to use actual prices and metered volumes, as provided to the Funds Administration Agent by SAA. Therefore the proposal is that settlement charges (as defined in BSC, Section T 5.3.3) for a

BSC Party are passed to ECVAA for use in the Indebtedness calculations. Therefore as Modification P26 amends the Energy Imbalance cashflow for a Party, this will automatically be reflected in Indebtedness calculations and therefore no further amendment in this area is required under Modification P26.

5.3.8 Settlement Report (SAA-I014) Amendments

The Settlement Report (SAA-I014), all sub flows, require amendment to reflect the application of the Trading Neutrality Band in the report, so that BSC Parties, the Transmission Company and ELEXON can replicate the settlement calculations, if required.

It should be noted that there is potential to utilise the parallel reporting functionality defined within Modification P8, i.e. recipients determine the version of the Settlement Report they wish to receive. Therefore any Impact Assessment should provide a view on the appropriateness and cost / timescale implications of utilising this approach.

Therefore the following amendments are required:

SAA-I014 Subflow 1 - to BSC Parties:

Group SSD 'System Period Data'

Include new data item 'Neutral Price' (£/MWh) between 'System Sell Price' (N0215) and 'Total System BM Cashflow' (N0333).

SAA-I014 Subflow 2 - to Transmission Company:

Group SPI 'Settlement Period Information'

Include two new data items, 'Trading Neutrality Band' (MWh) and 'Neutral Price' (£/MWh) at the end of the Group.

Group SSD 'System Period Data'

Include new data item 'Neutral Price' between 'System Sell Price' (N0215) and 'Total System BM Cashflow' (N0333).

SAA-I014 Subflow 3 - to ELEXON:

Group SPS 'Settlement Period Summary'

Include the new data item, 'Trading Neutrality Band' (MWh) at the end of the Group.

Group SSD 'System Period Data'

Include new data item 'Neutral Price' between 'System Sell Price' (N0215) and 'Total System BM Cashflow' (N0333).

5.3.9 Reporting Amendments to the Balancing and Settlement Code

Section V 'Reporting' requires amendment to clause 4. 'Reporting by BSCCo' to reflect the new parameter 'Trading Neutrality Band' and to reflect the requirement to publish the Neutral Price on the ELEXON website.

5.4 Alternative Modification – Combination Trading Neutrality Band

5.4.1 The Trading Neutrality Band

The value of the Trading Neutrality Band ((TNB), (MWh, %) i.e. the parameter to be utilised when calculating the amount of energy imbalance to be cashed out at a Neutral Price for a Party, defined as both a fixed Volume and a percentage) will be determined by the BSC Panel on an annual basis (BSC Section T 1.5A). Although the Panel may revise the values outside of that timetable with the approval of the Authority. Any revised value will be notified to all Parties, the SAA and the Authority. It is intended that the values of the Trading Neutrality band be consistent with the granularity of the spot markets and that the Panel will take this into consideration when revising such values.

The Trading Neutrality Band will therefore be applied within the Energy Imbalance Price calculations as comprising a minimum of the fixed volume parameter or the percentage value applied to the Account Credited Energy Volume.

On determination of revised values of the Trading Neutrality Band, SAA is required to be notified of both the amended values. It is proposed that the mechanism for notifying SAA will be via an existing manual interface utilised by ELEXON for notifying system parameters to SAA, namely SAA-I023 'Receipt of System Parameters'. It should be noted that the existing format of the interface enables specific Settlement Periods to be included in the range, however, it is intended that the Trading Neutrality Band be effective on a Settlement Day (rather than Settlement Period) basis.

5.4.2 The Neutral Price

The Neutral Price ((NPj, in £/MWh) i.e. the price applied to energy imbalance falling within the Trading Neutrality Band for a Party) is to be a single price applied to the Energy Imbalance covered by the Trading Neutrality Band. It is proposed that the Neutral Price be a £/MWh variable and that amendments to the Neutral Price between settlement runs be supported by the settlement calculations. It is proposed that the Neutral Price be open to Trading Disputes / Trading Queries by BSC Parties, if it is believed that it has been calculated / determined incorrectly and it is also proposed that revisions due to data amendments be supported. Therefore, any implementation must allow for potential resubmission of the data between Settlement Runs.

The Modification proposes that the Panel also determine the methodology for determining the Neutral Price (BSC Section 1.3 and BSC Section T 1.5B). The PIMG recommends that, at least initially, the Neutral Price be the 'policed' last trade price from the UKPX, for each Settlement Period.

5.4.3 Determining the Neutral Price

ELEXON will utilise the methodology so determined by the Panel to determine the Neutral Price for all Settlement Periods in a Settlement Day (BSC Section T 1.5C).

For the mechanism proposed by the Modification, UKPX should be requested (potentially under a formal contract) to provide the policed last trade price for all Settlement Periods of a Settlement Day to ELEXON, for ELEXON to provide onwards to SAA.

It is proposed that the Neutral Price be provided to SAA by ELEXON by the end of the second working day after the Settlement Day (to allow time to obtain the Neutral Price). It is also proposed that ELEXON post the Neutral Prices for all Settlement Periods on the ELEXON website for information, to provide a parallel, regarding the provision of information, between the Neutral Price and the Energy Imbalance Prices calculated by the System. ELEXON will use reasonable endeavours to generate and publish the Neutral Prices for a Settlement Day as soon as possible after receipt of the information needed to generate the Neutral Prices.

It seems inappropriate to publish the Neutral Prices on the BMRA, as BMRA is intended to be a 'near real time' reporting Agent for the Balancing Mechanism, and as such, will not utilise these Neutral Prices in the calculations it undertakes. Therefore as ELEXON is required to publish other Market Data (which Neutral Prices appear to fall into) it seems a more consistent approach to place them on the ELEXON Website.

5.4.4 Notifying the Neutral Price

ELEXON shall notify the Neutral Prices, according to the timescales defined in 4.2.4, i.e. by the end of the second Business Day after the Settlement Day, for all Settlement Periods in a Settlement Day to SAA for use in settlement calculations. The timing constraints defined here to enable the Neutral Price to be provided to SAA in time for use in the Interim Information Run.

It is proposed that this be undertaken via a new manual interface, defined as follows:

ELEXON to SAA.

Settlement Date

Settlement Period (1-50)

Neutral Price (£/MWh)

5.4.5 Application of the Trading Neutrality Band and Neutral Price in Energy Imbalance Cashflow Calculations

The intent of the Modification is that a specified amount (the Trading Neutrality Band) of energy imbalance for a BSC Party is cashed out at a Neutral Price for each Settlement Period. All energy imbalance in excess of the Trading Neutrality Band is cashed out under the System Buy or System Sell Prices, as defined under the existing arrangements.

Therefore, in order to support the introduction of the Trading Neutrality Band, settlement calculations, as defined in Section T of the Balancing and Settlement Code, will have to be amended for all settlement runs. The determination of the Energy Imbalance for each Energy Account will remain as currently defined, however, the determination of energy imbalance cashflows (Section T 4.7) is required to be amended to calculate the Period Account Trading Neutrality Band (PTNBaj), i.e. the minimum of the fixed volume parameter TNB and the percentage volume TNB after application to the Account Credited Energy Volume (BSC Section T 4.7.1A).

The Neutral Price is then applied to the Period Account Trading Neutrality Band to determine the Energy Imbalance cashflows for the Party (BSC Section T 4.7.1).

5.4.6 Accounting for the Trading Neutrality Band in Residual Cashflow Allocations

In the Residual Cashflow Reallocation Proportion calculation, defined in BSC Section T 4.10.2, the calculation should be amended so that each Party's QCE is adjusted by a factor, derived on an account basis, to reflect the effect of the TNB on their imbalance exposure.

5.4.7 Accounting for the Trading Neutrality Band in Energy Indebtedness Calculations

Modification P2 'Revision of the Methodology for Assessing Credit Indebtedness' proposes that the calculation of indebtedness for credit-checking purposes should be enhanced to use actual prices and metered volumes. Therefore the proposal is that settlement charges (as defined in BSC, Section T 5.3.3) for a BSC Party are passed to ECVAA for use in the Indebtedness calculations. Therefore as Alternative Modification P26 amends the Energy Imbalance cashflow for a Party, this will automatically be reflected in Indebtedness calculations and therefore no further amendment in this area is required under Alternative Modification P26.

5.4.8 Settlement Report (SAA-I014) Amendments

The Settlement Report (SAA-I014), all sub flows, require amendment to reflect the application of the Trading Neutrality Band in the report, so that BSC Parties, the Transmission Company and ELEXON can replicate the settlement calculations, if required.

It should be noted that there is potential to utilise the parallel reporting functionality defined within Modification P8, i.e. recipients determine the version of the Settlement Report they wish to receive. Therefore any Impact Assessment should provide a view on the appropriateness and cost / timescale implications of utilising this approach.

Therefore the following amendments are required:

SAA-I014 Subflow 1 - to BSC Parties:

Group SSD 'System Period Data'

Include new data item 'Neutral Price' (£/MWh) between 'System Sell Price' (N0215) and 'Total System BM Cashflow' (N0333).

Group APD 'Account Period Data'

Include new data item 'Period Account Trading Neutrality Band' (MWh) between 'Account Credited Energy Volume' (N0002) and 'Residual Cashflow Reallocation' (N0195).

SAA-I014 Subflow 2 - to Transmission Company:

Group SPI 'Settlement Period Information'

Include three new data items, 'Trading Neutrality Band' (MWh), 'Trading Neutrality Band' (%) and 'Neutral Price' (£/MWh) at the end of the Group.

Group SSD 'System Period Data'

Include new data item 'Neutral Price' between 'System Sell Price' (N0215) and 'Total System BM Cashflow' (N0333).

Group APD 'Account Period Data'

Include new data item 'Period Account Trading Neutrality Band' (MWh) between 'Account Credited Energy Volume' (N0002) and 'Residual Cashflow Reallocation' (N0195).

SAA-I014 Subflow 3 - to ELEXON:

Group SPS 'Settlement Period Summary'

Include two new data items, 'Trading Neutrality Band' (MWh) and 'Trading Neutrality Band' (%) at the end of the Group.

Group SSD 'System Period Data'

Include new data item 'Neutral Price' between 'System Sell Price' (N0215) and 'Total System BM Cashflow' (N0333).

5.4.9 Reporting Amendments to the Balancing and Settlement Code

Section V 'Reporting' requires amendment to clause '4. Reporting by BSCCo' to reflect the new parameter 'Trading Neutrality Band' and to reflect the requirement to publish the Neutral Price on the ELEXON website.

5.5 Background: Implementation of the Modification Neutral Price

The PIMG reviewed the mechanism for setting the Neutral Price and agreed that some variation of the UKPX reference price should be recommended for use as the Neutral Price, as UKPX is the largest exchange and should therefore be more representative of the cost of traded electricity, which is what the Modification is endeavouring to achieve. During the Initial Written Assessment, the Proposer of the Modification Proposal confirmed that UKPX indicated that they would be able to make reference price information available on a more formal basis in order to support the Modification, if implemented.

It is probable that formal contracts between ELEXON and any provider for provision of any necessary data, such as reference prices, would be required once the Panel had made a recommendation as to the mechanism for calculating the Neutral Price.

The PIMG looked at a number of alternatives for defining the Neutral Price, such as a UKPX average price for the Settlement Period, a UKPX highest price for the Settlement Period, and a last price for the Settlement Period.

With regards to the average price, the PIMG noted the potential for manipulation and potential to reduce trading, as it could become a barrier to trading if Parties use an alternative exchange, or fail to trade because they like the current average UKPX price and wish it to become the Neutral Price. A similar argument was made against the highest price - that this was also open to manipulation.

Therefore the PIMG agreed that the UKPX 'policed' last price should be used, and that as it is a policed exchange, that such policing should be sufficient to prevent manipulation of the last price. Therefore the PIMG are recommending that this become the Neutral Price. However, it should be noted that the PIMG can only make a recommendation, as the absolute determination of the composition of the Neutral Price will become the responsibility of the BSC Panel.

The PIMG discussed the definition of the mechanism for implementing the Modification and noted that there was an alternative way of implementing the Modification within the settlement calculations, via use of a contract on an exempt Energy Account (such as the Transmission Company, Non - IEA, Energy Account), for example, an ELEXON Energy Account, utilising a concept similar to meter sharing rules and using the following equation:

Party Error = QCEaj - contract1 - contract2 + Σother contracts

Contract1 = max (0, min (QCEaj-C, 20))

Contract2 = min (0, max (QCEaj-C, -20))

Contract 1 and 2 are cashed out at the Neutral Price.

However, a review of the implementation of this mechanism into the Settlement calculations indicated that there would be significant development and amendment to the existing settlement calculation framework over and above that required for the implementation within the Energy Imbalance Cashflow calculation, therefore this option was discounted as it provides little benefit over the 'purer' approach recommended in the original Modification Proposal and requires too significant a change to the settlement calculation framework.

5.6 Background: Alternative Modification Proposal

The PIMG did not reach a consensus on the form of the Trading Neutrality Band, some favouring a fixed MWh value for all BSC Parties as proposed in the Modification, and others favouring an approach which used the minimum of a percentage of the Account Credited Energy Volume and a fixed MWh value for a BSC Party. Therefore the two differing approaches, under the provisions of the Balancing and Settlement Code with regards to Modifications (Section F), are necessarily presented as the Modification (fixed MWh value) and the Alternative Modification (minimum of a percentage of the Account Credited Energy Volume and a fixed MWh value - the combined Trading Neutrality Band approach). Those members of the PIMG in favour of the Alternative Modification approach noted that the combination of a fixed volume / percentage of Credited Energy removed the step change in incentives produced by having a fixed volume limit.

The PIMG discussed the differing variables that the percentage could be applied to in order to calculate the Trading Neutrality Band for a Party:

1. **Physical Notification** - however, the PIMG noted that this opened up the possibility of misdeclaration of Physical Notifications in order to extend the TNB for that Party;
2. **Account Bilateral (Contract) Volumes** - again the PIMG noted the possibility of over contracting in order to manipulate the TNB. It was also noted by the PIMG that this variant seemed to be contrary to what the Modification was raised for.
3. **Metered Volumes** - the PIMG noted that this would cause problems in terms of availability of data (although this is not a material issue, as metered volumes are

available for all by Initial Settlement[5]), and in terms of BM Unit failures where the metered volume is adversely affected by the failure. This variant seems to be contrary to the intent of the Modification, as only bigger players will be able to compensate in full for BM Unit failure. The metered volumes also do not account for any metered volume reallocation (under MVRNs).

4. **Account Credited Energy Volumes** – although this is based on metered volumes adjusted for Metered Volume Reallocations, this appears to offer the best approach, as although it still has the drawback of BM Unit failure flagged at 3 above, such failure may have been mitigated by a metered volume reallocation, which is taken into account for this option. Utilising the adjusted metered volume also removes the propensity for manipulation inherent with variants 1 and 2.

Therefore the first three variants were disregarded and it was agreed that the percentage be applied to the Account Credited Energy Volume. Therefore the Alternative Modification reflects this determination.

[5] At the point of the Interim Information run, metered volumes will not be available for Suppliers and therefore their Energy Imbalance Cashflows reflect this. At Initial Settlement, the metered data is available and the Energy Imbalance Cashflows are amended accordingly.

6 IMPACT ON BSC AND BSCCO DOCUMENTATION

6.1 BSC

Modification P26 and the Alternative Modification to P26 impact Sections T 'Settlement and Trading Charges', V 'Reporting' and X, ANNEX X-2 'Technical Glossary. ANNEX 1 of this document contains the legal text for the Modification and for the Alternative Modification.

6.2 Code Subsidiary Documents

The amendments to Code Subsidiary documents required to support the Modification and the Alternative Modification are believed to be limited to amendments to the NETA Data File Catalogue, the Reporting Catalogue, and to the Settlement Administration Agent Service Description, as follows.

6.2.1 Modification P26 and the Alternative Modification: The NETA Data File Catalogue

The NETA Data File Catalogue requires amendment to reflect the changes to reporting described and detailed in previous sections in this Assessment Report, namely:

Modification P26

Section 5.3.1, to support the amendments to the SAA – I023 System Parameters interface

Section 5.3.4, to support the new interface for reporting the Neutral Price

Section 5.3.8, to support the amendments to all subflows of the Settlement Report (SAA-I014)

Alternative Modification

Section 5.4.1, to support the amendments to the SAA – I023 System Parameters interface

Section 5.4.4, to support the new interface for reporting the Neutral Price

Section 5.4.8, to support the amendments to all subflows of the Settlement Report (SAA-I014)

6.2.2 Modification P26: The Reporting Catalogue

The Reporting Catalogue requires amendment to reflect the amendments to the Settlement Report, and to the data published on the ELEXON Website, as follows:

3.1.1 Report sent to the Transmission Company (TC)

(b) Settlement Period Information …

- System Sell Price SBPj £/MWh
- Neutral Price NPj £/MWh

- …
- Notional Reserve Limit (MW)
- Trading Neutrality Band (TNBj) (MWh)
- …

(h) Settlement Period Information

- System Period Data:
  - System Sell Price SBPj £/MWh
  - Neutral Price NPj £/MWh …

3.1.2 Report sent to BSCCo

(c) Settlement Period Information …

- System Sell Price SBPj £/MWh
- Neutral Price NPj £/MWh
- …
- Notional Reserve Limit (MW)
- Trading Neutrality Band (TNBj) (MWh)
- …

3.1.3 Reports sent to Parties

(b) Settlement Period Information …

- System Sell Price SBPj £/MWh
- Neutral Price NPj £/MWh

6.2.3 Alternative Modification P26: The Reporting Catalogue

The following amendments to the Reporting Catalogue are required to support the Alternative Modification Proposal for P26.

3.1.1 Report sent to the Transmission Company (TC)

(b) Settlement Period Information …

- System Sell Price SBPj £/MWh
- Neutral Price NPj £/MWh
- …
- Notional Reserve Limit (MW)

- Trading Neutrality Band (TNB) (MWh, %)
- …

(h) Settlement Period Information

- System Period Data:
  - System Sell Price SBPj £/MWh
  - Neutral Price NPj £/MWh …

(i) Account Period Information

- Account Period Data:
  - Account Credited Energy Volume (QCEaj)
  - Account Period Trading Neutrality Band (PTNBaj)

3.1.2 Report sent to BSCCo

(c) Settlement Period Information …

- System Sell Price SBPj £/MWh
- Neutral Price NPj £/MWh
- …
- Notional Reserve Limit (MW)
- Trading Neutrality Band (TNB) (MWh, %)
- …

3.1.3 Reports sent to Parties

(b) Settlement Period Information …

- System Sell Price SBPj £/MWh
- Neutral Price NPj £/MWh

(i) Account Period Information

- Account Period Data: …
  - Account Credited Energy Volume (QCEaj)
  - Account Period Trading Neutrality Band (PTNBaj)

6.2.4 Service Description for the Settlement Administration Agent

The following amendments are required to support the implementation of the Modification P26 and the Alternative Modification for P26.

Section 1.4 …

g1. receive the Neutral Price Data from BSCCo; …

j1 Calculate the Period Account Trading Neutrality Band for each Energy Account and Settlement Period; (relevant to the Alternative Modification only).

k. calculate charges and payments for Energy Imbalances by applying SBP, SSP and the Neutral Price to Energy Imbalance Volumes; …

Section 2.6 BSCCo …

2.6.3 The SAA shall receive the Neutral Prices for inclusion in the Settlement process. The Neutral Price shall be provided by 2 WD after the relevant Settlement Day.

3.36 Calculation of the Energy Imbalance Cashflow

Amended to reflect the calculation defined at 3.2.7 in this document (BSC Section T 4.7.1), for the original Modification Proposal; or

Amended to reflect the calculation defined at 4.2.7 in this document (BSC Section T 4.7.1A and 4.7.1), for the Alternative Modification Proposal.

3.51 Determination of Residual Cashflow Reallocation Proportion

Amended to reflect the calculation defined at 3.2.8 in this document (BSC Section T 4.10.2), for the original Modification Proposal; or

Amended to reflect the calculation defined at 4.2.8 in this document (BSC Section T 4.10.2), for the Alternative Modification Proposal.

6.3 BSCCo Memorandum and Articles of Association

Not Applicable.

7 IMPACT ON BSC SYSTEMS

7.1 High Level Impact Assessment

The Central Service Agent provided an interim High Level Impact Assessment (provided in full in ANNEX 4) for the development and implementation of:

- Modification P26 and the Alternative Modification as a standalone implementation (ANNEX 4 (a)); and
- Modification P26 implemented in conjunction with option 3 of Modification P27 (Reference 5 and 6) (ANNEX 4 (b)).

The High Level Impact Assessments provide indicative costs (all costs are exclusive of VAT) and timescales only. In summary:

Modification P26 – standalone implementation

The development and implementation will cost	**£269,100**
The operating and maintenance costs are	**£4,600 per month**
The development and implementation will take	**19 weeks**

Alternative Modification – standalone implementation

The development and implementation will cost	**£287,200**
The operating and maintenance costs are	**£4,900 per month**
The development and implementation will take	**20 weeks**

Modification P26 and Modification P27 (Option 3) dual implementation

The development and implementation will cost	**£504,000**
The operating and maintenance costs are	**£8,700 per month**
The development and implementation will take	**29 weeks**

All impact assessments assume the following:

- The changes are not developed or implemented in parallel with Release 2;
- There are no regression testing costs / timescales included; and
- There are no Participant testing costs and timescales included.

7.2 Detailed Level Impact Assessment

The Central Service Agent provided Detailed Level Impact Assessment (provided in full in ANNEX 4) for the development and implementation of:

- Modification P26 and the Alternative Modification as a standalone implementation (ANNEX 4 (c)); and
- Modification P26 implemented in conjunction with option 3 of Modification P27 (Reference 5 and 6) (ANNEX 4 (d)).

The changes to systems required to support this Modification and the Alternative Modification are detailed in this Assessment Report, Sections 5 and 6.

The Detailed Level Impact Assessments provide firm costs (all costs are exclusive of VAT) and timescales. In summary:

Modification P26 – standalone implementation

The development and implementation will cost	**£249,106**
The operating and maintenance costs are	**£3,736 per month**
The development and implementation will take	**17 weeks**

Alternative Modification – standalone implementation

The development and implementation will cost	**£260,691**
The operating and maintenance costs are	**£3,910 per month**
The development and implementation will take	**18 weeks**

Modification P26 and Modification P27 (Option 3) dual implementation

The development and implementation will cost	**£508,871**
The operating and maintenance costs are	**£7,633 per month**
The development and implementation will take	**32 weeks**

All impact assessments assume the following:

- The changes are not developed or implemented in parallel with Release 2;
- There are no regression testing costs / timescales included; and
- There are no Participant testing costs and timescales included.

8 IMPACT ON CORE INDUSTRY DOCUMENTS AND SUPPORTING ARRANGEMENTS

8.1 Grid Code

No Impact from either the Modification or the Alternative Modification.

8.2 Connection and Use of System Code (CUSC)

The Transmission Company, in an addendum to the Impact Analysis (provided in ANNEX 5), indicated that if Modification P26 (either the Modification or the Alternative Modification) were implemented, then the Transmission Company would be potentially compensating mandatory frequency responsive plant for larger imbalance volumes than they have incurred. Hence, an amendment would be required to the CUSC with regards to the formulae utilised for calculating such payments by the Transmission Company (CUSC 4.1.3.9).

Such amendments may take in the region of five months, however, this can be reduced, in agreement with the Authority, if the amendment is deemed to be Urgent.

8.3 Supplemental Agreements

No Impact from either the Modification or the Alternative Modification.

8.4 Ancillary Services Agreements (ASAs)

No Impact from either the Modification or the Alternative Modification.

8.5 Master Registration Agreement (MRA)

No Impact from either the Modification or the Alternative Modification.

8.6 Data Transfer Services Agreement (DTSA)

No Impact from either the Modification or the Alternative Modification.

8.7 British Grid Systems Agreement (BGSA)

No Impact from either the Modification or the Alternative Modification.

8.8 Use of Interconnector Agreement

No Impact from either the Modification or the Alternative Modification.

8.9 Pooling and Settlement Agreement (PSA)

No Impact from either the Modification or the Alternative Modification.

8.10 Settlement Agreement for Scotland (SAS)

No Impact from either the Modification or the Alternative Modification.

8.11 Distribution Codes

No Impact from either the Modification or the Alternative Modification.

8.12 Distribution Use of System Agreements (DUoSAs)

No Impact from either the Modification or the Alternative Modification.

8.13 Distribution Connection Agreements

No Impact from either the Modification or the Alternative Modification.

9 IMPACT ON ELEXON

ELEXON Design Authority

This CPC has the following impacts on DA maintained products

P26:

NETA Data File Catalogue	estimated 2 mdays inc. reviews	
Reporting Catalogue:	estimated 1 mdays inc. reviews	
SVA Catalogue:	no impact	
Business Process Model	estimated 2 mdays inc. reviews	
Website Market Data URS	estimated 1 mdays inc. reviews	
Total:	6 mdays	**£3000**[6]

The full ELEXON impact assessments are provided in ANNEX 6 of this Assessment Report.

ELEXON Web Site

For the design testing and implementation of the amendments to the ELEXON web site (namely a new section in the Market Data area) required to support Modification P26 or the Alternative Modification for P26:

5 weeks **£17,500**

For the ongoing operation of the publishing of the Neutral Price, there are two options:

1. Manual receipt and publishing **£125 per Operational Day - ongoing**

2. Automated receipt and publishing **£4000** for development, testing and implementation

All costs and timescales are subject to a 30% tolerance.

ELEXON Trading Operations

The implementation of Modification P26 or the Alternative Modification P26 has an impact on TOMAS, an ELEXON system. TOMAS will require amendment to:

1. Accommodate the changes to the structure / format of the Settlement Report (SAA-I014 subflows 2 and 3);
2. Accommodate the requisite changes to the settlement calculations; and

[6] Based on ELEXON standard costs of £500 per mday.

3. It is also expected that TOMAS will require amendment to introduce functionality in order to model the effects of differing values of the Trading Neutrality Band in order to support the Panel's deliberations in setting the value.

Development, testing and implementation:

For 2 and 3	**10 mdays**	**£5,000**
For 1,	**30 to 90[7] mdays**	**£15,000 to £45,000**
	Total:	**£20,000 to 50,000**

Ongoing operational cost in order to support the requirement to model amendments to the value of the Trading Neutrality Band is estimated to require one mday per month, totalling 12 per year **£6000 per annum**

Total ELEXON Development, testing and Implementation costs:	**£74, 500[8]**
Total ELEXON Operational costs:	**£6,000 pa**

[7] This is dependent upon whether TOMAS is still operating the interim solution to Modification P18A (which is to calculate the Energy Imbalance Prices). The solution is materially more complex if TOMAS is still operationally calculating prices, hence the more material workload.

[8] This total represents the most expensive options, namely implementation whilst TOMAS is required to calculate Energy Imbalance Prices operationally, and an automated mechanism for publishing the Neutral Price on the ELEXON website.

10 IMPACT ON PARTIES AND PARTY AGENTS

The following represents an assessment of the impact on BSC Parties and Party Agents based upon the Consultation and Impact Assessment responses received. It should be noted that the Impact on Parties relatively similar for both the Modification and the Alternative Modification, in that both require the implementation of amendments to the Settlement Report (SAA-I014, subflow 1) and to amend any functionality for verification of Settlement Reports to account for the implementation of the Modification or Alternative Modification.

The Participant Impact Assessments are summarised in Section 12.2 and provided in full in ANNEX 3 (b) of this Assessment Report.

10.1 Parties

All Parties are impacted by the amendments to the Settlement Report (SAA-I014, subflow 1). However, it may be possible to utilise the parallel implementation approach defined under Modification P8 to delay the impact.

Modification P8 proposes that flow version numbering be implemented within the NETA Central Service Agent. Namely, when a report such as the Settlement Report (SAA-I014) changes and the changes are implemented, Parties can determine whether they wish to continue receiving the old version of the report (i.e. without the amendments and therefore reducing the ability to accurately verify their trading charges), or the new, with the amendments. This enables them to determine the timeframes for implementation of an amended interface independently of its development within the Central Services (unlike a 'big bang' approach). However, the impact from the implementation of amendments to the Settlement Report is still likely to be significant.

The Impact Assessments indicate a material impact on Parties, with estimates of implementation timescales ranging from ten days to twelve months. One response provided an assessment of the implementation costs at £16,000.

10.2 Party Agents

No impact identified.

11 LEGAL ISSUES

No Impact from either the Modification or the Alternative Modification.

12 SUMMARY OF REPRESENTATIONS

12.1 Initial Consultation Responses

Twelve responses on behalf of twenty seven BSC parties were received in response to the consultation on the Initial Written Assessment (Initial Consultation). The full responses are provided in ANNEX 3 of this Assessment Report. At a high level:

- Five responses, on behalf of thirteen Parties supported the Modification;
- Six responses, on behalf of thirteen Parties did not support the Modification; and
- One response, on behalf of one Party did not wish to comment at this time.

At a high level, the reasons provided for supporting the Modification are as follows:

- The Modification benefits small Players, thus increasing competition, but is not unfair as the Trading Neutrality band applies to all;
- The Trading Neutrality Band provides greater incentive to balance rather than go long, as is currently the case; and
- Although all Parties are disadvantaged by the lack of granularity in spot markets, smaller players have less customers to spread the incurred costs over.

The reasons provided for not supporting the Modification are as follows:

- The Modification reduces the incentive to balance;
- Neutral Price may not reflect the cost the System Operator is exposed to as a result;
- Transaction costs and granularity are such that small volumes can be traded with prices independent of the size of the trade; and
- The Modification encourages the splitting out of Parties into smaller affiliates to maximise benefits, thus reducing (BSC) efficiency.

The no comment response raised the following concerns:

- The Modification could inhibit the development of sub 20MWh products and therefore hinder market evolution;
- The Modification reduces the incentives for balancing and could lead to greater Energy Imbalance Price volatility in the Balancing Mechanism;
- The Modification reduces competition in demand forecasting products; and
- The Modification reduces demand forecasting risk, thus unfairly advantaging small players.

The Pricing Issues Modification Group (PIMG) considered the responses from the Initial Consultation, at their meeting of the 21st August 2001, whilst determining the rationale and the way forward for this Modification Proposal. The points detailed above represent a mixture from all of the responses. The following represents some of the views expressed during these discussions:

"**The Modification reduces the incentive to balance**". The PIMG noted that given the current market situation, the implementation of this Modification Proposal would make very little difference in terms of incentive to balance, as larger players will not really notice the Trading Neutrality Band and will still attempt to balance as closely as possible, and smaller players will try to ensure that they are within this band, towards the middle, to avoid exposure to the Energy Imbalance Prices. A view was expressed that it was likely to be the medium sized players who would be most affected by the introduction of the Trading Neutrality Band.

The parallel with the Trading Neutrality Band equivalent in the gas market was discussed and it was noted that the Trading Neutrality Band was removed because broadly speaking it decreased incentives to balance. However, it should be noted that the circumstances in the gas market are different to those under NETA, as the balancing window is significantly smaller under NETA. It should be noted that the gas market parallels with the Trading Neutrality Band are the subject of a separate piece of analysis under this Modification (and is presented in ANNEX 2 of this Assessment Report).

Therefore the introduction of this Trading Neutrality Band may actually incentivise smaller players to actively compete in the balancing mechanism[9], as the Modification reduces the penalties on the players for whom 20MWh is a significant volume. Therefore, a view was expressed that although the incentive to balance was reduced somewhat, that this was not a significant issue. However, the PIMG agreed that this Modification did reduce the incentive on a Party to balance.

"**The Neutral Price may not reflect the cost the System Operator may be exposed to**" (as a result of Parties 'not balancing', under point 1.1). The PIMG believed that this statement was intended to mean 'the costs to the Balancing Mechanism' rather than the costs to the System Operator, as these costs would increase with any increase in Parties not balancing. If Parties are not incentivised to balance, i.e. the System Operator is affected to the same extent as the incentive to balance is reduced, then it is likely that there will be a mixture of short and long positions within the market as a result, therefore such action is likely to have a balancing effect in itself. However, a view was expressed indicating that if the System Operator has to take more balancing actions as a result of the 'non balancing' of parties, then this may have a beneficial effect on the Energy Imbalance Prices, as there will be more Bids and Offers in the price calculations, which should have the effect of 'smoothing' the prices somewhat. However, an alternative view was that the larger the volumes of Bid – Offers, the more 'extreme' the price of the final Acceptance would be.

"**Transaction costs and granularity are such that small volumes can be traded, with prices independent of the size of the trade**". The PIMG noted that the power exchange trading costs and minimum volumes supported the spot market trading of volumes down to 1MWh without incurring excessive transaction costs. However, the PIMG also noted that the costs of setting up a trading function are disproportionate for smaller players, incurring a differential overhead cost for participation in the balancing mechanism. However, a view was expressed that this is effectively irrelevant to this Modification, as these costs will not be addressed by this Modification and therefore fall outside of the scope of the discussion.

[9] The PIMG noted that there have been instances of smaller generators not generating due to the perceived risk of exposure to Imbalance. Therefore if this Modification encourages such players to actively participate, then it is achieving the Applicable BSC Objectives and the objectives of the introduction of NETA.

A representative of a 'smaller player' stated that they had found that smaller volumes for longer term trading are unavailable, and that therefore they are forced to depend upon the spot markets for their contract requirements almost in entirety, which is not ideal, as this depends mainly upon the liquidity of the spot markets, however, the PIMG agreed that the spot markets are materially less volatile than the Balancing Mechanism. In response to this point, a view was also expressed to the effect that such small players could utilise the services of consolidators to minimise their exposure. However, the representative took an action to provide the PIMG with information pertaining to the liquidity on the spot markets with regards to smaller volumes. This further analysis is represented in ANNEX 2 of this Assessment Report.

"**The Modification encourages splitting of parties into smaller affiliates to maximise benefits, thus reducing efficiency**". The PIMG noted that the option to disaggregate existed and that such an option was the choice of the organisation involved. It was agreed that where such disaggregation occurred on a reasonable scale, that the efficiency of the balancing mechanism would decrease as a result of the increased administration of the registration data for the BSC Parties, increased contract submission for all of the Parties, increased market costs in administrating the balancing mechanism etc. However, conversely, there is a significant inherent cost for such disaggregation, and associated decrease in efficiency for the disaggregating organisation which would / should outweigh any benefit achieved under the Modification and provide a barrier for splitting out Parties.

It should also be noted that this incentive existed in the gas market, and there were no observed instances of this disaggregation.

"**The Modification Proposal could inhibit development of sub 20MWh products and therefore hinder market evolution**". The PIMG agreed that this was a valid point, as the sub 20MWh granularity products would not require (as much) development under this Modification.

"**The Modification Proposal reduces incentives for balancing which could lead to greater Energy Imbalance Price Volatility in the Balancing Mechanism**". This is related to the point regarding incentives to balance above, and the same response applies.

"**Reduces competition in demand forecasting products**". A number of PIMG representatives believed that the Modification Proposal did not change the incentives for accurate demand forecasting, as although the Modification reduces the risk of exposure to Imbalance Prices somewhat, it will not remove the risk in entirety, or indeed significantly enough to remove the disadvantage on Parties not forecasting correctly. The PIMG noted that if the cost of getting the forecasting wrong decreased, as would be expected under this Modification, then there is the potential for less to be spent on developing products, however, it was noted that this would reduce cost to Parties and that effectively this was a competition issue. Therefore, a number of PIMG representatives believed that there was still a material advantage to be gained by accurate demand forecasting and that the implementation of this modification would not reduce competition to develop products which forecast accurately. However, an alternative view was expressed indicating that there would be less incentive to demand forecast accurately if there was a 'tolerance band' of 20MWh.

"**Reduces demand forecasting risk, thus unfairly advantaging small players**". A view was expressed that the Modification would remove some of the disproportionate risk on smaller players for incorrect demand forecasting, but that this was not 'unfairly advantaging'

such small players, merely removing some disadvantage, as smaller players have less customers to spread the costs of inaccuracies over. However, an alternative view indicated support for the statement that the Modification does unfairly advantage smaller players.

"**The Modification benefits small players, thus increasing competition, but is not unfair as the Trading Neutrality Band applies to all**". The PIMG noted this point and some representatives made the comment that this Modification has no material effect on bigger players. A view was expressed that the Modification Proposal, as drafted, was advantaging smaller players, and this effectively provided the reasoning for development of the Alternative Modification, as introducing a percentage sliding scale makes the Trading Neutrality Band smaller for smaller volumes, therefore evening the incentives out.

"**Trading Neutrality Band provides greater incentives to balance rather than go long, as is currently the case**". The PIMG agreed that there was potentially a reduction in length of position for smaller players, but noted that there is always a tendency for long positions in any commodities market, and therefore this Modification may reduce that tendency somewhat, but more than likely will not eliminate it, due to the nature of the market.

"**Although all Parties are disadvantaged by lack of granularity in spot markets, smaller players have less customers to spread the incurred costs over**". The PIMG agreed with this comment.

12.2 Impact Assessment Responses

Fifteen responses on behalf of thirty BSC parties were received in response to the Impact Assessment on the Requirements Specification (Reference 3), detailing the changes required to support Modification P26 and the Alternative Modification. The full responses are provided in ANNEX 3 of this Assessment Report. At a high level:

- Four responses, on behalf of six Parties agreed with the change;
- Seven responses, on behalf of twenty Parties did not agree with the change; and
- Four responses, on behalf of four Parties provided a no comment / no impact response.

None of the responses indicated a preference for the Modification or the Alternative Modification.

The majority of responses indicated a material impact, ranging between ten days and twelve months notice required for implementation of the changes. One response provided a high level cost of implementation as £16,000.

One response provided comments with regards to the intent of the Modification:

- The Modification encourages Parties not to balance, which increases overall costs and reduces liquidity;
- The Modification inhibits development of products in the forwards markets; and

- The Modification is at odds with the gas market, as the gas market has removed its imbalance tolerances.

Similar comments were made in response to the initial consultation and therefore these are addressed in Section 12.1 of this Assessment Report.

12.3 Questionnaire Responses

Eighteen responses, on behalf of thirty-one Parties, were received in response to the questionnaire issued on behalf of the PIMG. The full responses are provided in ANNEX 3 of this Assessment Report. The questionnaire requested responses to the following questions, and requested further comments in all areas:

Q1 What services are available for mitigating imbalance exposure risk?

Q1 (a) Are these services available at a reasonable cost (quantify what you believe to be a reasonable cost)? If these services are not available, why do you think this is?

Q1 (b) Are these services available for small volumes – i.e. is there a level of granularity and is this important? If these services are not available for small volumes, why do you think this is?

Q1 (c) If alternative mechanisms were available within the Balancing and Settlement Code for mitigating imbalance exposure, would you continue to use / develop alternate services?

At a high level in response to Question 1, regarding the availability of imbalance risk management services, the majority of responses indicated that there were such services available, and referenced a number of such services, such as contracting prior to Gate Closure, either via Over The Counter trading or via Power Exchanges, consolidation (via Metered Volume Reallocations), Financial products and Tariff Rate offers. However, a number of points were raised in this area:

- Entry (lodging of credit with clearers and PX software) costs and operational administration costs for trading in the forwards / spot markets were seen as potentially disproportionate for smaller players and therefore seen as a factor that may prevent such players from utilising these services. One response stated that the costs of systems and resources for trading were in the region of £1 million which is a significant overhead;
- Liquidity in the Power Exchanges was seen to be an issue, in that generally liquidity is improving, but the responses indicate that there are still periods of illiquidity (with one response specifying that poor liquidity on exchanges occurred mainly out of office hours);
- Some responses indicated that smaller volumes were still not available, one response indicated that this was perceived to be a consequence of an immature market, another indicated that there was still no real market for trading volumes of less than 10 to 20 MW. However, other responses indicated that small volumes were freely available;
- One response indicated that financial instruments for managing imbalance exposure risks were available at the start of NETA, but were withdrawn as a result of the imbalance risks being higher (and more volatile) than initially anticipated, therefore causing Service Providers to be exposed to undue risk;

- Three respondents indicated that they themselves offered such imbalance risk management services, for all sizes of trades. One response indicated that innovative services in this area were continuing to be developed and to come available;
- A number of responses indicated that smaller volumes were available in the power exchanges, but that smaller volumes (<20 MW) were subject to the full spread of the exchange (whereas larger players could post bids and offers within the spread), leading to disproportionate costs for smaller trades; and
- A number of responses indicated that imbalance risk management services would continue to be developed, as there would always be a market in this area, however, other responses indicated that the Modification would prevent development of services for smaller volumes.

In summary, there is no real consensus across the responses as to the availability of imbalance risk management services for smaller volumes. However, the main issues in this area appear to be those of liquidity on the exchanges for some periods and the relatively high administration costs for smaller players trading.

Q2 Are STOD (Seasonal Time of Day) contracts available for small volumes? If not, why do you think this is?

Q2 (a) Are they reasonably priced (please quantify what you believe to be reasonable)? If they are not reasonably priced, why do you think this is?

Q2 (b) Are they sufficiently flexible? If available STOD contracts are not sufficiently flexible, why do you think this is?

At a high level in response to Question 2, regarding the availability and flexibility of STOD (Seasonal Time of Day) contracts, the majority of responses indicated that there were such contracts available with a requisite level of flexibility. However, a number of points were raised:

Availability

- The majority of responses indicate that STOD contracts are available for smaller volumes, some indicating that smaller volumes were easier to obtain via STOD contracts;
- Another response indicated that STOD contracts are generally unavailable and where they are available, are priced at a significant premium; and
- Two larger players indicate that there is little demand for smaller volume STOD contracts, one stated that they would offer such contracts if required. However, they expected that more contracts would be entered into as NETA beds down, as currently contracts are not being struck as a consequence of the relative immaturity of the market leading to uncertainty in the pricing of contracts.

Flexibility

- One response asserted that fixed volume STOD contracts did not resolve the need to fine tune positions closer to Gate Closure, therefore requiring fine tuning either by bilateral OTC trading, or by trading in the forward market / spot market;

- Another response indicated that variable volume STOD (requirement) contracts are not available in the market, as a consequence of outturn demand varying from expected demand after Gate Closure;
- A number of responses indicate that STOD contracts are sufficiently to 'infinitely' flexible, especially for smaller volumes, whereas another response indicates that such flexibility is available, but at a premium; and
- One response indicated that STODs are not flexible enough to allow fine tuning of small supply businesses due to the differing shapes as a result of the mix of customers.

Price

- A number of responses asserted that products for smaller players are not reasonably priced due to the relatively low value of product in relation to high complexity and high transaction cost for the seller;
- A small number of responses assert that currently the costs of these STOD contracts are greater than would be available from a liquid market, particularly for smaller volumes;
- One response indicates that STOD contracts are valued at the market price and that this is not volume dependent;
- Another response indicates that there is a narrow market for such contracts, making them relatively expensive; and
- Another response states that STODs are reasonably priced given the current market, as the Service Providers run a 24/7 operation and are exposed to (the currently volatile) Energy Imbalance Prices, therefore the associated overheads are reflected in the transaction costs.

Therefore, it can be seen that there is no consensus in the responses as to the availability, flexibility and costs of STOD contracts.

Q3 What do you believe the granularity of trades an associated liquidity in the Forwards market to be?

Q3 (a) Are small volumes (say less than 20MWh) available at a reasonable cost (quantify reasonable)?

Q3 (b) Is there a discrepancy between the costs for these small volumes and costs of larger volumes? If there is such a discrepancy, why do you think this is?

Q3 (c) Are these small volumes freely available (i.e. liquid) or is there time / day availability limitations? If there are liquidity issues, why do you think this is?

Q3 (d) To what extent is there liquidity in shaped contracts?

Granularity and Liquidity

- A number of responses indicate that liquidity is generally good for larger (>10MW) quantities but is generally poor for smaller quantities;

- One response stated that 1MW lots can be traded when available, but liquidity in the HH and four hour market is generally poor, however, liquidity for day ahead is strong but only for >50MW; and
- A number of responses indicate that liquidity is sufficient, with one response indicating that liquidity is significantly better if only a small volume is required.

Costs

- A number of responses indicate that trades are available at the market price regardless of the volume;
- Other responses indicate that it is likely that small lots would be more expensive than the quoted market prices;
- A number of responses indicate that small volumes are available, but at higher overall prices as a result of poor liquidity and high bid offer spreads. One response asserts that 20-30 MW trades can be typically done at the mid-point of the bid-offer spread, but smaller volumes are typically price takers of the spread (typically £1 to £20 / MWh), thus the disadvantage to smaller trades is crudely half the spread.

Liquidity for Smaller Volumes

- A number of responses indicated that there were significant periods of illiquidity in the 1MW markets, with no prices or volumes quoted a certain times. One respondent looked at the 1MW HH contract market over the week prior to receipt of the questionnaire and asserts that the market had a high degree of volatility between periods, with an uncertainty as to whether there would be a reasonable degree of volume traded. The respondent indicated that some of the more well traded settlement periods could be related to one or two large volume trades;
- One response indicated that liquidity, in either the forward or the spot market, is required in order to hedge effectively. If small volumes are not available, then smaller companies cannot hedge effectively;
- One response made the point that vertically integrated players will adjust their export to match their position rather than take minor trades, thus affecting liquidity;
- One response indicated that as a result of the lack of liquidity in the forward market, it is not a realistic option for smaller Suppliers to have to trade all of its contract requirements in the spot markets, dependent upon the liquidity there. This presents significant risk to the Party, requires guaranteed liquidity and a 24/7 operation;
- A number of responses indicated that small volumes are either not available or are highly priced and can only be bought much closer to real time; and
- A number of responses indicated that there was sufficient liquidity for smaller volumes and that such volumes were freely available.

Cost Discrepancy

- A number of responses indicated that there was no discrepancy between the cost of small and large volumes;
- A number of responses indicate that there is such a discrepancy, with one response asserting that this is a consequence of a lack of liquidity, lack of real time ECVNA reporting (to be addressed by P4) and volatility in Energy Imbalance Prices;

- Another response indicates that there are discrepancies as a result of liquidity problems in purchasing small volumes, with another response indicating that the discrepancy is a result of smaller trades having to be price takers; and
- Another response indicates that discounts for large volumes traded over a period of time are available, but asserts that this is normal trading practice and cannot be viewed as discriminatory.

Liquidity in Shaped Contracts

- A number of responses indicated that liquidity in shaped contracts was poor, with one response indicating that they were limited to peaks which are traded in 50MW lots within the prompt market;
- Another response indicates that trades in shaped contracts (LS44 and LS46) have dropped since the start of NETA and the market for such contracts has become illiquid and non transparent;
- One response indicates that liquidity for shaped contracts is lower than for base and peak shapes, and consequently, resultant costs are higher – HH shaping for small amounts requires a weekend resource, as HH shapes are only available day ahead which requires additional overhead;
- One response indicates that there is not any form of liquid market in this area;
- Another response asserts that this is a bespoke market, therefore liquidity is not of the same level as the OTC trading; and
- A number of responses assert that there are no liquidity issues.

However, there does seem to be a general agreement that shape is not available in small volumes in the forward markets, as the references to shape in the responses seems to be limited to the spot markets.

Again, there is no real consensus from the questionnaire responses as to the granularity and liquidity in the forwards / spot markets. From the varying responses it is difficult to draw any specific conclusions or make any clear statement as to the state of the current operational market for trading small volumes.

However, in general, smaller Parties were reporting high costs, lack of economic alternatives and a lack of liquidity for small volumes, while the larger Parties believed that these problems were not apparent and in some cases were themselves offering competitive risk management products.

13 SUMMARY OF TRANSMISSION COMPANY ANALYSIS

ANNEX 5 contains the full Initial Consultation response and Impact Analysis received from the Transmission Company.

13.1 Initial Consultation Response

The Transmission Company's response to the initial consultation (P26_ASS_008) is considered under the discussions at Section 12, but is also presented here for completeness (with the full response provided in ANNEX 5).

The Transmission Company indicate in their initial consultation response that they are not supportive of this Modification. The reasons provided for not supporting the Modification are:

- The Modification provides an incentive to disaggregate into as many small accounts as possible; and
- The Modification could lead to an increase in imbalance volumes if all accounts exploit the value of the neutrality band in the same direction.

The Transmission Company response refutes the two main reasons this Modification Proposal was raised:

- The Modification claimed to restore the markets ability to balance. The Transmission Company indicates that participants are currently over contracting by a safety margin and asserts that restoring the ability to balance will only occur if the safety margin is under 20 MWh; and
- The Modification claims an inability to trade small volumes. However, the Transmission Company asserts that it is possible to buy part offers down to 1 MWH lot sizes.

13.2 Impact Assessment Response

The full Transmission Company response to the Impact Assessment is provided in ANNEX 5 of this Assessment Report.

In summary:

- The Transmission Company has reservations as to whether this Modification better meets the Applicable BSC Objectives; and
- The Transmission Company believes that this Modification runs counter to the Applicable BSC Objectives of maintaining an efficient, economic and co-ordinated Transmission System.

The Transmission Company has concerns as to whether this Modification (and by implication, the Alternative Modification) better meet the Applicable BSC Objectives. The Transmission Company asserts that any assessment of the Modification should be based on the premise that the Energy Imbalance Prices are cost reflective (and if they are not believed to be, then the Transmission Company states that this should be the subject of a separate Modification). Therefore if the Energy Imbalance Prices correctly reflect the cost imposed on the system, then Parties should not be given relief from the application of Energy Imbalance Prices and such relief distorts economic incentives placed on Parties by the application of Energy Imbalance Prices.

The Transmission Company also asserts that the implementation of the Neutrality Band will introduce incentives to operate at the upper end of the Trading Neutrality Band where the Neutral Price is greater than the incremental cost of production, thus conflicting with the Applicable BSC Objectives of the efficient, economic and co-ordinated operation of the Transmission Sytem.

The Transmission Company also stated the implementation of this Modification (and again, by implication the Alternative Modification) would require an associated amendment to the Connection and Use of System Code (CUSC) as they believe that the implementation of the Trading Neutrality Band potentially means that the Transmission Company will be compensating mandatory frequency response service providers for larger imbalance volumes than they have incurred, and therefore amendment to the formulae utilised in calculating these payents is required.

14 PROJECT BRIEF

The detailed costs and timescales provided here are based on the costs and timescales received from the BSC Central Service Agent and on those development and implementation costs and timescales projected by ELEXON

It is expected that the implementation of this Modification or the Alternative Modification would be undertaken as part of an existing release project (given the current schedule of BSC System Releases).

The cost of developing the necessary changes for the implementation of Modification P26 within ELEXON and BSC Central Services is in the region of £325,000 and the requisite changes could be completed within 17 weeks[10]. These costs and timescales do not include any allowance for external testing, nor do they include ELEXON project costs.

Therefore, in addition to the ELEXON and BSC Central Service Agent's development costs of £325,000, there may be ELEXON project costs of approximately £100,000 per month (which will be incurred if the implementation of this Modification / Alternative Modification causes the project to over run the existing schedule) which include those for changes to the Code and Code Subsidiary Documents as well as for the relevant degree of Market Participant testing. It should be noted that these ELEXON costs do not include any project management or audit costs.

[10] This will be dependent upon the other changes scheduled as part of the release.

ANNEX 1 – PROPOSED TEXT TO MODIFY THE BSC

a Modification P26: Fixed Trading Neutrality Band

Amendments to the BSC, Section T 'Settlement and Trading Charges'

1.3 Data Requirements

1.3.8 Data required from BSCCo is the Neutral Price for each Settlement Period.

1.5A Trading Neutrality Band

1.5A.1 In respect of each BSC Year (the "relevant BSC Year") the Panel shall establish at least 30 days prior to the start of such relevant BSC Year the value of the Trading Neutrality Band to be used by the SAA in each Settlement Period in the relevant BSC Year for the purposes of Section T.

1.5A.2 The values established each year by the Panel under paragraph 1.5A.1 shall be values (expressed in MWh) determined by the Panel and approved by the Authority.

1.5A.3 The Panel may revise such values from time to time within any BSC Year subject to the approval of the Authority.

1.5A.4 In setting and revising the value of the Trading Neutrality Band from time to time:

(a) The Panel may request BSCCo to prepare an analysis to assist the Panel in making its determination;

(b) BSCCo shall prepare such analysis where so requested to do so by the Panel and shall comply with such further reasonable requests of the Panel for information or clarification in respect thereof;

(c) The Panel shall make available a copy of such analysis to each Party and to the Authority.

1.5A.5 In setting and revising the value of the Trading Neutrality Band from time, the Panel shall consult with parties and consider the views expressed in the course of such consultation prior to making its determination (and shall provide a detailed summary of such views to the Authority).

1.5A.6 The Panel Secretary shall notify the values of the Trading Neutrality Band established and revised from time to time under this paragraph 1.5A to:

(a) each Party;

(b) the SAA;

and shall copy such notice to the Authority.

1.5B Neutral Price

1.5B.1 In respect of each BSC Year (the "relevant BSC Year") and the Trading Neutrality Band, determined under paragraph 1.5A, the Panel shall establish at least 30 days prior to the start of such relevant BSC Year the method for determining the Neutral Price to be applied to such Trading Neutrality Band to be used by the SAA in each Settlement Period in the relevant BSC Year for the purposes of Section T.

1.5B.2 The methodology established each year by the Panel under paragraph 1.5B.1 shall be determined by the Panel and approved by the Authority.

1.5B.3 The Panel may revise the methodology from time to time within any BSC Year subject to the approval of the Authority.

1.5B.4 In setting and revising the methodology for the determination of the Neutral Price from time to time:

(a) The Panel may request BSCCo to prepare an analysis to assist the Panel in making its determination;

(b) BSCCo shall prepare such analysis where so requested to do so by the Panel and shall comply with such further reasonable requests of the Panel for information or clarification in respect thereof;

(c) The Panel shall make available a copy of such analysis to each Party and to the Authority.

1.5B.5 In setting and revising the methodology for determining the Neutral Price from time, the Panel shall consult with parties and consider the views expressed in the course of such consultation prior to making its determination (and shall provide a detailed summary of such views to the Authority).

1.5B.6 The Panel Secretary shall notify the methodology for determining the Neutral Price established and revised from time to time under this paragraph 1.5B to:

(a) each Party;

(b) the SAA;

and shall copy such notice to the Authority.

1.5C Determination of the Neutral Price

1.5C.1 In respect of each Settlement Day, BSCCo shall determine, using the methodology defined and agreed under 1.5B, the Neutral Price for all Settlement Periods in the Settlement Day.

1.5C.2 BSCCo shall, no later than the end of the second business day after the relevant Settlement Day, notify SAA of the Neutral Price for all Settlement Periods and place such Neutral Prices on the BSCCo Website, in accordance with the provisions of Section T 4.

4.7.1 In respect of each Settlement Period, the Account Energy Imbalance Cashflow for each Energy Account, other than the TC (Non-IEA) Energy Accounts held by the Transmission Company, will be determined as follows:

if QAEIaj > 0 then CAEIaj is calculated as follows:

$CAEIaj = - \{(QAEI_{aj \leq TNBj} * NPj) + (QAEI_{aj > TNBj} * SSPj)\}$

Where $QAEI_{aj \leq TNBj}$ is the energy imbalance volume less than, or equal to TNBj and $QAEI_{aj > TNBj}$ is the energy imbalance volume in excess of TNBj

Otherwise $CAEIaj = - \{(QAEI_{aj \geq -TNBj} * NPj) + (QAEI_{aj < -TNBj} * SBPj)\}$

Where $QAEI_{aj \geq -TNBj}$ is the energy imbalance volume greater than[11], or equal to -TNBj and $QAEI_{aj < -TNBj}$ is the energy imbalance volume less than[12] -TNBj.

4.10.3 In respect of each Settlement Period, for each Energy Account, other than the TC (Non-IEA) Energy Accounts held by the Transmission Company, the Residual Cashflow Reallocation Proportion will be determined as follows:

$RCRPaj = \{\{\Sigma^{+}_{i} (QCEaij) + \Sigma^{-}_{i} (- QCEaij)\} - \min (|QAEIaj, TNB|)\} / \{\Sigma a \{\Sigma^{+}_{i} (QCEaij) + \Sigma^{-}_{i} (- QCEaij)\} - \Sigma a\{\min (|QAEIaj, TNB|)\}\}$

The rest of the calculation remains as currently defined.

Amendments to the BSC, Section V 'Reporting'

4.1.1 BSCCo shall maintain: …

(b) an up-to-date list of the following parameters set out in or established and revised from time to time under and in accordance with the Code: …

(v) the Trading Neutrality Band established and revised from time to time by the Panel pursuant to Section T1.5A.

4.2.2 Market Data comprises the following: …

(d1) the Neutral Price as described in paragraph 1.5B

4.2.6A The Neutral Price for each Settlement Period in a Settlement Day shall be published on the BSC website (and displayed for a period of 30 days), as soon as reasonably practicable after receipt / determination by BSCCo of the Neutral Price in respect of such Settlement Day, as described in paragraph 1.5B.

[11] i.e. less negative than.
[12] i.e. more negative than.

Amendments to the BSC, Section X , ANNEX X-2 'Technical Glossary'

Neutral Price	NPj	£/MWh	The amount determined in accordance with Section T1.5B The Neutral Price is the price applied to energy imbalance falling within the Trading Neutrality Band for a Party, in accordance with Section T4.7.1

Trading Neutrality Band	TNBj	MWh	The amount determined in accordance with Section T1.5A The Trading Neutrality Band is the amount of energy imbalance for a Party to be cashed out at a Neutral Price in accordance with Section T4.7.1

b Alternative Modification P26: Combination Trading Neutrality Band

Amendments to the BSC, Section T 'Settlement and Trading Charges'

1.5A Trading Neutrality Band

1.5A.1 In respect of each BSC Year (the "relevant BSC Year") the Panel shall establish at least 30 days prior to the start of such relevant BSC Year the fixed volume value and the percentage value of the Trading Neutrality Band to be used by the SAA in each Settlement Period in the relevant BSC Year for the purposes of Section T.

1.5A.2 The fixed volume and percentage values established each year by the Panel under paragraph 1.5A.1 shall be values (expressed in MWh and %, respectively) determined by the Panel and approved by the Authority.

1.5A.3 The Panel may revise such values from time to time within any BSC Year subject to the approval of the Authority.

1.5A.4 In setting and revising the fixed volume and percentage values of the Trading Neutrality Band from time to time:

(a) The Panel may request BSCCo to prepare an analysis to assist the Panel in making its determination;

(b) BSCCo shall prepare such analysis where so requested to do so by the Panel and shall comply with such further reasonable requests of the Panel for information or clarification in respect thereof;

(c) The Panel shall make available a copy of such analysis to each Party and to the Authority.

1.5A.5 In setting and revising the values of the Trading Neutrality Band from time, the Panel shall consult with parties and consider the views expressed in the course of such consultation prior to making its determination (and shall provide a detailed summary of such views to the Authority).

1.5A.6 The Panel Secretary shall notify the fixed volume and percentage values of the Trading Neutrality Band established and revised from time to time under this paragraph 1.5A to:

(a) each Party;

(b) the SAA;

and shall copy such notice to the Authority.

1.3 Data Requirements

1.3.8 Data required from BSCCo is the Neutral Price for each Settlement Period.

1.5B Neutral Price

1.5B.1 In respect of each BSC Year (the "relevant BSC Year") and the Trading Neutrality Band, determined under paragraph 1.5A, the Panel shall establish at least 30 days prior to the start of such relevant BSC Year the method for determining the Neutral Price to be applied to such Trading Neutrality Band to be used by the SAA in each Settlement Period in the relevant BSC Year for the purposes of Section T.

1.5B.2 The methodology established each year by the Panel under paragraph 1.5B.1 shall be determined by the Panel and approved by the Authority.

1.5B.3 The Panel may revise the methodology from time to time within any BSC Year subject to the approval of the Authority.

1.5B.4 In setting and revising the methodology for the determination of the Neutral Price from time to time:

(a) The Panel may request BSCCo to prepare an analysis to assist the Panel in making its determination;

(b) BSCCo shall prepare such analysis where so requested to do so by the Panel and shall comply with such further reasonable requests of the Panel for information or clarification in respect thereof;

(c) The Panel shall make available a copy of such analysis to each Party and to the Authority.

1.5B.5 In setting and revising the methodology for determining the Neutral Price from time, the Panel shall consult with parties and consider the views expressed in the course of such consultation prior to making its determination (and shall provide a detailed summary of such views to the Authority).

1.5B.6 The Panel Secretary shall notify the methodology for determining the Neutral Price established and revised from time to time under this paragraph 1.5B to:

(a) each Party;

(b) the SAA;

and shall copy such notice to the Authority.

1.5C Determination of the Neutral Price

1.5C.1 In respect of each Settlement Day, BSCCo shall determine, using the methodology defined and agreed under 1.5B, the Neutral Price for all Settlement Periods in the Settlement Day.

1.5C.2 BSCCo shall, no later than the end of the second business day after the relevant Settlement Day, notify SAA of the Neutral Price for all Settlement Periods and place such Neutral Prices on the BSCCo Website, in accordance with the provisions of Section T 4.

4.7.1A In respect of each Settlement Period, the Period Account Trading Neutrality Band to be applied to the Energy Imbalance of a Party is determined as follows:

PTNBaj = min (Fixed Volume TNB, (percentage TNB * |QACEaj|[13]))

4.7.1 In respect of each Settlement Period, the Account Energy Imbalance Cashflow for each Energy Account, other than the TC (Non-IEA) Energy Accounts held by the Transmission Company, will be determined as follows:

if QAEIaj > 0 then CAEIaj is calculated as follows:

$CAEIaj = - \{(QAEI_{aj \leq PTNBaj} * NPj) + (QAEI_{aj > PTNBaj} * SSPj)\}$

Where $QAEI_{aj \leq PTNBaj}$ is the energy imbalance volume less than, or equal to PTNBaj and $QAEI_{aj > PTNBaj}$ is the energy imbalance volume in excess of PTNBaj

Otherwise $CAEIaj = - \{(QAEI_{aj \geq -PTNBaj} * NPj) + (QAEI_{aj < -PTNBaj} * SBPj)\}$

Where $QAEI_{aj \geq -PTNBaj}$ is the energy imbalance volume greater than[14], or equal to -PTNBaj and $QAEI_{aj < -PTNBaj}$ is the energy imbalance volume less than[15] -PTNBaj.

The rest of the calculation remains as currently defined.

4.10.2 In respect of each Settlement Period, for each Energy Account, other than the TC (Non-IEA) Energy Accounts held by the Transmission Company, the Residual Cashflow Reallocation Proportion will be determined as follows:

$RCRPaj = \{\{\Sigma^{+}_{i} (QCEaij) + [\Sigma^{-}_{i} (- QCEaij)\} - \min (|QAEIaj, PTNBaj|)\} / \{\Sigma a \{\Sigma^{+}_{i} (QCEaij) + \Sigma^{-}_{i} (- QCEaij)\} - \Sigma a\{\min(|QAEIaj, PTNBaj|)\}\}$

The rest of the calculation remains as currently defined.

Amendments to the BSC, Section V 'Reporting'

4.1.1 BSCCo shall maintain: …

(b) an up-to-date list of the following parameters set out in or established and revised from time to time under and in accordance with the Code: …

(v) the Trading Neutrality Band established and revised from time to time by the Panel pursuant to Section T1.5A.

4.2.2 Market Data comprises the following: …

(d1) the Neutral Price as described in paragraph 1.5B

[13] This is intended to be an absolute value of QACE, in order to give a PTNB value.
[14] i.e. less negative than.
[15] i.e. more negative than.

4.2.6A The Neutral Price for each Settlement Period in a Settlement Day shall be published on the BSC website (and displayed for a period of 30 days), as soon as reasonably practicable after receipt / determination by BSCCo of the Neutral Price in respect of such Settlement Day, as described in paragraph 1.5B.

Amendments to the BSC, Section X, ANNEX X-2 'Technical Glossary'

Neutral Price	NPj	£/MWh	The amount determined in accordance with Section T1.5B The Neutral Price is the price applied to energy imbalance falling within the Trading Neutrality Band for a Party, in accordance with Section T4.7.1

Trading Neutrality Band	TNB	MWh, %	The amount determined in accordance with Section T1.5A The Trading Neutrality Band is the parameter to be utilised when calculating the amount of Energy Imbalance to be cashed out at a Neutral Price in accordance with Section T4.7.1A. The Trading Neutrality Band is defined as both a fixed Volume (MWh) and a percentage (%) for use in accordance with Section T 4.7.1A.
Period Account Trading Neutrality Band	PTNBaj	MWh	The amount determined in accordance with Section T4.7.1A The Period Account Trading Neutrality Band is the calculated amount of energy imbalance for a Party to be cashed out at a Neutral Price in accordance with Section T4.7.1A.

ANNEX 2 – TERMS OF REFERENCE

"The Modification Group should assess P26 against the current Baseline, but endeavour to understand the interdependence with other pricing issues (including the results of the ISG pricing review), and shall include in the report:

1. The interaction of this Modification Proposal with existing Modifications, specifically P4, P008, P12 and P015/P018;
2. The impact on the market / trading trends of the introduction of an 'Imbalance buffer zone'. An assessment of the incentives and the impact on trading needs to be undertaken to understand the impact this Modification potentially has on market operation;
3. The impact on BSC Agent Systems, specifically the significant impact on the Settlement Administration Agent (SAA);
4. The scope of the Modification Proposal, and its impact on consequential processes, such as credit cover calculations;
5. The definition of the mechanism for setting the Trading Neutrality Band, potentially this could be a fixed volume or a percentage based variable;
6. The methodology by which the Panel could change the parameters of the Neutrality band, if necessary;
7. The definition of the mechanism for setting the Neutral Price, which could be fixed or market based and, therefore, variable;
8. The reasons for the removal of the neutrality band within the Gas Market;
9. Clear information on prices and volumes and the effect of granularity in the forward exchanges;
10. An assessment of the impact on the risk profile of different types and size of player of a fixed volume neutrality band;
11. An assessment of what other risk management arrangements are available to manage the risks the Proposer is seeking to address via this Modification; and
12. An implementation strategy based on the interdependence of all the pricing issues / approved Modification Proposals."

Each of these points is discussed in detail over the following pages, unless it is explicitly stated that this point is covered elsewhere in this Assessment Report. These discussions are also summarised in Section 4.2 of this Assessment Report.

1. Interaction with this Modification and Modification P4, P8, P12 and P015/P018

The **Alternative Modification P4** 'Enhanced ECVAA Reporting' is pending approval by the Authority. Where such approval is granted, then it is intended that this Modification be implemented as part of the ELEXON BSC Systems Release 2 Project, with a proposed implementation date of March 2002. This Modification seeks to improve liquidity in the contract market by improving reporting on notifications from the Central Services (ECVAA). It is believed that this enhanced reporting will improve trading on the spot markets and encourage more trading closer to real time, thus improving liquidity and potentially competitive pricing (in the cost of trading) as a result of increased trading.

This has implications on Modification P26 in that if liquidity, and therefore trading, is increased, then smaller trades could be more freely and cheaply available than currently. However, there are three factors worth considering:

1. Any effect from the implementation of P4 is not likely to be seen immediately with the effect on short term / spot market trading taking time to develop;
2. Modification P26 has a clear requirement for the granularity of the spot markets and the prices in the spot markets to drive the values set for the Trading Neutrality Band and the associated Neutral Price, therefore as granularity increases, the Trading Neutrality Band can be amended to reflect such increase; and
3. Alternatively, granularity may be improved to a level such that the Trading Neutrality band implemented under Modification P26 becomes redundant, thus incurring significant implementation costs that will not recoup any benefit.

However, the effects of the implementation of Modification P4 cannot be determined at this stage, but should be considered when making recommendations regarding this Modification.

Modification P8 'Introduction of a Price Adjuster to Reflect Option Fees for Balancing Services Contracts in Setting System Buy and System Sell Price' has been approved by the Authority. It is intended that this Modification be implemented as part of the ELEXON BSC Systems Release 2 Project, with a proposed implementation date of March 2002 for the amendments to the Energy Imbalance Price calculations. This Modification seeks to implement BSAD Price Adjuster functionality within the BSC Systems, consequently requiring amendment to the Energy Imbalance Price calculation and (under later implementation within Release 2), the reporting out of these additional variables.

Therefore the interaction between Modification P8 and Modification P26 is limited to implementation issues as they both affect the same area of functionality with the Central Services. Therefore any implementation project / plan should take due consideration of this interaction when proposing any implementation strategy.

Modification P12 'Reduction of Gate Closure time from 3.5 hours to 1 hour' is currently in the Assessment Procedure, with an extended timetable, with the Assessment Report due to be presented to the March 2002 Panel Meeting. The intent, and therefore potential impact of Modification P12, is similar to that of Modification P4, in that it is attempting to improve market liquidity. However, such impact cannot be assessed with regards to the implications on Modification P26, when the Assessment Procedure and therefore the assessment of Modification P12 has not been completed.

Modification P15/P18 effectively equates to Modification P18A 'Removing / Mitigating the effects of System Balancing Actions in the Imbalance Price Calculations', from which, Modification P18A has received Authority Approval and is currently being implemented, effective from 25th September 2001, as a workaround, with an enduring solution planned for implementation to the same timetable as Modification P8. Modification P18A seeks to reduce the volatility of the Energy Imbalance Prices by excluding certain Bids and Offers, which are identified as attributable to System Balancing actions, from the calculation of the System Buy and System Sell Prices. The intent of the Modification is to somewhat mitigate the volatility of the balancing market by removing the system balancing actions that have, so far, been setting very high prices.

Therefore if the implementation of Modification P18A does reduce the volatility of the Energy Imbalance Prices then Parties in imbalance will not be subject to the same level of risk as has been seen since Go Live. This should have a similar effect on the operational market as the implementation of P4 and P12. However, it should be noted that this Modification (P18A) is unlikely to reduce the spread between the System Buy and the System Sell Price completely, although initial operational usage of P18A shows that the spread has reduced. It should be noted that the implementation of Modification P18A is likely to reduce the costs associated with exposure to imbalance, but does not address the key principle of the Modification P26, which is the insufficient granularity in the spot markets. Therefore the implementation of Modification P18A affects the materiality but not the principle of Modification P26.

Also to be considered is any potential implementation interaction. Modification P18A affects the calculation of the System Buy and System Sell Prices, and subsequent reporting (via the Settlement Reports – SAA-I014, all sub flows), therefore there is a degree of interaction which should be considered if these Modifications are implemented together.

However, without experience of the effect this Modification has on the Balancing Mechanism and on incentives for trading, it is difficult to assess the impact the implementation of Modification P18A will have on the incentives for implementing Modification P26.

Other Modifications

Alternative Modification P7 'Allocation of Supplier Demand to the same BM Unit in a GSP Group for all Suppliers in the same Company Group' is pending approval by the Authority. Where such approval is granted, then it is intended that this Modification be implemented effective one month from the Authority decision. This Modification seeks to improve available embedded benefits for small (Licence Exemptable) generators and potentially small suppliers, by allowing any combination of Supplier BM Units and CVA Licence Exempt BM Units within a GSP Group to form a Trading Unit, thus maximising the embedded benefits.

This Modification potentially improves the current situation with regards to charges and benefits for smaller players, therefore making the implementation of Modification P26 arguably (but at this time, not quantifiably) less material, but again, does not address the key principle of Modification P26, which is the issue of granularity in the spot markets.

Modification P27 'Amendment to the Derivation of Imbalance Prices' is currently in the Assessment Procedure and is being considered in conjunction with Modification P26.

Therefore the interaction between Modification P27 and Modification P26 is limited to implementation issues as they both affect the same area of functionality with the Central Services. Therefore any implementation project / plan should take due consideration of this

interaction when proposing any implementation strategy. This interaction has been considered in the request for Impact Assessment from the Central Service Agent.

2. The impact on the market / trading trends of the introduction of an 'Imbalance buffer zone'. An assessment of the incentives and the impact on trading needs to be undertaken to understand the impact this Modification potentially has on market operation.

The Ofgem document 'Report to the DTI on the Review of the Initial Impact of NETA on Smaller Generators' August 2001 (Reference 7) goes into some detail about the existing trading trends of smaller generators in the operational market. As this Modification and the Alternative Modification have the intent of protecting smaller players, it seems pertinent to utilise the information gathered by Ofgem in the area of smaller generator trading. The Ofgem website (www.ofgem.gov.uk) provides the terms of reference under which this review was undertaken.

This review document states that "9 out of 40 companies that responded had signed the BSC as compared with 8 who had signed the PSA. 98 per cent had chosen the option whereby smaller generators may sign contracts for all their exported output with a single supplier. None of the respondents had signed a contract with a consolidator during the two month period covered by the review." (See ToR Point 11 for more information in this area).

The analysis of the responses (ANNEX 5 of the Ofgem document (Reference 7)) provides the respondents views of the reasoning behind this lack of trading in the Balancing Mechanism / under NETA.

"5.4 The general view amongst respondents was that NETA had resulted in lower prices for exported power and that the availability of offers for exported electricity is low. Some cited the unpredictability and consequent balancing risks of smaller generators as the reasons for this, others cited the associated disadvantage that smaller generators' output causes by reducing the Suppliers entitlement to RCFR (reallocation of the residual cash flow, the 'Beer Fund'). Some interviewees claimed that buyers were either only prepared to pay the equivalent of System Sell Price or to enter into contracts with all the imbalance risk passed through and that in some cases, this was below the marginal costs of production for some smaller generators."

"5.9 Generally the volatility seen in cash out prices was considered to have the effect of increasing the risk premia associated with contracting for output from smaller generators."

This clearly indicates that the current volatility in the Balancing Mechanism is a deterrent for smaller generators, and by association, smaller players in general, to enter and participate in the Balancing Mechanism. Therefore the introduction of a Trading Neutrality Band may encourage smaller players to participate and also encourage Suppliers to offer more competitive contracts or more competitive pricing for those contracts if the imbalance risk is mitigated somewhat by the Neutral Price applied to the Trading Neutrality Band.

This point of the Terms of Reference is broadly written and therefore encompasses other areas of discussion in various sections of this Assessment report, namely:

- **Section 12** – consultation responses discuss potential impact of the implementation of the Modification, for example, the assertion that the Modification reduces the incentives to balance, and that it reduces development of the sub 20MWh product market;
- **Section 13** – Transmission Company response provides their view on the impact and incentives of the implementation of this Modification (with full responses provided in ANNEX 5); and

- This Section, **ANNEX 2**, other points of the Terms of Reference, such as point 9 and point 11 also cover areas that pertain to the incentives and impact of implementing this Modification.

The discussions around these points have not been repeated here.

8. The reasons for the removal of the neutrality band within the Gas Market;

An interim report (Reference 4, 030/013) on this aspect of this Modification was presented to the Panel Meeting of the 20th September 2001, extracts from which are attached below.

"**Tolerances in the gas market**

In the gas market balancing tolerances were originally introduced at the time the Network Code was implemented in 1996 as a transitional measure. The regime provided shippers with some protection from System Marginal Price (SMP) cash out. The intent of this was to ensure that imbalances arising from genuine operational uncertainty were not unduly exposed.

The mechanism rolled forward imbalances accumulated through the application of the Absolute Tolerance Quantity (ATQ) and were cashed out at the end of each month with the Cumulative Imbalance Tolerance Quantity (CITQ). The ATQ was equivalent to 7 500 Therms per day and although applicable to all, was introduced to afford protection to small shippers. Shippers that were out of balance within the ATQ were cashed out at zero. Above the ATQ sat the Imbalance Tolerance Quantity (ITQ) which was the sum of the Non Daily Metered (NDM) Forecast plus 2% of throughput for Very Large Daily Metered Consumers (VLDMCs) or 3% of throughput for Daily Metered (DMs). Imbalances between the ATQ and ITQ were cashed out at System Average Price. Above these levels shippers were cashed out at System Marginal Price.

The percentage of throughout was initially set at 8% of Daily Metered (DMs), 3% of Very Large Daily Metered Consumers (VDLMCs) and 2% of inputs, before being reduced by successive modifications. ATQ and CITQ Tolerances were removed from 1 April 2001 but a form of ITQ remains as a tolerance for Non Daily Metered (NDM) Forecast Deviations as this is imbalance risk that is beyond the control of the shipper.

Tolerances in the gas market were reviewed almost on an annual basis by successive Modification Proposals raised by the industry. Discussion of tolerances was also included in several Ofgem consultations[16]. The February 2001 consultation document[17] provides only a snapshot of the latest Ofgem views on the tolerances. This document stated that "The main principles underlying the current (gas balancing) regime are to:

> Provide commercial incentives on shippers to balance their inputs and offtakes by managing their own gas portfolios; ...

This provides a context to the Ofgem views provided on the reduction and removal of the tolerances. Ofgem indicated in this, and the previous, consultations that shippers should manage their imbalance risks through linepack services and by trading out their imbalances. Ofgem noted that under certain circumstances, the tolerance cash out mechanism incentivised shippers to utilise the imbalance tolerance rather than trade out of imbalance, and Ofgem believed this to not be in accordance with the incentive they had defined, above.

It should be noted that a consistent factor influencing the decisions for reducing and removing tolerances was the dependency of reduction / removal on the provision of alternative services for managing imbalance. In the September 1999 Consultation, Ofgem stated "Ofgas made it clear that the complete removal of balancing tolerances is linked to the introduction of commercial linepack services by Transco: these services allow shippers to buy

[16] 'The New Gas Trading Arrangements: A Decision Document', published by Ofgem in September 1999.
'The New Gas Trading Arrangements: A review of the new arrangements and further development of the regime – a review and decision document', published by Ofgem in July 2000.
[17] 'The New gas Trading Arrangements: Further reform of the gas balancing regime: A consultation document' published by Ofgem in February 2001.

linepack from Transco to replace existing tolerances and thus avoid exposure to cash out prices." Ofgem indicated the reasoning for this dependency in a decision letter[18] published, in response to a request for an extension to the ATQ, "We (Ofgem) agreed that it was prudent to sanction an extension to this regime until such time as the new tolerance regime was introduced, otherwise smaller shippers would be unduly exposed to balancing risks, if the ATQ and CITQ were removed prior to the introduction of the tolerance service."

In the February 2001 Consultation document, Ofgem noted that "4.15 ... Imbalance tolerances allow shippers to deliver long / short on the system without being required to trade out their positions. For instance, if a shipper has flexibility to bring additional gas to the market and it sees System Average Price (SAP) exceeding the marginal cost of delivering that gas, the shipper may bring additional gas to the system. In order to trade out a portion of its imbalance, the shipper might need to price its gas below the prevailing SAP, with the effect of reducing both the price it receives for the gas that it trades and the daily SAP it receives on the gas that it has not traded."

Ofgem drew the conclusion from their review that "4.16 ... The continued presence of imbalance tolerances, that allows shippers to refrain from trading in the market, reduces gas trading (particularly on the OCM), encourages shippers to carry physical imbalances and increases the volumes of Transco's balancing actions. These effects are likely to reduce market liquidity and widen the Bid – Offer spread in the market."

Comparison of the gas and the electricity markets

There are a number of factors in the gas market that make a direct comparison with implementation of a similar tolerance band for electricity trading difficult. The most significant of which appears to be the manner in which gas is traded. In the gas market, gas is traded between shippers and by Transco for balancing, via a transparent On the day Contract Market. This, in conjunction with the relative length of the balancing period, means that shippers can determine the relative price of gas on the OCM (and therefore the SAP and SMP) during the balancing period and determine whether it is more profitable for them to use their imbalance tolerance in preference to trading out of imbalance or remaining balanced, as asserted previously.

The balancing mechanism for electricity trading seems, to a degree, to preclude this sort of within settlement period trading, as a result of the shorter balancing periods, and associated Gate Closure. However, a more detailed analysis of the incentives and issues surrounding the introduction of the Trading Neutrality Band including consideration of the issues experienced by the gas market, is to be undertaken by the Modification Group as part of the Assessment Procedure and will therefore be included in the Assessment Report for the Modification P26."

Further assessment of the tolerances in the gas market was under taken by the PIMG at their meeting of the 27th September 2001, and the PIMG reiterated the point made above, namely that in the gas market the Gate Closes two hours from the end of a twenty four hour Settlement Period (at 04:00 for 06:00). This allows shippers to determine the cash out price for imbalances and enables them to make a decision as to whether it is more favourable for them to trade out of imbalance, or to utilise their imbalance tolerances and have the associated imbalance cashed out at the System Average Price. Further more, this effect is exacerbated by ex-ante contract disclosure.

[18] Ofgem Decision letter, reference Net/Cod/Mod/421, dated 16 August 2000, detailing a decision on Modification 421 'Temporary Extension of Absolute Tolerance Quantity'

The PIMG believed that the nature of the electricity market would preclude this sort of manipulation, in that the cash out prices are set on an 'after the event' basis, and therefore are unpredictable, necessitating trading against unknown prices. This should have the effect of disincentivising BSC Parties from deliberately utilising their imbalance tolerance.

The PIMG also considered the reasons for implementing an imbalance tolerance, and the incentives of such tolerances, in both the gas and the electricity markets:

The gas market implemented their imbalance tolerances as a transitional measure at the implementation of the Network Code. The tolerances were introduced to protect shippers from imbalances resulting from operational uncertainty and the subsequent removal was dependent upon the development and introduction of an On the Day Contract Market (OCM) and the implementation of other services for managing imbalance exposure risk, namely linepack services. The tolerances encouraged shippers to utilise their imbalance exposure in order to maximise advantage.

The Trading Neutrality Band, i.e. the imbalance tolerance for the electricity market, has been proposed for implementation as a result of the illiquidity of the spot markets and forward exchanges with regards to the availability of small volumes at a reasonable cost – this is not an effect seen in the gas market, as a consequence of the OCM. With regards to incentives arising from the implementation of the Trading Neutrality Band, it should be noted that the introduction of the TNB is also effectively a consequence of the spread between System Buy and System Sell Prices. The TNB has the potential to incentivise Parties to utilise the Trading Neutrality Band to protect themselves from the volatile Energy Imbalance Prices.

Another parallel between the gas market and the electricity market is the commonality of the dependency upon the development of services for managing exposure to imbalance risk. The tolerances in the gas market were extended pending the development of sufficiently developed and flexible services for managing imbalance exposure, namely linepack. The Ofgem document detailing the impact of NETA on smaller generators (Reference 7) draws the conclusion that there is a perceived lack of similar imbalance risk management services (such as consolidation) in the electricity market. Therefore there seems to be some commonality between the two markets in this area.

9. Clear information on prices and volumes and the effect of granularity in the forward exchanges.

Two of the responses to the initial Consultation for this Modification included reference to the costs and granularity of the forwards exchanges:

P26_ASS_006 stated "Volumes less than 20MWh are available and traded on the power exchanges. 1MWh being the minimum permitted volume. Trade and notification charges are levied on a per MWh basis on at least two of the major exchanges, i.e. rate is independent of the size of the trade."

P26_ASS_011 stated "We understand that UKPX charges a fixed monthly fee and a 6.5p/MWh trade fee. There is no fixed per trade fee or minimum trade volume."

The Ofgem document 'Report to the DTI on the Review of the Initial Impact of NETA on Smaller Generators', August 2001 (Reference 7) provides information on the Over The Counter (OTC) Market, with specific reference to liquidity and trading volumes for smaller generators in the operational market. The following extracts from ANNEX 7 (Power exchanges view / analysis) of the Ofgem document provide the Power Exchanges view of their trading and services and associated costs.

APX state at "7.2 … ongoing charges are based solely on usage (i.e. MWh notified or traded) with no charges for software or communications. There is a minimum monthly fee of £500 per participant."

IPE state at "7.6 Contracts are available from 2 days to over 3 years forwards. The smallest increment which can be traded is a 5MW baseload contract for a day. Assuming an £18/MWh price, this represents a minimum contract value of £2160.

7.7 IPE transaction fees are very competitive at a level close to £0.001/MWh for a monthly contract and £0.002/MWh for a daily contract."

PowerEx state at 7.10 that they intend to "provide to smaller generators their back office and risk management services along with notification agent services … on a structured fee basis. The structured fee basis would vary from £50 to £500 per month depending on requirements and a usage fee for transactions and notifications / registrations."

Therefore the liquidity and de minimis volumes in the OTC / spot market seems to support the assertion that these volumes are freely available at a transaction price unlinked to trade size.

The APX and UKPX websites (www.apx.com and www.ukpx.com respectively) support this assertion by listing the minimum trade size as 0.5MW. This was noted and agreed by the PIMG at the meeting of the 21st August 2001, however, a representative of a smaller player presented the view that smaller players were subject to the whims of the spot market for the majority of their trading, as they were unable to find longer terms contracts for the smaller volumes they required. Therefore the representative undertook to supply further information on smaller players trading. The following represents this view:

"Modification Proposal P026: Market-Driven Trading Neutrality Band

Additional Comments to support the Discussion at the Modification Group meeting, 21 August 2001.

I would like to clarify my understanding of how market liquidity adversely affects smaller suppliers, compared to larger suppliers.

Volume Risk

Larger suppliers are able to trade in the forward market to obtain a relatively high percentage hedge to fit their shape requirements. On the other hand, a small supplier has the option of being significantly long or short. The statement that 20MW granularity in the forward market disadvantaging small players appears unchallenged.

The contention at the meeting of the Modification Group on Tuesday 21st August centres on the extent to which 1MW contracts on the UKPX exchange (every half hour before gate closure) for delivery in half hourly blocks provides a pragmatic solution for small players to hedge their requirements, taking account of the liquidity in that market.

The option of trading 1MW blocks on a half hourly basis using the UKPX exchange as the principle hedging mechanism poses significant risk to a small supplier that is either significantly long or short, as compared to a very large supplier using it to top up or sculpt from a hedged position in the forward market.

The liquidity in the UKPX 1MW half-hourly market is not uniform across the 48 settlement periods. Volumes traded appear to be variable and thin at several points during the day, and on occasions this is manifest in the prospect of no prices or trades. At other times, the degree of liquidity may be greater but only to a point where the minimum trade quoted may still exceed the requirements of a smaller participant. The cost of this illiquidity is the prospect of being cashed out for larger volumes as a percentage of the overall supply requirements in comparison to a larger supplier.

Price Risk

When the liquidity in the market is relatively thin, one of the usual characteristics is a large bid offer spread. A supplier who is significantly long or short as a percentage of its overall requirements will have little option but to trade at these times. In addition, smaller suppliers are nearly always price takers. Their requirements are such that they are unlikely to have the ability to move prices to a point somewhere within the spread.

Prices quoted in the half hourly market, being close to real time are also considerably more volatile by half-hour than for other periods quoted in the forward market, and can be traded at price levels several times much greater than that quoted in the forward market.

Noting the price risk exposure of a small supplier to the 1MW market as the primary means to hedge its requirements, the overall weighted average hedged supply price is likely to be much greater than if it was able to use also the forward market to meet a significant percentage of its requirements.

10. Administrative Cost

The cost of trading on the UKPX has been quoted at 7p/MWh per trade plus a flat monthly fee which it has been suggested is not an undue cost burden for a small supplier. This cost is an additional cost above the bid offer spread that would be incurred through trading in the

forward market. It also does not include the wider costs of running a 24-hour trading and weekend trading operation, all of which need to be recovered from a smaller customer base.

It also worth noting that all but one of the larger suppliers are vertically integrated companies that have little or no requirement to trade, being physically hedged with access to flexible plant to meet their own shape requirements. It is much easier to adjust the physical output from a flexible genset for small quantities than to trade in the 1MW market. Liquidity in this market is therefore unlikely to be as important to the large suppliers as small suppliers because their total non-speculative traded volume is likely to constitute a smaller percentage of their energy flows.

The Proposed Modification

The proposed modification seeks to implement a fixed band of 20MWh to compensate for the adverse consequences of granularity of minimum trade size in the forward market for small suppliers seeking to hedge their position.

A fixed size of 20MWh goes beyond a trading neutrality band linked to the percentage forecasting error in supply for which we believe there would also be a justification (in the absence of granularity of trade size impacting on small suppliers). We understand that the transmission system operator is capable of achieving a forecast error of 2% against national demand, while large suppliers are capable of achieving between 3-6%. Forecast error is likely to be greater for smaller suppliers, possibly as high as 15% due to the statistical effect of averaging from a smaller sample set. The cost of this error when spread across a smaller customer base is significant. A trading neutrality band would also remove the problems experienced by renewables and CHP under Neta.

Large suppliers have the choice to develop their trading strategy through the combination of spot and forward market trades. Small suppliers have a much inferior choice between costly half hourly trading or being cashed out significantly long or short. Both are more costly than the wider alternatives available to large suppliers. This is neither equitable nor efficient.

Damian Johnson

Amerada Hess Gas Ltd"

The Ofgem document 'Report to the DTI on the Review of the Initial Impact of NETA on Smaller Generators' August 2001 (Reference 7) provides information on the Over The Counter (OTC) Market, with specific reference to liquidity and trading volumes for smaller generators in the operational market.

As this Modification (and by association the Alternative Modification) quote the granularity and costs fo the spot markets as a driver for implementing the Modification, it seems pertinent to utilise the information gathered by Ofgem in the area of smaller generator OTC trading. The Ofgem website (www.ofgem.gov.uk) provides the terms of reference under which this review was undertaken.

The summary of the Ofgem document (Reference 7) states that "None of the respondents who had signed the BSC had participated directly in the Balancing Mechanism. One generator said that it had not been able to obtain an acceptable contract offer and as a result had sought to generate only sufficient power to meet its own demand. ..."

"The majority of forward trading under NETA has been conducted through the OTC market. NETA has seen significant developments in liquidity in OTC trades both in terms of the total volumes of trading reported and in the variety of products on offer. ..."

"The three main power exchanges that have developed since NETA Go Live are the UKPX, the UK APX and the IPE. Of these the UKPX and UK APX offer a spot market, while both the UKPX and the IPE offer futures contracts."

"5.19 Other respondents thought that levels of liquidity currently being experienced were not indicative of liquidity levels that would emerge over the longer term. Some thought that current levels and types of trading were in reaction to extreme cash out prices and players trying to go long to avoid exposure to System Buy Price."

"Although liquidity in general has increased significantly ... there is still a lack of liquidity in the within day spot markets. This may reflect several factors including the initial spread between System Buy and System Sell Prices, portfolio generators self insuring against plant failure, a lack of reporting from central systems and the length of Gate Closure."

Therefore the Ofgem analysis indicates that the liquidity of the forwards and spot markets has improved, but that there is still a level of illiquidity in the within day markets, therefore for Parties relying on this aspect of the operational market, this may impede their trading, thus supporting the assertion of the Modification Proposal.

This view is supported by some of the respondents to the Ofgem review (Reference 7), in the analysis of the responses (ANNEX 5 of the document):

"5.16 One respondent commented that although the spot markets have a notional de minimis size of trades of 1MW (0.5 MWh in a half hour), in practice it was not considered to possible to trade such volumes, and that most trading was done in blocks of 50MW or 20MW, with the lowest granularity being 10MW. For most smaller generators this was considered to be an order of magnitude greater than that required and not in volumes that enabled them to manage their imbalance risk."

Conversely, the Ofgem analysis indicates that forwards contracts can be bought at a relevant level of granularity via UKPX and IPE, such that parties should not be forced to rely on the spot markets for the majority of their trading, but should be able to utilise the spot markets for fine tuning positions, even at a low level of granularity.

"5.13 There is some evidence of concentration of liquidity during working hours and also close to Gate Closure but these affects do not seem to be significant. Again from a limited examination, there does not appear to be any bias in the prices that small volumes attract versus large. There are many transactions every day that are for volumes less than 10MW."

However, to add an additional level of complexity, contract prices do not seem to be favourable, with respondents to the Ofgem review (ANNEX 5 of Reference 7) indicating as follows:

"5.5 ... Smaller generators presently have little choice of who to sell to, so those who are buying are considered at an advantage and can heavily discount the prices they offer. One respondent asserted that under NETA embedded generators do not have any negotiating power and this is being exploited by large licensed supplier, which in its view has resulted in embedded generators being forced to accept distressed prices and all of the risks associated with trading in the market which suppliers are seeking to pass on through contracts."

If this is true for embedded generators, then this premise could also be extended to smaller players.

The PIMG issued a questionnaire to Participants (detailed in Section 12.3, with the responses provided in full in ANNEX 3 (c)). One of the objectives of the questionnaire was to obtain information on granularity and pricing in the forward / spot markets. However, the questionnaire responses indicate that there is no consensus on costs / granularity in this area amongst Parties.

The PIMG also requested that Brokers / Price Reporters be contacted to determine what their opinion of the operational market in terms of granularity and liquidity. The following represents the response:

John Evans of Spectron, an established Broker, confirmed that most trades in the OTC market are in quantities of 25MW, 50MW or 100Mw and that over one third of trades were in 100MW blocks, Almost all of these are 'all or nothing' which precludes the possibility of splitting these quantities. Transaction costs were also cited as being a major concern.

Patrick Heren of PH Energy, a Price Reporter, said that most trades were 20MW or 25MW for forward trades and 50MW for the "prompt" market. He said that there were similar drivers for standardisation in the OTC market that existed for the exchanges, and that market players were keen not to use non-standard contracts as the fact that you want to buy or sell them gives too much (information) away.

10. An assessment of the impact on the risk profile of different types and size of player of a fixed volume Neutrality Band.

The following table represents an analysis of the implementation of a 20MWh fixed volume Trading Neutrality Band in two Settlement Periods on a Settlement Day. The Settlement Day was picked at random – **6th September 2001**, and the relevant Settlement Periods on that day were picked at random – **Settlement Period 5** and **Settlement Period 40**.

For each Settlement Period, BSC Party Energy Accounts were chosen based upon the Account Credited Energy Volume – i.e. a representative number of Parties from each 'level' of Account Credited Energy Volume were chosen.

The **Neutral Price** was obtained from the (weighted average) Reference Price from the Automated Power Exchange for the chosen Settlement Day and Settlement Periods. This source for the Neutral Price was chosen as a consequence of this information being unrestricted and therefore freely available to all on the internet, and should be sufficiently representative of the price of trades on a Power Exchange at the times chosen.

It is recognised that this source for the Neutral Price differs from that proposed for this Modification, which is the last traded price from the UKPX, however, the information required to determine the Neutral Price under this Modification is restricted and not freely available to all, and therefore it may not be appropriate to include it in this report.

For each Party and Energy Account:

- The Account Energy Imbalance Volume (QAEI) is expressed as a percentage of the Account Credited energy Volume (QACE) to determine whether there is a correlation between the Account Credited Energy Volume and the Account Energy Imbalance Volume;
- The Account Energy Imbalance Cash flow (CAEI) was calculated to take into account the Trading Neutrality Band and the application of the Neutral Price to this Band;
- The Account Energy Imbalance Volume was compared to the Trading Neutrality Band to determine what percentage of the Account Energy Imbalance Volume falls within the TNB; and
- The Account Energy Imbalance Cashflow (CAEI) was compared to the cashflow calculated by applying the Trading Neutrality Band and Neutral Price to determine the difference in cashflows.

It should be noted that the BSC Party Ids are not provided here. Although the provision of this information is not perceived to be a breach of data confidentiality for these Parties, as The Balancing and Settlement Code, Section V, 3.2.2 states that this information (taken from the SAA-I014 Settlement Report) is available to all BSC Parties, it should be noted that the distribution of this report may include recipients other than BSC Parties who are not entitled to this Settlement information.

6th September 2001 – Settlement Period 5

System Buy Price £20.60[19] System Sell Price £4.88 Neutral Price £12.86

En Acc	QAEI MWh	CAEI £	QACE MWh		TNB CAEI £	QAEI % of QACE	% difference EIP and TNB	% of Imbalance in TNB
C	-53.06	1092.88	-2609.26		938.16[20]	2.03	85.84	37.69
C	28.91	-141.10	-2111.87		-300.67	1.37	213.09	69.19
C	19.32	-94.33	-1242.58		-248.51	1.56	263.44	100.00
C	-103.44	2130.48	-1095.35		1975.77	9.44	92.74	19.34
C	40.97	-200.00	-785.22		-359.56	5.22	179.78	48.82
C	56.06	-273.67	-578.34		-433.23	9.69	158.30	35.67
C	7.15	-34.92	-148.87		-92.00	4.81	263.46	100.00
C	13.92	-67.94	-136.08		-179.00	10.23	263.47	100.00
C	0.79	-3.84	-26.60		-10.12	2.96	263.56	100.00
C	-1.72	35.45	-24.72		22.13	6.96	62.43	100.00
P	-0.52	10.73	-17.02		6.70	3.06	62.44	100.00
C	0.85	-4.16	-8.02		-10.96	10.63	263.38	100.00
C	1.41	-6.88	-5.69		-18.13	24.78	263.56	100.00
P	0.06	-0.31	-1.19		-0.82	5.40	265.50	100.00
C	0.08	-0.37	-0.91		-0.96	8.29	260.68	100.00
P	-0.04	0.84	24.46		0.53	0.17	62.77	100.00
P	22.28	-108.75	48.78		-268.32	45.67	246.73	89.77
P	1.23	-5.99	61.23		-15.79	2.01	263.64	100.00
P	0.12	-0.57	200.12		-1.50	0.06	263.97	100.00
P	-0.77	15.92	228.73		9.94	0.34	62.44	100.00
P	-80.49	1657.89	419.51		1503.17	19.19	90.67	24.85
P	-0.36	7.48	468.37		4.67	0.08	62.41	100.00
P	-33.49	689.78	918.68		535.05	3.65	77.57	59.72
P	10.51	-51.33	1012.64		-135.21	1.04	263.41	100.00
P	25.75	-125.71	1153.37		-285.28	2.23	226.93	77.66

6th September 2001 – Settlement Period 40

[19] The SBP is applied to negative Energy Imbalance Volumes, the SSP is applied to positive Energy Imbalance Volumes.
[20] A negative Energy Imbalance Cashflow is a payment to the party and a positive Energy Imbalance cashflow is a charge to the Party.

System Buy Price £113.42 System Sell Price £8.38 Neutral Price £20.25

En Acc	QAEI MWh	CAEI £	QACE MWh		TNB CAEI £	QAEI % of QACE	% difference EIP and TNB	% of Imbalance in TNB
C	63.60	-533.14	-3696.68		-770.48	1.72	144.52	31.45
C	90.61	-759.52	-3111.97		-996.85	2.91	131.25	22.07
C	212.37	-1780.13	-1790.35		-2017.42	11.86	113.33	9.42
C	164.31	-1377.26	-1415.06		-1614.56	11.61	117.23	12.17
C	85.62	-717.70	-817.97		-955.03	10.47	133.07	23.36
C	-68.56	7775.48	-645.56		5912.17	10.62	76.04	29.17
C	7.25	-60.75	-202.75		-146.75	3.57	241.57	100.00
P	0.82	-6.91	-102.18		-16.69	0.81	241.48	100.00
C	-2.21	250.31	-33.21		44.69	6.65	17.85	100.00
C	1.99	-16.70	-32.19		-40.34	6.19	241.54	100.00
C	1.13	-9.43	-13.25		-22.78	8.49	241.58	100.00
C	0.70	-5.83	-5.05		-14.09	13.77	241.75	100.00
C	0.17	-1.40	-1.75		-3.38	9.56	241.55	100.00
P	0.12	-1.01	-1.13		-2.43	10.62	240.59	100.00
P	17.12	-143.51	17.12		-346.70	100.00	241.59	100.00
P	-11.39	1291.26	27.12		230.55	41.99	17.85	100.00
P	0.11	-0.91	45.11		-2.19	0.24	240.33	100.00
P	65.97	-552.95	105.97		-790.29	62.25	142.92	30.32
P	2.97	-24.91	177.10		-60.16	1.68	241.52	100.00
P	58.84	-493.21	203.11		-730.55	28.97	148.12	33.99
P	-0.52	59.09	276.06		10.55	0.19	17.85	100.00
P	0.51	-4.25	359.01		-10.27	0.14	241.57	100.00
P	-59.71	6771.88	539.77		4908.53	11.06	72.48	33.50
P	179.79	-1507.09	775.98		-1744.39	23.17	115.75	11.12
P	-16.07	1822.48	1236.24		325.40	1.30	17.85	100.00
P	8.58	-71.89	1715.46		-173.66	0.50	241.57	100.00
P	21.08	-176.72	1888.65		-414.07	1.12	234.31	94.87
P	13.51	-113.28	3234.61		-273.66	0.42	241.58	100.00

To summarise the tables:

- There appears to be some correlation between the Account Credited Energy Volume and the Account Energy Imbalance Volume, i.e. there is not a percentage correlation. If it is assumed that the larger percentages are an anomaly, then the average imbalance for a Party is up to around 10% of the Account Credited Energy Volume for a Settlement Period. Therefore as the Account Credited Energy Volume decreases, the amount of imbalance decreases and falls within the Fixed Volume Trading Neutrality Band; and
- Generally the small to medium players (assessed on the Account Credited Energy Volume) have a very high percentage of their Account Energy Imbalance Volume within the 20MWh Trading Neutrality Band. In Settlement Period 5 all of the Parties (bar one – at 90%) with an Account Credited Energy Volume between –150 and +230 MWh have all of their Imbalance Volume covered by the Trading Neutrality Band. In Settlement Period 40 all of the Parties (bar two – both at ~30%) with an Account Credited Energy Volume between – 205 and +360 MWh have all of their Imbalance Volume covered by the Trading Neutrality Band. Larger players still appear to have a significant volume (20 to 100% in Settlement Period 5 and 40) of their Energy Imbalance Volume falling within the Trading Neutrality Band and therefore are benefited by the implementation.

Therefore, the utilisation of the Trading Neutrality Band mitigates the risk significantly for small to medium Parties – Parties with a Settlement Period export / import of around, and less than, 200 MW are the ones benefiting most from the implementation of the Trading Neutrality Band (on the premise that the average Energy Imbalance Volume for a Settlement Period is less than (or equal to) 10%). To summarise the affect this has on the cash flows for these Settlement Periods:

- Generally those Parties with a long position (i.e. a positive Energy Imbalance Volume, indicating 'spill' onto the system) benefit most, with the Neutral Price in excess (in both Settlement Periods) exceeding the System Sell Price. This is reflected by an up to 263% (Settlement Period 5) and 242% (Settlement Period 40) increase in payments (where all the positive imbalance volume falls within the Trading Neutrality Band); and
- Generally those Parties with a short position (i.e. a negative Energy Imbalance Volume) have their charges reduced by 10 to 30% by the implementation of the Trading Neutrality Band in Settlement Period 5 and by approximately 80% in Settlement Period 40 (mostly attributable to the high System Buy Price in that Period, where the smaller Neutral price provides the most benefit).

Therefore at a relatively high level, cashflows from the system (for positive Energy Imbalances) are likely to increase materially for (it is expected) the majority of Settlement Periods. It should also be noted that positive imbalance volumes within the Trading Neutrality Band will be protected from negative System Sell Prices (i.e. positive imbalance volumes are charged for rather than paid for). This will have significant benefit for smaller generators who are refraining from generating as a consequence of the potential for the System Sell rice to go negative.

11. An assessment of what other risk management arrangements are available to manage the risks the Proposer is seeking to address via this Modification.

The Modification Proposal P26 indicates that the key incentive for implementing the Modification is to manage imbalance risk for smaller players. One of the key risk management arrangements available to Parties for imbalance risk management is consolidation.

Consolidation allows the reduction of exposure to NETA's dual imbalance cash out prices. The benefit of consolidation arises because individual market participants may have fully or partially offsetting imbalances, such that when their imbalance positions are combined the net exposure to imbalance prices is reduced. There are potentially three levels of consolidation:

1. Pure consolidation: Just offering the potential benefit of reduced imbalance exposure;
2. Fully managed consolidation service: Undertaking all contracting and trading functions in addition to pure consolidation; and
3. Intermediate consolidation service: The Party specifies some of the contracting and the consolidator does the rest.

For Parties with BM Units, this can be undertaken via use of Metered Volumes Reallocations and Energy Contract Volume Notifications, and therefore is not limited to Licence Exemptable generators.

The Ofgem document 'Report to the DTI on the Review of the Initial Impact of NETA on Smaller Generators', August 2001 (Reference 7) provides information on the view of consolidators and smaller generators, with specific reference to availability of consolidation services for smaller generators in the operational market. Therefore, it seems pertinent to utilise the information gathered by Ofgem in the area of smaller generator consolidation. The Ofgem website (www.ofgem.gov.uk) provides the terms of reference under which this review was undertaken.

The summary of this Ofgem document (Reference 7) states, with respect to consolidation services, that "Smaller generator respondents indicated widespread dissatisfaction with the consolidation services available at the start of NETA, and a number of those offering consolidation services indicated that these were not operational then. … However, all of the consolidators reported that they were watching the way the market was developing and were still intending to offer the services although were not yet marketing actively."

Specific analysis of the responses received by Ofgem (ANNEX 5 of the Ofgem report (Reference 7)) further support the assertion that consolidation services are not available:

"5.22 Of those that thought that consolidation services had not emerged, some considered this temporary, citing such reasons as; inadequate rewards which currently do not justify the risks; parties finding it difficult to value imbalance risks; lack of readiness (not having the systems in place to manage the imbalance risks); and the products being offered by consolidators not yet being sufficiently advanced or flexible enough to offer any benefit over a Seasonal Time of Day (STOD) varying contract arrangement."

This seems to offer a parallel with the gas market, in that tolerances were maintained for smaller players until other imbalance management services were introduced with the aim of offering alternative services for managing imbalance (see Terms of Reference Point 8).

However, conversely, another response to this review stated “5.23 ... One respondent commented that consolidation is not a panacea for smaller generators; a service can be offered, but at a price that reflects the risks involved.”

The PIMG issued a questionnaire to Participants (detailed in Section 12.3, with the responses provided in full in ANNEX 3 (c)). One of the objectives of the questionnaire was to obtain information on available imbalance risk management services. Therefore the responses and the summary provide further information in this area.

The following Terms of Reference points are covered elsewhere in this Assessment Report, as detailed, and are therefore not discussed in further detail here.

3. The impact on BSC Agent Systems, specifically the significant impact on the Settlement Administration Agent (SAA);

The impact on the SAA is significant and is summarised in Section 7 of this Assessment Report, with the full Impact Analysis provided in ANNEX 4 of this report.

4. The scope of the Modification Proposal, and its impact on consequential processes, such as credit cover calculations;

The Description of the Modification and Alternative Modification for P26 (Section 5, 5.3 and 5.4, respectively, of this Assessment Report) defines the extent of the impact of the Modification and Alternative Modification via a definition of the amendments required. The impact for the implementation of this Modification / Alternative Modification, is limited to the Energy Imbalance Cashflow and Residual Cashflow Reallocation Calculations. The Indebtedness calculation process is not affected, as described in Sections 5.3.7 and 5.4.7 for the Modification and Alternative Modification respectively, as a consequence of the nature of the process.

5. The definition of the mechanism for setting the Trading Neutrality Band, potentially this could be a fixed volume or a percentage based variable;

This aspect is covered in more detail by the description of the Modification and Alternative Modification in Section 5 of this Assessment Report. The PIMG determined that the Trading Neutrality Band could be a fixed volume, as defined in the original modification Proposal, and therefore presented at the original Modification, but also defined the Trading Neutrality Band based on a combination of a fixed volume and a percentage and this is presented as the Alternative Modification.

6. The methodology by which the Panel could change the parameters of the Neutrality Band, if necessary;

This aspect is covered in more detail by the description of the Modification and Alternative Modification in Section 5 of this Assessment Report, and by the legal text supporting amendments to the Balancing and Settlement Code provided in ANNEX 1 (Section T 1.5A).

7. The definition of the mechanism for setting the Neutral Price, which could be fixed or market based and, therefore, variable;

This aspect is covered in more detail by the description of the Modification and Alternative Modification in Section 5 of this Assessment Report, and by the legal text supporting amendments to the Balancing and Settlement Code provided in ANNEX 1 (Section T 1.5B and 1.5C).

12. An implementation strategy based on the interdependence of all the pricing issues / approved Modification Proposals.

Section 14 of this Assessment Report contains a summary of the Project Brief which provides the implementation strategy for this Modification and the Alternative Modification. The Project Brief is based upon the Impact Assessment received from the Central Service Agent.

ANNEX 3 – REPRESENTATIONS FROM PARTIES

a Responses from P26 Assessment Consultation

Representations were received from the following parties:

No	Company	File Number
1.	Atlantic Electric and Gas Ltd	P26_ASS_001
2.	Utility Link	P26_ASS_002
3.	Edison Mission Energy (CONFIDENTIAL)	P26_ASS_003
4.	SEEBOARD	P26_ASS_004
5.	Amerada Hess Gas Ltd	P26_ASS_005
6.	British Energy	P26_ASS_006
7.	Scottish Power plc	P26_ASS_007
8.	NGC	P26_ASS_008
9.	Scottish and Southern Energy	P26_ASS_009
10.	Dynegy	P26_ASS_010
11.	Enron	P26_ASS_011
12.	PowerGen	P26_ASS_012

P26_ASS_001 – Atlantic Electric and Gas Ltd

Regarding P26 raised by Bizzenergy, I have the following response to make on behalf of Atlantic Electric and Gas Ltd.

Since the start of NETA small players in both generation and supply have been at a distinct disadvantage. Small suppliers typically do not have the diverse portfolio of a large supplier and do not have the necessary historical information that is required for accurate demand forecasting. Even if small suppliers were able to do this, since the start of NETA, trading in small amounts has been very illiquid.

The smallest traded long term amount that is typically available is 20MW. For denominations of less than this, the only place to trade is the UKPEX where power is traded on a half hourly basis. Experience of the UKPEX typically shows very large bid-offer spreads with the result being high buy prices and low sell prices.

So if a supplier requires 33MW in a half hour, for example, then due to the penal imbalance prices that have been experienced since the start of NETA, this number could not be rounded down to 20MW or up to 40MW. Therefore, the supplier would have to buy 13 on the UKPEX at a higher price or sell 7MW at a lower price. There is also no guarantee that bids and offers will be even available for each half hour. A large supplier would round say 433MW up to 440MW as demand forecast errors are typically 3% as a minimum.

The UKPEX only trades half hourly slots at day -1 at the earliest so there often a requirement on small suppliers to trade on weekends for Sundays and Mondays, further adding to the costs of operating under NETA.

This modification would offer excellent benefits for small suppliers to buy energy at the same wholesale prices as larger suppliers which will increase competition (one of the advertised aims of NETA during its inception), which will ultimately benefit the customer. At the same time it will not give an unfair advantage to smaller players over larger ones as this 20MWband would apply to all.

Much has also been documented about the detrimental effects NETA is having on small generators, including CHP and renewables. This modification would take away most of the problems these players are having under NETA and at the same time encourage more development of CHP and renewable schemes, increasing the numbers of ROCs available which will in turn decrease prices to consumers as a result of reduced buy-out premiums. It would also significantly aid the Government's long term targets for CHP and renewable energy.

The above points outline the reasons why Atlantic Electric and Gas wholly supports this modification and would like it to be implemented at the earliest opportunity.

Regards,
Mark Jones
Market Operations Manager

P26_ASS_002 – Utility Link

Utility Link support the proposal for the reasons mentioned in the modification as an appropriate solution to the liquidity problem facing small Suppliers and Generators.

However, we believe that the neutrality band should be 25MWh as this equates to the 50MW point where a Generator is no longer considered small by the BSC trading arrangements.

Chris Welby
Regulation & Consultancy Manager
Utility Link Ltd
16, Avon Reach,
Monkton Hill,
Chippenham,
SN15 1EE
Tel: 01249 705559
Fax: 01249 445374
www.utility-link.com

P26_ASS_003 – Edison Mission Energy

CONFIDENTIAL RESPONSE

P26_ASS_004 – SEEBOARD

Modification Proposal P26 Assessment Comments

At this stage we do not feel able to make any decision on if this modification better facilitates BSC Objectives. We do feel that further work is necessary to provide a better idea of a potential solution prior to making any decision. However we do have a number of concerns, which are summarised below:

1. This proposal seeks to address shortcomings in Power Exchanges by changing the rules of the Balancing Mechanism. Therefore, we are concerned that the introduction of this proposal could inhibit development of sub 20MWh products and hinder the evolution of the market mechanism.

2. The proposer argues that 'granularity' and lack of liquidity in spot markets means that suppliers and small generators cannot fine-tune their positions. However, at the same time it reduces demand forecasting risk for all suppliers and for a small supplier may even eliminate it altogether. As demand forecasting errors are related to volume a fixed neutrality band will unfairly advantage small players. It would therefore seem logical that a neutrality band if applied should be based on an inherent percentage forecasting accuracy. This, however, could cause other problems as these percentage errors could relate to a considerable amount of electricity. It is possible that this would lead to other problems with the Balancing Mechanism.

3. Participants have invested large sums of money in systems to enable them to reduce their costs by forecasting demand more accurately than their competitors. Thus it can be argued that this proposal would remove an important part of the competitive process.

4. This proposal reduces incentives on participants to balance accurately. This could lead to greater price volatility in the Balancing Mechanism.

Dave Morton
SEEBOARD
0190 328 3465

P26_ASS_005 – Amerada Hess Gas Ltd

P26 – Assessment Comments

Thank you for the opportunity to comment on the above Modification. Our comments represent the views of Amerada Hess Gas Ltd, Amerada Hess Gas (Domestic) Ltd, amerada.co.uk Ltd, Midlands Gas Ltd, and Western Gas Ltd.

Amerada is in support of the principles of this modification, believing that a tolerance band for small imbalances that cannot be economically managed is appropriate. We believe such a tolerance would further the relevant objectives by facilitating competition and encouraging smaller new entrants to the market, as the current position has disproportionate adverse effects on smaller suppliers.

Amerada does not believe that other modifications (P008, P015, P018, P004 & P012) will resolve the issues that have led to the requirement for P026. The primary reason is the granularity of normal trade size being 20MW and the volatility of imbalance prices leading to punitive cashout.

This modification may not necessarily reduce liquidity unless system prices are asymmetric encouraging parties to go long or short. In addition, we do not agree that all parties will be similarly affected. This is because the worst imbalance cost of 20MW chunks has to be spread across a much smaller number of customers for a small supplier and therefore will have a disproportionate cost of supply for a small business. The same imbalance cost spread across a large supply business with 5 million customers is much less significant.

Amerada agrees that the size of the neutrality band should be related to the granularity in trading to manage cost effectively the level of imbalances. We also believe for the reasons outlined above, it should be a fixed volume for all settlement periods, further we would favour a single neutral price if a suitable figure can be agreed for simplicity and to ensure equal care is taken on both long and short imbalances. Finally we would support a phased application, the all or nothing approach referred to in Elexon's initial assessment would undermine the principle of a neutrality band.

In addition, we agree with the proposer that liquidity of markets and traded instruments should be reviewed annually to assess whether this regime stays in force for all players or whether, once the regime is more settled and trading more liquid, the tolerances could be progressively reduced as happened in the Gas market.

In summary, we believe that a tolerance regime is appropriate for small imbalances, pending the markets becoming more liquid and the granularity smaller. We also consider that there is a case for a low level tolerance in the longer term to take account of error that cannot be effectively or economically managed, as is the case with Forecast Deviation in Gas.

We trust our comments have been useful, and we would be happy to discuss any of the points raised in more detail, if this would be helpful.

Yours sincerely
Alison Kuck
Transportation Contract Manager

P26_ASS_006 – British Energy

P26 - Market Driven Trading Neutrality Band - Comments following Elexon Initial Written Assessment

No firm evidence is provided in the modification proposal to support the suggestion that the liquidity and efficiency of spot markets is hampered by the current level of control of flexible generation by "a limited number of portfolio and vertically integrated participants".

Volumes less than 20 MWh are available and traded on the power exchanges, 1 MWh being the minimum permitted volume. Trade and notification charges are levied on a per MWh basis on at least 2 of the major power exchanges, ie. the rate is independent of the size of trade. British Energy are unconvinced by the argument that participants trading smaller volumes are unfairly disadvantaged by the operation of forward markets and exchanges.

If deficiencies in the forward markets are found, they should be dealt with at source, not by arbitrary and discriminnatory benefits given via the Balancing Mechanism to "small" participants.

The size of the neutrality band and the price applied within it would represent an arbitrary step difference between participants solely on the basis of size.

If a modification such as that proposed were to be implemented, there would be incentives for participants to separate into smaller affiliates to achieve the small participant benefits. This would not be efficient. Certain economies of scale are a normal and natural feature of most activities, and all participants should recognize this in establishing and operating their businesses.

In summary, we consider that this proposal seeks to create an unfair advantage for smaller participants without any demonstrable benefit in terms of real increased competition or overall reduced prices to customers. If Ofgem believe the imbalance mechanism is giving inappropriate incentives or is operating inefficiently, or that the forward markets are not developing in an efficient manner, then a separate thorough and considered consultation should be undertaken on these issues.

Rachel Ace
for
British Energy Power & Energy Trading Ltd
British Energy Generation Ltd
Eggborough Power Ltd

P26_ASS_007 – Scottish Power plc

Having given some consideration to the issues raised in "Modification Proposal P26 - Market Driven Trading Neutrality Band (Bizzenergy)", we would like to submit the following comments on behalf of ScottishPower Plc and Manweb Plc: -

In principle, we support Modification Proposal P26. However, the application of a fixed volume deadband would be discriminatory, favouring those participants trading small volumes. Therefore, we would suggest a more equitable approach might see the use of a small and equal percentage of metered volume for each participant when assessing imbalance. It may be worth noting that a similar approach was adopted in the gas market when determining what, if any, imbalance price was appropriate.

We would concur with the proposer that such a change would serve to further the objectives of the BSC in promoting effective competition in the generation and supply of electricity.

I hope that you find these comments helpful,

Regards
James Nixon
Design Authority, Deregulation Services
Calanais Ltd for ScottishPower & Manweb
Int - 700 2316 Ext - 0141 568 2316
http://asg.scottishpower.plc.uk <http://asg.scottishpower.plc.uk/>
(Intranet)

P26_ASS_008 – NGC

The Transmission Company response to the Initial Consultation on Modification P26 is included in ANNEX 5 (Transmission Company Analysis).

P26_ASS_009 – Scottish and Southern Energy

Modification P26 - Market Driven Trading Neutrality Band

Response on behalf of Scottish and Southern Energy, Southern Electric, Keadby Generation Limited and SSE Energy Supply Limited.

In principle, Scottish and Southern Energy support this modification proposal. We believe it will facilitate achievement of the BSC objectives by improving efficiency of current arrangements and promoting more effective competition in generation and supply. We believe it is inappropriate that current arrangements penalise participants for actions which they can not directly control, whether that be due to lack of liquidity or granularity in the spot market, uneconomic transaction costs or inherent demand forecasting errors. We believe the introduction of a neutrality band will remove some of the risk associated with such inherent difficulties and hence provide a greater incentive for participants to balance positions rather than go long, as is currently the case. We believe this will improve the efficiency of the Balancing Mechanism and help limit or reduce the actions required of the System Operator.

Scottish and Southern believe the proposal should be applied equally to all participants rather than a selected few e.g. new entrants, small generators or niche players. All players are experiencing such inherent difficulties to a greater or lesser extent and we believe that the proposals should be applied in a consistent and fair manner.

In the interests of fairness and consistency we believe it is important that the neutrality band be applied on a percentage basis rather than fixed volume. A percentage basis would ensure the benefit is applied proportionally whereas a fixed volume basis would benefit smaller parties to a greater extent and distort competition. An appropriate figure would be 5%.

We believe it is inappropriate to apply the percentage to FPN as this could create a perverse incentive to overestimate the FPN in order to increase the size of the neutrality band. We also believe it is inappropriate to apply it to metered volume as this would potentially penalise parties participating in the Balancing Mechanism. We believe it should be applied to credited energy volumes, this would ensure that those parties using % MVRNs would gain the benefit of this proposal.

We suggest the neutral price should be based on average UKPX price traded over the preceding 24 hours rather than on the last traded price. This would reduce the impact of any price spikes and the ability of participants to manipulate the neutral price.

A “phased” application should be introduced. If a Party’s imbalance is greater than the neutrality band the volume up to the neutrality band threshold should be cashed out at the neutral price. Anything above the threshold should be cashed out at the appropriate SSP or SBP.

Further consideration needs to be given to how this modification proposal might impact on credit cover and settlement calculations, the associated system costs and implementation timescales and the interaction with the current raft of Modifications around cash-out pricing. Consideration also needs to be given to how it will interact with the Balancing Mechanism Non-Delivery rule.

Finally, we agree that the Modification should go to the definition phase.

P26_ASS_010 – Dynegy

Modification Proposal P26: Market-driven trading neutrality band.

The principle objective of NETA was to ensure that market participants were incentivised to achieve a balanced position. Dynegy believe the introduction of trading neutrality band eliminates this objective and could potentially lead to a reduction in trading, as a consequence of market participants no longer being required to fine tune their positions.

The modification proposal includes numerous suggestions to calculate the neutral price that shall be used to cash out imbalances within the neutral band. However this neutral price has the possibility of not reflecting the cost the SO maybe exposed to, leading to a rise in the cost of the balancing mechanism.

Dynegy, as an active trading party within the UK electricity market, disagrees with the proposer's statement of small energy volumes not being available within the market. Since the implementation of NETA, we have undertaken numerous small volume trades and continue to offer such a service. The relevant person to contact is Alex Feuer on 020 8334 7111.

Dynegy do not agree with the proposer that the modification proposal better fulfils BSC objective condition 7A.3(c) of the Transmission Licence. The market has available small energy volumes and therefore the neutrality band is not required. The modification will not promote effective competition between generators and suppliers.

Yours sincerely,
Rekha Patel
Power Regulatory Analyst

P26_ASS_011 – Enron

Modification Proposal P26: Market-Driven Trading Neutrality Band

Response by Enron Europe

16 August 2001

We recommend that the Panel and GEMA reject modification proposal P26. The imbalance price setting mechanism is the best way to resolve issues of imbalance risks – not a trading neutrality band.

We find it difficult to understand the trading issue P26 attempts to address. We understand that UKPX charges a fixed monthly fee and a 6.5p/MWh trade fee. There is no fixed per trade fee or minimum trade volume. We would like BizzEnergy.com to explain what prevents participants from trading energy blocks of less than 20MWh.

Further, a trading neutrality band would, if set to a fixed MWh level, incentivise participants to minimise imbalance risks by registering multiple small companies - each of whom would have a neutrality band. Alternatively, if the neutrality band were proportional to metered output or consumption, it would probably favour large generators / suppliers because imbalances tend to decrease proportionally as participants increase in size. In summary, it would be very difficult to set a "correct" neutrality band that did not impact competition or the efficient operation of the BSC.

The most efficient way to address imbalance risk is by addressing imbalance price risk for all imbalance volumes. If imbalance prices reflected the fundamentals of the energy supply and demand balance in each half hour, most of the imbalance price risk for all participants would disappear. This would address most of the imbalance risk issues while avoiding the perverse incentives created by a trading neutrality band.

In addition, reducing the price risk of being out of balance would encourage participants to take contract positions within day. This would increase within day liquidity – allowing participants to better manage their volume risks through contract trading.

Several modifications attempt to address either imbalance volume risk or imbalance price risk. The assessment of P26 should take account of the potential impact of these modifications on imbalance risks.

While we recommend P26 should be rejected, if it were accepted, we recommend that a single price be used to cash out imbalances within the neutrality band, and that the single price should be based on the value of energy in the half-hour concerned. Any other price would be inefficient. We also recommend that a "phased" application of the neutrality band apply to all participants. An "all or nothing" approach could create perverse behavioural incentives on participants whose imbalance volumes were close to the boundary of the neutrality band.

P26_ASS_012 – PowerGen

Modification Proposal P26: Market-Driven Trading Neutrality Band

Powergen UK plc ('Powergen') welcomes the opportunity to comment on the modification report issued for P26 on 6th August. Powergen provides this response on behalf of itself and the following BSC Parties: Powergen Energy plc, Diamond Power Generation Limited and Cottam Development Centre Limited.

Powergen does not support this modification because it believes it is against the principles of NETA and the BSC, namely that:

- it is based on an erroneous premise that trading small volumes on exchanges is uneconomic. In reality, the UKPX generally has reasonable liquidity for individual Settlement Periods, regularly trades in 1MW clips and has a charging structure which is independent of volume;
- it reduces the incentive to balance accurately and therefore does not support the objective to efficiently and economically operate the system (clause 1.2.1 b (ii) of Section B); and
- as a fixed MWh band it introduces discrimination between different classes of players which is contrary to clause 1.2.1 c of Section B

It may also be useful to consider similar 'precedents' that have occurred in the gas market. Modification 0415 proposed an initial reduction of shipper tolerances (ITQ) by 50% and then to zero by 1st April 2001. This was made to incentivise shippers into balancing their positions. It seems strange that while the gas market has phased out tolerance bands, P26 is seeking to introduce a similar band under the BSC in the electricity market. Such a modification would disincentivise parties from accurately balancing their energy position.

In conclusion the proposed modification appears to introduce significant additional complexity and cost to industry and individual company systems with no resulting material economic benefit. As such the proposed modification should be rejected.

Yours Sincerely

Afroze Miah

Strategy & Regulation Department
Energy Trading
Powergen
02476 424814

b Responses from P26 Impact Assessment

Representations were received from the following parties:

No	Company	File Number
1.	Yorkshire Electricity Group	P26_IA_001
2.	Vattenfalls AB	P26_IA_002
3.	Scottish and Southern	P26_IA_003
4.	Economy Power	P26_IA_004
5.	Barking Power	P26_IA_005
6.	SEEBOARD	P26_IA_006
7.	GPU Power	P26_IA_007
8.	London electricity Group	P26_IA_008
9.	Npower Limited	P26_IA_009
10.	Npower Direct Limited	P26_IA_010
11.	Siemens Metering	P26_IA_011
12.	IMServ Europe	P26_IA_012
13.	Bridge of Cally	P26_IA_013
14.	British Energy	P26_IA_014
15.	TXU Europe	P26_IA_015

P26_IA_001 – Yorkshire Electricity

Yorkshire disagree to the above change proposal on the basis of the amount of changes required to systems & processes. This will have major impact on us.

If you have any queries, please let me know.

Emma Coates

Business Analyst, Supply Design Authority

Information Systems Services

Yorkshire Electricity

www.yeg.co.uk

P26_IA_002 – Vattenfalls AB

Here is Vattenfalls response to the consultation.

We agree to the proposed changes.

We require 10 days notice.

Yes, the changes impact Vattenfall.

Comments:

A number of Mod Proposals have been dealing with the System Prices. We are in principle very much in favour of finding ways to improve the way these prices are calculated and applied. However we believe that it might be necessary to take a broader view on the issue, otherwise there is a risk of creating a piece of patchwork with all the different Mod Proposals implemented, that might not be efficient and manageable.

Bo Wahrgren

Vattenfall AB

SE-162 87 Stockholm

Sweden

P26_IA_003 – Scottish and Southern

CPC041 - DLIA Request for Modification P26 and Modification P27

I **agree**/ with the proposed changes.

How much notification do you require? **6 months**

Do the changes stated impact your organisation? **Yes**

Comments:

Name: Susan Macklin

BCA & PACA

Organisation: Scottish and Southern Energy plc, Southern Electric

Date: 24th September 2001

P_26_IA_004 – Economy Power

I disagree with the proposed changes.

Name: Leyton Jones

Organisation: Economy Power

Date: 24/09/01

Cyfarchion / Regards

Leyton Jones

Rheolwr Masnachu Ynni / Energy Trading Manager

P26_IA_005 – Barking Power

CPC041 - DLIA Request for Modification P26 and Modification P27

I ~~agree~~/disagree* with the proposed changes.

How much notification do you require? 6 months

Do the changes stated impact your organisation? Yes

Comments:

Albeit if Barking Power are obliged to make these changes, the 6 months notice period would be effective from the issue of the IDD.

Name: Janice Tanner

BCA/~~PACA~~*

Organisation: Barking Power Ltd

Date: 24 September 2001

P26_IA_006 – SEEBOARD

CPC041 - DLIA Request for Modification P26 and Modification P27

I disagree with the proposed changes.

How much notification do you require? 50 days (subject to other higher priority work on impacted systems).

Do the changes stated impact your organisation? Yes

Comments:

We do not support P26 in either form because we believe that it discourages participants to balance accurately. This could increase overall costs to the system and reduces liquidity, inhibiting the development of products in the forward markets. It is also at odds with developments in the gas regime where a neutrality has been removed.

As a general comment, in all these cases we should ensure that there are no impacts in terms of cost on BSC parties or subsidiaries of these parties not directly impacted by these changes i.e. Public Distribution Service Operators.

Name: DAVE MORTON

BCA/PACA*

Organisation: SEEBOARD

Date: 24TH SEPTEMBER 2001

P26_IA_007 – GPU Power UK

Please find that GPU POWER UK's response is 'No Comment'.

regards

Rachael Gardener

Deregulation Control Group & Distribution Support Office

GPU POWER.CO.UK

P26_IA_008 – London Electricity

CPC041 - DLIA Request for Modification P26 and Modification P27

I agree/~~disagree~~* with the proposed changes.

How much notification do you require? Three Months

Do the changes stated impact your organisation? Yes (See Below)

Comments:

From an I.T. point of view both Modifications will effect our Settlements systems. A high-level impact assessment was that MP26 would cost approx. £16,000, and MP27 would cost approx. £10,000.

Name: Richard Drew

BCA/~~PAGA~~*

Organisation: London Electricity Group

Date: 24/09/2001

P26_IA_009 – Npower Limited

CPC041 - DLIA Request for Modification P26 and Modification P27

I ~~agree/~~**disagree*** with the proposed changes.

How much notification do you require? Minimum of 12 months.

Do the changes stated impact your organisation? Yes – a significant number of systems and processes would need amending in order to introduce these changes.

Comments:

Name: Helen Lees

BCA/~~PACA~~*

Organisation: Npower Ltd

Date: 24th September 2001

P26_IA_010 – Npower Direct Limited

CPC041 - DLIA Request for Modification P26 and Modification P27

I ~~agree/~~**disagree*** with the proposed changes.

How much notification do you require? Minimum of 12 months.

Do the changes stated impact your organisation? Yes – a significant number of systems and processes would need amending in order to introduce these changes.

Comments:

Name: Helen Lees

BCA/~~PACA~~*

Organisation: Npower Direct Ltd

Date: 24th September 2001

P26_IA_011 – Siemens Metering Services

CPC041 - DLIA Request for Modification P26 and Modification P27

I agree with the proposed changes.

How much notification do you require?

Do the changes stated impact your organisation? No

Comments:

Name: Lina Shah

BCA/PACA*

Organisation: Siemens Metering Services (Nottingham – Wollaton)

Date: 17/09/01

P26_IA_012 – IMServ Europe

CPC041 - DLIA Request for Modification P26 and Modification P27

I agree/disagree* with the proposed changes.

How much notification do you require?

Do the changes stated impact your organisation?

Comments:

NO IMPACT

Name: CORRINA HARVEY

BCA/PACA* SVA HHDC/HHDA

Organisation: IMSERV EUROPE

Date: 13/09/01

P26_IA_013 – Bridge of Cally Energy Investments Limited

CPC041 - DLIA Request for Modification P26 and Modification P27

No Impact

No notification required.

Stephen Mooney

Bridge of Cally Energy Investments Limited

(Postal response)

P26_IA_014 – British Energy

CPC041 - DLIA Request for Modification P26 and Modification P27

I agree/disagree* with the proposed changes. See Comments below

How much notification do you require? See Comments Below

Do the changes stated impact your organisation? See Comments Below

Comments:

Both options will have a large impact on our settlement validation system.

At least 3 months notice required.

Name: Rachel Ace

BCA/PACA*

Organisation: British Energy Power and Energy Trading, British Energy Generation, Eggborough Power Ltd.

Date: 25th September 2001

P26_IA_015 – TXU Europe

CPC041 - DLIA Request for Modification P26 and Modification P27

Response on behalf of 14 TXU BSC Parties.

We do not support either of the changes (P26 or P27)

Comments:

Our best estimate at present is that either change would cost £150k and take 6 months from the decision of the Authority to implement either Proposal.

Name: Phil Russell

Organisation: TXU (All)

c Responses from Modification Questionnaire

Representations were received from the following parties:

No	Company	File Number
1.	Cinergy	P26_QUE_001
2.	Edison Mission Energy	P26_QUE_002
3.	Scottish and Southern Energy	P26_QUE_003
4.	Amerada Hess	P26_QUE_004
5.	BP	P26_QUE_005
6.	Atlantic Electric and Gas Limited	P26_QUE_006
7.	SEEBOARD	P26_QUE_007
8.	TXU	P26_QUE_008
9.	Bizzenergy	P26_QUE_009
10.	Utility Link	P26_QUE_010
11.	Centrica	P26_QUE_011
12.	APX	P26_QUE_012
13.	British Energy	P26_QUE_013
14.	Intergen	P26_QUE_014
15.	Powergen	P26_QUE_015
16.	Npower	P26_QUE_016
17.	Enron	P26_QUE_017
18.	London Electricity	P26_QUE_018

P26_QUE_001 – Cinergy

Q1 Please provide evidence to support your responses, where appropriate.

Question	Comment
Q1. What services are available for mitigating imbalance exposure risk?	Active management of expected energy imbalances within forward markets.
Q1 (a) Are these services available at a reasonable cost (quantify what you believe to be a reasonable cost)? If these services are not available, why do you think this is?	Establishing a trading desk will require necessary trading systems, traders, back office personnel and settlement systems, risk management and sufficient credit to be able to trade. Staff and systems are likely to cost a minimum of £1m for a small sized business. Third party consolidation services are likely to represent around 5% margin on price. Consolidation services are generally not available due to credit risk associated with small supply business.
Q1 (b) Are these services available for small volumes – i.e. is there a level of granularity and is this important? If these services are not available for small volumes, why do you think this is?	A high degree of granularity is important for fine-tuning small portfolios. Expected changes in a demand forecast will cause the supplier to buy/sell additional volumes. This is often for small volumes on a half-hour basis in order to establish the required bespoke shape. Fine-tuning of purchases is important for a small supplier where the potential exposure is large relative to the value of its customer base (vis-à-vis a large portfolio supplier). It is possible to trade directly in the spot markets provided by APX and UKPX for 1MW lots although in practice liquidity is poor, thereby causing spread prices to be wide. This is partially due to the large degree of vertical integration reducing the need for some parties having to trade. Those parties that do actively participate within the spot market (e.g. NGC, large suppliers, traders) are more concerned with larger volumes than that required by small suppliers.

Q1 (c) If alternative mechanisms were available within the Balancing and Settlement Code for mitigating imbalance exposure, would you continue to use / develop alternate services?	Subject to cost.
Q2. Are STOD (Seasonal Time of Day) contracts available for small volumes? If not, why do you think this is?	Some STOD contracts for fixed volumes may be purchased bilaterally from some market participants, although the cost of such products are likely to be greater than would be available from a liquid market, particularly if the required volumes are small. Variable volume STOD contract (requirement contracts) are not available in the market as outturn demand is likely to vary from expected demand after gate closure.
Q2 (a) Are they reasonably priced (please quantify what you believe to be reasonable)? If they are not reasonably priced, why do you think this is?	Products to small suppliers are not reasonably priced due to relatively low value of product in relation to high transaction cost of seller (i.e. providers of such products would rather spend their resources trading larger volumes).
Q2 (b) Are they sufficiently flexible? If available STOD contracts are not sufficiently flexible, why do you think this is?	A fixed volume STOD contract would not resolve the need to fine tune positions closer to gate closure.
Q3. What do you believe the granularity of trades and associated liquidity in the forwards market to be?	1MW lots can be traded on a half-hour basis when available within the spot market. However, liquidity in the Half-hour market and four-hour block market is generally poor. Liquidity in the day-ahead OTC market is strong but only for lot sizes of 50MW.
Q3 (a) Are small volumes (say less than 20MWh) available at a reasonable	Small lot sizes within the spot market are not reasonably priced due to lack of

cost (quantify reasonable)?	liquidity. Spread between bid and offer prices are typically 10 £/MWh.
Q3 (b) Is there a discrepancy between the costs for these small volumes and costs of larger volumes? If there is such a discrepancy, what do you think causes it?	There is a large discrepancy between the cost of the day-ahead OTC market and on the day spot market. Day-ahead prices are currently trading around 18 £/MWh with various bids and offers competing for trades. In contrast, the spot market may provide a 13 £/MWh at 23 £/MWh market where it is difficult for prices to converge. Since the spot market is the last market before gate closure, any indication of a distressed buyer or seller may cause prices to move unfavourably or be removed altogether.
Q3 (c) Are these small volumes freely available (i.e. liquid) or are there time / day availability limitations? If there are liquidity issues, why do you think this is?	Liquidity remains poor throughout the day for the reasons cited in 1a.
Q3 (c) To what extent is there liquidity in shaped contracts?	Shaped contracts are limited to peaks (0700hrs - 1900hrs) and (to a lesser extent) extended peaks (0700hrs - 2300hrs). However, these are traded in 50MW lots within the prompt market. Some shapes may be available for small volumes on a bilateral basis, but are likely to prove relatively expensive for the reasons cited in Q2a compared with the prices available for larger volumes.

P26_QUE_002 – Edison Mission Energy

Edison Mission Energy Response to P26 Questionnaire on behalf of First Hydro Company, Edison First Power and Lakeland Power.

Q1 Please provide evidence to support your responses, where appropriate.

Question	Comment
Q1. What services are available for mitigating imbalance exposure risk?	Imbalance risk can be mitigated via trading on the PXs, via brokers or via bilateral trades
Q1 (a) Are these services available at a reasonable cost (quantify what you believe to be a reasonable cost)? If these services are not available, why do you think this is?	Small volumes can be traded on UKPX at the same flat rate as larger volumes. UKPX charges approximately 7p/MWh regardless of the size of the trade
Q1 (b) Are these services available for small volumes – i.e. is there a level of granularity and is this important? If these services are not available for small volumes, why do you think this is?	Any volume in increments of 1MW per half hour can be traded on UKPX
Q1 (c) If alternative mechanisms were available within the Balancing and Settlement Code for mitigating imbalance exposure, would you continue to use / develop alternate services?	This would depend on the certainty of price and the timescales for making/receiving payment for trades. Alternative services would have to be better than the PXs for them to be considered.
Q2. Are STOD (Seasonal Time of Day) contracts available for small volumes? If not, why do you think this is?	The UKPX offers the opportunity to purchase whatever contract shape is required, this is made easier easy if only a small volume is needed.

Q2 (a) Are they reasonably priced (please quantify what you believe to be reasonable)? If they are not reasonably priced, why do you think this is?	Yes, the market determines the prices on the PXs and it is not volume dependent.
Q2 (b) Are they sufficiently flexible? If available STOD contracts are not sufficiently flexible, why do you think this is?	STOD contracts, particularly for smaller volumes are infinitely flexible.
Q3. What do you believe the granularity of trades and associated liquidity in the forwards market to be?	The minimum purchase on UKPX is 1MW per HH. Liquidity is better if only a small volume is required. It is much harder to purchase 500MW on a PX for a half hour than it is to purchase 5MW
Q3 (a) Are small volumes (say less than 20MWh) available at a reasonable cost (quantify reasonable)?	Market prices apply regardless of the volume
Q3 (b) Is there a discrepancy between the costs for these small volumes and costs of larger volumes? If there is such a discrepancy, what do you think causes it?	No -please see answers to Qs 1a, 2a and 3a.
Q3 (c) Are these small volumes freely available (i.e. liquid) or are there time / day availability limitations? If there are liquidity issues, why do you think this is?	Yes - please see answers to Qs 1b, 2 and 3
Q3 (c) To what extent is there liquidity in shaped contracts?	This depends on the shape and the volume but for smaller shaped contracts there are no liquidity problems.

P26_QUE_003 – Scottish and Southern Energy

Please find attached a copy of our response to the questionnaire issued in relation to the above modification proposal. The response is on behalf of Keadby Generation Ltd, Keadby Development Ltd, SSE Generation Ltd and SSE Energy Supply Ltd.

Regards

Beverley Grubb
Market Development
SSE Energy Supply Limited

Question 1 What services are available for mitigating imbalance exposure risks ? Power exchanges, over the counter trades, own assets, contracts

Question 1a Are these services available at a reasonable cost ? Depends on definition of reasonable, size of participant, volume of trades etc. Set up costs and transaction costs for some power exchanges could be onerous for some participants.

Question 1b Yes these services are available for small volumes, there is no minimum lot size for trades.

Question 1c Yes. The neutrality band being proposed is small and assumes you can get your fundamental underlying position correct. Irrespective of portfolio size you will still need mechanisms to balance your position and irrespective of portfolio size there will be a need for small volume trades. The main issue is not availability it is set-up and transaction cost.

Question 2 Not sure what is meant by STOD contracts. We assume question refers to EFA block, peak and off peak and by load shape, in which case the answer is yes.

Question 2a As above the main issue is set-up and transaction costs.

Question 2b We believe contracts are sufficiently flexible.

Question 3 Granularity down to 1MW

Question 3a Yes

Question 3b Only that as stated above the set-up and transaction costs apply regardless of the volume traded. The smaller the volume being traded the greater the impact of these costs.

Question 3c Generally freely available.

Question 3d There are a range of products available, the liquidity relating to each product can vary.

P26_QUE_004 – Amerada Hess

Please see attached the submission by Amerada Hess.

Amerada Hess would ideally like to submit more details to support its view that current costs of trading due to granularity and liquidity are material - (comparing STOD contracts against cost of trading in the forward and spot markets). As this information is confidential, we would not be prepared to use this for open discussion.
Regards,

Damian Johnson

Q1 Please provide evidence to support your responses, where appropriate.

Question	**Comment**
Q1. What services are available for mitigating imbalance exposure risk?	We are not aware that consolidation services are being offered to the market. Ofgem report to the DTI on the review of the initial impact of NETA on Small Generators, comments on the lack of consolidation services offered to date.
Q1 (a) Are these services available at a reasonable cost (quantify what you believe to be a reasonable cost)? If these services are not available, why do you think this is?	It is speculation but it could be: i.) Parties are not yet fully comfortable with NETA to accept risk of other parties: OR ii.) The cost of transferring risk to another party might be too great for a market to develop.
Q1 (b) Are these services available for small volumes – i.e. is there a level of granularity and is this important? If these services are not available for small volumes, why do you think this is?	No.

Q1 (c) If alternative mechanisms were available within the Balancing and Settlement Code for mitigating imbalance exposure, would you continue to use / develop alternate services?	The answer will depend on what alternative mechanisms are being suggested. If a trading Neutrality Band were implemented, responses would vary according to the size of business. For a larger player, there would be little impact on behaviour because a fixed band would be insignificant as a percentage of the overall physical volumes. For a small supply business, balancing would be to a lower percentage of its physical volumes but the imbalance volumes would be considerably less in aggregate terms in comparison to a larger business. This does not imply that a TNB would jeopardise the emergence of liquidity in the 1MW market as there is no a priori reason why liquidity should develop much more than current levels and no explanation has been offered why it would be likely to increase in the future. In addition, the trade volumes associated with a small supply business are likely to be insignificant in comparison to the reductions in liquidity associated with the integration of ownership in generation and supply in the recent past and future.

Further Comments: Liquidity and Granularity effects in the forward and spot markets is a barrier to entry in electricity supply via the inability to hedge at a reasonable cost. The consumer will ultimately suffer in the longer term if new entrants are discouraged. Centrica has successfully managed to overcome barriers to entry because of its incumbent position in gas supply and the financial strength this gives to withstand large losses in the process of gaining market share to trade larger volumes. A trading neutrality band would offset this barrier if implemented as a fixed band and linked to granularity.

Granularity effects: There is a greater cost per volume traded for small suppliers as price takers paying the full bid offer spread for volumes less than 20MW in both the forward and spot markets. This cost is disproportionate A larger participant trading in 20MW volumes can post bids and offers within the spread.

Liquidity effects: Liquidity in the 1MW prompt market is much more volatile and is characterised by large periods of illiquidity (wide bid offer spreads, relatively few bids and offers). It is more risky for a small business to be using this market to trade a higher percentage of physical requirements so close to gate closure to acquire shape, especially when the market is typically illiquid for many half-hour periods. The potential for significant imbalance exposure is therefore much greater for a smaller supplier

Administrative Trading Costs: Inability to acquire shape for weekend delivery periods unless a seven day, 24 hour operation is established. This cost is also

disproportionate when divided amongst a smaller customer base.	
Q2. Are STOD (Seasonal Time of Day) contracts available for small volumes? If not, why do you think this is?	YES – But they would have to be negotiated OTC bilateral due to the nature of their complexity and there is a narrow market in which to contract for this type of contract. Trading OTC bilateral is therefore a poor substitute to trading in fully competitive liquid forward and short term markets via an exchange or OTC brokered markets. – See Further Comments to Q2 and Q3.
Q2 (a) Are they reasonably priced (please quantify what you believe to be reasonable)? If they are not reasonably priced, why do you think this is?	Probably not because of the relative shortage of flexible plant and the concentration of ownership in the hands of a few. Again, such contracts are negotiated OTC Bilateral.
Q2 (b) Are they sufficiently flexible? If available STOD contracts are not sufficiently flexible, why do you think this is?	Possibly – Depends on what level of flexibility is requested and how much the buyer is willing to pay for this flexibility. The cost of this could be significant if it were an option to be exercised closed to gate closure.
Further Comments: The EFA Association introduced shape contracts based on 20/40 MW block size combinations (LS44 & LS46) as simplifications of STOD to stimulate trade in shapes. We note trades in these shapes have dropped in 2001. Parties seeking to hedge small volumes therefore now have the choice of seeking STOD contracts with their competitors via negotiated OTC bilateral trades or risk significant imbalance exposure and the associated costs by hedging in the forward and short term markets with granularity and liquidity effects.	
Q3. What do you believe the granularity of trades and associated liquidity in the forwards market to be?	Granularity of trades tends to be 20MW in the forward market. Baseload contracts are relatively liquidity on most days but is much less for peak contracts. Prices for peak contracts are not widely reported in the near side of the forward curve (months and quarters). Forward market can at times be characterised by large bid offer spreads for certain delivery periods. Only 20MW size trades have the ability to move prices within this spread. The market is very limited for volumes much smaller than 20MW with the certainty of paying a much wider bid offer spread cost. Granularity and liquidity in the shorter term markets is equally important. This

	market is required to acquire shape and fine tune positions, otherwise non-generation portfolio players risk significant imbalance exposure. Liquidity in this market is much less and more volatile.
Q3 (a) Are small volumes (say less than 20MWh) available at a reasonable cost (quantify reasonable)?	No – Unfortunately, this is true in both the forward market and the 1MW market – It should be possible to trade volumes of variable size down to the level of transaction costs without incurring a much wider bid offer spread cost.
Q3 (b) Is there a discrepancy between the costs for these small volumes and costs of larger volumes? If there is such a discrepancy, what do you think causes it?	Yes – Imperfect competition and lack of liquidity. Wide bid offer spreads are maintained unless there are significantly more parties willing to trade and/or a need to trade volumes wholesale to hedge physical positions with external parties. As more companies seek to become vertically integrated with balanced portfolios, their only requirement to trade will be at the margin for arbitrage, or for fine tuning positions in response to physical changes.
Q3 (c) Are these small volumes freely available (i.e. liquid) or are there time / day availability limitations? If there are liquidity issues, why do you think this is?	No – We understand that there are significant periods of illiquidity in the 1MW market with no prices or volumes quoted at certain times. This market needs to be liquid in all 48 periods, not just significant volumes quoted for individual half hour periods) if this is to become a significant market for hedging. This market is also characterised by granularity effects. The typical minimum trade is significantly more than the 1MW contract size and it is not unusual to see wide bid offer spreads. Again, only the larger players will be in a position to minimise this cost. Anyone seeking smaller volumes will experience wider spreads. It would aid transparency if more information about the depth of the market was published. Information pertaining to the total number of trades, the volumes behind the bids and offers and the size of the spreads would be more indicative of the degree of liquidity. Inspection of traded volumes in the 1MW half-hourly contract market for last week reveals a very high degree of volatility between periods. In most periods

	there is no certainty that there will be a reasonable degree of volume traded. Some of the more well traded half hour periods could be heavily related to one or two large volume trades, especially if there are major physical changes taking place on the system. This volatility in total traded volume is perhaps what should be expected in markets close to real time, especially if many of the larger integrated players are using physical adjustments in preference to trading to fine tune positions.
Q3 (c) To what extent is there liquidity in shaped contracts?	None – Trades in LS44 and LS46 contracts have dropped since the start of NETA. This could be attributed to the reduction in competition between companies following the concentration in supply and generation. These contract shapes were typically purchased by PES's from non-integrated generation businesses seeking to hedge their supply businesses. Such contracts have not been renewed upon expiry in the lead up to and following NETA as generation and supply become more integrated. See further comments.
Further Comments: The market for shaped products has become illiquid and non-transparent since the introduction of NETA. As trades in shaped contracts (LS44 & LS46) typically traded in the OTC brokered market have dropped, OTC bilateral trades have increased. In an opaque market for physical power where there are only a handful of players with the flexibility to offer shaped contracts, bilateral OTC restricts price reporting. This strengthens the negotiating position of shaped contract providers (our competitors in supply to the domestic sector) as they are most likely to know at any point in time how much value there is in trading these contracts. Trading in a fully competitive liquid forward and spot market would therefore be preferable, in which there are tighter bid-offer spreads (to a level of non-material significance) for volumes less than 20MW.	

P26_QUE_005 – BP

Q1 Please provide evidence to support your responses, where appropriate.

Question	Comment
Q1. What services are available for mitigating imbalance exposure risk?	**1. UKPX (approx 2% of the market), 2. APX (less than 1% of the market, 3. Forward/spot contracts**
Q1 (a) Are these services available at a reasonable cost (quantify what you believe to be a reasonable cost)? If these services are not available, why do you think this is?	The power exchange prices do not tend to be reflective of the rest of the market out of office hours. The spot market has limited liquidity and short term options are very expensive.
Q1 (b) Are these services available for small volumes – i.e. is there a level of granularity and is this important? If these services are not available for small volumes, why do you think this is?	The power exchanges lend themselves to small volumes, but not always out of hours. There is no real market for trading less than 10 or 20MWs OTC.
Q1 (c) If alternative mechanisms were available within the Balancing and Settlement Code for mitigating imbalance exposure, would you continue to use / develop alternate services?	Optimisation and risk management will always be the key to our activities, irrespective of what facilities are available to manage imbalance exposure. This is likely to mean that we would use a combination of all the different services available, but we would strongly support the introduction of P26.
Q2. Are STOD (Seasonal Time of Day) contracts available for small volumes? If not, why do you think this is?	This is not a product that we trade.
Q2 (a) Are they reasonably priced (please quantify what you believe to be reasonable)? If they are not reasonably priced, why do you think this is?	

Q2 (b) Are they sufficiently flexible? If available STOD contracts are not sufficiently flexible, why do you think this is?	
Q3. What do you believe the granularity of trades and associated liquidity in the forwards market to be?	**The forwards market is liquid when one is trading 10 and 20 MW clips. Liquidity is very limited for smaller quantities.**
Q3 (a) Are small volumes (say less than 20MWh) available at a reasonable cost (quantify reasonable)?	One is likely to pay more than the quoted market prices. The market place for sub 10MW trading tends to be the power exchanges.
Q3 (b) Is there a discrepancy between the costs for these small volumes and costs of larger volumes? If there is such a discrepancy, what do you think causes it?	There is a discrepancy and this is also evident on the power exchanges out of office hours. The cause is a lack of liquidity which is the result of the lack of real time ECVNA position reporting (to be addressed by P4) and the levels of SSP and SBP, which hinder short term trading due to the fear of imbalance exposure.
Q3 (c) Are these small volumes freely available (i.e. liquid) or are there time / day availability limitations? If there are liquidity issues, why do you think this is?	As previously stated, the small volumes market, which is focused on the PXs, is much more liquid during office hours as that is when the bulk of traders are trading the market.
Q3 (c) To what extent is there liquidity in shaped contracts?	Shaped contracts are a more bespoked market and as such liquidity is not of the same level as the standard OTC markets.

P26_QUE_006 – Atlantic Electric and Gas Limited

Q1 Please provide evidence to support your responses, where appropriate.

Question	Comment
Q1. What services are available for mitigating imbalance exposure risk?	Purchasing small amounts on the UKPX and the APEX. Of these the UKPX is by far the more liquid and flexible
Q1 (a) Are these services available at a reasonable cost (quantify what you believe to be a reasonable cost)? If these services are not available, why do you think this is?	The exchange costs in themselves are not overly penal. However, what is a major problem is that large amounts of cash deposits have to be put up for clearing with a clearer and there are high costs associated with getting the software licences for the exchanges. The problem is not the high costs of the exchanges, but the barriers to entry in getting on the exchanges in the first place.
Q1 (b) Are these services available for small volumes – i.e. is there a level of granularity and is this important? If these services are not available for small volumes, why do you think this is?	These service are available for small volumes – however often there are no offers to buy / sell for certain half hourly and EFA periods. .
Q1 (c) If alternative mechanisms were available within the Balancing and Settlement Code for mitigating imbalance exposure, would you continue to use / develop alternate services?	Buying off exchanges is time consuming, expensive and risky. Any other methods of mitigating risk would be welcome. Being able to move away from fine tuning on exchanges would be excellent!
Further Comments: Under the Electricity Pool there was no need to fine tune so closely. Contracts were taken out to hedge against wholesale prices movements over time, but having a small long or short exposure to the Pool prices was never a problem as the prices were not so risky or so uncertain as imbalance prices. NETA certainly favours large suppliers and generators at a time when Ofgem is trying to encourage competition. This mod would go some way to levelling the playing field.	
Q2. Are STOD (Seasonal Time of Day) contracts available for small volumes? If not, why do you think this is?	STOD contracts are generally unavailable in the marketplace.

Q2 (a) Are they reasonably priced (please quantify what you believe to be reasonable)? If they are not reasonably priced, why do you think this is?	They are priced at a significant premium
Q2 (b) Are they sufficiently flexible? If available STOD contracts are not sufficiently flexible, why do you think this is?	Not flexible enough to allow fine tuning of a small supply business. Supply business due to their customer mix have different shapes and so one STOD may suit one player and not another even though they may be of comparative sizes
Q3. What do you believe the granularity of trades and associated liquidity in the forwards market to be?	Most trades are in blocks above 20MW – this seems to be the market minimum. The next size is then 40MW and upwards in increments of 10MW. This is due to the fact that these are the sizes larger players trade in and thus have increased liquidity.
Q3 (a) Are small volumes (say less than 20MWh) available at a reasonable cost (quantify reasonable)?	Small volumes are available at higher overall prices. There is also low liquidity in certain time slots leading to large bid / offer spreads and often price spikes associated with some purchases. My definition of reasonable is that small volumes should be available at the same market prices as large volumes and with the same certainty of availability. Any sort of premium costs for the power disadvantages small players, who are already disadvantaged by the commission costs of purchasing small volumes.
Q3 (b) Is there a discrepancy between the costs for these small volumes and costs of larger volumes? If there is such a discrepancy, what do you think causes it?	There are discrepancies in costs due to liquidity problems in purchasing small volumes. The small volumes are just not offered fin the same quantities. I also have a view that small flexible generators can offer to sell at high prices and have very different physical and commercial characteristics to larger generators. The lack of bids / offers for small volumes and short time intervals is due to the fact that the larger players do not have to get involved in this type of trading. Large generators sell their output in large blocks and large suppliers, due to demand forecasting errors, only need to buy to the

	nearest big block – if a demand forecast was 1,013MW for a half hour for example then as this would be typically around 4% inaccurate anyway then either 1,000MW or 1,020MW would be bought
Q3 (c) Are these small volumes freely available (i.e. liquid) or are there time / day availability limitations? If there are liquidity issues, why do you think this is?	These small volumes are often not available or are highly priced and can only be bought much closer to real time than the larger blocks which can be purchased much further out. This has the effect of making it harder for smaller suppliers to hedge their wholesale price exposure as they cannot buy all of it in advance when they agree to supply customers on a tariff.
Q3 (c) To what extent is there liquidity in shaped contracts?	Liquidity in shaped contracts is much lower than for base and peak shapes. Costs as a result are higher
Further Comments: Half hourly shaping for small amounts requires a weekend resource as half hourly shapes are only available on day +1 at the earliest. This adds further costs on to smaller players.	

P26_QUE_007 – SEEBOARD

SEEBOARD have no comments on those questions detailed within the questionnaire circulated for modification proposal P26.

Dave Morton
SEEBOARD

P26_QUE_008 – TXU

Q1 Please provide evidence to support your responses, where appropriate.

Question	Comment
Q1. What services are available for mitigating imbalance exposure risk?	We already provide a service to smaller players whereby we take on their imbalance exposure through the MVRN arrangements.
Q1 (a) Are these services available at a reasonable cost (quantify what you believe to be a reasonable cost)? If these services are not available, why do you think this is?	The cost is dependent on the portfolio of the counterparty.
Q1 (b) Are these services available for small volumes – i.e. is there a level of granularity and is this important? If these services are not available for small volumes, why do you think this is?	Yes
Q1 (c) If alternative mechanisms were available within the Balancing and Settlement Code for mitigating imbalance exposure, would you continue to use / develop alternate services?	We would continue to develop services while there was a demand for them.
Q2. Are STOD (Seasonal Time of Day) contracts available for small volumes? If not, why do you think this is?	Yes
Q2 (a) Are they reasonably priced (please quantify what you believe to be reasonable)? If they are not reasonably priced, why do you think this is?	Yes, market price
Q2 (b) Are they sufficiently flexible? If available STOD contracts are not sufficiently flexible, why do you think this is?	Yes

Q3. What do you believe the granularity of trades and associated liquidity in the forwards market to be?	
Q3 (a) Are small volumes (say less than 20MWh) available at a reasonable cost (quantify reasonable)?	Yes
Q3 (b) Is there a discrepancy between the costs for these small volumes and costs of larger volumes? If there is such a discrepancy, what do you think causes it?	No
Q3 (c) Are these small volumes freely available (i.e. liquid) or are there time / day availability limitations? If there are liquidity issues, why do you think this is?	Yes
Q3 (c) To what extent is there liquidity in shaped contracts?	moderate

P26_QUE_009 – Bizzenergy

Q1 Please provide evidence to support your responses, where appropriate.

Question	Comment
Q1. What services are available for mitigating imbalance exposure risk?	1. Trading in various exchanges 2. Consolidation 3. Tariff rate offers 4. Financial Products None of the services remove all the residual risk. All services continue to incentivise parties to balance as accurately as they can. For example: Tariff structures have this implied within the risk premia paid for the contract also they may contain caps on imbalances.
Q1 (a) Are these services available at a reasonable cost (quantify what you believe to be a reasonable cost)? If these services are not available, why do you think this is?	1. Trading on various exchanges suffers from the defined problem of granularity for the smaller player. The cost is unreasonable if it materially disadvantages small players relative to larger ones. The financial impact is almost directly related to the size of portfolio, a 400GWh portfolio imbalance costs are 50 times greater than a 20TWh costs for the same 20MWh error. For a small player taking a £2/MWh spread increases the cost of purchases by 2.2%. In a business where margins are generally less than this, it is unacceptable. 2. Small traders are always likely to have to take the price spread, but larger players will tend to be able to trade in the middle of the spread. 3. Entry costs to the UKPX are prohibitively high for smaller players when spread across the likely traded volumes. They present a real

	barrier to entry. Other exchanges are slightly cheaper, but have even less liquidity than the UKPX. 4. Consolidation offers are similar to STOD or market access fees. 5. Tariff rates offered are typically, £5000/month fixed fee plus 10% of exchange price. STOD tariffs would be expected to be at a similar premium to the market. Thes costs are significant for small players when spread across small volumes. 6. Financial products have been available from one player, but the risk premia built into them made them prohibitively expensive.
Q1 (b) Are these services available for small volumes – i.e. is there a level of granularity and is this important? If these services are not available for small volumes, why do you think this is?	Several players have indicated that they would be prepared to offer such services and within such will offer any degree of resolution. However, the smaller the transactions the greater the costs and there is a point around which a conventional traded solution does not work due to the transaction costs being a material portion of the underlying value. Firm offers have been difficult to access from most players.
Q1 (c) If alternative mechanisms were available within the Balancing and Settlement Code for mitigating imbalance exposure, would you continue to use / develop alternate services?	Yes, if they continued to remove risk from participating in the market.
Further Comments: A reasonable cost is where the there is no discrimination in purchasing costs and risk management between small and large players.	
Q2. Are STOD (Seasonal Time of Day) contracts available for small volumes? If not, why do you think this is?	Yes, but only from one offer has been received. Most of the larger organisations do not wish to be bothered with the complexity of entering structured transactions with smaller players. The volumes and value do not justify the transaction costs. If they do quote costs are generally very high.

Q2 (a) Are they reasonably priced (please quantify what you believe to be reasonable)? If they are not reasonably priced, why do you think this is?	The cost of them is most likely to be only a marginal improvement on the opportunity cost of the purchaser trading directly in the exchange. Therefore unless there is healthy competition in these products they will not provide an alternative to mod P26. It is unlikely given the size of the market opportunity that healthy competition in the delivery of such products will exist.
Q2 (b) Are they sufficiently flexible? If available STOD contracts are not sufficiently flexible, why do you think this is?	STOD by their nature are aggregated, which implies risks of price/take mismatch and hence an inbuilt premium. A fully disaggregated HH STOD tariffs are not on offer. The likelihood of them being so is low due to the cost and complexity of transacting individual small volumes in individual HH. A transaction cost to the seller is likely to be in the range £10-!5, against an underlying value of power between £5-40/MWh.
Further Comments: Large players and trader are looking at volumes of trade greater than can be guaranteed through STOD type contracts. Large option fees or high premia therefore exist. These however reasonable on behalf of the seller are an additional cost for the smaller player for which there is no other compensatory factors under NETA.	
Q3. What do you believe the granularity of trades and associated liquidity in the forwards market to be?	The market can trade down to 1 MW, indeed a few small trades have been done. Typical trades are in the range 25MW to 100MW.
Q3 (a) Are small volumes (say less than 20MWh) available at a reasonable cost (quantify reasonable)?	20-30MW trades can typically be done at mid-point of the bid-offer spread. Volumes below this typically are price takers of the spread which ranges from £1-20/MWh. Thus the disadvantage to smaller trades is crudely half the spread.
Q3 (b) Is there a discrepancy between the costs for these small volumes and costs of larger volumes? If there is such a discrepancy, what do you think causes it?	Yes for reason stated above. The causes are: 1. The significance of a sub 20MW trade to a large player is immaterial,

	i.e. 20MW/5000MW = 0.4%, but 20MW/100MW = 20% 2. Vertically integrated players will adjust their generation to match the position rather than make minor trades
Q3 (c) Are these small volumes freely available (i.e. liquid) or are there time / day availability limitations? If there are liquidity issues, why do you think this is?	The exchanges do not always have product available for every HH.
Q3 (c) To what extent is there liquidity in shaped contracts?	There is not any form of liquid market, structured transactions frequently take months to develop. We have not yet seen any form of transaction that contains obligations within these to always offer reasonable prices on demand.
Further Comments: General comment: The lack of liquidity and granularity of markets impacts all players. The effect though is much greater on smaller players. The net result is that the current circumstances are not promoting competition in the market, due in part to effects such as this.	

P26_QUE_010 – Utility Link

Q1 Please provide evidence to support your responses, where appropriate.

Question	Comment
Q1. What services are available for mitigating imbalance exposure risk?	i) 100 % reallocation of Meter volumes to a third party trader ii) Financial instrument to fix imbalance exposure risk iii) Balancing position through Power Exchanges
Q1 (a) Are these services available at a reasonable cost (quantify what you believe to be a reasonable cost)? If these services are not available, why do you think this is?	Services are not available to us for three reasons: i) 100% reallocation of meter volumes means that you hand over your complete trading portfolio to a third party and they trade it on your behalf, mitigating risk against other volumes in their portfolio. Our experience of these types of contracts is they are subject to a minimum monthly fee and the transaction costs at small volumes can be a significant proportion of the traded value. ii) Financial instruments to mitigated imbalance exposure, were available to us for the first month of the new trading arrangements at reasonable cost. These contracts are no longer available as imbalance has proved to be much higher than expected and the service provider was not prepared to offer the same contract again iii) The Power Exchange trades in minimum volumes of 1MW. On a portfolio of 10 MW this is 10% that could be exposed in the balancing mechanism, and as such this is not an option for the smaller player to "fine tune" their portfolio.
Q1 (b) Are these services available for small volumes – i.e. is there a level of	Small volumes mean:

granularity and is this important? If these services are not available for small volumes, why do you think this is?	i) excessive cost because of the minimum monthly fee and transaction cost ii) services no longer available for the smaller volumes iii) the 1MW minimum trade, which is not flexible enough for balancing a small portfolio
Q1 (c) If alternative mechanisms were available within the Balancing and Settlement Code for mitigating imbalance exposure, would you continue to use / develop alternate services?	A mechanism to help us minimise our exposure would be very welcome. If it were along the lines of a neutrality band, a non-contracted position would still be exposed to a non-fixed price and hence be a risk. Hence for the smaller players there would still be a considerable incentive to balance the position, without facing penal prices. Such a mechanism would just provide a means of ameliorating the disproportionate risks faced at the smaller end of the market, where there are few economic market tools available to do this.
Further Comments: This modification would also provide some benefit to suppliers managing embedded generation portfolios, in particular those portfolios which are more difficult to forecast i.e. Wind power, and would provide suppliers and consolidators with better tools for managing such portfolios which are made up of relatively small blocks of power.	
Q2. Are STOD (Seasonal Time of Day) contracts available for small volumes? If not, why do you think this is?	The STOD contracts are available at small volumes, but they are subject to high transaction costs (cost per trade irrespective of volume) and a minimum monthly fee. These are essentially the meter volume reallocation contracts mentioned above.
Q2 (a) Are they reasonably priced (please quantify what you believe to be reasonable)? If they are not reasonably priced, why do you think this is?	We feel these are reasonably priced in the current market conditions. The market signals are skewed by the volatility in the SSP and SBP, hence most providers will have at least a 24/7 operation, which carry the appropriate overheads. Hence the minimum monthly fees and the transaction costs, necessary to support such a team.

Q2 (b) Are they sufficiently flexible? If available STOD contracts are not sufficiently flexible, why do you think this is?	
Q3. What do you believe the granularity of trades and associated liquidity in the forwards market to be?	It is fairly self evident from the power exchanges that there is a lack of liquidity in the power exchanges. The lack of liquidity is particularly evident at the smaller end of the market, all the power exchanges freely admit this, in discussions that we have had with power exchanges such as APX and Powerex.
Q3 (a) Are small volumes (say less than 20MWh) available at a reasonable cost (quantify reasonable)?	Our current position is that normally we buy forward contracts of below 5 MW in any half-hour. To purchase on the power exchanges to match our shape would be a mixture of base and peak contracts. Closer to time we would need to fine-tune our position to avoid significant cash-out penalities. Since the minimum contract size in the quoted markets is 1 MW, our accuracy of matching our contracts with our position would be 20%! This would be a significant cost based on the current cash out prices.
Q3 (b) Is there a discrepancy between the costs for these small volumes and costs of larger volumes? If there is such a discrepancy, what do you think causes it?	The answer to Q3 means that we cannot buy contracts in the keener priced block forwards markets. We have to buy shaped contracts, which are available, but at a higher price than buying a combination of base and peak contracts.
Q3 (c) Are these small volumes freely available (i.e. liquid) or are there time / day availability limitations? If there are liquidity issues, why do you think this is?	Our perception of the market is that there is no liquidity in the smaller end of the market (1MW) irrespective of time. The liquidity issues are related to the skewed risk from SSP and SBP. This encourages most players to be long, so fine tuning to a position is not encouraged. The introduction of a dead-band, would mean that more companies, like ours, could use the power exchanges, and encourage

	liquidity.
Q3 (c) To what extent is there liquidity in shaped contracts?	There are only one or two organisations that offer shaped contracts. These tend to only be available for a minimum of a month period.
Further Comments With the questions on liquidity, I would suggest that a report from the power exchanges would be helpful to ascertain the levels of liquidity in the block markets at the 1MW end and whether they have had any shape activity on their OTC trades.	

P26_QUE_011 – Centrica

Q1 Please provide evidence to support your responses, where appropriate.

Question	Comment
Q1. What services are available for mitigating imbalance exposure risk?	**Balancing contracts are available and the UKPX half hourly market.**
Q1 (a) Are these services available at a reasonable cost (quantify what you believe to be a reasonable cost)? If these services are not available, why do you think this is?	**Yes. Balancing contracts are available at minimal cost and they are negotiable.**
Q1 (b) Are these services available for small volumes – i.e. is there a level of granularity and is this important? If these services are not available for small volumes, why do you think this is?	**Yes the services are available for small volumes. The level of granularity could be important. It depends on the accuracy of demand forecasts.**
Q1 (c) If alternative mechanisms were available within the Balancing and Settlement Code for mitigating imbalance exposure, would you continue to use / develop alternate services?	**No, most demand forecasts are accurate to 20MW for small players at present. A TNB of 20MW would mean players could balance their own position so there would be little point in offering services to balance within the TNB if it were introduced.**
Q2. Are STOD (Seasonal Time of Day) contracts available for small volumes? If not, why do you think this is?	
Q2 (a) Are they reasonably priced (please quantify what you believe to be reasonable)? If they are not reasonably priced, why do you think this is?	
Q2 (b) Are they sufficiently flexible? If available STOD contracts are not sufficiently flexible, why do you think this	

is?	
Q3. What do you believe the granularity of trades and associated liquidity in the forwards market to be?	**There is a fair degree of liquidity in forwards markets.**
Q3 (a) Are small volumes (say less than 20MWh) available at a reasonable cost (quantify reasonable)?	**Yes in the short term, not so much in the long term.**
Q3 (b) Is there a discrepancy between the costs for these small volumes and costs of larger volumes? If there is such a discrepancy, what do you think causes it?	**There is some discrepancy between the costs of smaller and larger volumes.**
Q3 (c) Are these small volumes freely available (i.e. liquid) or are there time / day availability limitations? If there are liquidity issues, why do you think this is?	**Small volumes are available without limitations.**
Q3 (c) To what extent is there liquidity in shaped contracts?	**These contracts are not really a traded market. They are done through bilateral contracts.**
Further Comments: **UKPX start up costs are very high with a monthly minimum commission fee. If only small volumes are to be traded Parties might consider it to be an unacceptable cost.**	

P26_QUE_012 – APX

Further Comments:

In considering Modification P26, Automated Power Exchange (UK) Limited would like to make the following points with regard to the options available for trading. APX believes it systems, products and services are ideally suited to companies with smaller volumes to trade.

- The software required to trade on the APX Market is free and downloadable on to a standard PC; connection to the APX Market can be facilitated via the internet. Participants do not need a dedicated line or terminal.
- Trading fees associated with trading on APX are approximately 0.25% of the cost of the energy traded making trading on the exchange a cost effective and efficient method of covering an expected exposure.
- The minimum contract size is 1MW
- APX offers a range of products from the Half-Hour to Weekday strips. All products are cleared by APX thereby negating the need to negotiate individual GTMAs with all industry participants.
- Volumes being traded on the exchange and across all the exchanges are increasing as companies utilise the variety of trading options available to them. Following the introduction of NETA, liquidity in traded electricity contracts has increased significantly and is set to be a continuing trend. If the pattern of others markets is to be followed then transaction costs are likely to fall as a result.

P26_QUE_013 – British Energy

Question	Comment
Q1. What services are available for mitigating imbalance exposure risk?	**Contracts made in advance of gate closure!** **Exchanges provide capability down to 1MW in each half-hour at the day-ahead stage at reasonable cost. We believe OTC and other markets are or will shortly be available through "aggregators" and/or risk management providers, and that further such providers will come forward in the future.**
Q1 (a) Are these services available at a reasonable cost (quantify what you believe to be a reasonable cost)? If these services are not available, why do you think this is?	The basic cost of exchange traded contracts is the same for all parties, with discounts available for high volumes. Current prices in the range 2.5-6.5 p/MWh at this stage of market development do not seem obviously unreasonable. It may be possible to negotiate lower costs for bilateral or aggregator arrangements.
Q1 (b) Are these services available for small volumes – i.e. is there a level of granularity and is this important?	Yes, 1MW by half-hour (ie. 0.5 MWh) on exchanges, see above.
Q1 (c) If alternative mechanisms were available within the Balancing and Settlement Code for mitigating imbalance exposure, would you continue to use / develop alternate services?	Use of a "neutrality band" or other methods of reducing imbalance exposure would reduce incentives for providers to develop aggregation and Risk Management products.
Q2. Are STOD (Seasonal Time of Day) contracts available for small volumes? If not, why do you think this is?	Not much liquidity, but exchanges provide facility for balancing volumes down to 1 MW per half-hour at the day-ahead stage. There does not appear to be demand for very small volumes STOD contracts.
Q2 (a) Are they reasonably priced (please quantify what you believe to be reasonable)?	See above.

If they are not reasonably priced, why do you think this is?	
Q2 (b) Are they sufficiently flexible? If available STOD contracts are not sufficiently flexible, why do you think this is?	Exchanges provide flexibility. Administrative overheads for bilateral and OTC contracts make them unattractive for small volumes. This is true in any market.
Further Comments: **Detailed information on electricity markets is readily available from publications such as the Heren Report and Petroleum Argus as well as from websites such as Enron Online, and from exchanges such as UKPX.**	
Q3. What do you believe the granularity of trades and associated liquidity in the forwards market to be?	**At day-ahead, OTC half-hour blocks of 20MW with total traded volume 500-1000MW are typical. On UKPX, 250-300MW per half-hour, with granularity down to 1MW occurs, although some periods have little trade.**
Q3 (a) Are small volumes (say less than 20MWh) available at a reasonable cost (quantify reasonable)?	Assuming 20MWh per half-hour, OTC/Bilateral opportunities are limited. Exchanges do provide capability.
Q3 (b) Is there a discrepancy between the costs for these small volumes and costs of larger volumes? If there is such a discrepancy, what do you think causes it?	Discounts for large volumes traded over a period of time are available. This is normal trading practice and cannot be viewed as discriminatory against smaller participants.
Q3 (c) Are these small volumes freely available (i.e. liquid) or are there time / day availability limitations? If there are liquidity issues, why do you think this is?	Overnight liquidity is often less than daytime, but is nevertheless generally available. Probably cause is the smaller size of the market at night, and non-24-hour trading by some participants. More participation of small players might encourage liquidity.
Q3 (c) To what extent is there liquidity in shaped contracts?	Exchanges can provide great flexibility. BE have not experienced significant demand for small bilateral shaped contracts.

P26_QUE_014 – Intergen

Q1 Please provide evidence to support your responses, where appropriate.

Question	Comment
Q1. What services are available for mitigating imbalance exposure risk?	OTC, brokered, bi-lateral, Web based and PX trading.
Q1 (a) Are these services available at a reasonable cost (quantify what you believe to be a reasonable cost)? If these services are not available, why do you think this is?	All trading requires credit to be lodged. Brokerage fees are expected but can reasonably be avoided by trading direct with counterparty. Power Exchanges have relatively high costs due to cost of start-up and notification fees. However, the highest cost with PX trading is the unfavourable price spread due to lack of liquidity.
Q1 (b) Are these services available for small volumes – i.e. is there a level of granularity and is this important? If these services are not available for small volumes, why do you think this is?	Granularity is important if you wish to mitigate all exposure to system prices. Power Exchanges are the only place where small volumes can be traded easily in different volumes per period. Other forms of trading are geared toward higher volumes.
Q1 (c) If alternative mechanisms were available within the Balancing and Settlement Code for mitigating imbalance exposure, would you continue to use / develop alternate services?	Yes, we would wish to explore all options and use the most economically viable at that time.

Further Comments:

A key issue is the lack of liquidity in PX markets and the limited number of small volume OTC trades. The lack of confidence in WD notification is a problem which may be partially addressed by more frequent ECVAA reporting.

Introducing a neutrality band would potentially deter parties from balancing their positions.

A small number of large players have adopted a revised Schedule 3 to facilitate WD trading among the group. To our knowledge there are no small parties in

this group.	
Q2. Are STOD (Seasonal Time of Day) contracts available for small volumes? If not, why do you think this is?	N/A
Q2 (a) Are they reasonably priced (please quantify what you believe to be reasonable)? If they are not reasonably priced, why do you think this is?	N/A
Q2 (b) Are they sufficiently flexible? If available STOD contracts are not sufficiently flexible, why do you think this is?	N/A
Q3. What do you believe the granularity of trades and associated liquidity in the forwards market to be?	Very limited – 50MW normally on prompt forward markets. Small volumes only available to trade on PX.
Q3 (a) Are small volumes (say less than 20MWh) available at a reasonable cost (quantify reasonable)?	The smaller the volume the higher the premium. On PX, the closer to gate-closure you trade the higher the premium tends to be. If a neutrality band was introduced, the combination of knowing the band is there plus the close to real time premium could deter parties from balancing.
Q3 (b) Is there a discrepancy between the costs for these small volumes and costs of larger volumes? If there is such a discrepancy, what do you think causes it?	Some counterparties try to extract a premium for volumes less than 50MW claiming they are an unusual size. The cause of the discrepancy is likely to be a perception by the counterparty that any party wishing to trade a smaller volume than 50MW really **needs** to do the deal and are therefore willing to pay more.
Q3 (c) Are these small volumes freely available (i.e. liquid) or are there time	In brokered markets smaller volumes tend to be traded later in the day. There is availability on PX 24 hours except during system outages or during

/ day availability limitations? If there are liquidity issues, why do you think this is?	planned daily shutdown.
Q3 (c) To what extent is there liquidity in shaped contracts?	Not in a position to comment.

P26_QUE_015 – Powergen

Proposed Variation to BSC – Modification Proposal No: 26 – Market-Driven Neutrality Band - Questionnaire

Powergen UK plc ('Powergen') welcomes the opportunity to comment on the questionnaire issued for P26 on 28th September. Powergen provides this response on behalf of itself and the following BSC Parties: Powergen Energy plc, Diamond Power Generation Limited and Cottam Development Centre Limited.

We do not support this modification. We believe that the NETA arrangements have not been given sufficient time to bed down nor for parties to gain experience and confidence in them before the industry moves on to changing the arrangements. We believe that once parties gain more understanding of the new market arrangements there will be more liquidity and flexibility in contracts in both the short-term and forwards markets. Any modifications now would be premature especially as the industry has not yet experienced NETA under a Winter scenario.

Please see our response on the attachment below.

Yours Sincerely

Afroze Miah

Strategy & Regulation Department
Energy Trading
Powergen
02476 424814

Q1 Please provide evidence to support your responses, where appropriate.

Question	Comment
Q1. What services are available for mitigating imbalance exposure risk?	Counterparties can contract with other counterparties (e.g. consolidators, suppliers) that are prepared to provide balancing / trading services
Q1 (a) Are these services available at a reasonable cost (quantify what you believe to be a reasonable cost)? If these services are not available, why do you think this is?	Yes. Reasonable cost would cover the costs associated with providing the service plus a reasonable margin, plus cover whatever risks the counterparty is transferring.
Q1 (b) Are these services available for small volumes – i.e. is there a level of granularity and is this important? If these services are not available for small volumes, why do you think this is?	You need to define 'small volumes'. But generally services should be available for smaller volumes i.e. <5 MW. These services may not be available if smaller parties believe the costs associated are too prohibitive and therefore do not go to consolidators and others for such services.
Q1 (c) If alternative mechanisms were available within the Balancing and Settlement Code for mitigating imbalance exposure, would you continue to use / develop alternate services?	It depends on the alternative mechanisms, but we would still consider developing alternate services.
Q2. Are STOD (Seasonal Time of Day) contracts available for small volumes? If not, why do you think this is?	Small generators – yes Suppliers – we have not had any enquiries from them but would offer such contracts if they are required
Q2 (a) Are they reasonably priced (please quantify what you believe to be reasonable)? If they are not reasonably priced, why do you think this is?	They are competitively priced.
Q2 (b) Are they sufficiently flexible? If available STOD contracts are not sufficiently flexible, why do you think this	Generators – yes, flexibility is included. Suppliers – we have done these in the past, based on weather corrections

is?	and customer numbers
Further Comments: There has been reluctance on parties to do contracts because they are not sure how to price contracts under the NETA environment. The new arrangements are still very new and we have not yet experienced a winter therefore parties have not entered into negotiations. As parties gain more experience of and confidence in NETA, we expect more contracts to be concluded.	
Q3. What do you believe the granularity of trades and associated liquidity in the forwards market to be?	Granularity has been below 10 MWh at times. This can be done at market if there are parties who want to do it. Liquidity: Day Ahead – between 1,000 – 1,500 MWh traded and is increasing Week Ahead – between 2,500 – 3,000 MWh and increasing Month Ahead – over 15,000 MWh at times, there has been increasing liquidity
Q3 (a) Are small volumes (say less than 20MWh) available at a reasonable cost (quantify reasonable)?	Can be reasonably done at market price
Q3 (b) Is there a discrepancy between the costs for these small volumes and costs of larger volumes? If there is such a discrepancy, what do you think causes it?	No, there is very little discrepancy between small and large volumes
Q3 (c) Are these small volumes freely available (i.e. liquid) or are there time / day availability limitations? If there are liquidity issues, why do you think this is?	The market, in general, is more liquid during the night thereby affecting both small and large volumes similarly. Night volumes are less liquid, but it should be easier
Q3 (c) To what extent is there liquidity in shaped contracts?	Depends on the product: - peak products 12 hour weekday – liquid - otherwise by their nature they are OTC products

P26_QUE_016 – Npower

Please find the attached response on behalf of Innogy plc, Innogy Cogeneration Trading Ltd, Npower Ltd; Npower Northern Ltd, Npower Yorkshire Ltd, npower direct Ltd.

Q1 Please provide evidence to support your responses, where appropriate.

Question	Comment
Q1. What services are available for mitigating imbalance exposure risk?	BSC parties can use MVRNs and ECVNs to manage their imbalance exposure. Suppliers (in SVA and CVA) and traders (in CVA) offer consolidation services to embedded generators to reduce imbalance exposure. This occurs through aggregation with other consumption account imbalances. We had expected the service to be provided by consolidators to embedded generators and small suppliers. However, there is not a specific role for consolidators because the rules to allow them to offer services were not introduced under NETA.
Q1 (a) Are these services available at a reasonable cost (quantify what you believe to be a reasonable cost)? If these services are not available, why do you think this is?	We are not aware of suppliers or traders offering generic services to purchase imbalances other than through STOD tables and fixed prices.
Q1 (b) Are these services available for small volumes – i.e. is there a level of granularity and is this important? If these services are not available for small volumes, why do you think this is?	We do not think they are available for small volumes. Again, we believe that the market is relatively immature.
Q1 (c) If alternative mechanisms were available within the Balancing and Settlement Code for mitigating imbalance exposure, would you continue to use / develop alternate services?	If alternative methods of mitigating imbalance exposure were introduced, there would still be a need for the market to create solutions for volumes in excess of the amounts protected by the new alternative methods. We expect that development would take place in these areas.
Q2. Are STOD (Seasonal Time of Day) contracts available for small	Yes, they are available.

volumes? If not, why do you think this is?	
Q2 (a) Are they reasonably priced (please quantify what you believe to be reasonable)? If they are not reasonably priced, why do you think this is?	The cost is expressed in a fixed price for a variable volume, priced at a discount to the forward curve. The market derives these discounts and reflects the suppliers' or traders' appetite for imbalances.
Q2 (b) Are they sufficiently flexible? If available STOD contracts are not sufficiently flexible, why do you think this is?	STOD tables can be desegregated down to the granularity of individual half-hour contract periods. We believe that they can be very flexible.
Q3. What do you believe the granularity of trades and associated liquidity in the forwards market to be?	We believe that trades of as little as 5 MWh can be executed in the forward markets.
Q3 (a) Are small volumes (say less than 20MWh) available at a reasonable cost (quantify reasonable)?	Yes.
Q3 (b) Is there a discrepancy between the costs for these small volumes and costs of larger volumes? If there is such a discrepancy, what do you think causes it?	Costs are relative. If the commission charge for a small trade is large, it has to be viewed in relation to a cash-out charge would could be a) unknown and b) much larger.
Q3 (c) Are these small volumes freely available (i.e. liquid) or are there time / day availability limitations? If there are liquidity issues, why do you think this is?	The market is not liquid but it is possible to close out positions in the forward markets with relatively small volumes.
Q3 (c) To what extent is their liquidity in shaped contracts?	We are not aware of significant liquidity in these products.

P26_QUE_017 – Enron

Q1 Please provide evidence to support your responses, where appropriate.

Question	Comment
Q1. What services are available for mitigating imbalance exposure risk?	Aggregators such as Enron provide risk management services to both generators and suppliers. These services take many forms. An embedded generator could have its meter registered with a supplier and have its output netted off the supplier's demand. The recent approval of Mod P7 makes this service more flexible. Embedded generators have the option of registering their meters in the central systems and either managing their own imbalance risk through contract trading, or allocating their metered output to a third party and passing on some or all of the imbalance risk. Innovative solutions are being used to manage the imbalance risk of aggregators. For example, information links between the aggregator and embedded generators allow embedded generators to update their output predictions as Gate Closure approaches, enabling the aggregator to better manage imbalances.
Q1 (a) Are these services available at a reasonable cost (quantify what you believe to be a reasonable cost)? If these services are not available, why do you think this is?	The price for aggregation services largely depends on who takes the imbalance risk and the nature of the imbalance risk. For example, supply is well suited to aggregation because of the portfolio effect acting on many small fluctuations. Generation is less well suited to aggregation because the portfolio effect is less pronounced for the relatively few large output fluctuations related to trip risk. If the aggregator takes on the trip risk, it factors this into the price it is willing to pay an embedded generator for output.
Q1 (b) Are these services available for small volumes – i.e. is there a level of granularity and is this important? If these services are not available for small volumes, why do you think this is?	Aggregation services are available to large and small customers alike. However, the administrative cost of arranging specialised contracts for aggregation services may be a deterrent for very small players, eg, 1MW players.

Q1 (c) If alternative mechanisms were available within the Balancing and Settlement Code for mitigating imbalance exposure, would you continue to use / develop alternate services?	
Q2. Are STOD (Seasonal Time of Day) contracts available for small volumes? If not, why do you think this is?	STOD contracts are typically available for large consumers with volumes in the range 2 to 200GWh per year, although larger volumes may be contracted.
Q2 (a) Are they reasonably priced (please quantify what you believe to be reasonable)? If they are not reasonably priced, why do you think this is?	
Q2 (b) Are they sufficiently flexible? If available STOD contracts are not sufficiently flexible, why do you think this is?	
Q3. What do you believe the granularity of trades and associated liquidity in the forwards market to be?	The PXs trade half-hourly contracts day-ahead and within day for quantities as low as 1MW, and 1MW trades are often seen. Liquidity varies by settlement period and declines (bid-offer spreads widen) as real time approaches. It is actually easier to trade small volumes than large volumes, because of the low depth in the half hour markets. In forward markets, 5MW blocks can be readily traded over the counter (OTC), through brokers and on Enron online. The GTMA block size (20MW) does not preclude trades of smaller blocks. Liquidity is very good out to 3 years, as demonstrated by bid-offer spreads in the order of between 1 and 20p/MWh.
Q3 (a) Are small volumes (say less than 20MWh) available at a reasonable cost (quantify reasonable)?	PX trades are charged according to volume, which means there is no barrier to small volume trades. Enron online trades and bilateral trades incur no explicit trade charge, and brokered deals incur a volume related charge. In all 3 cases there is no barrier to small volume trades. There is no evidence that small blocks trade

	at different prices to larger blocks. Spectron has a fixed and variable trade charge.
Q3 (b) Is there a discrepancy between the costs for these small volumes and costs of larger volumes? If there is such a discrepancy, what do you think causes it?	With the exception of Spectron, trade charges are proportional to volume, or included in quoted prices. This means there is no discrimination between trade charges for small and large volume deals.
Q3 (c) Are these small volumes freely available (i.e. liquid) or are there time / day availability limitations? If there are liquidity issues, why do you think this is?	In the PXs it is easier to trade small volumes than large volumes because of the lack of depth in the half-hourly markets. In forward markets small blocks can be freely traded. A 5MW bid or offer will be lifted if it is at a competitive price.
Q3 (c) To what extent is there liquidity in shaped contracts?	PXs trade half-hourly blocks day-ahead and within day, which means any shape can be traded. Peaks, off-peaks, baseload and other standard shapes are readily available on forward markets.
Further Comments: The ability to trade in forward markets is irrelevant to assessment of the proposed trading neutrality band. The alternative to trading in forward contracts is to trade in the half hour power exchanges and it has been argued that the trading neutrality band is necessary because the half hour exchanges do not provide sufficient risk management options. However, the trading neutrality band simply mirrors the power exchanges and does not provide an additional risk management option. This is because Mod P26 proposes to cash out small imbalances at a price related to the UKPX price and cashing out an imbalance at the UKPX price is no different to trading a contract in the UKPX. Therefore, even if it were the case that small players could not trade effectively in forward contract markets (something that they can do), the proposed trading neutrality band would not address this issue. Rather, the proposed trading neutrality band reduces the importance of aggregation, contract trading (whether forward or spot) and good forecasting.	

P26_QUE_018 – London Electricity

Q1. What services are available for mitigating imbalance exposure risk?

Commercial generator breakdown insurance from Marsh and McLellan. Explicitly excludes new or commissioning gensets

Q1 (a) Are these services available at a reasonable cost (quantify what you believe to be a reasonable cost)?

Cost is arguably very high for cover offered. (Unwilling to give further details).

Q1 (b) Are these services available for small volumes - i.e. is there a level of granularity and is this important?

Yes

If these services are not available for small volumes, why do you think this is?

Q1 (c) If alternative mechanisms were available within the Balancing and Settlement Code for mitigating imbalance exposure, would you continue to use / develop alternate services?

Yes. There is always going to be some cost to being out of balance – that is virtually a design objective of the market (i.e. the selection of two prices for settlement makes this the case).

ANNEX 4 - BSC AGENT IMPACT ASSESSMENTS

High Level Impact Assessments (HLIAs)

The following representations detail the high Level Impact Assessments received from the Central Service Agent.

a HLIA of Modification P26 as a Standalone Implementation

The following represents the High Level Impact Assessment received from the Central Service Provider for the implementation of Modification P26 and the Alternative Modification as a standalone change.

NETA Change Form

To be completed by the Originator						
Change Request ID (to be provided by the Customer) P26 Logica reference:			Service affected SAA			
Change Request Name: ICR145			Market-Driven Trading Neutrality Band			
Agreement by the customer to proceed to the next stage						
	High Level Assessment	Detailed Level Assessment	Change Quotation	Implement Change	Emergency Fix Report	Change Request under Clause 14.2 (delay)
Tick which stage is being requested	✓					
Signed by Customer Baseline Manager						
Signed by Customer Contract Manager						
Date of agreement to proceed to next stage					n/a	n/a
Date this stage to be completed by	24/09/01					

Configuration of Service(s) (baseline affected)	
Assumed Changes (over baseline)	Service Definition Baseline (V1.0)
Priority	High/Medium/Low
Identified by : Sandy Blows	Date Submitted: 07/09/01
Description of Change See attached original P26 .	
Reason for Change (benefits) See attached original P26	
Implications of not making the change See attached original P26	
Attachments/references	P26

Competition Item Yes/No/n/a	Reasons for Competition
If Change Request made under Clause 14.2 (delay)	Required supporting information attached

To be completed by the Service Provider			
	High Level Assessment	Detailed Level Assessment	Change Quotation
Tick which stage is being completed	✓		
Signed by Service Provider Contract Manager			
Date	24/09/01		

Validity period of costs/prices	Change Quotation	
	Change	30 days
Does the change involve any changes to the System or Services		Yes
Would the undertaking of a Detailed Level Assessment or Change Quotation delay the Trigger Milestone or the Planned Go-Live Date before Go Live or any Release Date after Go Live		N/a
If Yes – specify which Milestones/Release Dates would be affected	N/a	
Impact on any Milestones of incorporation of change	N/a	

Indicative impact on resources for change incorporation	Phase of the work			
	Design	Build	Test & Trial	Operate
Labour				
Materials/3rd Party				
Impact on Service Levels	None			
Impact on IDD	Yes			

Price for Detailed Level Assessment		Indicative/firm
Price for Change Quotation		Indicative/firm
Price for Change		
Option 1 Fixed MWh Trading Neutrality Band.	£269,100 (ex VAT) to develop and implement this change £4,600 (ex VAT) per month to operate and maintain	Indicative Indicative
Option 2 Trading Neutrality Band based on the minimum of a fixed MWh and a percentage of the Account Credited Energy Volume.	£287,200 (ex VAT) to develop and implement this change £4,900 (ex VAT) per month to operate and maintain	Indicative Indicative

Assumptions for the above Price:

- The price quoted for this change is based on the assumption that it is not developed in parallel with Release 2
- No regression testing has been included as it is assumed that regression testing for P26 will be carried out as part of a suite of regression tests for the SAA system modules. The costs and durations will be similar to that detailed in the Release 2 change proposal.
- The cost and durations provided in this HLIA assume that only the CP to which the estimate relates is being implemented. This has been achieved by excluding the effects of other changes.
- Depending on which options are selected, deployment will require a planned outage.
- Interface testing for new data sources is excluded from the prices for the P27options.
- Participant testing is excluded from the price and any required is expected to be charge T&M.
- Logica will invoice 30% on receipt of CN or authorised start of work, 50% on completion of acceptance tests, 20% on deployment or one month after completion of acceptance tests, whichever is sooner.
- The Service Description will have been updated by ELEXON and agreed with Logica prior to commencement of work.
- For all formal documentation which is subject to review, Logica shall provide one draft issue to the Client. The Client shall review and provide written comments on, or its acceptance of, such documentation within 5 working days of such delivery
- Within reasonable levels, ELEXON will make available appropriate staff to assist Logica during the development of this change
- There will be no new Service Levels.
- The O+M charge has been estimated as a proportion of the price.

If the change is to be incorporated after Go Live, is this change proposed to be a patch or release		
If patch, expected time of incorporation		
If release - what release number	Release number	
Date	Release Date	
For High Level Assessment only – is it a Detailed Level AssessmentYes/No	If No, estimate of time and resources required to complete	

Resources Required to undertake	Detailed Level Assessment	Change Quotation
Labour		
Materials		

Consequential amendments to base line:	
Proposed method of Change/ Work statement	Option 1 uses a fixed MWh Trading Neutrality Band. Option 2 uses a Trading Neutrality Band based on the minimum of a fixed MWh and a percentage of the Account Credited Energy Volume.
Proposed Plan for Change	The estimated time to complete the development for each option is: Option 1 - 19 weeks. Option 2 - 20 weeks.

Has the customer has indicated this is a competitive change		No
	Service Provider Plan for competition	
	Risks/Constraints of competition	

	Service Provider plan for incorporation of change including testing	
	Documentation to be produced by Service Provider to enable competition according to plan above	
	Indicative costs of Service Provider role in competition	

For Change Notice only – to be completed by the Customer	
Basis for payment	
Agreed Customer Caused Delay: Yes/No **If Yes, amount of delay**	
Date Change to become effective.	**Is this to be a Release Date? Yes/No**
Other items as required under the Change Management Procedures	

b HLIA of Modification P26 Implemented with Modification P27

The following represents the High Level Impact Assessment received from the Central Service Provider for the implementation of Modification P26 in conjunction with the changes required to support Option 3 of Modification P7 (Reference 5 and 6).

NETA Change Form

To be completed by the Originator						
Change Request ID (to be provided by the Customer) P26 (Option 1) and P27 (Option 3) Logica reference:			Service affected SAA/BMRA			
Change Request Name: ICR145 and ICR146			Combined P26 and P27			
Agreement by the customer to proceed to the next stage						
	High Level Assessment	Detailed Level Assessment	Change Quotation	Implement Change	Emergency Fix Report	Change Request under Clause 14.2 (delay)
Tick which stage is being requested	✓					
Signed by Customer Baseline Manager						
Signed by Customer Contract Manager						
Date of agreement to proceed to next stage					n/a	n/a
Date this stage to be completed by	24/09/01					

Configuration of Service(s) (baseline affected)	
Assumed Changes (over baseline)	.
Priority	High/Medium/Low
Identified by : Sandy Blows	Date Submitted: 07/09/01
Description of Change See attached original P26 (O1) & P27 (O3) .	
Reason for Change (benefits) See attached original P26 (O1) & P27 (O3)	
Implications of not making the change See attached original P26 (O1) & P27 (O3)	
Attachments/references	P26 (O1) & P27 (O3)
Competition Item Yes/No/n/a	Reasons for Competition
If Change Request made under Clause 14.2 (delay)	Required supporting information attached

To be completed by the Service Provider			
	High Level Assessment	Detailed Level Assessment	Change Quotation
Tick which stage is being completed	✓		
Signed by Service Provider Contract Manager			
Date	24/09/01		

Validity period of costs/prices	Change Quotation	
	Change	30 days

Does the change involve any changes to the System or Services	Yes
Would the undertaking of a Detailed Level Assessment or Change Quotation delay the Trigger Milestone or the Planned Go-Live Date before Go Live or any Release Date after Go Live	N/a

If Yes – specify which Milestones/Release Dates would be affected	N/a
Impact on any Milestones of incorporation of change	N/a

Indicative impact on resources for change incorporation	Phase of the work			
	Design	Build	Test & Trial	Operate
Labour				
Materials/3rd Party				

Impact on Service Levels	None
Impact on IDD	Yes

Price for Detailed Level Assessment		Indicative/firm
Price for Change Quotation		Indicative/firm
Price for Change		
P26 (Option 1) and P27 (Option 3)	£504,000 (ex VAT) to develop and implement this change £8,700 (ex VAT) per month to operate and maintain	Indicative Indicative

Assumptions for the above Price:

- The price quoted for this change is based on the assumption that it is not developed in parallel with Release 2
- No regression testing has been included as it is assumed that regression testing for P26 (Option 1) and P27 (Option3) will be carried out as part of a suite of regression tests for the SAA and BMRA system modules, as appropriate. The costs and durations will be similar to that detailed in the Release 2 change proposal.
- The cost and durations provided in this HLIA assume that only the CPs to which the estimate relates are being implemented. This has been achieved by excluding the effects of other changes.
- Depending on which options are selected, deployment will require a planned outage.
- Interface testing for new data sources is excluded from the prices for the P27options.
- Participant testing is excluded from the price and any required is expected to be charge T&M.
- The functionality for the P26 and P27 option is still separate, but the development will be done at the same time.
- Logica will invoice 30% on receipt of CN or authorised start of work, 50% on completion of acceptance tests, 20% on deployment or one month after completion of acceptance tests, whichever is sooner.
- The Service Description will have been updated by ELEXON and agreed with Logica prior to commencement of work.
- For all formal documentation which is subject to review, Logica shall provide one draft issue to the Client. The Client shall review and provide written comments on, or its acceptance of, such documentation within 5 working days of such delivery.
- Within reasonable levels, ELEXON will make available appropriate staff to assist Logica during the development of this change
- There will be no new Service Levels.
- The O+M charge has been estimated as a proportion of the price.

If the change is to be incorporated after Go Live, is this change proposed to be a patch or release			
If patch, expected time of incorporation			
If release - what release number		Release number	
Date		Release Date	
For High Level Assessment only – is it a Detailed Level AssessmentYes/No		If No, estimate of time and resources required to complete	

Resources Required to undertake	Detailed Level Assessment	Change Quotation
Labour		
Materials		

Consequential amendments to base line:	
Proposed method of Change/ Work statement	P26 Option 1 uses a fixed MWh Trading Neutrality Band. and P27 Option 3 involves having no new data calculated or displayed by BMRA.
Proposed Plan for Change	The estimated time to complete the development for each option is 29 weeks.

Has the customer has indicated this is a competitive change			No
	Service Provider Plan for competition		
	Risks/Constraints of competition		

	Service Provider plan for incorporation of change including testing	
	Documentation to be produced by Service Provider to enable competition according to plan above	
	Indicative costs of Service Provider role in competition	

For Change Notice only – to be completed by the Customer	
Basis for payment	
Agreed Customer Caused Delay: Yes/No **If Yes, amount of delay**	
Date Change to become effective.	**Is this to be a Release Date? Yes/No**
Other items as required under the Change Management Procedures	

Detailed Level Impact Assessments (DLIAs)

The following representations provide the Detailed Level Impact Assessments received from the Central Service Agent.

c DLIA of Modification P26 as a Standalone Implementation

The following represents the Detailed Level Impact Assessment received from the Central Service Provider for the implementation of Modification P26 and the Alternative Modification as a standalone change.

NETA Change Form

To be completed by the Originator						
Change Request ID (to be provided by the Customer) P26 Logica reference:			Service affected SAA			
Change Request Name: ICR145			Market-Driven Trading Neutrality Band			
Agreement by the customer to proceed to the next stage						
	High Level Assessment	Detailed Level Assessment	Change Quotation	Implement Change	Emergency Fix Report	Change Request under Clause 14.2 (delay)
Tick which stage is being requested		✓				
Signed by Customer Baseline Manager						
Signed by Customer Contract Manager						
Date of agreement to proceed to next stage					n/a	n/a
Date this stage to be completed by		28/09/01				
Configuration of Service(s) (baseline affected)						
Assumed Changes (over baseline)	Service Definition Baseline (V1.0)					
Priority	High/Medium/Low					
Identified by : Sandy Blows			Date Submitted: 07/09/01			
Description of Change See attached original P26 .						
Reason for Change (benefits) See attached original P26						
Implications of not making the change See attached original P26						
Attachments/references	P26					
Competition Item Yes/No/n/a	Reasons for Competition					

If Change Request made under Clause 14.2 (delay)	Required supporting information attached

To be completed by the Service Provider			
	High Level Assessment	Detailed Level Assessment	Change Quotation
Tick which stage is being completed		✓	
Signed by Service Provider Contract Manager			
Date		28/09/01	

Validity period of costs/prices	Change Quotation	
	Change	30 days
Does the change involve any changes to the System or Services		Yes
Would the undertaking of a Detailed Level Assessment or Change Quotation delay the Trigger Milestone or the Planned Go-Live Date before Go Live or any Release Date after Go Live		N/a
If Yes – specify which Milestones/Release Dates would be affected	N/a	
Impact on any Milestones of incorporation of change	N/a	

Indicative impact on resources for change incorporation	Phase of the work			
	Design	Build	Test & Trial	Operate
Labour				
Materials/3rd Party				

Impact on Service Levels	None
Impact on IDD	Yes

Price for Detailed Level Assessment		Indicative/firm
Price for Change Quotation		Indicative/firm
Price for Change		
Option 1 Fixed MWh Trading Neutrality Band.	£249,106 (ex VAT) to develop and implement this change £3,736 (ex VAT) per month to operate and maintain	Firm Firm
Option 2 Trading Neutrality Band based on the minimum of a fixed MWh and a percentage of the Account Credited Energy Volume.	£260,691 (ex VAT) to develop and implement this change £3,910 (ex VAT) per month to operate and maintain	Firm Firm

Assumptions for the above Price:

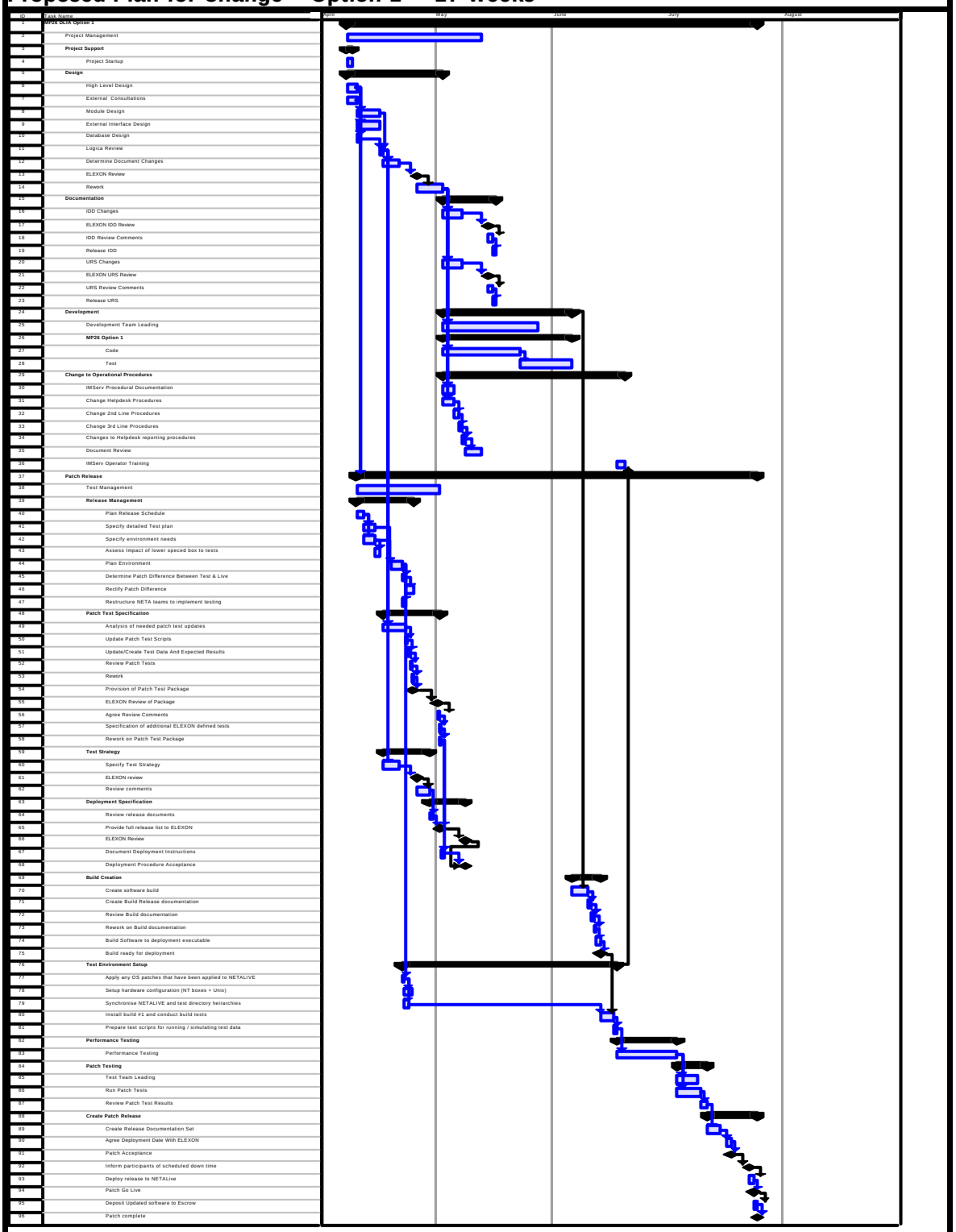
- The price quoted for this change is based on the assumption that it is not developed in parallel with Release 2
- The pricing does not include any additional reporting requirements other than those explicitly detailed in the P26 change details.
- This change will be implemented as a patch with localised integration testing.
- Depending on which options are selected, deployment will require a planned outage.
- Interface testing for new data sources is excluded from the prices for the P27options.
- Participant testing is excluded from the price and any required is expected to be charge T&M.
- Logica will invoice 30% on receipt of CN or authorised start of work, 50% on completion of acceptance tests, 20% on deployment or one month after completion of acceptance tests, whichever is sooner.
- The Service Description will have been updated by ELEXON and agreed with Logica prior to commencement of work.
- For all formal documentation which is subject to review, Logica shall provide one draft issue to the Client. The Client shall review and provide written comments on, or its acceptance of, such documentation within 5 working days of such delivery
- Within reasonable levels, ELEXON will make available appropriate staff to assist Logica during the development of this change
- There will be no new Service Levels.
- The O+M charge has been estimated as a proportion of the price.

If the change is to be incorporated after Go Live, is this change proposed to be a patch or release		
If patch, expected time of incorporation		
If release - what release number	Release number	
Date	Release Date	
For High Level Assessment only – is it a Detailed Level AssessmentYes/No	If No, estimate of time and resources required to complete	

Resources Required to undertake	Detailed Level Assessment	Change Quotation
Labour		
Materials		

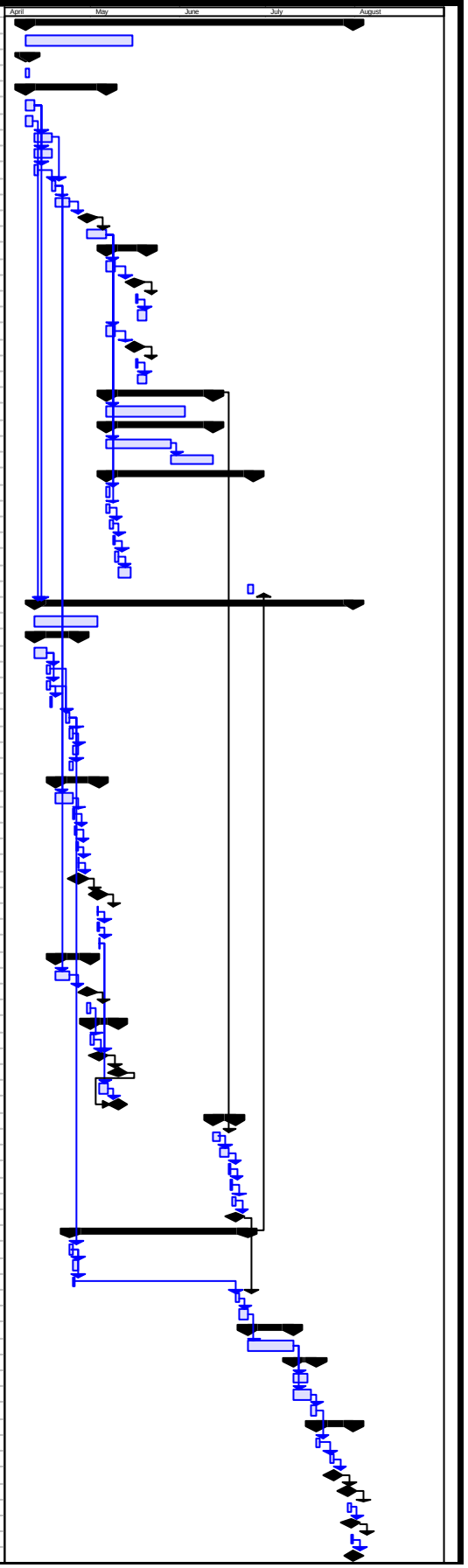
Consequential amendments to base line:	
Proposed method of Change/ Work statement	Option 1 uses a fixed MWh Trading Neutrality Band. Option 2 uses a Trading Neutrality Band based on the minimum of a fixed MWh and a percentage of the Account Credited Energy Volume.

Proposed Plan for Change – Option 1 = 17 weeks



Proposed Plan for Change – Option 2 = 18 weeks

ID	Task Name
1	**MP26 DLIA Option 2**
2	Project Management
3	**Project Support**
4	Project Startup
5	**Design**
6	High Level Design
7	External Consultations
8	Module Design
9	External Interface Design
10	Database Design
11	Logica Review
12	Determine Document Changes
13	ELEXON Review
14	Rework
15	**Documentation**
16	IDD Changes
17	ELEXON IDD Review
18	IDD Review Comments
19	Release IDD
20	URS Changes
21	ELEXON URS Review
22	URS Review Comments
23	Release URS
24	**Development**
25	Development Team Leading
26	**MP26 Option 2**
27	Code
28	Test
29	**Change to Operational Procedures**
30	IMServ Procedural Documentation
31	Change Helpdesk Procedures
32	Change 2nd Line Procedures
33	Change 3rd Line Procedures
34	Changes to Helpdesk reporting procedures
35	Document Review
36	IMServ Operator Training
37	**Patch Release**
38	Test Management
39	**Release Management**
40	Plan Release Schedule
41	Specify detailed Test plan
42	Specify environment needs
43	Assess Impact of lower speced box to tests
44	Plan Environment
45	Determine Patch Difference Between Test & Live
46	Rectify Patch Difference
47	Restructure NETA teams to implement testing
48	**Patch Test Specification**
49	Analysis of needed patch test updates
50	Update Patch Test Scripts
51	Update/Create Test Data And Expected Results
52	Review Patch Tests
53	Rework
54	Provision of Patch Test Package
55	ELEXON Review of Package
56	Agree Review Comments
57	Specification of additional ELEXON defined tests
58	Rework on Patch Test Package
59	**Test Strategy**
60	Specify Test Strategy
61	ELEXON review
62	Review comments
63	**Deployment Specification**
64	Review release documents
65	Provide full release list to ELEXON
66	ELEXON Review
67	Document Deployment Instructions
68	Deployment Procedure Acceptance
69	**Build Creation**
70	Create software build
71	Create Build Release documentation
72	Review Build documentation
73	Rework on Build documentation
74	Build Software to deployment executable
75	Build ready for deployment
76	**Test Environment Setup**
77	Apply any OS patches that have been applied to NETALIVE
78	Setup hardware configuration (NT boxes + Unix)
79	Synchronise NETALIVE and test directory heirarchies
80	Install build #1 and conduct build tests
81	Prepare test scripts for running / simulating test data
82	**Performance Testing**
83	Performance Testing
84	**Patch Testing**
85	Test Team Leading
86	Run Patch Tests
87	Review Patch Test Results
88	**Create Patch Release**
89	Create Release Documentation Set
90	Agree Deployment Date With ELEXON
91	Patch Acceptance
92	Inform participants of scheduled down time
93	Deploy release to NETALive
94	Patch Go Live
95	Deposit Updated software to Escrow
96	Patch complete



Has the customer has indicated this is a competitive change			No
	Service Provider Plan for competition		
	Risks/Constraints of competition		
	Service Provider plan for incorporation of change including testing		
	Documentation to be produced by Service Provider to enable competition according to plan above		
	Indicative costs of Service Provider role in competition		
For Change Notice only – to be completed by the Customer			
Basis for payment			
Agreed Customer Caused Delay: Yes/No **If Yes, amount of delay**			
Date Change to become effective.		**Is this to be a Release Date? Yes/No**	
Other items as required under the Change Management Procedures			

d DLIA of Modification P26 Implemented with Modification P27

The following represents the Detailed Level Impact Assessment received from the Central Service Provider for the implementation of Modification P26 in conjunction with the changes required to support Option 3 of Modification P7 (Reference 5 and 6).

NETA Change Form

To be completed by the Originator						
Change Request ID (to be provided by the Customer) P26 (Option 1) and P27 (Option 3) Logica reference:			Service affected SAA/BMRA			
Change Request Name: ICR145 and ICR146			Combined P26 and P27			
Agreement by the customer to proceed to the next stage						
	High Level Assessment	Detailed Level Assessment	Change Quotation	Implement Change	Emergency Fix Report	Change Request under Clause 14.2 (delay)
Tick which stage is being requested		✓				
Signed by Customer Baseline Manager						
Signed by Customer Contract Manager						
Date of agreement to proceed to next stage					n/a	n/a
Date this stage to be completed by		28/09/01				

Configuration of Service(s) (baseline affected)	
Assumed Changes (over baseline)	.
Priority	High/Medium/Low
Identified by : Sandy Blows	Date Submitted: 07/09/01
Description of Change See attached original P26 (O1) & P27 (O3) .	
Reason for Change (benefits) See attached original P26 (O1) & P27 (O3)	
Implications of not making the change See attached original P26 (O1) & P27 (O3)	
Attachments/references	P26 (O1) & P27 (O3)
Competition Item Yes/No/n/a	Reasons for Competition
If Change Request made under Clause 14.2 (delay)	Required supporting information attached

To be completed by the Service Provider			
	High Level Assessment	Detailed Level Assessment	Change Quotation
Tick which stage is being completed		✓	
Signed by Service Provider Contract Manager			
Date		28/09/01	

Validity period of costs/prices	Change Quotation	
	Change	30 days

Does the change involve any changes to the System or Services	Yes
Would the undertaking of a Detailed Level Assessment or Change Quotation delay the Trigger Milestone or the Planned Go-Live Date before Go Live or any Release Date after Go Live	N/a
If Yes – specify which Milestones/Release Dates would be affected	N/a
Impact on any Milestones of incorporation of change	N/a

Indicative impact on resources for change incorporation	Phase of the work			
	Design	Build	Test & Trial	Operate
Labour				
Materials/3rd Party				
Impact on Service Levels	None			
Impact on IDD	Yes			

Price for Detailed Level Assessment		Indicative/firm
Price for Change Quotation		Indicative/firm
Price for Change		
P26 (Option 1) and P27 (Option 3)	£508,871 (ex VAT) to develop and implement this change £7,633 (ex VAT) per month to operate and maintain	Firm Firm

Assumptions for the above Price:

- The price quoted for this change is based on the assumption that it is not developed in parallel with Release 2
- The pricing does not include any additional reporting requirements other than those explicitly detailed in the P26 and P27 change details.
- This change will be implemented as a patch with localised integration testing.
- Depending on which options are selected, deployment will require a planned outage.
- Interface testing for new data sources is excluded from the prices for the P27options.
- Participant testing is excluded from the price and any required is expected to be charge T&M.
- The functionality for the P26 and P27 option is still separate, but the development will be done at the same time.
- Logica will invoice 30% on receipt of CN or authorised start of work, 50% on completion of acceptance tests, 20% on deployment or one month after completion of acceptance tests, whichever is sooner.
- The Service Description will have been updated by ELEXON and agreed with Logica prior to commencement of work.
- For all formal documentation which is subject to review, Logica shall provide one draft issue to the Client. The Client shall review and provide written comments on, or its acceptance of, such documentation within 5 working days of such delivery.
- Within reasonable levels, ELEXON will make available appropriate staff to assist Logica during the development of this change
- There will be no new Service Levels.
- The O+M charge has been estimated as a proportion of the price.

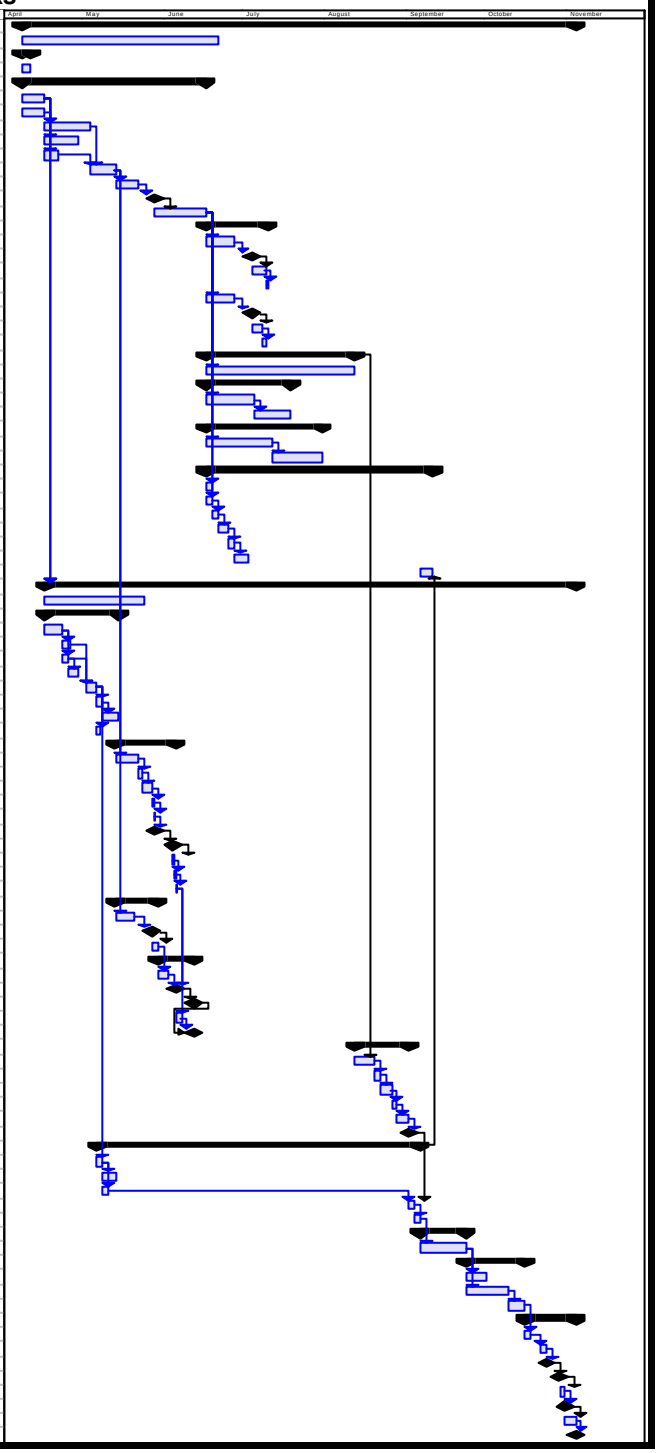
If the change is to be incorporated after Go Live, is this change proposed to be a patch or release		
If patch, expected time of incorporation		
If release - what release number	Release number	
Date	Release Date	
For High Level Assessment only – is it a Detailed Level AssessmentYes/No	If No, estimate of time and resources required to complete	

Resources Required to undertake	Detailed Level Assessment	Change Quotation
Labour		
Materials		

Consequential amendments to base line:	
Proposed method of Change/ Work statement	P26 Option 1 uses a fixed MWh Trading Neutrality Band. and P27 Option 3 involves having no new data calculated or displayed by BMRA.

Proposed Plan for Change = 32 weeks

ID	Task Name
1	**MP26 O1 & MP27 O3 DLIA**
2	Project Management
3	**Project Support**
4	Project Startup
5	**Design**
6	High Level Design
7	External Consultations
8	Module Design
9	External Interface Design
10	Database Design
11	Logica Review
12	Determine Document Changes
13	ELEXON Review
14	Rework
15	**Documentation**
16	IDD Changes
17	ELEXON IDD Review
18	IDD Review Comments
19	Release IDD
20	URS Changes
21	ELEXON URS Review
22	URS Review Comments
23	Release URS
24	**Development**
25	Development Team Leading
26	**MP26 Option 1**
27	Code
28	Test
29	**MP27 Option 3**
30	Code
31	Test
32	**Change to Operational Procedures**
33	IMServ Procedural Documentation
34	Change Helpdesk Procedures
35	Change 2nd Line Procedures
36	Change 3rd Line Procedures
37	Changes to Helpdesk reporting procedures
38	Document Review
39	IMServ Operator Training
40	**Patch Release**
41	Test Management
42	**Release Management**
43	Plan Release Schedule
44	Specify detailed Test plan
45	Specify environment needs
46	Assess Impact of lower speced box to tests
47	Plan Environment
48	Determine Patch Difference Between Test & Live
49	Rectify Patch Difference
50	Restructure NETA teams to implement testing
51	**Patch Test Specification**
52	Analysis of needed patch test updates
53	Update Patch Test Scripts
54	Update/Create Test Data And Expected Results
55	Review Patch Tests
56	Rework
57	Provision of Patch Test Package
58	ELEXON Review of Package
59	Agree Review Comments
60	Specification of additional ELEXON defined tests
61	Rework on Patch Test Package
62	**Test Strategy**
63	Specify Test Strategy
64	ELEXON review
65	Review comments
66	**Deployment Specification**
67	Review release documents
68	Provide full release list to ELEXON
69	ELEXON Review
70	Document Deployment Instructions
71	Deployment Procedure Acceptance
72	**Build Creation**
73	Create software build
74	Create Build Release documentation
75	Review Build documentation
76	Rework on Build documentation
77	Build Software to deployment executable
78	Build ready for deployment
79	**Test Environment Setup**
80	Apply any OS patches that have been applied to NETALIVE
81	Setup hardware configuration (NT boxes + Unix)
82	Synchronise NETALIVE and test directory heirarchies
83	Install build #1 and conduct build tests
84	Prepare test scripts for running / simulating test data
85	**Performance Testing**
86	Performance Testing
87	**Patch Testing**
88	Test Team Leading
89	Run Patch Tests
90	Review Patch Test Results
91	**Create Patch Release**
92	Create Release Documentation Set
93	Agree Deployment Date With ELEXON
94	Patch Acceptance
95	Inform participants of scheduled down time
96	Deploy release to NETALive
97	Patch Go Live
98	Deposit Updated software to Escrow
99	Patch complete



Has the customer has indicated this is a competitive change			No
	Service Provider Plan for competition		
	Risks/Constraints of competition		
	Service Provider plan for incorporation of change including testing		
	Documentation to be produced by Service Provider to enable competition according to plan above		
	Indicative costs of Service Provider role in competition		
For Change Notice only – to be completed by the Customer			
Basis for payment			
Agreed Customer Caused Delay: Yes/No **If Yes, amount of delay**			
Date Change to become effective.		**Is this to be a Release Date? Yes/No**	
Other items as required under the Change Management Procedures			

ANNEX 5 – TRANSMISSION COMPANY ANALYSIS

The following represent the analysis received from the Transmission Company in response to the Initial Consultation of Modification P26, and from the Impact Assessment of the Requirements Specification (Reference 3) respectively.

a Initial Consultation Response

P26_ASS_008

RESPONSE FROM NATIONAL GRID
MP26 MARKET DRIVEN NEUTRALITY BAND

We note that the argument in favour of this modification is that participants can't balance to an accuracy of less than 20MWh and therefore they should be subject to a relatively benign imbalance price. However, we do not support the modification as currently drafted for the following reasons: -

- it provides an incentive to 'disaggregate' ie. to get as many small accounts as possible.
- it could lead to an increase in imbalance volumes if all accounts exploit the full value of the neutrality band in the same direction.

The two main arguments in favour of the proposal appeared flawed for the following reasons: -

1. Restoring the markets ability to balance. However, if the participants are currently over contracting by a 'safety margin' this will only happen if the 'safety margin' is less than 20MWh.
2. The inability to trade small volumes. However, on the Power Exchanges it is possible to buy 'part offers' down to 1MWh lot sizes.

Yours faithfully
Richard Lavender
Market Issues Analyst

b Impact Analysis

Conversion of a faxed IA response (electronic to follow):

CPC041 – DLIA Request for Modification P26 and Modification P27

Specific comments for P26

How much notification do you require?	Days or weeks depending upon SAA-I014 Impact.
Do the changes impact your organisation?	Yes

Comments:

As a recipient of the SAA-I014 report we will need to co-ordinate our systems with any changes to the report. This is not anticipated to be difficult providing the Interface Definition Document (IDD) is available with sufficient notice.

Due regard should be given to the potential interaction of P26 and P34 if both were implemented, as P34 proposes a mechanism whereby an exact volume of a balancing service may be calculated whereas P26 will implement a balancing tolerance.

We note that the Proposer states that P26 will “satisfy the applicable BSC Objective of facilitating competition between generators and between suppliers”. However, we believe that the likely increase in the imbalance volumes that the System Operator has to reconcile, runs counter to the applicable BSC and Transmission Licence objectives of efficient and economic and co-ordinated operation of the Transmission System and hence we do not support this Modification as currently drafted.

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BCA

Organisation: National Grid

Date: 24/09/01

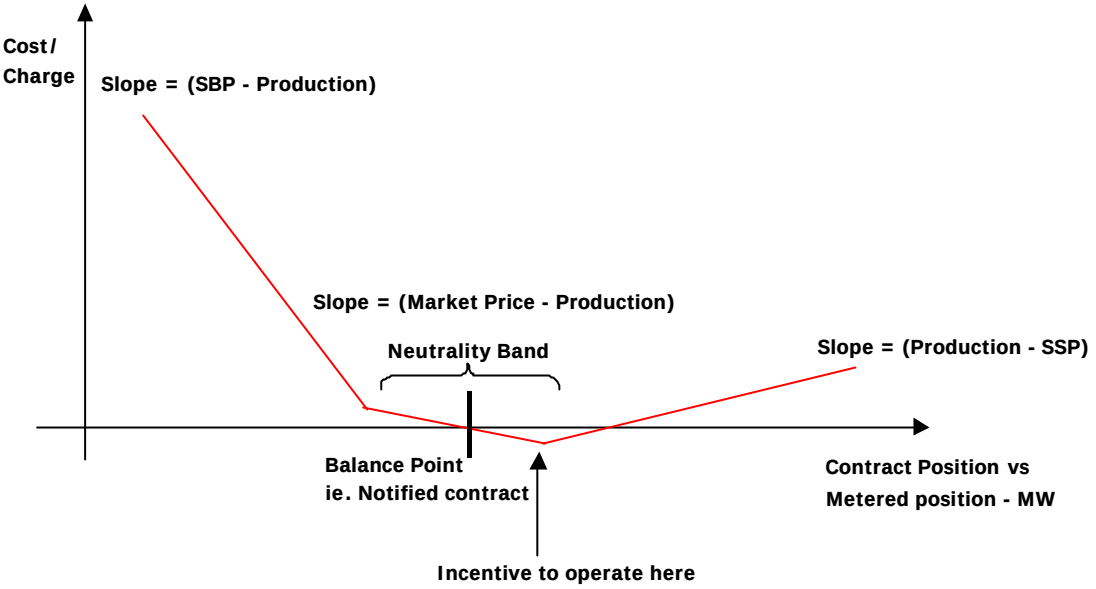
Addendum to CPC041 - DLIA Response to Modification P26 and Modification P27

Specific comments on Modification P26

We have reservations concerning whether this modification better meets the relevant objectives of the BSC. In assessing this modification it should be assumed that the imbalance prices SBP/SSP are cost reflective. *(Note: if there is any disagreement with this statement then modifications should be sought to solve this discrepancy directly instead of mitigating their effects with second order modifications)* Furthermore, if SBP/SSP are correctly reflecting the costs imposed on the system why should Parties be given relief? Market participants should be free to respond to the economic signals of SBP/SSP. Any relief from SBP/SSP will distort the economic incentive and hence encourage parties to offset their notified contracts and maximise the benefit of this distortion. This will tend to move the system away from the economic optimum.

In our initial response to CPC041 we stated that "the likely increase in the imbalance volumes that the System Operator has to reconcile, runs counter to the applicable BSC and Transmission Licence objectives of efficient, economic and co-ordinated operation of the Transmission System". The reason for this can be seen by considering the incentive given to generators if such a neutrality band were to be introduced. The following graph represents the incentives on a contracting generator assuming that the incremental cost of production is less than the Market price.

Around the Balance Point is the Neutrality band, where the Cost/Charge to the generator will increase by (Market Price - Production Cost) if short or will reduce by (Production Cost - Market price) if long. It can be seen that parties who operate at the upper end of the neutrality band will maximise their income and minimise the chance of production problems leaving them exposed to SBP.



Comment on Structure/Content of Draft Assessment Report

Section 8.2 - Master connection and use of System Agreement (MCUSA)

On 18th September 2001 MCUSA was replaced with Connection and Use of System Code (CUSC).

It has come to our attention that if P26 were implemented then National Grid would be potentially compensating mandatory frequency responsive plant for larger imbalance volumes than they have incurred. Hence, an amendment would be required to the CUSC in the formula used to calculate these payments from National Grid (CUSC 4.1.3.9).

Amendments to the CUSC may take up to 5 months, however, with the agreement of the Authority amendments may deviate from the 'normal' route and be considered as an 'Urgent Amendment Proposal' which follows a similar process to Urgent BSC Proposals.

ANNEX 6 – ELEXON ANALYSIS

The following represents the ELEXON impact Assessment for the amendments required to support Modification P26 or the Alternative Modification for P26.

ELEXON Web Site

Impact Assessment

The Requirement

This Impact Assessment has been prepared in response to the requirement that ELEXON provide the Neutral Price for each Settlement Period in a Settlement Day, published on the ELEXON (BSC) website (displayed for a period of 30 days) as detailed in Modification Proposal P26: Market Driven Trading Neutrality Band.

Information will be represented on the web site in the format:

Settlement Date

Settlement Period (1 – 50)

Neutral Price (£ / MWh)

The following assumptions have been made:

- The provision for publishing information to the ELEXON website is only possible during a standard business working day.
- Implementation will not be required prior to the 1 February 2002[21]

[21] Budgeted workload and potential resourcing constraints will prevent the implementation of the proposed solution prior to February 2002.

Assessment

(i) A new section or new pages within the "Market Data" section of the website will need to be designed, tested and implemented.

Task	**Elapsed Time**	**Cost**
Analysis of Requirement	2 days	
Graphic Design of Section	3 weeks	
Design of Functionality	3 weeks	
Review + Amendments	1 week	
Testing	2 day	
Installation	1 day	
TOTAL	**5 weeks**[22]	**£17,500**

To maintain the data on the website and meet the ongoing requirement to provide "Neutral Price" information as detailed in Modification Proposal P26; two possible solutions are available.

Option 1

Receive data manually and place into a dedicated directory for publishing to the 'live' ELEXON website. An average of 2 hours of 'man effort' per day at a cost of £125 per day, assuming that information may only be provided during normal business hours. This solution is subject to manual error.

Option 2

Deploy a web publishing technology that would enable files to be automatically FTP from source to a dedicated directory on the 'live' ELEXON web server. The total cost of implementing this solution is £4000 and six 'man day's effort. This level of automation is recommended to reduce the margin of error and provide an enduring solution that will not incur long-term costs.

Summary

To deliver solution i), detailed in the Assessment phase above, the lead time for developing, testing and implementing would be 5 weeks and cost the order of £17,500.

To deliver Option 2, of Assessment ii), the lead time for developing, testing and implementing the solution would be 6 days and cost the order of £4000.

The intention of this impact assessment is to provide high level information only. A tolerance of +/- 30% should be applied to all estimated cost and timescale information.

[22] The Graphic Design of Section and Design of Functionality tasks will run concurrently, therefore making it possible to deliver this requirement in a shorter timescale.

High Level Impact Assessment of Modification P26 - Trading Operations

P26 will impact operations in the following way:

1/ TOMAS will have to be updated to accommodate the changes to the I014 sub flows 2 and 3;

2/ It is assumed that the Panel, having to set the Neutrality Band, would want a limited element of modelling the effect of different neutrality bands on party costs;

3/ Several operational queries that determine party costs would have to be re-written.

These will all have a development and implementation cost associated with them. Point 2 will also have an ongoing operational cost.

Development and Implementation

It is assumed that points 2 and 3 can be satisfied by amending operational queries (i.e. they will not require any more complex development). Based on this assumption, they are likely to be of the order up to 10 man days in total to write and test.

The costs associated with point 1 will be largely dependent on whether TOMAS is still being used to set the system prices (this is dues to end in March 2002). If it is not, and the development can be run as a mini project within Trading Operations, it is likely to entail of the order of up to 30 man days work. If it is, and a more substantial project is required, this figure could be far in excess of this - largely because of the additional testing levels and project infrastructure that would be required - this is difficult but I would estimate that it could be up to 90 man days.

Ongoing Operational Cost

It is assumed that modelling the effect of the price neutrality band will be limited to one day a month. That is a an estimate of 12 man days a year.

In summary, based on the assumptions above and an average day rate of £500, the estimates are as follows:

Development and Implementation:

Whilst TOMAS set system prices:	**£50,000**
After TOMAS has finished setting system prices:	**£20,000**

Ongoing Operational:	**£6,000 per year**