06 April 2001

URGENT MODIFICATION REPORT

MODIFICATION PROPOSAL P3

Correction of Price Spikes Generated By De-Minimis NGC Purchases

Prepared by ELEXON on behalf of the Balancing and Settlement Code Panel

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b Distribution

Name	Organisation
Ofgem	
BSC Panel	
Modification Group	
Parties and interested third parties	

c Intellectual Property Rights and Copyright

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1 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.

This Modification Report is addressed and furnished to the Gas and Electricity Markets Authority ('the Authority') and none of the facts, opinions or statements contained herein may be relied upon by any other person.

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

2 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 by the Authority, ELEXON is responsible for overseeing the implementation of that amendment (including any consequential changes to systems, procedures and documentation).

The modification procedures culminate in a modification report to the Authority, which normally contains the Panel's recommendation on whether or not a proposed modification should be approved and a proposed date for its implementation, together with a detailed assessment of the proposal in question. The report forms the basis upon which the Authority will decide whether to approve, direct or reject a modification proposal.

The Transmission Company or ELEXON may recommend that a Modification Proposal be treated as urgent, subject to approval by the Authority. The procedure for progressing an Urgent Modification Proposal is set out in Sections F2.9 and B4.6 of the Code. These urgent procedures allow the normal modification procedures to be circumvented as necessary to fit with the urgency of the matter. In such cases, the Authority will confirm the timetable and procedure that should apply. The timetable and procedure directed by the Authority must be adhered to, along with any other special instructions. A statement containing the reasons why the Panel (or Panel Chairman) consider the Proposal should be treated as urgent must be included in the Urgent Modification Report, together with a description of the extent to which the procedure followed deviated from the normal modification procedure.

Depending on the urgency of the matter, it may not be possible to establish a Modification Group or undertake detailed assessment of the modification proposal. The level of detail and analysis presented in this Urgent Modification Report therefore represents the full extent of relevant information regarding the modification proposal that could be collated within the time available.

3 DESCRIPTION OF PROPOSED MODIFICATION

On 28 March 2001 Electricity Direct submitted a proposed modification to the BSC that it said would prevent the occurrence of price spikes when option fees paid by NGC for provision of reserve (and other balancing contracts) are included in the numerator of the energy imbalance price calculations, but there is a very small volume of accepted offers (or bids) in such periods. In its submission Electricity direct said that:

1. NGC's Balancing Services costs in a period that are part of BCA but are not associated with a direct energy purchase (i.e. Aggregated standing reserve option fees + Aggregated Firm regulating reserve option fees) should be included as an entity in the BSC as "Buy Option Fees" (BOF).

2. Whenever the contribution of BOF to the SBP is greater than [25]% this contribution should be capped at [25]%.

3. A new entity "Buy Option Cost" (BOC) should be the Buy Option Fees capped at [25]% of SBP.

A copy of the Modification proposal, is available on the ELEXON website (www.elexon.co.uk) and is replicated in Annex 6 of this document. Details of the Modification and the alternative proposals considered by the Modifications Group are described in Annex 1 of this document.

4 EXTENT TO WHICH THE PROPOSED MODIFICATION WOULD BETTER FACILITATE THE APPLICABLE BSC OBJECTIVES

The Proposer states that the Proposed Modification better facilitates the BSC objectives as follows:

'The Applicable BSC Objective is:

BSC Section B1.2.2 (b) (iii) promoting effective competition in the generation and supply of electricity, and (so far as consistent therewith) promoting such competition in the sale and purchase (as defined in the Transmission Licence) of electricity;

Spurious price spikes raise the cost of risk and hence act as a barrier to new entrants.'

5 URGENCY

The Modification Proposal has been treated as urgent on the basis that the proposal seeks to ameliorate a perceived distortion in the imbalance price calculations. The implication of these circumstances is that the trading arrangements may be significantly impacted by such a distortion and any potential amelioration should be agreed upon at the earliest opportunity. The proposal to treat the Modification on an urgent basis was agreed by the Panel and endorsed by the Authority.

Given that it was perceived that a distortion in the energy imbalance pricing arrangements arises from the current allocation of option fees in the energy imbalance price calculations, it was believed that a failure to ameliorate the situation would necessarily perpetuate an undermining of the efficient operation of the trading arrangements. Therefore, any modification to remove any such distortion must better facilitate the achievement of the Applicable BSC Objectives in the Transmission Licence.

Given the possibility of a significant distortion in prices, it was considered that a failure to address this issue urgently would be inconsistent with the achievement of the Applicable BSC Objectives.

6 DETAIL OF PROCEDURE AND TIMETABLE FOLLOWED

The key steps that have been adopted in progressing this Urgent Modification Proposal are as follows:

- On 29 April 2001, ELEXON recommended that Modification Proposal P3 be treated as an Urgent Modification Proposal.

- In accordance with the procedures set out in F2.9 of the BSC, the BSC Panel Chairman was able to obtain the views of seven Panel Members all of whom supported the recommendation that the Modification Proposal be treated as urgent. This view was subsequently ratified by the Authority. The Authority also agreed the process and timescale as described below.

- Having obtained the necessary confirmations that the Modification Proposal should be treated as urgent, an initial assessment of the proposal was prepared by ELEXON for consideration by a Modification Group.

- This initial assessment was presented to a Modification Group on the 3 April 2001 and considered by the Group. The Group comprised ELEXON technical experts, NGC representatives, Ofgem representatives and industry experts; a full listing of members is given in Annex 2.

- Following discussion at the Modification Group meeting, this Urgent Modification Report was drafted and issued for consultation on 3 April 2001, with a request for comments by 4 April 2001.

- Comments received as a result of the consultation were assimilated and presented to the BSC Panel at its meeting of the 5 April 2001. The BSC Panel considered the draft Report and made a number of recommendations and observations to the Authority, as set out in Section 3 above.

- Deviations from the normal Modification Procedures (as prescribed by Section F of the BSC) were as follows:

  - The Initial Written Assessment was presented directly to the Modification Group, rather than to the BSC Panel.

  - The membership of the Modification Group was agreed by the BSC Panel Chairman, rather than by the BSC Panel.

  - Representations of Parties and interested third parties were not obtained and assessed by the Modification Group, but were considered by ELEXON and presented to the BSC Panel, following the Modifications Group deliberations.

- No Assessment Report has been produced, but some analysis supporting the recommendations has been undertaken and is included in Annex 1 of this document.

7 PANEL RECOMMENDATION

At its meeting on 5 April 2001 the Panel considered the Modification Proposal. It noted the recommendations of the Modification Group contained within Annex 1 of this report that:

a) The Modifications Group (including the Modification Proposer) overwhelmingly supported the implementation of a short-term solution, which was to disregard option fees entirely in the calculation of Energy Imbalance price.

b) The general sentiment was that such option fees should not be included in imbalance prices in either the short term or in the longer term. However, it was recognised that in its August 2000 Consultation document[1], Ofgem concluded that "... energy imbalance prices should, as far as possible, reflect the costs of all energy balancing costs whether incurred in the Balancing Mechanism or through energy balancing contracts purchased ahead of Gate Closure".

c) The solution judged to best achieve BSC objectives that did incorporate option fees in the imbalance price calculations (the "Ex-Ante Capability Price" option) would be relatively cumbersome to implement immediately from a practical perspective In order for it to be implemented more properly, it would require changes to BSC systems that would have timescale implications for implementation;

d) The option of disregarding option fees is simple to implement and (based on the data analysis available in the timescales for considering the Modification) appears to constitute a good approximation to the solution that did incorporate option fees, but which was less practicable to implement;

e) Regarding implementation, the Modifications Group noted Ofgem's statement on NETA Imbalance Settlement arrangements issued on 3rd April, which stated that "If accepted, modifications to the Balancing and Settlement Code and Balancing Services Adjustment Data (BSAD) methodology would have effect from 00:00hrs am on 5 April 2001";

f) A parallel consultation was being conducted by NGC[2] on two alternative revisions to the Balancing Services Adjustment Data Methodology Statement. The first of which supports disregarding option fees and second of which would be consistent with the Ex-Ante Capability Price option and therefore no changes should be made to the BSC, Code subsidiary documents or associated systems in relation to Modification Number 3;

g) In accordance with F2.9.7 if an Urgent Modification is made as a result of this consultation and the resulting recommendation, the Panel will submit this modification to a review by a Modification Group to consider and report as to whether an alternative modification would better facilitate achievement of the Applicable BSC Objectives. The terms set by the Panel should state that the review should include whether the incorporation of Option Fee costs in Imbalance prices is required to achieve the BSC Objectives. It would be likely to be

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[1] "Initial proposals for NGC's system operator incentive scheme under NETA, A consultation document and proposed licence modifications", August 2000
[2] Additional information is available on the NGC website www.nationalgrid.com/uk (balancing services home page, what's new?)

necessary to co-ordinate such a review with NGC in order to take into account any interactions with the Balancing Services Adjustment Data Methodology Statement.

The Panel also noted the results of the ELEXON consultation exercise (based on the report of the Modifications Group above) where:

a) A total of 27 responses were received at ELEXON by the deadline of 12 noon Thursday 5th April;

b) 25 supported the interim solution of disregarding options fees within the System Buy Price Calculation (Option 1)

c) 2 respondents were against Option 1 as they felt that any change to the System Buy Price calculation mechanism at this early stage of the market would be reflex action to volatile prices; furthermore

d) 15 respondents recommended a different implementation date to one proposed by Ofgem in its statement issued on 3 April 2001 (ie *"00:00hrs on 5 April 2001")* and proposed a "retrospective" implementation date for Option 1, i.e. from market start "00:00hrs 27th March 2001".

The Panel noted that NGC was consulting on changes to the BSAD methodology which would deliver the effect sought by the Modification Proposal, namely the removal of price distortions. It concluded that, on the basis of the recommendations of the Modification Group, the results of the consultation exercise and the proposed amendments to the BSAD contained in the NGC consultation paper circulated on 4 April 2001 that it would recommend to Ofgem that the Modification Proposal submitted by Electricity Direct should not be implemented and that, in the light of NGC's consultation on proposed changes to the BSAD methodology, no alternative modification was required to the Balancing Settlement Code

The Panel wished to draw Ofgem's attention to the support, both within the Modification Group and in the responses to the consultation, for disregarding options costs in the System Buy Price Calculation. It concluded that, as a matter of urgency, a review should be initiated to establish a longer term solution that might better meet the applicable objectives within the Code. It also said it wished to draw Ofgem's attention to the views of respondents that a temporary solution should be implemented retrospectively, i.e. from 00:00hrs on 27th March 2001 as it was thought that the damage of retrospection is outweighed by the damage caused to market participants from these high price spikes.

ANNEX 1 RESULTS OF MODIFICATION GROUP MEETING

The Modification Group concluded that the treatment of option fees in the energy imbalance price calculations was causing significant distortions in the values of System Buy Price in certain Settlement Periods. This occurred in Settlement Periods where the total quantity of accepted offers was small, the Buy Price Volume Adjustment was small (or zero) and the Buy Price Cost Adjustment was non-zero. It was also noted that it was possible for distortions to occur for similar reasons in the calculation of System Sell Price, but that this had not as yet happened as no option fees had to date been included in the relevant BSAD data that affected System Sell Price.

The Modification Group agreed that correcting the significant distortion in the price calculations would better facilitate the achievement of the relevant objectives of the BSC, in particular, the relevant objectives set down in Conditions 7A(3)(a) to (d) of the transmission licence.

The Modification Group believed that the spurious prices were clearly not being set on an economic basis, and that they were having the effect of undermining market confidence. Furthermore, it was possible that because they placed very high and inappropriate costs on certain parties, they may result in a reduction in competition as companies may wish to withdraw from the market in order to avoid such levels of potential risk. As a consequence, the Modification Group believed that removal of the price distortion would very obviously better achieve the Applicable BSC Objective in Condition 7A(3)(b).

Avoiding exposure to System Buy Price may be achieved by “spilling”. In order to achieve this, Parties can adjust their contractual position to ensure that they are “long”. For generation, this means that they would wish to under-contract (and deliberately spill), whereas for demand, this means that they would wish to deliberately over-contract. The distorted incentive to contract to a level other than the intended physical operating level was also perceived to be inconsistent with the Applicable BSC Objective in Condition 7A(3)(b). Furthermore, to the extent that contract levels are consistent with Physical Notifications prevailing at Gate Closure, the spurious prices provide an incentive for parties to deliberately deviate from their final physical notification position in order to avoid the possibility of being exposed to the spurious prices. This would be likely to disrupt the efficient, economic and co-ordinated operation of the Transmission System (thus undermining the Applicable BSC Objective in Condition 7A(3)(c) of the transmission licence).

The Modification seeks to correct the distortion created by the treatment of Balancing Service option fees in the imbalance prices. However, the proposed Modification may create another (less significant) distortion by arbitrarily capping the effect of the option fees. On the basis of this assessment, in accordance with the provisions of section F of the BSC, the Modifications Group considered alternatives which delivered the same intent. The underlying intent was taken to be the removal of the price distortions created by the existing arrangements for taking account of Balancing Service option fees in the imbalance price calculations.

Generic Mechanisms for Allocating Option Fees

There are a number of ways in which reserve (and other) option fees may be taken into account in the determination of energy imbalance prices. The degrees of freedom that are available in this area include:

i) What proportion of option fees (if any) to include in the imbalance price calculation;

ii) If any, how this is to be pro-rated across Settlement Periods in the year. Sub-options include pro-rating on:

a) expected or actual utilisation;
b) expected or actual capability (availability);
c) other – e.g. all MWh, peak Settlement periods etc;

iii) Whether any associated volume-term is used in the denominator of the imbalance price calculation. Sub-options include:

a) No additional volume (as is the case in the existing BSC Rules);
b) Volume based on contract option quantity;
c) Volume based on utilisation quantity.

iv) Whether to include the adjustment as a price adjustment or as a cost (and possibly volume) adjustment. This is partly contingent on iii).

Modification Proposal and Alternatives

The proposal as originally submitted (Modification P3) seeks to cap the maximum contribution that the option fee is permitted to make to the System Buy Price to 25%.

The Modifications Group concluded that there are, in theory, an infinite number of alternative ways in which the option fees could be taken into account in the price calculation. However, a number of specific alternative modifications have been considered which, it is believed, would deliver the same basic intent as Modification P3. The group acknowledged that an adjustment to the BSAD methodology itself might address the issue; the group recognised that changes to the methodology itself were a matter for NGC.
The options it considered are set down below:

1) **Disregard Option Fees -** Under this option, no adjustment to imbalance prices would be made as a consequence of option fees payable under balancing services contracts.

2) **Ex-Ante Utilisation -** Allocate the total annual contract option fee ex-ante on the basis of expected utilisation. Under this method, it would be necessary to forecast the expected times of contract utilisation. The total contract option fee would be pro-rated across the MWh of contract call off. The Buy Price Cost Adjustment would be changed to reflect the amount of the pro-rated option fee notionally allocated to the period, and the Buy Price Volume Adjustment would be changed to reflect the associated expected utilisation quantity.

3) **Ex-Post Utilisation -** Allocate the total annual contract option fee ex-post on the basis of actual contract call-off. As above, but base the pro-rata allocation on the basis of actual contract call off.

4) **Ex-Ante Capability Price -** Pro-rate the option payment across expected capability quantity. Under this method, the annual option payment would be pro-rated across the MWh of capability under the contract available in periods when the capability is provided. In this way a price (in £/MWh) would be determined and added to the value of Energy Imbalance Price (the proposed BSC changes to support this proposal are set down in Section 8).

5) **Ex-Ante Capability Cost/Volume Adjustments –** Under this option, the option fees are pro-rated across Settlement Periods in which the contract is active, and added into BCA for such periods. The value of BVA is also increased in such periods by an amount equal to the capability of the contract (in MWh).

6) **Ex-Post Pro-Rated on Accepted Offer Volume** – Under this option, the option fees to be paid in relation to a particular period of time (for example a Settlement Day) are pro-rated across Settlement Periods in relation to the aggregate quantity of accepted offers in such periods.

Discussion of Options

Whilst all of the above options are likely to remove the effects of (some of) the recent price spikes there are a number of relative advantages and disadvantages between the options.

One significant issue is whether it is appropriate to include any option fees at all in the determination of imbalance prices. If some or all of the option fees were excluded from the calculation of energy imbalance prices at some stage, it would have the following effects:

i) NGC contract strategy (i.e. whether or not to include an option fee) would significantly affect the costs reflected in energy imbalance prices. If NGC purchased energy through the BM, or via a utilisation only contract, then the costs would be reflected in energy imbalance prices, if option fees were included, then some of the costs would not.

ii) The choice of the proportion of the costs to incorporate is somewhat arbitrary.

The Modification Group overwhelmingly supported an initial approach to disregard all option fees in the energy imbalance price calculations.

If it were decided to include the option fees in the price calculation, two of the natural candidates over which to pro-rate the option fees are contract capability and contract utilisation. Either of these could be determined on an ex-ante or on an ex-post basis. From a utilisation perspective, ex-ante would be based upon when the contract was expected to be called, whereas ex-post would be on the basis of when the contract was actually called. From a capability perspective, ex-ante would be based upon when the capability to provide the service was expected to be made available, and ex-post would be on the basis of when it was made available.

It is assumed that in general ex-ante rather than ex-post allocations of costs are most appropriate. This is because if an ex-post allocation were chosen, significant price uncertainty could be introduced. Also, iterative calculations of the price adjustments would be required as data on actual utilisation became available.

It is also assumed that pro-rating based upon utilisation is undesirable. This is because it is possible that utilisation quantities could be (very) low, (actual utilisation could even be zero). Furthermore it is likely that basing the allocation on forecast utilisation would prove somewhat arbitrary. In the case of reserve contracts, the expected utilisation would be determined on a probabalistic basis. Whilst the total quantity of expected utilisation may be a reasonable forecast of actual utilisation, it is unlikely that the actual Settlement Periods in which the contract would be called would be properly predicted. Ex-ante allocation on a utilisation basis is therefore judged to be less attractive as an option.

Alternative allocations (such as all MWh) would be possible, but would clearly allocate costs to periods in which no service had been provided. Because this is the case, an allocation of costs over periods in which the capability to provide the service is in place is preferred.

Three options based on an ex-ante capability were considered in more detail. These three options were:

i) the Ex-Ante Capability Price;
ii) Ex-Ante Capability Cost/Volume Adjustments and
iii) Ex-Post Pro-Rated on Accepted Offer Volume.

The relative merits of these options were discussed in some detail and were also studied as part of the data analysis carried out by NGC. In general, it was accepted that of these three options, the Ex-Ante Capability Price option should be selected (to the extent that any option fee is to be included at all). This was primarily because whilst the Ex-Ante Capability Cost/Volume Adjustment option was relatively trivial to implement, it resulted in significantly depressed prices in a number of Settlement Periods. This was caused by the fact that the denominator of the price calculation is made significantly larger by treating the option volumes in the same way as utilisation volumes.

The Ex-Post Pro-Rated on Accepted Offer Volume option was rejected partly because it required a post-event recalculation of prices, but more importantly because it did not guarantee that price spikes would necessarily be removed. Price spikes would still occur if, for example, very low quantities of offers were accepted over the entire Settlement Day.

Whilst it was generally agreed that the Ex-Ante Capability Price option did place undue weight on the adjustment from option fees at times of high prices, this effect was believed to be less significant than the relatively large distortions that may arise for small offer quantities under the Ex-Ante Capability/Cost Adjustment option.

Further to debate in the Modification Group, it was decided to recommend that option fees should be disregarded entirely in the price calculations. This option was favoured by the representative of the party who raised the original Modification over the proposal in the Modification. The three options discussed above were considered in the context of which option would be most suitable if it were necessary to develop a solution that included the entirety of the option fees in imbalance prices at some stage. Because the original Modification did not meet this criterion, it was not considered further in this context.

Practical Implementation

There are no practical issues associated with the recommended approach which relies on the separate process of changes to the Balancing Services Adjustment Data Methodology Statement. The changes to NGC's systems and process required to deliver the option of disregarding option fees is also perceived to be very simple to implement (NGC confirmed this at the Modifications Group meeting).

If it were proposed to adopt the Ex-Ante Capability Price option, then changes would need to be made both to the BSAD Methodology Statement and to the BSC. It is envisaged that in the short term, such an approach would be difficult to implement immediately from a practical perspective for the following reasons:

i) Without changing BSC systems, only the Buy Price Cost Adjustment (BCA) and Buy Price Volume Adjustment (BVA) may be amended in order to effect the required changes. The process of duplicating the effect of the Ex-Ante Capability Price option by only amending this data would be relatively cumbersome. It would, for example, be necessary to know the aggregate quantity of accepted offers, and the Transmission Loss Multipliers of associated BM Units in order to determine values of BVA and BCA required to be set. The data required to carry out the calculations only becomes available once a Settlement run has been carried out and so any adjustments would need to be made between Settlement Runs for a particular Settlement Day.

ii) A calculation would be needed following each Settlement run to the extent that the offer volume data (or more likely Transmission Loss Multipliers) changed in each Settlement Run.

iii) Relatively complicated off-line calculations would need to be carried out in relation to each Settlement Period in which option fees were to be taken into account (approximately 20 periods each Settlement Day). This introduces the possibility of error and may raise audit concerns.

An alternative approach which would simplify the calculations, and reduce the likelihood of recalculations being required following each settlement run would be to use values of $ETLMO_j^+$ (and, where necessary $ETLMO_j^-$) instead of the actual Transmission Loss Multipliers. However if this approach were adopted, it would be necessary to either recognise that the prices calculated by Settlement were not exactly in line with the BSC Trading Rules, or to write the BSC so that the trading rules explicitly included the values of ETLMO in the determination of the values of BCA and BVA from the BSAD data sent by NGC. Both these options are regarded as not being viable.

A final option would be to deliver the Ex-Ante Capability Price option via changes to the BSAD Methodology Statement alone, with no associated changes to the BSC. Such an approach would require NGC to undertake the complexities of calculating the required adjustments and would be outside the scope of the BSC.

Additional Issues

It was noted at the Modification Group that it may be necessary to consider the interaction between any changes to the energy imbalance price calculations and NGC's incentive arrangements for managing the costs of BSUoS. Whether or not any changes were needed was recognised as being a matter that was outside the scope of the Modification Group.

It was further noted that NGC has largely finished its tendering process for standing reserve contracts for the current financial year. As this was the case, if it were decided to elect to adopt the recommended option of disregarding option fees, the scope of any concerns over NGC seeking to influence the costs that are reflected in imbalance prices via a particular contracting strategy is not anticipated to be significant.

The options and associated issues are summarised in Table 1 below.

Table 1 - Summary of Options and Associated Issues

	Impact on BSC*	Impact on BSC Systems	Impact on BSAD Methodology	Price Calculation	Issues
Modification Proposal P3	Yes	Yes	No	BOC_j = Min{BOF_j, [0.25]* $\sum_i \sum^n$ {$QAO^n{}_{ij}$ * $PO^n{}_{ij}$ * TLM_{ij}} + BCA_j – BOF_j} SBP_j = {$\sum_i \sum^n$ {$QAO^n{}_{ij}$ * $PO^n{}_{ij}$ * TLM_{ij}} + BCA_j – BOF_j +BOC_j} / {$\sum_i \sum^n$ {$QAO^n{}_{ij}$ * TLM_{ij}} + BVA_j}	i) 25% somewhat arbitrary ii) Not all option fees allocated to SBP/SSP iii) Non-trivial interim manual work-round with potential audit implications.
Disregard Option Fees	No	No	Yes	As per BSC, but with no option fees in BCA/SCA	iv) NGC contract strategy affects composition of prices v) Simple to implement in BSC vi) Changes to BSAD data required to remove option costs.
Ex-ante Utilisation	No	No	Yes	As per BSC, but with pro-rated option fee reflected in BCA, and expected utilisation reflected in BVA.	vii) Not clear how easy ex-ante utilisation is to forecast nor how accurate it will be. viii) Still potential for relatively large price adjustments ix) Simple to implement in BSC, but may cause issues in determination of BSAD from an NGC systems perspective. x) Both expected and actual utilisation ultimately appear in the weighted average calculations if the BM Unit participates in the BM.

	Impact on BSC*	Impact on BSC Systems	Impact on BSAD Methodology	Price Calculation	Issues
Ex-Post Utilisation	No	No	Yes	As per BSC, but with additional pro-rated option fee in BCA. Where pro-rating is undertaken on the basis of actual utilisation.	xi) Adjustments not finalised until year end (this is perceived as very undesirable). xii) Potential for large price adjustments xiii) Potentially NGC Systems issues for determining BSAD.
Ex-Ante Capability Price	Yes	Yes	Yes	$SBP_j = BPA_j + \{\sum_i\sum^n\{QAO^n_{ij} * PO^n_{ij} * TLM_{ij}\} + BCA_j\} / \{\sum_i\sum^n \{QAO^n_{ij} * TLM_{ij}\} + BVA_j\}$ Where BPA_j is the Buy Price Price Adjustment (in £/MWh). This is equal to the total expected annual option fee payments divided by the total expected capacity in periods in which the contract is active. Similar changes would also apply for SSP. See Section 8.	xiv) Requires changes to both BSC and to BSAD data xv) Undue contribution to price calculation from option fees when large volumes of offers are accepted xvi) Short-term “manual” implementation complex with potential audit implications.
Ex-Ante Capability Cost/Volume	No	No	Yes	As per BSC, with additional pro-rated option fee in BCA. Capability quantity (in MWh) would also be reflected in the value of BVA.	xvii) Simple to implement in the BSC on both an enduring and short-term basis. No changes to BSC systems or rules required. xviii) Significant undue influence on price calculation from volume term adjustment in weighted average calculation when small volumes of offers are accepted.

	Impact on BSC*	Impact on BSC Systems	Impact on BSAD Methodology	Price Calculation	Issues
Ex-Post Pro-Rated on Accepted Offer Volume	Yes	Yes	Yes	$SBP_j = (\{\Sigma_i\Sigma^n\{QAO^n_{ij} * PO^n_{ij} * TLM_{ij}\} + BCA_j + \{COF_{jT} * \{\Sigma_i\Sigma^n\{QAO^n_{ij} * TLM_{ij}\} + BVA_j\}/\Sigma_{jT}\{\Sigma_i\Sigma^n\{QAO^n_{ij} * TLM_{ij}\} + BVA_j\}\})/ \{\Sigma_i\Sigma^n\{QAO^n_{ij} * TLM_{ij}\} + BVA_j\}$ Where COF_{jT} is the contract option fee to be allocated in over the period T, and Σ_{jT} is the sum over all Settlement Periods in the period T in which the standing reserve contracts are "armed" – i.e. in which option payments are being made. BCA_j excludes option fees.	xix) Ex-post calculation required xx) High option fees still possible if low quantities arise over the period T. Thus it does not guarantee that the solution will be delivered.

* See discussion above in Section 7 on Practical Implementation. This points out that it would, in principle, be possible to deliver all options via adjustments to the BSAD Methodology alone, rather than via changes to the BSC. However, there may be audit implications of taking this approach.

ANNEX 2 SUMMARY OF CONSULTATION PROCESS

The results of the ELEXON consultation exercise (based on the report of the Modifications Group above) were that:

- A total of 27 responses were received at ELEXON by the deadline of 12 noon Thursday 5th April;
- 25 supported the interim solution of Disregarding options fees within the System Buy Price Calculation (Option 1)
- 2 respondents were against Option 1 as they felt that any change to the System Buy Price calculation mechanism at this early stage of the market would be reflex action to volatile prices; furthermore
- 15 respondents recommended a different implementation date to one proposed by Ofgem ("*00:00hrs on 5 April 2001")* and proposed a "retrospective" implementation date for Option 1, i.e. from market start "00:00hrs 27th March 2001".

ANNEX 3 LEGAL TEXT TO GIVE EFFECT TO THE PROPOSED MODIFICATION

Recommended Approach

No changes to the BSC would be needed if the recommended solution of disregarding option fees were adopted.

Ex-Ante Capability Price in BSC

If it were proposed to adopt the Ex-Ante Capability Price option, and to effect the changes via the BSC, it is proposed that the following BSC changes would be required.

Section T – Replace Sections 4.4.5 and 4.4.6 as follows (bold text indicates changes from existing BSC):

4.4.5 In respect of each Settlement Period, if $\{\sum_i\sum^n \{QAO^n_{ij} * TLM_{ij}\} + BVA_j\}$ is not equal to zero then the System Buy Price will be determined as follows:

$SBP_j = \mathbf{BPA}_j + \{\sum_i\sum^n\{QAO^n_{ij} * PO^n_{ij} * TLM_{ij}\} + BCA_j\} / \{\sum_i\sum^n \{QAO^n_{ij} * TLM_{ij}\} + BVA_j\}$

where $\sum_i$ represents the sum over all BM Units and $\sum^n$ represents the sum over those accepted Offers that are not Arbitrage Accepted Offers and not Trade Tagged Offers.

If for any Settlement Period $\{\sum_i\sum^n \{QAO^n_{ij} * TLM_{ij}\} + BVA_j\}$ is equal to zero, then **if BPA_j is not equal to zero, System Buy Price will be equal to BPA_j, otherwise**:

(a) if for that Settlement Period $\{\sum_i\sum^n \{QAB^n_{ij} * TLM_{ij}\}+ SVA_j\}$ is equal to zero, the System Buy Price for that Settlement Period will be equal to zero;

(b) otherwise, the System Buy Price will be determined as the maximum of System Sell Price and:

(i) the Offer Price of the cheapest Offer available in that Settlement Period:

(1) which has a positive Bid-Offer Pair Number; and

(2) which has an Offer Price greater than the Offer Price of any Offer which is an Arbitrage Accepted Offer in respect of that Settlement Period; and

(3) for which the value of Bid-Offer Volume ($qBO^n_{ij}(t)$) is greater than zero for all spot times t in that Settlement Period;

(ii) or, if no such Offer exists, zero.

4.4.6 In respect of each Settlement Period, if $\{\Sigma_i\Sigma^n \{QAB^n_{ij} * TLM_{ij}\} + SVA_j\}$ is not equal to zero then the System Sell Price will be determined as follows:

$$SSP_j = \mathbf{SPA_j} + \{\Sigma_i \Sigma^n \{QAB^n_{ij} * PB^n_{ij} * TLM_{ij}\} + SCA_j\} / \{\Sigma_i\Sigma^n \{QAB^n_{ij} * TLM_{ij}\} + SVA_j\}$$

where Σ_i represents the sum over all BM Units and Σ^n represents the sum over those accepted Bids that are not Arbitrage Accepted Bids and not Trade Tagged Bids.

If for any Settlement Period $\{\Sigma_i\Sigma^n \{QAB^n_{ij} * TLM_{ij}\} + SVA_j\}$ is equal to zero, then **if $\mathbf{SPA_j}$ is not equal to zero, System Sell Price will be equal to $\mathbf{SPA_j}$ otherwise**:

(a) if for that Settlement Period $\{\Sigma_i\Sigma^n \{QAO^n_{ij} * TLM_{ij}\} + BVA_j\}$ is equal to zero, the System Sell Price for that Settlement Period will be equal to zero;

(b) otherwise, the System Sell Price will be determined as the minimum of System Buy Price and:

(i) the Bid Price of the most expensive Bid available in that Settlement Period:

(1) which has a negative Bid-Offer Pair Number; and

(2) which has a Bid Price less than the Bid Price of any Bid which is an Arbitrage Accepted Bid in respect of that Settlement Period; and

(3) for which the value of Bid-Offer Volume ($qBO^n_{ij}(t)$) is less than zero for all spot times t in that Settlement Period;

(ii) or, if no such Bid exists, zero.

Add the following definitions in Table X2:

Buy Price Price Adjustment	BPA_j	£/MWh	The amount send by the Transmission Company as the 'Buy Price Price Adjustment' in accordance with Section Q6.3
Sell Price Price Adjustment	SPA_j	£/MWh	The amount send by the Transmission Company as the 'Sell Price Price Adjustment' in accordance with Section Q6.3

Amend Section Q6.3.2 as follows:

Q6.3.2 The Balancing Services Adjustment Data shall comprise the following data in respect of each Settlement Period:

(a) Sell Price Cost Adjustment SCA

(b) Sell Price Volume Adjustment SVA
(c) **Sell Price Price Adjustment SPA**
(c) Buy Price Cost Adjustment BCA
(d) Buy Price Volume Adjustment BVA
(e) **Buy Price Price Adjustment BPA**

ANNEX 4 AVAILABLE SUPPORTING INFORMATION AND DATA

NGC has undertaken an analysis of the prices that would have been determined had the price calculations been carried out on the basis of a number of the options set out above.

The options for which the analysis has been carried out are as follows:

Option	NGC Reference
NGC approximate calculation of price based on existing BSC rules	Derived SBP
Value of SBP as reported on BMRS	SBP
Disregard Option Fees	Option 1
Ex-Ante Capability Price	Option 2
Ex-Ante Capability Cost/Volume	Option 3
Ex-Post Pro-Rated on Accepted Offer Volume	Option 4
Original Modification Proposal	Option 5

It is noted that NGC has produced the analysis presented in this section in the limited time available in order to support the progression of the Modification. It is recognised that the calculations are approximate partly because the data is based on data available to NGC and not formal Settlement Data and partly because the calculations have been undertaken on a spreadsheet and may not perfectly duplicate the BSC Trading Rules. The possibility of error in the data and/or analysis is also recognised.

The data provided by NGC relates to 29th March 2001. Some of the data has been presented graphically. The data in relation to all options is also included in the spreadsheet. The Excel Spreadsheet is provided as Attachment 1.

The Modifications Group drew the following conclusions from the data:

i) The spurious nature of the existing treatment of the option fees is self-evident;

ii) None of the options removed the price spike in Settlement Period 15 which was not caused by allocation of BSAD option fees across small accepted offer volumes;

iii) Most of the alternative solutions delivered similar results, with the following general exceptions:

   a) Option 3 produced significantly lower prices in many periods, reflecting the additional volume in the denominator of the weighted averaging that this solution includes. It was generally considered that this solution was inappropriate.

   b) Option 5 produced values approximately 25% higher than the other solutions in a number of Settlement Periods, reflecting the 25% contribution from BSAD option fees.

ANNEX 5 ATTENDEES OF MODIFICATIONS GROUP

Urgent Modifications Group - MP3

Member	Organisation
Justin Andrews	Chairman (ELEXON)
Tony Dicicco	PowerGen
Ben Willis	Yorkshire Electricity
Ian Moss	APX
Martin Mate	British Energy Group
Mike Calviou	NGC
Steve Wilkin	St Clements Services
Paul Mott	London Electricity
Libby Glazebrook	Edison Mission Energy
Maurice Smith	Campbell Carr
John Stewart	Campbell Carr
Mark Trott	BGT
Andrew Murray	Axia Energy
Paul Mott	London Electricity
Nick Simpson	Ofgem
Ilesh Patel	Caminus
Sonia Brown	Ofgem
John Greasley	NGC
Paul Dawson	Enron
John Lucas	ELEXON
Neil Cohen	NETA Programme/ELEXON
Richard Haigh	NETA Programme/ELEXON
Gwilym Rowlands	ELEXON
Nick Durlacher	Panel Chairman (observer)

ANNEX 6- COPY OF MODIFICATION PROPOSAL

Modification Proposal	**MP No: P3** *(mandatory by BSCCo)*

Title of Modification Proposal *(mandatory by proposer)***:**

Correction Of Price Spikes Generated By De-Minimis NGC Purchases

Submission Date *(mandatory by proposer)***:** 27 March 2001

Description of Proposed Modification *(mandatory by proposer)***:**

1. NGC's Balancing Services costs in a period that are part of BCA but are not associated with a direct energy purchase (i.e. Aggregated standing reserve option fees + Aggregated Firm regulating reserve option fees) should be included as an entity in the BSC as "Buy Option Fees" (BOF).

2. Whenever the contribution of BOF to the SBP is greater than [25]% this contribution should be capped at [25]%.

3. A new entity "Buy Option Cost" (BOC) should be the Buy Option Fees capped at [25]% of SBP.

(Algebra attached)

Description of Issue or Defect that Modification Proposal Seeks to Address *(mandatory by proposer)***:**

The issue was pointed out by the BRL Subgroup in BSCP 11/10 ISSUES ASSOCIATED WITH THE PRICE SETTING MECHANISM IN THE BALANCING AND SETTLEMENT CODE (attached).

In a period where NGC is carrying Standing Reserve, if - because the system is basically long, NGC purchases only a small amount of energy then - the resultant SBP can be extremely high.

On 27th March the NGC BCA was set at £2,333.51 per period, for 14 hrs of the day. The smallest recorded non-zero total trade in a period was 1.403MWh of system sell (at 15:30). Given that there is no reason to expect system buy volumes to be signifficantly different from sell volumes, a system buy of 1.403MWh in a period where Standing Reserve fees applied would generate a price of £1,663.23/MWh. This level of price spike can be expected as a regular, perhaps daily occurance, with NGC occasionally buying less than 1MWh (for example, a buy finishing 1 minute after the start of a period could feasibly mean an energy purchase of 1/120MWh hence a price of £280,021.20/MWh).

This undue and unnatural price volatility is a function of NGC's prudent purchase of Standby Reserve, and their acceptance of BM Offers to minimise cost (not price) within a price mechanism that needs further development.

Impact on Code *(optional by proposer)***:**

Impact on Core Industry Documents *(optional by proposer)***:**

Impact on BSC Systems and Other Relevant Systems and Processes Used by Parties *(optional by proposer)***:**

Modification Proposal	**MP No: P3** *(mandatory by BSCCo)*

Impact on other Configurable Items *(optional by proposer)***:**

Justification for Proposed Modification with Reference to Applicable BSC Objectives *(mandatory by proposer)***:**

The Applicable BSC Objective is:

BSC Section B1.2.2 (b) (iii) promoting effective competition in the generation and supply of electricity, and (so far as consistent therewith) promoting such competition in the sale and purchase (as defined in the Transmission Licence) of electricity;

Spurious price spikes raise the cost of risk and hence act as a barrier to new entrants.

Details of Proposer:

Name: William Bullen

Organisation: Electricity Direct

Telephone Number: 01727 842 842

Email Address: Bill.Bullen@electricity-direct.co.uk

Details of Proposer's Representative:

Name: Maurice Smith

Organisation: Campbell Carr Consultancy

Telephone Number: 01494 43 23 23

Email Address: M_Smith@campbellcarr.co.uk

Details of Representative's Alternate:

Name: Robert Barnett

Organisation: Campbell Carr Consultancy

Telephone Number:)1494 43 23 23

Email Address: Rob_Barnett@campbelcarr.co.uk

Attachments: YES

If Yes, Title and No. of Pages of Each Attachment:

De-minimis Price Spike Algebra - 1page

BSCP 11/10 ISSUES ASSOCIATED WITH THE PRICE SETTING MECHANISM IN THE BALANCING AND SETTLEMENT CODE (attached) - 4 pages

ANNEX 7 SUMMARY OF RESPONSES TO ELEXON CONSULTATION ON MODIFICATION PROPOSAL P3

Option 1 Disregard Option Fees

No.	Organisation	For	Against	Implementation	Comment
1	Dynegy	✔		27th March 2001	Also support Option 1 as long term solution
2	Entergy	✔		27th March 2001	
3	Fortum Direct Limited	✔			
4	Scottish and Southern Energy plc	✔		27th March 2001	
5	TXU Energy Trading Ltd		✕		Reflex action, but would support hybrid of Ex-ante and Ex-post utilisation
6	Seeboard	✔			Other price issues need addressing
7	Vattenfall	✔			Other price issues need addressing
8	Axia Energy Europe	✔		27th March 2001	
9	Enron Europe	✔			
10	British Energy Generation Ltd	✔			
11	Eggborough Power Ltd	✔			
12	British Energy Power and Energy Trading Ltd	✔			
13	British Gas Trading Limited	✔		27th March 2001	
14	Scottish Power UK plc	✔			
15	PowerGen	✔			Short term no longer than 3 months
16	Enfield Energy Centre Ltd	✔		27th March 2001	
17	AEP Energy Trading	✔		27th March 2001	
18	Innogy	✔		29th March 2001	
19	Northern Electric	✔		27th March 2001	
20	Cinergy Global Trading	✔		27th March 2001	
21	Edison Mission Energy		✕		Knee Jerk Reaction. Highlight condition 7B of Transmission Licence where requirement exists for 28 day consultation on BSAD methodology.
22	Maverick Energy Limited	✔			
23	British Gas Marketing	✔		27th March 2001	
24	Electricity Direct	✔		27th March 2001	
25	Utility Link Limited	✔		27th March 2001	
26	South Coast Power	✔		27th March 2001	
27	Barking Power	✔		27th March 2001	

Responses received after the 12 Midday deadline.

28	BNFL Magnox	✔		27th March 2001	
29	London Power	✔		27th March 2001	
30	The European Power Source Company		✕		Within a period of one month Elexon should co-ordinate full analysis of alternatives identified in the consultation document.
31	Yorkshire Electricity	✔		29th March 2001	
32	London Electricity	✔			
33	TotalFinaElf	✔			

ANNEX 8 RESPONSES TO ELEXON CONSULTATION ON MODIFICATION PROPOSAL P3

DYNEGY

Mr G Forrester
Elexon
Third Floor
1 Triton Square
London
NW1 3DX

4 April 2001

Dear Gareth,

Modification Proposal P003: Correction Of Price Spikes Generated By De-Minimis NGC Purchases.

Dynegy believe that it is vital that erroneous price spikes are removed from the imbalance prices, to reduce prices to cost reflective levels, as a matter of urgency and we therefore welcome this modification proposal. We would also agree with the modification group that any change must be quick and easy to implement. Dynegy therefore supports the proposal to disregard option fees in the calculation of imbalance prices.

Dynegy believes that the original modification proposal, to limit the contribution of the option fees to System Buy Price (SBP) to 25% of the price, is arbitrary and would still allow imbalance prices to rise to levels that were not truly cost reflective. These prices may, in the longer term, start to drive the forward price curve, pushing up prices to the detriment of customers. We also note that a number of other proposals have been considered, including the price adjustment on the basis ex-ante cost estimates, but agree with the group that the total removal of the option fees is the best long term solution. Given that the actual costs of the option fees are collected via the BSUoS charges, removing any of the fees from imbalance prices seems the most efficient solution.

Dynegy also feel that this proposal can be implemented with minimum correction to software and supporting documents, as well as being low cost. Most importantly the proposal guarantees to deliver against the criteria, so price spikes will be reduced.

Finally, Dynegy would urge Ofgem to consider making this change retrospective. As this is the beginning of a new market and the price spikes have been potentially costly to some players, without any perceivable benefit, there is a good case for a one off retrospective change to all imbalance prices. Dynegy would normally agree that retrospective changes undermine the stability in the market and contribute to regulatory risk, but under the very unique circumstances of new market arrangements we believe that a retrospective change is not only justifiable on economic grounds, but also would be in line with Ofgem's primary duty to protect the interests of customers, who will ultimately end up paying twice for these option contracts. A retrospective change to imbalance prices would also better facilitate the relevant objectives of the Transmission Licence Condition 7A(3), by promoting effective competition in the generation and supply of electricity (charging cost reflective price to players). The modification also promotes efficient implementation of balancing and settlement arrangements, again achieving the objectives set out for NETA.

Dynegy urge Ofgem to accept the modification recommendation to remove options prices from imbalance prices and to make the change retrospective. By removing the price spike distortions the objectives set out in Condition 7A of NGC’s transmission licence would be achieved from the NETA “Go Live” date.

Yours sincerely

Lisa Waters

Senior Regulatory Analyst

Entergy

Entergy Wholesale Operations
Equitable House
47 King William Street
London EC4R 9JD
TEL. 020 7337 8200
FAX. 020 7337 8201

4 April 2001

URGENT MODIFICATION REPORT

MODIFICATION PROPOSAL P03

Correction of Price Spikes Generated by De-Minimus NGC Purchases

In response to the urgent modification report issued on 4 April, Entergy Wholesale Operations (EWO) supports the alternative approach of disregarding option fees in the BSAD calculation, which would result in no adjustment to imbalance prices as a consequence of option fees payable under balancing services contracts. This is both the most economically sound and most efficient solution. Changes will only be necessary to the BSAD methodology, not the BSC, and as such will prove quick to implement.

EWO does not support Ofgem's statement that the modification should have effect from 00:00hrs on 5 April. Given the already acknowledged urgent nature of the modification it is argued that the modification should be applied retrospectively with effect from 00:00 hrs on 27 March 2001. As mentioned above, the solution supported by EWO is done so on the grounds of economy and efficiency. If the BSC modification P03 were sought and agreed this would take considerably longer to implement and even though it would be back-dated to 28 March (the date on which notice of the modification was served) the interim period would carry significant cost and risk for participants. EWO is not alone in its wish for retrospective application and it urges the BSC Panel to recommend to the Authority that it use its discretion and allow retrospective application of the modified BSAD methodology; this is in the best interests of all parties. EWO does not feel that any retrospective change should set a precedent for the future.

Melanie K Wedgbury

Melanie K Wedgbury
Senior Manager, Regulatory Affairs

Tel: 020 7337 8396
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E-mail: mwedg90@entergy.com

On behalf of Fortum Direct Ltd, having reviewed the report following consultation on modification proposal P3, we are minded to agree strongly with the modifications group and believe the short term solution is to disregard option fees entirely in the calculation of energy imbalance prices (Option 1).

We are in contact with a number of smaller supply organisations where artificially high price spikes are causing untold damage to the balance sheet and will almost certainly lead to the removal of new entrant businesses who would otherwise be contributing to competition and customer choice over the longer term. You are no doubt aware of the organisations I speak of and their separate representation to both yourselves and Ofgem.

Regards

Alan Aldridge

Managing Director
Fortum Direct Ltd
020 7616 1556
07990 898717 (m)
020 7616 1515 (fax)

I would appreciate it if the following comments could be taken in to account when modification P3 is being considered at the BSC Panel meeting tomorrow.

Scottish and Southern Energy plc agree in principle with modification P3 to amend the current pricing mechanism and remove the spurious price spikes caused by the BCA in periods where buy volumes are small. It is inappropriate to have such extreme prices as a consequence of a mechanism rather than market forces. Spurious price spikes increase risk to market participants and are inconsistent with the principle of an efficient market as laid out in the Balancing and Settlement Code. However Scottish and Southern Energy question whether it is appropriate to tackle the problem by capping the contribution to the SBP. We believe this was discussed at some length during a working group meeting on Tuesday. An alternative and more appropriate solution would be to remove this element from the SBP altogether.

It is our view that as the consequence is so extreme, this amendment should be backdated to Go Live to remove all incidences of price spikes caused in this way.

Yours sincerely

Beverley Grubb
Market Development

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Gareth Forrester
Modifications Manager
Elexon Ltd
3rd Floor
1 Triton Square
London, NW1 3DX

04 April 2001

Dear Gareth

Modification Proposal P03: Correction of Price Spikes Generated by De-Minimis NGC Purchases

Thank you for the opportunity to comment on the above Modification Proposal. TXU Europe Energy Trading Ltd (on behalf of all TXU Europe companies) would like to make the following comments on the Urgent Modification Report received today.

First we would like to express our concern at the short timescales that have been afforded this consultation. The proposals contained in the Modification Report could, if implemented, result in a fundamental change to the way in which cashout prices are set, and therefore we believe that the industry should be granted more time to fully assess the possible impact of these proposals.

TXU Europe Energy Trading Ltd (hereafter TXU EET) does not support the proposals put forward in the Modification Report. The cashout prices that have been seen to date are indicative System Prices that do not include any volume adjustment as a result of utilisation of standing/regulating reserve contracts. We feel that it would be unwise to make adjustments to the methodolgy on the basis one week's worth of indicative prices and would prefer to wait until adjusted prices were published that include actual data on the volumes called under the relevant ancillary services contracts, when we will be in a better position to assess whether such a modification is necessary. This Modification Proposal appears to be a reflex reaction to volatile prices that are only to be expected in the early days of a new regime, and over the past few days the market has started to show signs of stability.

TXU EET strongly opposes the suggestion put forward by the Modification Group that option fees should not be included in imbalance prices, and therefore we also oppose the amended Balancing Services Adjustment Data Methodology Statement based on this proposal. We agree with the statement made in Ofgem's August 2000 consultation paper (Initial Proposals for NGC's system operator incentive scheme under NETA) and quoted in the Modification Report, that "…energy imbalance prices should, as far as possible, reflect the costs of all energy balancing costs whether incurred in the Balancing Mechanism or through energy balancing contracts purchased ahead of Gate Closure".

TXU EET believes that cost reflective cashout pricing is fundamental to the success of NETA and that to move away from this by implementing these proposals would undermine the principles on which NETA is based. Indeed in the July 1999 document[3] Ofgem stated that "in principle, imbalance cash-out prices should reflect the full costs of imbalances having to be resolved by the SO over relatively short timescales. These costs will be different from the costs of simply purchasing power on the forwards and futures markets since out of balance participants need also to pay for the costs of making use of balancing services".

Should Ofgem decide to implement one of the proposals put forward in the Modification Report, TXU EET would favour a hybrid of the Ex-Ante and Ex-Post Utilisation options. TXU EET believe that the most appropriate approach to amending the BSAD Methodology Statement would be to apply NGC's anticipated utilisation of balancing services contracts to the Buy Price Volume Adjustment in setting indicative system prices, with actual contract call off used to adjust the price when that data becomes available.

We hope that you have found our comments helpful and that they will be given due consideration. Should you wish to discuss any aspect of this response further please do not hesitate to contact me.

Yours sincerely

Nicola Lea
Market Development Analyst

[3] The new electricity trading arrangements Volume 1, July 1999

With regard to the above mentioned modifications proposal SEEBOARD feels that:

Option 1 to remove option fees from cash-out prices is our favoured option. We have always felt that these costs should be allocated via BSUoS which is smeared over all MWs rather than be charged just to out of balance MWs which when BM volumes are low is going to cause price spikes. The rationale for our argument is simply that all participants benefit from a secure and stable system which reserve option fees help to bring about and not just those that are out of balance.

Option 2 is a bit of a comprise as this still keeps option fees in the cash-out price but distributes them over more half hours. The effect seems to be that spikes will be less acute but those costs will still be in there only now they will not be allocated in the half hours in which they belong. This does not seem very fair if you are out of balance in one half hour but pick up the tab for a number of other half hours.

None of the other three options have support from the expert group and in the timescales have not been analysed fully. Two issues still seem to exist in that:

a) not all spikes seem to be managed by any method and further work should be considered.
b) should this work also include investigation into the appropriateness of negative values of System Selling Price.

Dave Morton
SEEBOARD
0190 328 3465

Vattenfall is basically supporting the proposal outlined in the report to remove the fixed cost elements (option fees etc) from the calculation of SBP and SSP. The fixed costs for guaranteeing a secure operation of the system shall be distributed amongst all users of the electricity system.

We are also concerned about the anomalous System Sell Prices which has been seen and which are not directly addressed in this modification proposal. We believe that it is crucial that the SBP and SSP are calculated in such a way that they represent the real market price for regulation in the system and that they are of corresponding magnitude during a specific settlement period, i.e. the spread between SSP and SSB shall not be "abnormally" wide. A lack of "relevant" system prices will also in a negative way affect the possibilities for a sane development of the short term trading in halfhour contracts.

Our opinion is that once a more adequate way of calculating the system prices (SBP and SSP) has been agreed upon, it should be used for re-calculating these prices from the Go-Live date.

Best regards,

Bo Wahrgren

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AXIA

Energy
Europe

4 April 2001

URGENT MODIFICATION REPORT

MODIFICATION PROPOSAL P03

Correction of Price Spikes Generated by De-Minimus NGC Purchases

Axia Energy Europe Limited (AEEL) supports the alternative approach of disregarding option fees in the BSAD calculation, as described in the urgent modification report issued on 4 April 2001. This calculation change should result imbalance prices will not be affected by option fees payable under balancing services contracts. This is both the most economically sound and efficient solution to an obvious problem. We must repair imperfect balancing methodologies quickly if the new UK power market is to develop.

AEEL supports modifying the BSAD calculation effective from 00:00 hrs on 27 March 2001 given the acknowledged urgent nature of the modification. To give effect from any later time would confirm and compound an admittedly obvious error. As mentioned above, the solution supported by AEEL rests on grounds of economy and efficiency. Full and complete evaluation of BSC modification P3, while inarguably meritorious, would take considerably longer to implement. Even if made effective retrospective to 28 March (the date of service for the notice of the modification), the interim period would carry unacceptably high cost and risk for market participants. AEEL believes the vast majority of the industry supports retrospective application, and accordingly AEEL urges the BSC Panel to recommend the Authority use its discretion and implement retrospective application of the modified BSAD methodology in the best interests of all. We of course recognise that retrospective solution in this instance is not a precedent for solving future issues, if any.

Yours sincerely

/s/

William C. Pitcher
Director, Legal & Regulatory Affairs

Modification Proposal P03

Response by Enron Europe

Correction of Price Spikes Generated By De-Minimis NGC Purchases

4 April 2001

Enron's Recommended Solution

Options fees should be disregarded entirely in the calculation of Energy Imbalance Prices

Rationale for Our Recommended Solution

The inclusion of option fees completely distorts the incentives provided by imbalance prices. Events over the last week have demonstrated this by unduly high system buy prices (SBP) at times when the system is long. The absence of any link between market fundamentals and the level of SBP has led to inertia in the traded market and, perversely, the system being long has resulted in very high levels of SBP - which should signal that the system is short of power. In turn, this has provided incentives for individual participants to get long to protect against the massive price spikes. We are also aware of rumours of market participants seeking to keep generating units off the system as private reserve to protect themselves against perverse price spikes. This undermines the very core of an integrated electricity network and, needless to say, falls far wide of the overriding NETA objective of delivering an efficient and liquid market.

We accept that Ofgem have signalled in the past that energy imbalance fees should reflect the costs of all energy balancing costs including options fees. This appears to stem from a desire not to allow NGC's contracting strategy to unduly influence cash-out prices. While we accept this might be a concern, the purported "cure" has clearly proven to be worse than the illness. The first week of NETA has amply demonstrated that the combination of NGC's actions and the current rules can generate perverse cash-out price incentives and unduly and unreasonably penalise some market participants. This was the inevitable and foreseeable consequence of the economically flawed approach of recovering fixed option fees in half-hourly cash out prices. The economic flaws of the current approach include:

Reserve is a "public good", explicitly procured centrally to protect system security. All market participants benefit from reserve *whether or not they are out of balance.* An individual's consumption of reserve cannot be measured since similar amounts would be procured even if an individual participant was removed from the system. (Indeed this is the definition of a public good.) As with other public goods, the cost of procurement should be socialised amongst those who benefit, ie, all market participants.

As a public good, reserves provide collective “insurance” to market participants. With some insurance – like car insurance – all market participants are required to have a level of insurance to protect against the cost that their actions impose on others (ie, other road users) and individuals are required to pay the premium irrespective of whether the insured event actually incurs. In electricity, reserve provides protection to all market participants against the costs imposed by any individual participant’s actions (eg, a generator trip). In the car analogy, the current rules for calculating SBP are akin to requiring only those drivers who crash to pay everyone else’s car insurance premiums. Needless to say this would completely defeat the point of compulsory motor insurance. (This is not to say that methods for more appropriately targeting the cost of insurance to those most at risk should not be considered.)

Reserve costs are effectively socialised through BSUOS. The inclusion of option fees in cash-out prices therefore merely increases the size of the “beer fund”, generating massive uneconomic and unfair redistribution of revenues between market participants.

Since costs of reserve are handled through BSUOS, the only question is the extent to which a price signal should be provided through cash-out prices. The role of cash-out prices is to provide balancing incentives to market participants. Economically, these incentives should be based on the cost of balancing *in any one individual half-hour.* This cost should comprise the strike prices in any reserve contracts plus the prices of any offers and bids accepted in the balancing mechanism. It should not include the longer-term costs of reserve procurement since charging fixed costs of decisions taken over much longer time periods will inevitably distort shorter-term pricing signals.

In summary, there is no economic justification for putting fixed options fees into cash-out price calculations. The problems that doing so has generated are self-evident in the experience of the last week.

Comments on Alternative Solutions

All solutions which include fixed option fees in the calculation of cash-out prices provide inappropriate incentives to market participants. As the least-distorting of the other five options considered by the Modifications Group, the alternative modification proposal (Ex-Ante Capability Price) is therefore only the “least bad” of the other options for solving the problem of perverse price spikes.

Suggested Way Forward

We accept that there may be some problems with having NGC's contract strategy influence cash-out prices. The appropriate place to address this concern is via the obligations and incentives placed on NGC under their licence and their incentive scheme (rather than by distorting cash-out prices which has a much wider detrimental impact on the market). Having adopted the Modification group's recommendation, we would therefore urge Ofgem to consult on whether NGC's decisions on balancing mechanism trades versus options is likely to significantly distort cash-out prices and, if so, how this might be corrected. In this regard, we note that existing constraints on NGC already provide a good deal of comfort since any uneconomic shifting into (or out of) option contracts would breach NGC's obligations to operate an economic and efficient system and not to discriminate in its procurement and use of balancing services. An appropriately designed incentive scheme would also provide further comfort against any potential distortion.

With reference to the consultations issued today by Elexon and NGC in relation to price spikes in the Balancing Mechanism and proposed revisions to the NGC BSAD methodology, this note gives the view of British Energy Generation Ltd, Eggborough Power Ltd and British Energy Power and Energy Trading Ltd as BSC Signatories.

British Energy support the "no option fees" proposal to remove NGC "balancing services option fees" (ie. costs with no associated actual energy) from BSC Balancing Mechanism price cost adjustments. This change should be easy and fast to implement, is easily understood, and will help reduce the incidence of irrational prices and help restore confidence in the Balancing Mechanism. Valid arguments exist for making this the long term solution. BE are unconvinced that the alternative proposal, for inclusion of an additive price adjustment based on "reserve fixed cost divided by capability" is the correct way forward.

We believe that the original proposal "P3" to cap the allowable contribution of "option fees" to imbalance price at 25% has some merits, but is less attractive than the alternative proposal of removing option fees altogether.

We would also encourage more transparency and faster reporting of NGC Balancing Services cost and volume data, to help wider understanding of the explicit and implicit interactions between balancing services contracts and the BSC balancing mechanism.

The removal of "option fees" from the BSAD data passed from NGC to the BSC should not result in any reduction in transparency of Balancing Services data available to participants.

Regards,

Martin Mate
British Energy

Dear Elexon

Consultation on Modification Proposal P3

We refer to the Urgent Modification Report dated 4 April 2001 on Correction of Price Spikes Generated by De-Minimis NGC Purchases and the recommendations set out on page 8.

In respect of recommendation (2), which notes that NGC has proposed two alternative revisions to the BSAD Methodology Statement, we see at pages 7, 15 and 21 of the report that the P3 Modifications Group decided to recommend that option fees be disregarded entirely in the price calculations. We are told that this was the unanimous view of the Group.

We support the recommendation that option fees be disregarded entirely in the price calculations. We also support the other recommendations on page 8 of the Report.

We infer from the statement issued yesterday by Ofgem that the recommendations, if accepted, will have effect from 00:00 hours on 5 April 2001. We regard this as acceptable but believe that in the unusual circumstances that prevail, there are good grounds for applying the recommendations to prices calculated for settlement periods from 00:00 hours on 27 March 2001.

Yours sincerely

Eldon Pethybridge
For and on behalf of British Gas Trading Limited

ScottishPower

Cathcart Business Park, Spean Street

Cathcart, Glasgow, G44 4BE

Telephone (0141) 568 2313

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4th April 2000

Mr Brian Saunders

3rd Floor

ELEXON

1 Triton Square

London

NW1 3DX

Correction of Price Spikes Generated by De-Minimus NGC Purchases

Dear Mr Saunders,

ScottishPower recognises the requirement for an urgent modification to the BSC to accommodate the issues that have arisen in market operation. In the light of the experience gained since the commencement of trading under NETA, ScottishPower feels that our response to the April 2000 consultation on the Role and Incentives of NGC under NETA is still relevant. In this, we stated:

"There has been considerable progress since the December consultation in the proposals for cost recovery for Balancing Services. We support charge-out mechanisms that:

target reserve costs to energy imbalance prices (as closely as possible to the half-hour period when they were incurred). Ideally, these costs should be only the utilisation costs of the reserve called consistent with achieving balance at half-hour discrimination, with the option fees being more appropriately targeted to all system users - akin to a system insurance policy.

remove the costs of system services from the imbalance prices and charge them out to all system users."

This is in line with option 1 presented in the paper, and we would strongly urge ELEXON to pursue this approach.

If you have any further questions on this response, please do not hesitate to contact me.

Yours sincerely,

Steve Field

PGEN Response to consultation on Modification Proposal P03 –

Tony Dicicco

4 April 2001

I support the three recommendations/observations to be made to the Authority as described in the consultation. I have the following specific points:

If adopted, the suggested revision to the BSAD Methodology statement to disregard reserve option fees from the energy imbalance prices should be a short-term solution, in place for no longer than three months. After this time, I would wish to see a solution in place which includes reserve option fees in the energy imbalance prices (such as the Ex Ante Capability Price option).

I support a further review by a Modification Group to consider and report as to whether an alternative modification would better facilitate achievement of the Applicable BSC Objectives than either of the two alternatives recommended (Disregard Option Fees and Ex Ante Capability Price).

I support the principle, as described in the Ofgem August 2000 consultation, "Initial Proposals for NGC's System Operator Incentive Scheme under NETA" that "*…energy imbalance prices should, as far as possible, reflect the costs of all energy balancing costs whether incurred in the Balancing Mechanism or through energy balancing contracts purchased ahead of Gate Closure*". I am concerned that if this link between NGC's forward contracting of reserve and BM purchases was lost, then the true costs of energy balancing would not be reflected in the energy imbalance prices. This would mean that energy balancing costs were smeared rather than allocated to parties out of balance.

05 April 2001

Reference:CF/N034/04/B/4367

modifications@elexon.co.uk

Dear Sir

Response to Modifcation Proposal P03 – Correction of Price Spikes Generated by De-Minimis NGC Purchases

In response to your consultation, Enfield Energy Centre Limited support the Modifications Group recommendation of disregarding options fees entirely from the calculation of Energy Imbalance prices.

We feel that this modification should only be viewed as a short-term fix and would hope for a more in depth analysis over the coming months with a view to developing a final and robust solution.

We share Ofgem's concerns with the post dating of modifications but believe that in exceptional circumstances such as the recent price spikes and given the undue impact these may have on parties, it is appropriate to apply these changes from 27 March 2001.

Yours faithfully

Christopher Ford

Enfield Energy Centre Limited

AEP Energy Trading Services
2nd Floor Interpark House
7 Down Street
Mayfair, W1

modifications@elexon.co.uk

5 April 2001

Dear Sir or Madam:

Consultation on Modification Proposal P3

We refer to the Urgent Modification Report dated 4 April 2001 on Correction of Price Spikes Generated by De-Minimis NGC Purchases and the recommendations set out on page 8.

In respect of recommendation (2), which notes that NGC has proposed two alternative revisions to the BSAD Methodology Statement, we see at pages 7, 15 and 21 of the report that the P3 Modifications Group decided to recommend that option fees be disregarded entirely in the price calculations. We are told that this was the unanimous view of the Group.

We support the recommendation, as a short-term solution, that option fees be disregarded entirely in the price calculations. We also support the other recommendations on page 8 of the Report.

We have assumed from the statement issued on the 3rd April by Ofgem that the recommendations, if accepted, will have effect from 00:00 hours on 5 April 2001. We regard this as acceptable but believe that to ensure the clarity and integrity of the market and in the unusual circumstances that currently prevail (being a price spike in excess of £34,000 in period 17 on Sunday morning), the MOD recommendations should apply to prices calculated for settlement periods from 00:00 hours on 27 March 2001 – based on the fact that only provisional data is available for this period at present.

Yours sincerely

Rick Hermon
AEP Energy Trading

Gareth,

Innogy welcomes the opportunity to comment on the above consultation. In the short term, we support the recommendation that option fees relating to standing reserve contracts be removed from the Balancing Services Adjustment Data (BSAD). However, this should be applied retrospectively from the date on which modification 3 was originally made, 29th March 2001.

A group needs to be set up to consider the long-term solution as soon as possible. It is imperative that the long term solution creates a stable trading environment, based on rational price setting in the spot market.

Innogy has taken an active role throughout the Ofgem consultations on NGC Incentives under NETA (and before that in the original BSEG discussions) on how we believe the option fees associated with any reserve contract should be treated in the BSAD Methodology.

The essence of our proposals has been that the option fees associated with any reserve contract should be targeted at the settlement periods in which the option is called. Such an approach has the obvious practical difficulty that the frequency with which the option contract is utilised over its term will not be known until the end of the contract period. However our response to the April 2000 Ofgem consultation on "NGC Incentives under NETA" repeated a proposal made in response to the December 1999 consultation that the allocation of the option fee should be based on a forecast of the call that would be made on the option contract. Any surplus or shortfall in the recovery of the option fees could then be "trued-up" either through an adjustment to the allocation of the option fees of subsequent reserve contracts, or as a general charge within BSUoS, (with, of course, an appropriate incentive for NGC). This idea is to be found on page 5 of our May 2000 submission.

Option fees should not be excluded in their entirety from the BM price calculation because this would create a perverse signal when the system was most under stress. Similarly to smear them over all periods when the option is available gives rise to the prospect of nonsensical prices, as has occurred.

We would be glad to contribute to the relevant discussions in the near future.

Regards,

Alan

Modifications
ELEXON Ltd
3rd Floor
1 Triton Square
London
NW1 3DX

5th April 2001

Dear Sir

Modification Proposal P03

Correction of Price Spikes Generated by De-Minimus NGC Purchases

Northern Electric welcomes the opportunity to comment on the urgent modification for the Correction of Price Spikes Generated by De-Minimus NGC Purchases.

Having considered the options outlined in the Modification Proposal Definition Report Northern Electric strongly support Option 1, the removal of option fees from Balancing Services Adjustment Data (BSAD). We note that this modification is to be implemented on 5th April, however we would also support this modification being made retrospective to 27th March.

We would be happy to discuss our views if necessary.

Yours faithfully

Lesley Mulley

Industry Communications Manager

4 April 2001

Dear Elexon/ OFGEM,

CONSULTATION ON MODIFICATION PROPOSAL P3

We refer to the Urgent Modification Proposal P3 "*Correction of Price Spikes generated by de-minimis NGC Purchases*" (4 April 2001). There is real concern that imbalance prices have been artificially distorted as a result of option fees being included in the numerator of the energy imbalance price calculations during periods when small volumes of bids or offers are accepted.

All such distortions should be corrected in accordance with Conditions 7A(3) (a) to (d) of the Transmission Licence. In particular, small suppliers are likely to be most adversely affected from the price distortions given that the burden of exposure will be greater than for larger players.

Cinergy Global Trading concur with the recommendations to ameliorate artificial price spikes by the removal of option fees from the Balancing Service Adjustment Data Methodology. However, **we strongly feel that distortions should be removed for all relevant trading periods since Go-Live at 00:00 hours on 27 March 2001**. We are concerned that OFGEM's statement on Imbalance Settlement Arrangements on 3 April stated that any modifications should be applied from 00:00hrs on 5 April. This would fail to remove all price distortions from the balancing mechanism, causing some participants to be unduly exposed to artificially high imbalance prices. Given that the initial settlement run has yet to take place, we feel that opportunity exists to apply modification P3 to all relevant trading periods since Go-Live, rather than 5 April.

Cinergy are broadly supportive of the Ex Ante Capability Price proposal (Option 2), subject to further analysis and consultation

Yours sincerely,

Robert McKenzie

Cinergy Global Trading

modifications@elexon.co.uk

5 April 2001

We have a number of major concerns about this proposal to correct price spikes and consider that the knock-on effects have not been properly thought through. The proposed modification appears to be a knee jerk reaction to some unpalatable prices and has not been subject to proper and reasonable due process including a sufficient examination of the potential impacts on participants. Furthermore, participants have not been given sufficient time to understand, observe and participate in this modification as required by administrative law.

We also have concerns about the process being followed to implement this change. The process is applicable to a modification to the BSC but what is proposed is a change to the BSAD methodology. We note from condition 7B of the Transmission Licence that any revisions to the BSAD Methodology should be subject to a 28 day consultation except where the Director directs otherwise. If the Director is to invoke his powers to sidestep this process, we consider that these powers should be exercised in a reasonable and considered manner. We request a thorough explanation of why the Director considers that his emergency powers are necessary.

We accept that in the early days of NETA there will be pricing anomalies which need to be addressed. However, we have observed that the market is responding to price signals appropriately; indications are that market participants have moved towards balance. For the market to work, participants need to be subject to this incentive; market rules must not be changed whenever participants are uncomfortable with the imbalance prices. Imbalance prices are designed to encourage participants to self balance and we believe that in the longer term, the extremes that have been seen so far (where the market has been short resulting in high prices then very long which has led to negative prices) will ease. We are therefore concerned that this modification is being implemented too quickly before the market has had time to settle down.

Furthermore, setting the BCA to zero is an arbitrary decision and is giving the wrong signal to the market about the cost of reserve. In the short term, a de-minimis volume level would give a better signal and would be no more arbitrary.

We note from the Definition Report that the solution judged to best achieve the BSC objectives is where option fees are included via the ‘Ex-Ante Price Capability Option’ (Option 2). We are therefore surprised that the conclusion of the Modifications Group is to remove option fees from the calculation of imbalance prices both in the short and the long term (Option 1). This does not sit well with the objectives expressed by Ofgem in their August 2000 Consultation document.

As is recognised in the Definition Report, it is necessary to consider the interaction between the change to the calculation of imbalance prices and NGC's incentives. Removing the option fees associated with NGC's purchases from the imbalance price calculation hands control of the imbalance market to NGC. It provides them with a choice of whether to trade ahead in such a way that their trading activity will have a much reduce impact on imbalance prices. This could lead to an administered price that is set by NGC and very high BSUoS charges. We would like an examination of this interaction to start immediately. Furthermore, whilst NGC might have finished its contracting for standing reserve for this year, there is a risk that imbalance prices could be influenced in future financial years if NGC were to adopt a different contracting strategy. For this reason, we do not consider it sufficient to simply switch off the inclusion of option fees in the imbalance price and only switch them on again via a further modification which might not be given such high priority and attention by market participants as this one is being given.

For the above reasons, we strongly recommend the following:

Any immediate change to the BSAD Methodology approved by Ofgem under a derogation to Schedule 7B should be time limited for one month.

The BSC Panel needs to conduct a review through a modification to the BSC that meets the desired objectives of Ofgem where imbalance prices do reflect the costs of energy balancing contracts purchased ahead of Gate Closure. The Panel should therefore submit this modification to a review by a Modification Group in accordance with F2.9.7 of the Code.

Given the speed with which this modification has progressed, we suggest that the BSC Panel should be directed to produce a more robust and relevant solution through the BSC within one month otherwise the rules should revert to the current BSAD methodology. This should act as an incentive for the market to come up with a solution that meets Ofgem's original intention.

Yours sincerely

Phil Edgington

Phil Edgington

Vice President - Commercial

Justin,

just to follow up this morning, I confirm that AEP having briefly consulted part of its membership and is very supportive of Option 1 removal of the option costs from the price. Although we usually are strongly averse to retrospective implementation of modifications, in this case we would support implementation from the date of submission of the initial mod proposal. Doubtless, some of our member companies involved will contact you in their own right.

We are all still learning about the process and doubtless it will become slicker with time.

Brian Saunders mentioned at the public session this morning, that the post event report and review methodology could be used to consider longer term solutions. We would be happy to support this process, subject to trading parties being fully consulted, as with the other modification proposals.

Regards

Malcolm Taylor

Electricity Market Adviser

Association of Electricity Producers

Amongst the companies that expressed full support for immediate implementation of option 1 with retrospection were

Brigg/Grangemouth - Fortum

South Coast Power

Scottish and Southern generation

Innogy generation

London Power

British Energy

BNFL Magnox