

<b>Modification Proposal</b>	<b>MP No: 45</b> <i>(mandatory by BSCCo)</i>
<b>Title of Modification Proposal</b> <i>(mandatory by proposer):</i> Introduction of Price Adjusters for Settlement Days 5 April 2001 to 24 September 2001 inclusive.	
<b>Submission Date</b> <i>(mandatory by proposer):</i> 19 October 2001	
<b>Description of Proposed Modification</b> <i>(mandatory by proposer):</i> The Modification Proposal proposes to implement Price Adjusters to reflect reserve option fees for System Sell Price (SSP) and System Buy Price (SBP) for Settlement Days from 5 April 2001 to 24 September 2001 inclusive. This will, in effect, retrospectively implement the calculation for Modification Proposal P08 for these Settlement Dates	
<b>Description of Issue or Defect that Modification Proposal Seeks to Address</b> <i>(mandatory by proposer):</i>  On 27 March 2001 Modification Proposal P03: "Correction of Price Spikes Generated by De-Minimus NGC Purchases" was raised by Electricity Direct. Modification Proposal P03 proposed changes to the BSC that would prevent the occurrence of price spikes when option fees, paid by NGC for the provision of reserve, were 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 by capping the maximum contribution that the option is permitted to make to System Buy Price to 25%.  On 5 April 2001 Ofgem issued a determination that no modification to the BSC was required, on the basis that the issue would be addressed by amending NGC's BSAD Methodology. The Authority believed that option fees should be included in the calculation of energy imbalance prices. However, it was accepted that the current methodology for allocating option fees to Settlement Periods could cause unduly high prices during Settlement Periods when a relatively small volume of offers was accepted.  The Authority recognised that the addition of a price adjuster would be difficult to implement immediately via the BSC due to the time required to develop and implement changes to the BSC Systems. In these circumstances the Authority decided that a more immediate solution to the anomalous price spikes was required. As an interim solution the Authority directed NGC to amend the BSAD Methodology to include price adjusters for SSP and SBP, the Buy Price Price Adjuster (BPA) and the Sell Price Price Adjuster (SPA). In addition, a mechanism was included to recalculate the Buy Price Cost Adjustment (BCA) and Sell Price Cost Adjustment (SCA) to include the effect of the additional data items. This was implemented via Workaround W024 as specified in the BSAD Methodology Statement of 10 April 2001. The Authority recommended that a full solution within the BSC should be developed as a matter of urgency.  As a result, Workaround W024 made post Settlement Run modifications to Buy Price Cost Adjustment (BCA)/Sell Price Cost Adjustment (SCA), to achieve the same effect as if BPA/SPA had been implemented. This applies the following manipulation <sup>1</sup> :	

## 1.1 \_\_\_\_\_

<sup>1</sup> The terms "PV" and "V" are not true abbreviations or acronyms, they represent the sum of the transmission loss adjusted price\*volume and volume terms used in the SBP/SSP equations, and have been included in this simplified form to illustrate how the equations are manipulated in support of W024.

$$\textit{The desired formula:} \quad \frac{PV + BCA}{V + BVA} + BPA$$

$$\textit{Is equivalent to:} \quad \frac{PV + BCA'}{V + BVA}$$

$$\textit{Where:} \quad BCA' = BCA + (V + BVA) * BPA$$

In order to calculate the replacement value of BCA the "V" term is required, which is the sum of all the TLM adjusted Offer volumes in the original denominator. This can only be determined after an initial attempt at calculating the prices using the current settlement systems. The interim solution uses the values calculated during the Interim Information (II) Settlement Run to calculate the values to be used in the Settlement Final (SF) Settlement Run (a process that should be repeated whenever this volume term changes).

The implementation of Workaround W024 was expedited in order to meet the Settlement deadline and was only intended as a temporary measure. It is considered that a more robust solution be developed and implemented before final reconciliation for Settlement Day 5 April 2001. The temporary nature of the Workaround is supported by the following statement in the "BSAD Methodology Statement (price adjusters)" issued by NGC on the 10 April 2001:

"Currently these two variables<sup>2</sup> are not specified in the BSC, and until such time as they are, the adjustment mechanism described in Part B section 1.3 of this document will be used to amend the BCA and SCA variables to have the same effect as including the price adjusters. It is National Grid's view that this approach should be a temporary solution only, and that the required changes should be made to the Balancing and Settlement Code as soon as possible."

On 20 April 2001, NGC raised Modification Proposal P08 to provide an enduring solution that calculated imbalance prices within BSC Systems that would replace Workaround W024. Modification P08 proposed to retain the same underlying BSAD Methodology and simply remove the steps related to the Workaround, but to include the Price Adjusters, BPA and SPA within the BSC and the BSC Systems. The Modification also required changes to the BSC definition of BSAD so that it would include six data items (SCA, SVA, BCA, BVA, BPA and SPA).

As stated in the Assessment Report for Modification P08, Workaround W024 was never designed as an enduring solution and contains a number of assumptions and approximations, which are only valid assuming that a replacement solution is in place for Final Reconciliation. If these assumptions are altered, then significant changes would be required to implement what would become an enduring solution, based on the process identified for the Workaround. This requirement would need to be sufficiently robust to ensure that accuracy and integrity requirements for the BSC Systems are not compromised. Particular, attention would need to be given to the underlying accuracy of the Workaround to ensure that errors do not creep into later settlement runs for the Settlement Runs affected.

The Assessment Report for Modification P08 also pointed out that Workaround W024 was originally designed to be a short-term solution (spanning a couple of months) and was based on a number of assumptions and approximations, as follows:

- It does not normally recalculate the modified versions of BCA/SCA after the Settlement Initial Run and hence must accept that a small degree of error that may be introduced in

<sup>2</sup> BPA and SPA

subsequent runs, until an enduring solution is implemented prior to the Final Reconciliation Run.

- In a number of places, data is rounded to a precision of 2 decimal places, a feature that was considered acceptable for a short-term workaround, but not for an enduring solution required to process Final Reconciliation Run data.
- Workaround W024 limits the ability to put other fixes and Modifications into the BSC Systems; not only could this increase their development costs but it may require additional Workaround runs to correct the BSAD (e.g. Modification P10 requires 100+ additional runs to correct data for First, Second and Third Reconciliation (R1, R2 and R3) Runs).
- If the Workaround was not going to be replaced then another iteration of Workaround W024 would be recommended to be planned for the Final Reconciliation Run, to take into account any changes, e.g. Transmission Loss Multiplier (TLM) changes since the SF Run.
- There are only limited checks to ensure that human intervention in the BSAD manipulation does not introduce errors. This is a recognised risk, which expects any errors to be corrected within the R1 Run, which is less than a month later. This does not apply to later runs and certainly not to the Final Reconciliation Run.
- It is not possible to determine what the original BSAD data was, or whether it has been manipulated correctly by examining the settlement output. This has masked errors in the past and is not ideal from an audit perspective.

Modification Proposal P08 was initially intended to have an Implementation Date of 5 April 2001 and this intent was included through the Assessment Procedure into the draft Modification Report. However, it was recognised during the Report Phase that this could be seen as applying changes retrospectively to both the BSC and the BSAD Methodology. In recognition that implementation of Modification Proposal P18 (Option A) Interim Solution on 25 September 2001 was dependent on approval of Modification Proposal P08, and that a retrospective P08 risked rejection, the Implementation Date was revised (following consultation) to 25 September 2001. The Authority subsequently agreed that Modification Proposal P08 should be implemented in the BSC with effect from Settlement Day 25 September 2001. This means that Workaround W024 will continue to apply for Settlement Days 5 April 2001 to 24 September 2001.

All the assumptions and approximations for the Workaround described above still apply for Settlement Days 5 April to 24 September 2001 and this Modification Proposal proposes replacing Workaround W024 by the BSC changes implemented for Modification Proposal P08 for these Settlement Days. As a result this will ensure that Settlement Days between 5 April 2001 and 24 September 2001 are settled on system prices that include the correct value of the Price Adjustments as envisaged by the Authority in their determination for Modification Proposal P03.

The BSC would need to be changed so that the changes implemented to the BSC for Modification Proposal P08 which apply Settlement Day 25 September 2001 are applied to all future Settlement Runs for historic Settlement Days 5 April 2001 to 24 September 2001 inclusive. It is essential that this be done to support the Final Reconciliation Run, and operationally desirable that it be introduced to support the R3 Reconciliation Run (thereby enabling cross-checking and, where necessary, correction within the normal Settlement timetable). The change will need to be implemented before the Final Reconciliation Run for 5 April 2001 which will occur in May 2002.

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

The Code would need to be modified so that the Code changes for Modification Proposal P08 would

apply to future Settlement Runs for Settlement Days 5 April 2001 to 24 September 2001 inclusive.

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

National Grid's BSAD Methodology Statement will need to be changed so as to refer to the provision of 6 variable BSAD instead of 4 variable BSAD for Settlement Days 5 April to 24 September 2001 inclusive.

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

The only change is a revision to which Settlement Runs the Modification Proposal P08 changes will apply to.

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

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

This Modification Proposal improves the transparency of calculating SSP and SBP for Settlement Days 5 April 2001 to 24 September 2001, moves the process into the BSC Systems for these Settlement Days and ensures that these Settlement Days are indeed settled on system prices that include the BPA and SPA as envisaged by the Authority in their Modification P03 determination.

ELEXON has recommended to the Panel, and the Panel agreed, that the Modification meets the Applicable Code Objective 7A(3)(d) of the Transmission Licence, as it would be useful in "promoting efficiency in the implementation and administration of the balancing and settlement arrangements."

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<b>Details of Proposer:</b>	
<b>Name:</b>	BSC Panel
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<b>Attachments: NO</b>	
<b>If Yes, Title and No. of Pages of Each Attachment:</b>	