Modification Proposal – BSCP40/03	MP No: 211 *(mandatory by BSCCo)*

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

Main imbalance price based on ex-post unconstrained schedule

Submission Date *(mandatory by originator)***:**

16th April 2007

Description of Proposed Modification *(mandatory by originator)*

This modification seeks to amend the calculation of the "main" imbalance price such that when the market is short (NIV>0), System Buy Price (SBP) will be based on the least expensive Offers that the System Operator (SO) could have utilised on an unconstrained system. Conversely, when the market is long (NIV<0), System Sell Price (SSP) will be based on the least expensive Bids that the SO could have utilised on an unconstrained system. PAR Tagging would then be applied to the new price stack to ensure that only the most expensive 500 MWh of Bids or Offers are used to set the main price.

The attached paper provides greater detail on the proposed revisions to the calculation of the main imbalance price.

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

National Grid Electricity Transmission (NGET) as the electricity SO has two key roles; keeping supply and demand in balance (energy balancing) and keeping the transmission system within safe technical limits (system balancing). NGET buys and sells electricity from generators, suppliers and large customers (mainly in the form of Bid-Offer Acceptances) to achieve this dual role.

These acceptances plus any other balancing services procured by the SO in the relevant settlement period are then used in the calculation of imbalance prices (also known as cash out prices) which are paid (or received) by parties whose notified contract positions at gate closure are different from their outturn metered volumes. By definition, the imbalance price calculation therefore includes both system and energy balancing actions. The cash out arrangements seek to exclude the cost of system balancing (for example the cost of resolving transmission constraints) from the calculation of cash out prices since these are only meant to reflect energy balancing costs. This view is supported by Ofgem who state in their P205 decision letter (increase in PAR level from 100 MWh to 500 MWh) that cash out prices should only reflect "the costs of the SO resolving imbalances in the supply and demand of energy rather than the costs of managing the transmission system".

The current cash out rules contain a number of mechanistic processes for reducing the pollution of the main imbalance price by system balancing actions, by removing certain actions from the pricing calculation. These processes also contain rules for removing actions where the SO has received a net benefit, and for ensuring that SBP/SSP reflect a more marginal cost faced by the system rather than the average cost. These processes are collectively known as the "tagging" mechanism and remove actions that are:

- less than 1 MWh ("de-minimis" Tagging);

- less than 15 minutes in duration ("CADL" Tagging);
- where the Offer price is less than the Bid price ("arbitrage" Tagging);
- at the extremity of the longer stack equal to the volume of actions in the shorter stack ("Net Imbalance Volume [NIV]" Tagging); and
- at the bottom of the stack where the NIV exceeds 500 MWh ("PAR" Tagging).

The de-minimis, CADL and NIV Tagging functions are the processes to remove what are deemed to be system balancing actions from the main price. However, these are arbitrary mechanisms which make assumptions about system balancing actions. For example, NIV Tagging assumes that equal and opposite balancing actions have been taken for system reasons, but when the SO seeks to correct a net imbalance and resolve a transmission constraint simultaneously, that action will not have an opposing action and will thus feed into the pricing calculation.

This issue has been particularly problematic since the implementation of BETTA because the SO has had to accept a significant number of negatively priced, or below cost of generation Bids in Scotland to resolve system constraints. This has had the effect of significantly lowering SSP in some periods, and in some cases sending the price negative. When this is the case, participants who are spilling energy on to the system have to pay for the spilt volume through imbalance settlement as well as paying for the cost of generation/purchasing the energy (i.e. they are effectively paying for the energy twice).

It should also be noted that whilst we believe NIV Tagging (as defined in Section 3 of Annex T-1) to be deficient in removing system actions from the main imbalance price, we do not believe the calculation in Section T 4.4.4A to be deficient in deriving the market length. We recognise however that certain elements of the Section 3 calculation in Annex T-1 may be required to derive the calculation that is specified in Section T 4.4.4A.

In summary, the defect identified relates to the actions that actually make up the main imbalance price ("price inputs"), as opposed to the volume of actions that the price is calculated from ("price derivation"). Therefore the current calculation for deriving market length (NIV) and the current level of PAR (500 MWh) are not considered defects as part of this modification proposal. Whilst the treatment of reserve contracts may be considered as price inputs, the derivation of these costs are defined outside of the BSC, and are therefore also not to be considered part of the defect.

Impact on Code *(optional by originator)*

Changes to Section T (Settlement and Trading Charges), particularly 4.4 which relates to the calculation of imbalance charges. Changes may also be required to Section V (Reporting) and Section X (Definitions and Interpretation).

Impact on Core Industry Documents or System Operator-Transmission Owner Code *(optional by originator)*

Possible changes to Grid Code and BSAD Methodology Statement.

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

Changes to the imbalance price calculation and to the Settlement Report (SAA-I014)

Impact on other Configurable Items (*optional by originator)*

None identified

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

Applicable BSC Objective B – 'the efficient, economic and co-ordinated operation by the Transmission Company of the Transmission System'

This proposal will better facilitate BSC Objective B by reducing the volatility and improving the predictability of the main imbalance price which will reduce the incentive for Parties to take a long(er) position to avoid high SBP. This will reduce the overall level of balancing required by the Transmission Company, benefiting the efficient operation of the Transmission System.

Applicable BSC Objective C – 'promoting effective competition in the generation and supply of electricity, and (so far as consistent therewith) promoting such competition in the sale and purchase of electricity'

The proposal would remove the impact of imperfections in the tagging mechanism on imbalance prices; therefore parties would be exposed to cash out prices which are reflective of the true cost of energy balancing the system. This would more appropriately target the costs of balancing the system and would have a positive impact on promotion of effective competition in the generation and supply of electricity, and promoting such competition in the sale and purchase of electricity.

The proposal may also increase liquidity in the short term market because plant operators will be more likely to sell volume into the market instead of using that volume to self-hedge. This in turn will promote competition in the sale and purchase of electricity.

In simplifying the BSC arrangements, this proposal will also promote competition by making it easier for both existing and new entrants to understand the cash out arrangements and enter the market.

Applicable BSC Objective D – 'promoting efficiency in the implementation and administration of the balancing and settlement arrangements'

The proposal will significantly simplify the BSC by removing the need for most of the tagging processes which add a significant amount of complexity to the current arrangements.

Urgency Recommended: No *(delete as appropriate) (optional by originator)*

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Justification for Urgency Recommendation *(mandatory by originator if recommending progression as an Urgent Modification Proposal)*

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Attachments: Yes *(mandatory by originator)*

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

"Attachment 1 - Main imbalance price based on EPUS", 3 pages.