Modification Proposal

MP No: 27 (mandatory by BSCCo)

Title of Modification Proposal (mandatory by proposer):

Amendment To The Derivation Of Imbalance Prices

Submission Date (mandatory by proposer): 26 June 2001

Description of Proposed Modification (mandatory by proposer):

Imbalance cash-out prices need to be amended to more closely reflect the costs that out-of-balance parties impose on the system. This should be based around a correct valuation both of net imbalance energy and of energy for reverse-flow imbalances. One potential method for doing this is offered as follows:

The Imbalance Cash-out Price for imbalances in the opposite direction to net system imbalances should be based on the imbalance price faced by those who are out out of balance in the direction of national imbalance but adjusted for the cost of managing such reverse-flow imbalances. The cost of managing reverse-flow imbalances is derived by applying a Difference Value to the reverse-flow volumes. This Difference Value represents the difference between the value of energy that the system operator could have bought or sold (as appropriate) in pre-gate closure markets and the cost or revenue derived from trading in the Balancing Mechanism. The value of energy against which the difference value is calculated will be derived from the prices at which electricity is traded for physical delivery in publicly traded electricity markets. The BSC Panel will Designate the Market or Markets to be used and will maintain a review of such Designation(s). If, at any time, the Panel decides that no publicly traded electricity market is suitable for Designation, then a default value of [5%] of the System Price derived for net system imbalances will be used as a difference price.

Calculation when the system is short:

When the system is short (NGC energy purchases exceed energy sales), the Primary Imbalance Price shall be System Buy Price. System Sell Price will be calculated using the appropriate methodology. In addition, a Market Price will be calculated for the purpose of calculating the Difference Value, which will be the higher of:

Market Price - System Sell Price, and

Zero.

Where there is no Market Price then the Difference Value will be SBP * [5%].

The Reverse-flow Imbalance Cost will be calculated as:

NGC Sales * Difference Value

The Reverse-flow Imbalance Cost will be shared out equally amongst all participants whose Credited Energy Volume exceeds their contract volume in proportion to their imbalance. However, there are potential de minimis perversities. Therefore, a Reverse-flow Unit Offset Price needs to be calculated as follows:

Reverse-flow Imbalance Cost/max(System Sell Volume, Imbalance party over-deliveries, BRL*)

Calculation when the system is long:

When NGC energy sales exceed energy purchases, the Primary Imbalance Price will be System Sell Price. The Difference Value will be the higher of:

System Buy Price - Market Price, and

Zero.

Or else will be [5%] of System Sell Price (if no Market Price is available). with the Reverse-flow Imbalance Cost calculated as:

NGC purchases * Difference Value

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and will be shared out amongst the imbalances of those who are short, with Reverse-flow Init Offset Price calculated as:

Reverse-flow Imbalance Cost/max(System Buy Volume, Imbalance party under-deliveries, BRL*)

[* BRL or something similar is offered as a potential bottom-stop volume to avoid de minimis volumes.]

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

When the pricing mechanism was conceived, it was intended that parties who were out of balance should bear the full cost of resolving the imbalance. Implicit in this is an assumption of a connection between spot market prices and imbalance prices with the spot market being used by participants (and, potentially, NGC) to adjust their contract position in order to avoid imbalance. However, what was not envisaged was the scale of the buy-sell spread in the imbalance prices which has led to considerable over-recovery of those costs and to a misallocation of incentives to balance, distorting the value of managing balance to the ultimate detriment of competition in supply. Because the spread is not reflective of the relative costs of imbalances, it is potentially hampering the development of spot markets.

Because, unlike in the gas market, electricity cannot be managed within tradable tolerances (i.e. linepack), the ultimate cost of managing imbalances is derived from the net imbalance of the system. To this extent imbalances that are in the opposite direction to system imbalance actually reduce the net cost of imbalance management. The purpose of this proposal is to recognise this factor and to determine the cost of reverse-flow imbalances in terms of the opportunity cost of imbalance energy (ultimately derivable from traded markets) and to apply that cost to reverse flow imbalances.

Imbalances in the direction of system imbalances are more correctly calculated in that they apply the direct cost of managing their gross imbalances through system prices although it can still be argued that this is a potential over-recovery of costs given that NGC will only need to recover net imbalance costs from these parties.

Impact on Code (optional by proposer):

Section T, Section B

Impact on Core Industry Documents (optional by proposer):

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

Impact on other Configurable Items (optional by proposer):

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

By more correctly allocating the cost of reverse-flow imbalances to those causing it rather than over-recovering that cost, imbalance cash-flows are more efficiently allocated. This reduces distortions in cashflow allocations, which facilitates competition in generation and supply.

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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:	01494 43 23 23
Email Address:	Rob_Barnett@campbellcarr.co.uk
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