INITIAL WRITTEN ASSESSMENT for Modification Proposal P211 'Main Imbalance Price based on Ex-post Unconstrained Schedule'

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This document has been distributed in accordance with Section F2.1.10 of the Balancing and Settlement Code.[2]

P211 seeks to amend the calculation of the 'main' imbalance price such that when the market is short and System Buy Price (SBP) is the main price, then this is to be based on the least expensive Offers that the System Operator (SO) could have utilised on an unconstrained system. Conversely, when the system is long and System Sell Price (SSP) is the main price, then this is to be based on the least cost Bids that the SO could have utilised on an unconstrained system. This will be achieved by creating a new Ex-Post Unconstrained Schedule (EPUS). Price Average Reference (PAR) tagging would then be applied to the EPUS to ensure that only the most expensive 500MWh of Bids or Offers that the SO could have utilised to resolve the energy imbalance in an unconstrained system are used to set the main price. The 'reverse' price will remain unchanged.

BSCCO'S RECOMMENDATIONS

On the basis of the initial assessment, BSCCo invites the Panel to:

- **DETERMINE that Modification Proposal P211 should be submitted to the Assessment Procedure;**
- **AGREE the Assessment Procedure timetable such that an Assessment Report should be completed and submitted to the Panel for consideration at its meeting of 13 September 2007;**
- **AGREE that P211 should be assessed in parallel to the assessment of P212;**
- **AGREE to request the Authority's agreement to a four-month Assessment Procedure;**
- **DETERMINE that the P211 Modification Group be formed from members of the Pricing Standing Modification Group; and**
- **AGREE the Modification Group Terms of Reference.**

[1] ELEXON Ltd fulfils the role of the Balancing and Settlement Code Company ('BSCCo'), pursuant to Annex X-1 of the Balancing and Settlement Code (the 'Code').
[2] The current version of the Code can be found at http://www.elexon.co.uk/bscrelateddocs/BSC/default.aspx.

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SUMMARY OF IMPACTED PARTIES AND DOCUMENTS

As far as BSCCo has been able to assess, the following parties/documents are potentially impacted by Modification Proposal P211.

Please note that this table represents a summary of the full initial impact assessment results contained in Appendix 2.

Parties		Party Agents		BSC Agents		Other Agents	
Distribution System Operators	☐	Data Aggregators	☐	SAA	☒	Supplier Meter Registration Agent	☐
Generators	☒	Data Collectors	☐	FAA	☐	Unmetered Supplies Operator	☐
Interconnectors	☒	Meter Administrators	☐	BMRA	☒	Data Transfer Service Provider	☐
Licence Exemptable Generators	☒	Meter Operator Agents	☐	ECVAA	☐		
Non-Physical Traders	☒	ECVNA	☐	CDCA	☐		
Suppliers	☒	MVRNA	☐	TAA	☐		
Transmission Company	☒			CRA	☐		
				SVAA	☐		
				Teleswitch Agent	☐		
				BSC Auditor	☐		
				Profile Administrator	☐		
				Certification Agent	☐		

Sections of the BSC	
A	☐
B	☐
C	☐
D	☐
E	☐
F	☐
G	☐
H	☐
I	☐
J	☐
K	☐
L	☐
M	☐
N	☐
O	☐
P	☐
Q	☒
R	☐
S	☐
T	☒
U	☐
V	☒
W	☐
X	☒

Code Subsidiary Documents		Core Industry Documents		BSCCo		BSC Panel/Panel Committees		Other	
BSC Procedures	☒	Ancillary Services Agreement	☐	Internal Working Procedures	☒	Working Practices	☐	Market Index Data Provider	☐
Codes of Practice	☐	System Operator – Transmission Owner Code	☐					Market Index Definition Statement	☐
BSC Service Descriptions	☒	Data Transfer Services Agreement	☐					System Operator-Transmission Owner Code	☐
Party Service Lines	☐	Distribution Code	☐					Transmission Licence	☐
Data Catalogues	☒	Distribution Connection and Use of System Agreement	☐						
Communication Requirements Documents	☐	Grid Code	☐						
Reporting Catalogue	☒	Master Registration Agreement	☐						
		Supplemental Agreements	☐						
		Use of Interconnector Agreement	☐						

1 DESCRIPTION OF PROPOSED MODIFICATION

1.1 Background

1.1.1 Cash out Review

In its decision letter[3] for Approved Modification P205 'Increase in PAR volume from 100MWh to 500MWh', the Authority recognised that there were fundamental issues remaining with the electricity cash out arrangements that need further consideration. This included the current tagging mechanism which is used to remove certain System Operator (SO) actions from the main Energy Imbalance Price calculation. In its decision letter Ofgem indicated their intention to conduct a review of the cash out arrangements.

During winter 2006/2007, Ofgem re-established their review of cash out prices via a number of bilateral meetings with industry participants and a presentation to the BSC Panel. In this presentation Ofgem highlighted their proposed programme for taking forward the review of the electricity cash out arrangements (the Cash Out Review). Independent consultants' reports were commissioned by Ofgem and an open industry meeting was also held on 30 March 2007[4]. It was subsequent to this that the Proposer raised P211.

1.1.2 System Operator Role

National Grid Electricity Transmission plc (NGET) as the SO has two key roles; keeping supply and demand in balance (energy balancing) and keeping the transmission system within safe technical limits (system balancing[5]). NGET buys and sells electricity from Generators, Suppliers and large customers (mainly in the form of Bid/Offer Acceptances) to achieve this dual role.

Generators, Suppliers and large customers provide an indication to NGET of their willingness to increase or decrease their generation or demand via their Bids and Offers. A Bid will decrease the amount of electricity on the system and is therefore referred to as a Sell action (as NGET are attempting to reduce volume). An Offer will increase the amount of electricity on the system and is therefore referred to as a Buy action (as NGET need to purchase additional volume). These are submitted as Bid/Offer pairs to enable any Bid or Offer accepted by NGET to be unwound.

The Bid/Offer Acceptances, plus any other balancing services procured by the SO in the relevant settlement period, are then used in the calculation of Energy 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 Energy Imbalance Price calculation therefore includes both system and energy balancing actions.

1.1.3 The Current Arrangements

Under the current baseline, actions taken by the SO to balance Supply and Demand for a Settlement Period set the main Energy Imbalance Prices (System Buy Price (SBP) when the system is 'short' and System Sell Price (SSP) when the system is 'long').

The current methodology for determining system length (whether the system is 'long' or 'sort') was introduced under Approved Modification P78 'Revised Definitions of System Buy Price and System Sell Price'. Overall system imbalance (i.e. Net Imbalance Volume or 'NIV') is currently determined by summing the Pre-Gate Closure trades (reflected in Balancing Services Adjustment Data or 'BSAD') with the Bids and Offers

[3] Available from Ofgem's website at:
http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=86&refer=Markets/WhlMkts/CompandEff/CashoutRev
[4] Ofgem documentation of the Cash Out Review can be found at:
http://www.ofgem.gov.uk/MARKETS/WHLMKTS/COMPANDEFF/CASHOUTREV/Pages/CashoutRev.aspx
[5] For example, the cost of resolving transmission constraints.

accepted by the SO. The system is 'long' when Bids and / or Relevant Balancing Services predominate and the system is 'short' when Offers and / or Relevant Balancing Services predominate.

The following actions contribute to the calculation of the main Energy Imbalance Price:

- Actions taken within the Balancing Mechanism to increase the total energy on the system (Accepted Offers), or actions within the Balancing Mechanism to decrease the total energy on the system (Accepted Bids); and
- Relevant Balancing Services provided outside the Balancing Mechanism, represented via BSAD.

When the system is short of energy, the main price (i.e. SBP as the price applied to imbalances in the same direction as the system) is based on the volume weighted average of the most expensive 500MWh[6] of priced balancing actions (accepted Offers and BSAD) remaining, following the application of the following rules:

- **De Minimis:** Accepted Bid and Offer Volumes below a defined threshold (1 MWh) are excluded from the price calculation completely. This approach is intended to remove 'false' actions created due to the finite accuracy of the systems used to calculate Bid and Offer Volumes;
- **Arbitrage:** Accepted Bids and Offers where no net energy has been delivered to the system but have provided an overall financial benefit to the system are excluded from the price calculation completely (i.e. where the price of an accepted Offer Volume is less than the price of an accepted Bid Volume);
- **CADL:** Acceptance Volumes associated with Acceptances of short duration (below the Continuous Acceptance Duration Limit (CADL) currently 15 minutes) are treated as un-priced[7] in the price calculation;
- **BSAD:** NGET determines whether Relevant Balancing Services will be treated as priced or un-priced. BSAD represents both priced and un-priced Relevant Balancing Services in aggregate form;
- **Emergency Instructions:** On the determination of NGET, Accepted Bids and Offers associated with Emergency Instructions may be tagged as Excluded Emergency Acceptances and therefore treated as un-priced for the purpose of Energy Imbalance Price Calculation; and
- **NIV Tagging:** Following application of the rules outlined previously, the Net Imbalance Volume (NIV) tagging process is applied to determine which of the priced actions will contribute to the calculation of Energy Imbalance Prices.

These processes are collectively known as the 'tagging mechanism'. 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.

In addition, trades undertaken on power exchanges feed into market prices provided by Market Index Data Providers (or a single provider, as it currently stands). The reverse Energy Imbalance Price (i.e. the price applied to imbalances in the opposite direction to the system) is based on the market price derived from data submitted by Market Index Data Providers.

1.1.4 Tagging Mechanism Issues

The cash out arrangements seek to exclude the cost of system balancing from the calculation of cash out prices.

[6] This is known as the Price Average Reference (PAR) volume. PAR is currently 500MWh. When the system has excess energy (said to be 'long') then the main price (SSP) will be based on the volume weighted average of the least expensive 500MWh of priced balancing actions (accepted Bids and Energy BSAD) remaining following the application of the tagging mechanism rules.

[7] NB: Un-priced volumes contribute to the determination of which actions set the main Energy Imbalance Price, however the costs of these actions are not included in the main Energy Imbalance Price.

In the analysis for P205 it was established that system balancing actions were affecting Energy Imbalance Prices (and thus not being removed by the tagging mechanism described above). At the 30 March 2007 meeting of the Cash Out Review, further evidence was provided by NGET of the level of system balancing actions taken and how these may enter the Energy Imbalance Prices[8]. The approximate nature of the tagging rules and the imprecise energy/system split was also highlighted as a problem with the cash out arrangements in one of the independent consultants' reports[9]. Additionally, in Ofgem's P205 decision letter, it stated that cash out prices should only reflect 'the costs of the SO resolving imbalances in the supply and demand of energy rather that the costs of managing the transmission system'. It has therefore been established that the main Energy Imbalance Price should only reflect energy balancing costs.

The effect of system balancing actions on Energy Imbalance Prices is to lower SSP when this is the main price and it has been noted by the Proposer that this has contributed to instances of negative SSP[10]. A negative SSP requires any Party that is long, when the system is long, to pay for the excess energy they have provided to the system.

1.1.5 Interaction with other Relevant Modifications

Modification Proposal P212 'Main Imbalance Price Based on Market Reference Price' seeks to address a similar defect to P211. P212 differs significantly from P211 in its solution as it will base the main price calculation on information provided by Market Index Providers and will not relate to actions available to the SO. Due to their similarity, P212 and P211 should be assessed in parallel, however the assessment of P212 will be provided in a separate report.

1.2 Modification Proposal

P211 was raised on 16 April 2007 by EDF Energy ('the Proposer'). P211 seeks to amend the calculation of the "main" imbalance price in order to better reflect only energy balancing actions. It has been shown that the current main price calculation includes system balancing actions even though a number of tagging mechanisms are used to try to remove these[3, 7, 8, 9].

P211 seeks to amend the calculation of the main price[11] such that when the market is short and SBP is the main price, then this is to be based on the least expensive Offers that the SO could have utilised on an unconstrained system. Conversely, when the system is long and System Sell Price (SSP) is the main price, then this is to be based on the least cost Bids[12] that the SO could have utilised on an unconstrained system. This will be achieved by creating a new Ex-Post Unconstrained Schedule (EPUS). Price Average Reference (PAR) tagging would then be applied to the EPUS to ensure that only the only the most expensive 500MWh of Bids or Offers that the SO could have utilised to resolve the energy imbalance in an unconstrained system are used to set the main price.

Under the current calculation of Energy Imbalance Prices, the main imbalance price is (subject to tagging rules) based on the actions that NGET actually utilised. P211 will instead use the least expensive Offers or least cost Bids that were nominally available to NGET to resolve the Net Imbalance Volume (NIV)[13]. The total amount of Bids and Offers available to NGET in any one Settlement Period will be known as the EPUS.

The methodology for the derivation of the reverse price will not be changed.

[8] NGET presentation to Cash Out Review ' What is the Impact of Non Exclusive Energy Actions on Imbalance Pricing', 30 March 2007
[9] Cash-out Review 2007 'An Independent Perspective', Nigel Cornwall, published 22 March 2007.
[10] The period 1 April 2005 to 31 March 2006 (when there was no PAR tagging) had 10 occasions of negative SSP. With the current arrangements of a PAR value of 500MWh, and no changes in behaviour, this would have increased to 17 occasions. NGET analysis confirmed that these were most likely due to constraints on the Cheviot boundary.
[11] Whenever the terms SBP and SSP are used in this IWA it is in reference to when they are the main price respectively. For any Settlement Period, only one of SBP or SSP can be the main price with the other referred to as the reverse price. Which is the main price is dependent on whether the SO has to take a net of buy actions (and SBP is the main price) or a net of sell actions (where SSP is the main price).
[12] A positively priced bid is the price that a party will pay NGET when NGET accept a bid to decrease generation or increase demand. A bid can be negative. By 'least cost' it is meant that NGET take their decisions based on their economic and efficient licence condition.
[13] NIV is as defined in BSC Section T4.4.4A.

The following sections (1.2.1 to 1.2.5) provide a step by step approach to describe the main Energy Imbalance Price calculation proposed by P211. This includes:

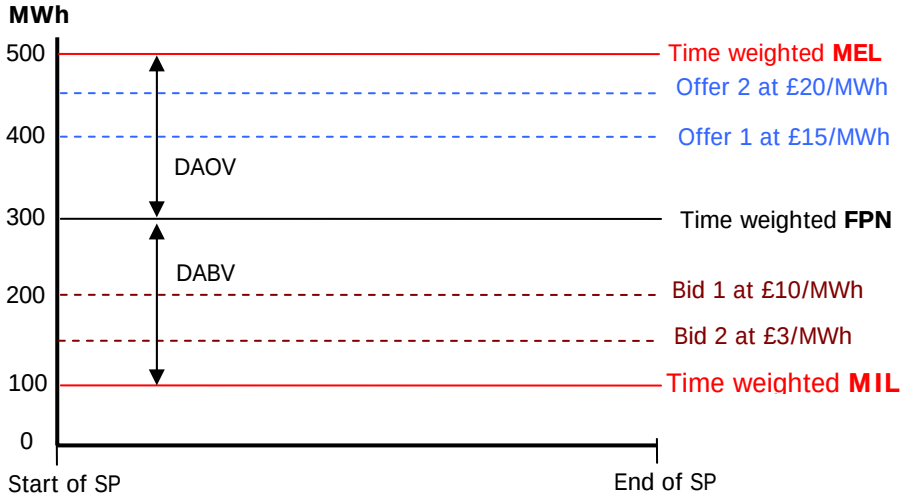
- Sourcing the available Bids and Offers;
- Aggregating the available Bids and Offers (plus Energy BSAD) into a stack. This stack will form the EPUS;
- Determination of NIV (unchanged from current arrangements). This determines the direction of the system imbalance and provides the length (in MWh) of the system;
- Applying NIV to the EPUS to determine the available Bids, Offers and Energy BSAD to be used for setting the main Energy Imbalance Price; and
- PAR tagging using a PAR level of 500MWh.

1.2.1 Sourcing Available Bids and Offers

Generators, Suppliers and large customers provide Bid/Offer pairs to NGET. These are made up of volumes obtained from the difference between a Balancing Mechanism Unit's (BMU's) Final Physical Notification[14] (FPN) and its Maximum Export Limit (MEL) for Offers, and its Minimum Import Limit (MIL) for Bids. An FPN is made up of a set of fixed points either within a Settlement Period or spanning more than one Settlement Period. It is therefore not required to be static. Similarly MEL and MIL may change depending on the operational capability of the BMU assets[15].

The EPUS will include Deemed Available Offer Volume ("DAOV") and Deemed Available Bid Volume ("DABV"). DAOV will be determined by the difference between the time weighted FPN and time weighted MEL for every BMU. Similarly, the DABV will be determined by the difference between the time weighted FPN and time weighted MIL for every BMU[16]. No dynamic parameters would be considered when deriving DAOV and DABV. This is represented in figure 1.

1.2.1.1 Figure 1 Example Bid/Offer Pair for a single BMU in one Settlement Period (SP)



For the purposes of the EPUS, this BMU would therefore have a total of 200MWh available for NGET to buy to increase energy on the system and 200MWh in which they are prepared to have NGET sell to them. Offers are priced in ascending order the further away from FPN they are, and Bids are

[14] The Final Physical Notification is the level of generation or demand that the Registrant of the BMU expects to generate or consume. This is submitted to NGC prior to Gate Closure as a series of MWh values with corresponding to and from times.
[15] For example, a generation unit may require a reduction in capacity in real time when the unit trips or cannot perform at the original level of MEL.
[16] For the purposes of the EPUS a time-weighted average of FPN, MIL and MEL will be used to ensure that the level of DAOV and DABV reflect actual operational capabilities. In reality the FPN is not static throughout a Settlement Period. Bid/Offer pairs must run parallel to the FPN.

priced in descending order the further away from FPN they are. In the example, Offer 1 is for 100MWh at £15/MWh and Offer 2 is for a further 50MWh at £20/MWh. The final 50MWh is not priced.

1.2.2 Forming the EPUS

P211 proposes to build an EPUS for every Settlement Period based on the aggregation of all the DAOVs and DABVs for all relevant BMUs. These will be stacked in price order from lowest to highest priced Offers and from highest to lowest priced bids. Energy BSAD will also be included in the EPUS in price order[17].

1.2.3 Determination of NIV

To determine whether the market is long or short, the current determination of NIV will remain (BSC Section T4.4.4A). This is based on the Bids and Offers accepted by NGET when balancing the system and Energy BSAD. The current NIV determination will also provide a single MWh value for the level of imbalance.

1.2.4 Applying NIV to the EPUS

To resolve[18] the NIV:

- **When the system is short –** the lowest priced DAOV and energy BSAD[19] will be used; and
- **When the system is long –** the highest priced DABV and energy BSAD will be used.

This level of imbalance will then be applied to the EPUS to determine which DAOV (or DABV) plus energy BSAD will be subject to PAR tagging.

1.2.5 PAR tagging

The level of PAR will not change from the current 500MWh. This means that only the volume weighted average of the:

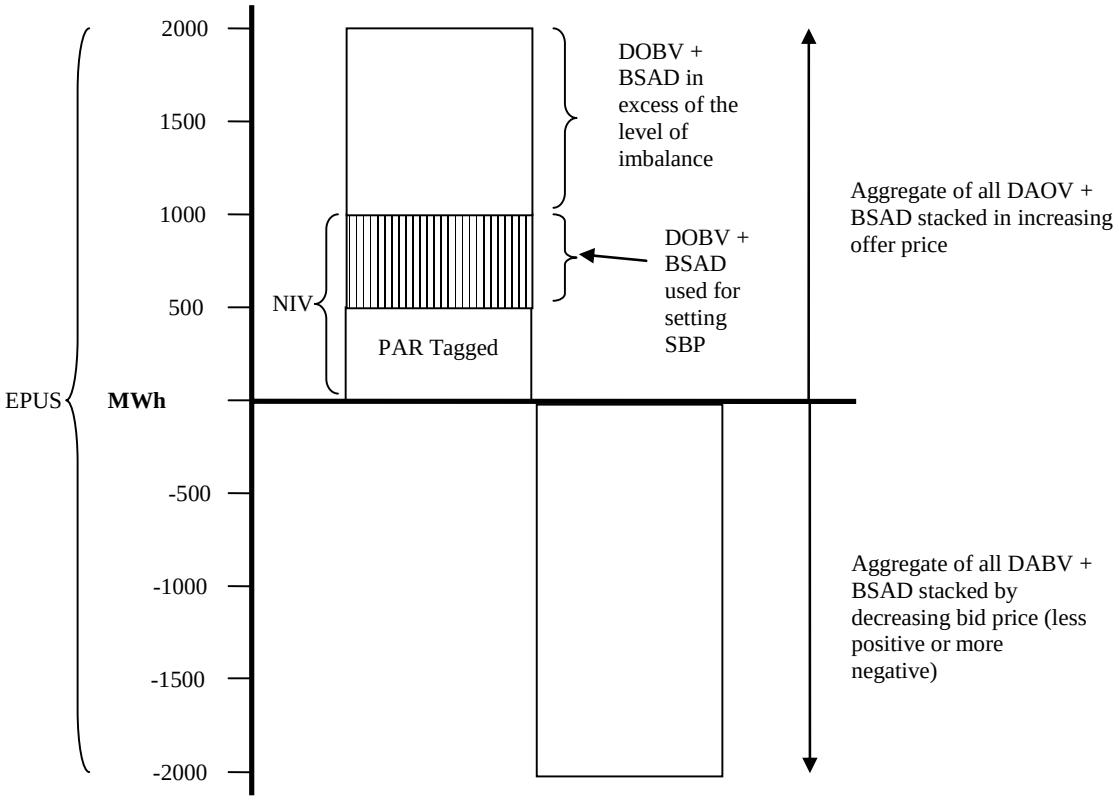
- most expensive 500MWh[20] of DAOV plus energy BSAD[21] that resolves the NIV will be used to calculate SBP **when the system is short**. Option fees would then be added to SBP via the Buy Price Adjuster (BPA); and
- least expensive 500MWh[22] of DABV plus energy BSAD that resolves the NIV will be used to calculate SSP **when the system is long**. Option fees would then be added to SSP via the Sell Price Adjuster (SPA).

Figures 2 and 3 present a fictional EPUS where we can depict the two scenarios of when:

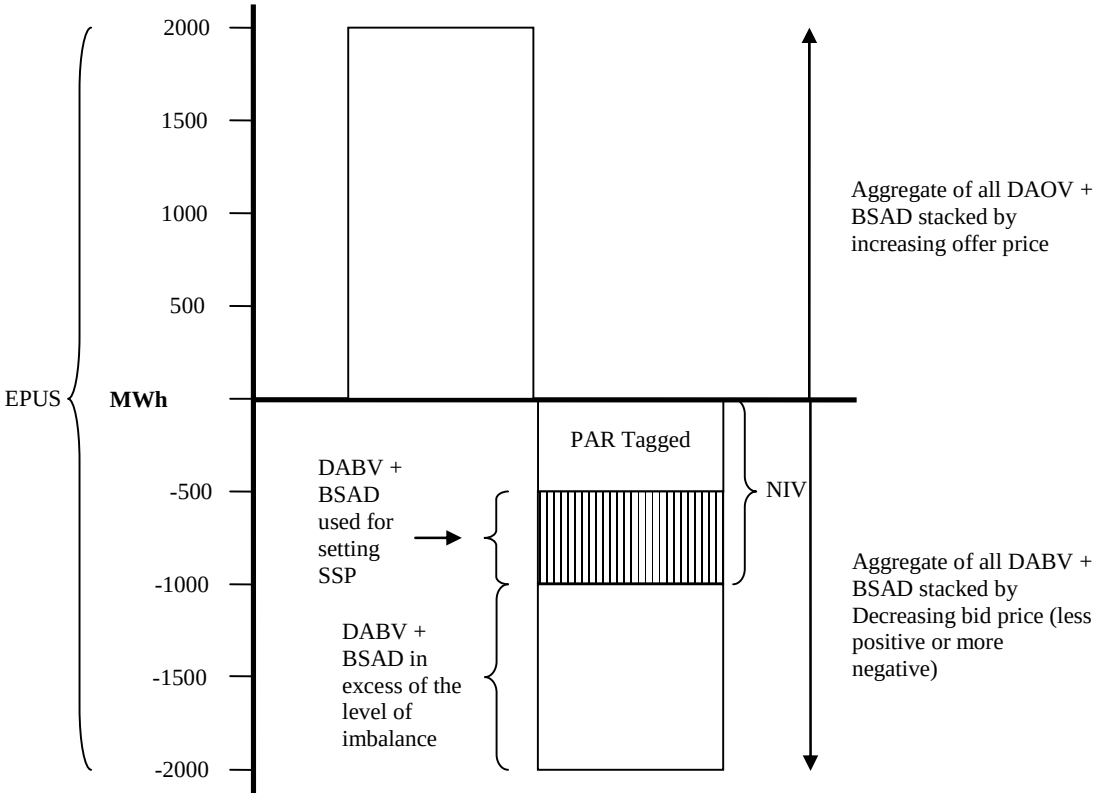
- In Figure 2, NIV is 1000MWh and the system is considered to be short of energy; and
- In figure 3, NIV is -1000MWh and the system is considered to be long.

[17] Currently NGET can determine whether BSAD is priced or unpriced.
[18] 'Resolving' the NIV is the term used for applying the MWh value of the NIV to the relevant stack so that Offers and BSAD volumes priced above this volume or Bids and BSAD volumes priced below this volume are excluded from the mechanism to determine price (PAR tagging).
[19] For the avoidance of doubt, BSAD volumes will enter the EPUS in price order and will not necessarily be included in the resolution of the NIV.
[20] If the absolute value of the NIV is less than 500MWh then the volume weighted average of the DAOV plus BSAD that resolves NIV will be used to calculate SBP.
[21] For the avoidance of doubt, BSAD volumes will enter the EPUS in price order and will not necessarily remain after PAR tagging.
[22] If the absolute value of the NIV is less than 500MWh then the volume weighted average of the DABV plus BSAD that resolves NIV will be used to calculate SBP.

1.2.5.1 Figure 2 Example EPUS formation – System is short



1.2.5.2 Figure 3 Example EPUS formation – System is long



2 AREAS FOR CONSIDERATION IN PROGRESSING MODIFICATION PROPOSAL

An initial assessment of P211 has identified the following areas which BSCCo recommends should be considered further during the progression of the Modification Proposal. These areas will form part of the Modification Group's Terms of Reference.

2.1 EPUS Derivation

An assessment of how the EPUS is derived under Modification Proposal P211 will be required. The following areas of analysis would prove beneficial:

- The impact of using the difference between FPN and MEL/MIL as a measure of available Bids and Offers to the System Operator. Analysis of whether there are any other methods for deriving the EPUS that can be identified and the relevant costs and benefits of any such derivations;
- The impact of including/excluding dynamic parameters on the derivation of EPUS. This may require data to be provided by NGET on these parameters and potentially modelling of the derivation of the EPUS by NGET;
- An assessment of how BSAD is treated and how it will enter the EPUS;
- An assessment of how de-minimus Bids and Offers should be treated within the EPUS;
- As EPUS is currently used in other wholesale electricity market jurisdictions in the formulation of wholesale electricity prices[23] the following areas of analysis may prove beneficial in order to support this assessment:
    - The reasons for introducing the EPUS into these jurisdictions including any benefit/dis-benefit (including costs) information that is publicly available; and
    - The similarities and differences between the BSC arrangements and those of the other jurisdictions.

2.2 Cost Reflective Prices

An assessment of the impact of Modification Proposal P211 on Energy Imbalance Prices will be required.

It is suggested by the Proposer of P211 that Energy Imbalance Prices should exclude the cost of system balancing and should only reflect the cost of energy balancing. A relative assessment of the ability of the existing Energy Imbalance Prices and those generated under the P211 arrangements to provide cost reflective prices in this context will be required.

In order to support this assessment, the following areas of analysis would prove beneficial:

- The degree to which system balancing actions enter Energy Imbalance Prices under the existing Energy Imbalance Price calculation;
- The degree to which the EPUS may include Bids and Offers that could not be delivered by the BMU or that the SO could not take for any physical reason. This should include the impact of not including dynamic parameters in the proposed EPUS;
- Using historic data, calculating the Energy Imbalance Prices that would have been generated had the P211 mechanism been applied for certain historic Settlement Days including those in which it has been identified that system balancing actions have entered the Energy Imbalance Price; and
- Consideration of the Energy Imbalance Prices generated for historic Settlement Days by both the current mechanism and that proposed by P211 in the context of the prevailing market conditions will also support the assessment of whether the proposed mechanism provides more cost reflective prices than the current baseline.

[23] For example, an EPUS is to be used under new market arrangements in Ireland.

It is not considered feasible to conduct analysis into the impact of P211 had the behaviour of market participants been different. Any observations in this area will be of a qualitative nature.

The Proposer has already performed analysis of the impact of P211 on Energy Imbalance Prices in support of the Modification Procedure. ELEXON's approach is to undertake similar modelling.

2.3 Cashflow Analysis

An assessment of the impact of Modification Proposal P211 on cashflows is required. The Residual Cashflow Reallocation Cashflow (RCRC) will need to be modelled under the P211 solution for comparison against the current arrangements such that any distributional impacts can be analysed.

2.4 Incentives

An assessment of the impact of Modification Proposal P211 on Market Participant incentives is required. In order to support this assessment, the following areas of analysis would prove beneficial:

- The degree to which price volatility is impacted and the resulting incentives to take an unbalanced position into cash-out;
- An assessment of how using the current operational parameters of FPN, MEL and MIL (and any other relevant Grid Code parameters) in the formation of the EPUS might introduce a commercial driver to use these as trading parameters. Whilst FPN is currently used as a trading parameter in the calculation of Bid Offer Acceptances (BOA) payments MEL and MIL are purely operational parameters. Additionally, the degree to which this might have a detrimental impact on the ability of the SO to use the submitted values as true indications of capability;
- An assessment of the potential for Market Participants to game the operational parameters and if there are any ways to address this[24] (for example by the non-delivery charge methodology or Information Imbalance Charges); and
- A qualitative view of the degree to which liquidity might be impacted and the incentive to enter forward contracts.

2.5 Impact on Settlement Calculation

An assessment of the impact of Modification Proposal P211 on the Settlement calculation is required. This will be informed by the BSC Agent impact assessments and information provided by the Transmission Company. The Modification Group may wish to consider how BSAD enters the EPUS as this can currently be deemed as unpriced by the Transmission Company. Additionally, the current timescales for calculating Energy Imbalance Prices and when these can feed into Settlement should be compared to those under P211. New data items (MEL and MIL) will be required for the new price calculation (and any other data determined by the Modification Group). Analysis provided to the Modification Group will need to identify if there is any difference between P211 and the current arrangements and establish a view on the materiality of any disparity in the timeliness of calculating this data.

2.6 Default rules

An assessment of whether new default rules are necessary including:

1. When there is insufficient deemed volume of Bids/Offers to resolve the NIV will be required; and
2. Interaction of volumes covered by Bid / Offer pairs and the volumes up to the MEL / MEL that are not priced.

[24] The Proposer suggests one option would be to use metered volumes for comparison to FPN. (i.e. time weighted FPN would only be used to create indicative cash out prices and metered volumes being used to calculate final prices).

3 RATIONALE FOR BSCCO'S RECOMMENDATIONS TO THE PANEL

BSCCo believes that further consideration of P211 by a Modification Group is required in order to further assess, and consult upon, the areas raised by this IWA. As the areas for consideration are sufficiently defined, BSCCo recommends that P211 proceeds to the Assessment Procedure. Given the similarity to P212 BSCCo recommends these are assessed in parallel.

BSCCo recommends that P211 be submitted to a 4-month Assessment Procedure.

It is estimated that progression of P211 will require (in parallel with the progression of P212:

- Eight Modification Group meetings (run in conjunction with P212);
- Two industry consultations (the initial consultation is to provide input into key issues with the second consultation on the solutions, costs, and issues assessed by the Modification Group);
- Potentially one Core Industry Document Owner impact assessment (Grid Code);
- Two BSCCo impact assessments (Proposed and Alternative);
- One BSCCo modelling exercise (including provision of modelling data/inputs from NGET); and
- Two impact assessments by the BSC Agents (Balancing Mechanism Reporting Agent (BMRA) and Settlement Administration Agent (SAA)), the Transmission Company and BSC Parties will be required (proposed Modification and options for any Alternative established by the Modification Group).

The proposed timetable and estimated costs for the progression of P211 are shown in Appendix 3. Interaction with Project ISIS is described in Section 4.

As this is a significant Modification that affects the Energy Imbalance Price calculation and has a high level of complexity, BSCCo has recommended a 4-month Assessment Procedure for P211. This is subject to Section F of the BSC in which under F1.4.3(d), the Authority may issue a notice to the Modification Secretary requesting the Panel (in relation to developments and changes highlighted in the Monthly Progress Report) amend the timetable for assessment of P211. It is therefore recommended to seek the Authority's agreement to the 4-month Assessment Procedure.

BSCCo recommends that the P211 Modification Group be formed from members of the Pricing Standing Modification Group (PSMG), whose areas of expertise includes Cash-out, Energy Imbalance Pricing, energy and system balancing, tagging and default price rules.

BSCCo recommends that the areas for consideration raised by this IWA should form the basis of the Modification Group Terms of Reference, along with any additional areas proposed by the Panel.

4 INTERACTION WITH PROJECT ISIS

It should be noted that the timescales and costs of the implementation approach could potentially be impacted by the Project ISIS. There would be a need to ensure that any change is managed across any transitional period to a new Service Provider and to ensure that a meaningful parallel run with both an old and new Service Provider would be completed.

The Central Volume Allocation (CVA) and Funds Administration Agent (FAA) systems are being ported from Tru64 to HP-UX during 2007 and early 2008. This work is planned to be completed in the first quarter of 2008 with the systems then being available to new service providers to undertake service transition. Consequently there will be two versions of the applications; one running the live systems and the other being tested prior to live operation in April 2009.

Any changes that are raised from now that affects the software systems may need to be implemented in both versions to ensure that they are in step. This will be considered during the impact assessments and when considering proposed implementation dates. As the new systems near completion of testing it may be more sensible to only implement the changes in the new versions ready for implementation at the 2009 cutover date. Changes requiring implementation early in 2008 would probably need to be implemented in both versions of the systems, although there is not a specific cut off date since it would depend on the complexity of the change and the costs and timescales for development and implementation.

5 TERMS USED IN THIS DOCUMENT

Other acronyms and defined terms take the meanings defined in Section X of the Code.

Acronym / Term	Definition
BMRA	Balancing Mechanism Reporting Agent
BSAD	Balancing Services Adjustment Data
DABV	Deemed Available Bid Volumes - Determined by the difference between the time weighted FPNs and time weighted MILs
DAOV	Deemed Available Offer Volumes – Determined by the difference between the time weighted FPNs and time weighted MELs
Energy balancing actions	Balancing actions taken purely to increase or decrease the level of generation or demand on the Transmission System.
EPUS	Ex-Post Unconstrained Schedule – The stack of all Bids and Offers that are available to the SO. The EPUS is made up of the differences between FPN and MEL and FPN and MEL for all relevant BMUs.
FPN	The Final Physical Notification is the level of generation or demand that the BMU Trader expects to generate or consume. Submitted as a ramped profile to NGC prior to Gate Closure
Main Energy Imbalance Price	The Energy Imbalance Price applied to imbalances in the same direction as the system.
NIV	Net Imbalance Volume
PAR Tagging	The process of removing Acceptance Volumes from the calculation of Energy Imbalance Prices
PAR Volume	Price Average Reference Volume, the volume of actions that are used to set the Main Energy Imbalance Price

RCRC	Residual Cashflow Reallocation Cashflow
Reverse Price	The price applied to imbalances in the opposite direction to the system. This is based on the market reference price derived from data submitted by Market Index Data Providers.
SBP	System Buy Price
SO	System Operator
SSP	System Sell Price
System balancing actions	Balancing actions which are not taken purely to increase or decrease the level of generation or demand on the Transmission System. For example to resolve a constraint on the physical flow of electricity caused by the finite capacity of the Transmission System.

6 DOCUMENT CONTROL

6.1 Authorities

Version	Date	Author	Reviewer	Reason for Review
0.1	26/04/07	Chris Stewart	David Jones	For peer review
0.2	02/05/07	Chris Stewart	Justin Andrews	For technical review
0.3	02/05/07	Chris Stewart	David Jones	For quality review
1.0	04/05/07	Change Delivery		For Panel decision

6.2 References

Ref.	Document Title	Owner	Issue Date	Version
1	Ofgems Cash Out Review – Independent Consultants' Reports http://www.ofgem.gov.uk/MARKETS/WHLMKTS/COMPANDEFF/CASHOUTREV/Pages/CashoutRev.aspx	Ofgem	22/03/2007	
2	P205 'Increase in PAR volume from 100MWh to 500MWh' - Decision Letter http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=86&refer=Markets/WhlMkts/CompandEff/CashoutRev	Ofgem	22/03/2007	

APPENDIX 1: MODIFICATION PROPOSAL

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

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

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.

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

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

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)*

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

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

Details of Proposer:

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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.

Attachment 1 to the Modification Proposal - Main imbalance price based on EPUS

Main imbalance price based on ex-post unconstrained schedule

Introduction

Ofgem's review of the electricity cash out arrangements was launched in February 2007, and one of their key target areas are the rules for removing system actions from electricity imbalance prices (the "tagging" mechanism). Currently system actions are not always removed from the "main" imbalance price. This has the effect of increasing System Buy Price (SBP) when the market is short and decreasing System Sell Price (SSP) when the market is long.

The following describes the proposed method for removing system actions from imbalance prices.

Proposed calculation of the main imbalance price

Under the current rules, the main imbalance price (subject to the tagging rules) is based on actions that the System Operator (SO) actually utilised. The proposal is to use the least expensive Bids or Offers that were available to the SO to resolve the Net Imbalance Volume (NIV)[25]. This would be known as the ex-post unconstrained schedule (EPUS).

When the market is short (NIV>0):

1. Deemed Available Offer Volume ("DAOV") for a BM unit would be calculated as the difference between time weighted FPN and time weighted MEL. Dynamic parameters would not be considered when deriving the DAOV.
2. DAOV (by Bid/Offer pair) would then be stacked in price order starting with the lowest priced DAOV first.
3. Energy BSAD would be added to the stack in price order to form the EPUS.
4. The NIV would be resolved using the lowest priced DAOV and Energy BSAD from the EPUS.
5. If there is sufficient DAOV to resolve the NIV that is priced lower than the Energy BSAD, then the Energy BSAD would not be used to resolve the NIV.
6. If the NIV is greater than 500 MWh, then the lowest priced volume above this threshold will be removed from the price calculation via PAR Tagging, and SBP will be calculated as a volume weighted average of the remaining 500 MWh of DAOV and Energy BSAD (if applicable) in the EPUS.
7. If the NIV is less than or equal to 500 MWh then SBP will be calculated as a volume weighted average of all the DAOV and Energy BSAD (if applicable) in the EPUS.
8. Any option fees would then be added to the SBP via the Buy Price Adjuster (BPA).

When the market is long (NIV<0):

1. Deemed Available Bid Volume ("DABV") for a BM unit would be calculated as the difference between time weighted FPN and time weighted MIL[26]. Dynamic parameters (apart from SEL) would not be considered when deriving the DABV.
2. DABV (by Bid/Offer pair) would then be stacked in price order starting with the highest priced DABV first.
3. Energy BSAD would be added to the stack in price order to form the EPUS.
4. The NIV would be resolved using the highest priced DABV and Energy BSAD.
5. If there is sufficient DABV to resolve the NIV that is priced higher than the Energy BSAD, then the Energy BSAD would not be used to resolve the NIV.
6. If the NIV is greater than 500 MWh, then the highest priced volume above this threshold will be removed from the price calculation via PAR Tagging, and SSP will be calculated as a volume weighted average of the remaining 500 MWh of DABV and Energy BSAD (if applicable) in the EPUS.
7. If the NIV is less than or equal to 500 MWh then the main price will be calculated as a volume weighted average of all the DABV and Energy BSAD (if applicable) in the EPUS.
8. Any option fees would then be added to the SSP via the Sell Price Adjuster (SPA).

[25] As defined in Section T 4.4.4A.

[26] The rationale for using MIL in a long market is that generators will offer feasible DABV to SEL, and then much lower prices below this if they don't want the unit to be de-synchronised (i.e. taken off). If SEL is used as the absolute parameter in a long market then this may exclude higher priced volume in the EPUS where it would have been cheaper to de-synchronise a unit.

The proposal will not affect:

- The calculation of the reverse market price;
- The current level of PAR (500 MWh);
- The existing calculation of NIV to derive the market imbalance.

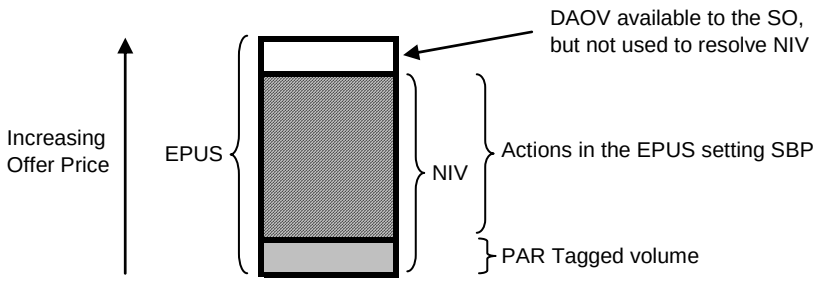
Other considerations for the modification group

- **Removal of de-minimis[27]/CADL/Arbitrage/NIV Tagging from the BSC** – the EPUS would not require these processes so the group should consider if these should be removed from the BSC text completely.
- **Use of operational parameters like MEL and MIL in the BSC** – Ofgem noted some concerns in the P167 decision letter regarding use of operational parameters as trading parameters in the BSC so it would be worth considering if these concerns still exist.
- **Use of metered volumes to enforce FPN** – the group may want to consider using metered volumes later on in the settlements process to ensure that market participants are not gaming FPN (i.e. time weighted FPN would only be used to create indicative cash out prices and metered volumes would be used to calculate final prices).
- **Defaulting rules** – changes to the BSC text may be required to ensure that these relate to the new pricing calculation.

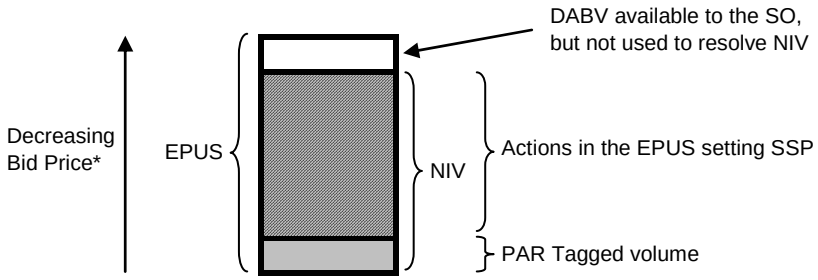
[27] Removal of de-minimis tagging will have a small effect on the NIV in some settlement periods as these volumes are currently excluded from this calculation.

Diagrams showing the proposed calculation of the main imbalance price under both short and long market conditions

Short market (NIV>0):



Long market (NIV<0):



*Less positive or more negative

Diagram showing the calculation of Deemed Available Bid – Offer Volume for a generation BM Unit

APPENDIX 2: INITIAL ASSESSMENT OF IMPACTS OF MODIFICATION PROPOSAL

An initial assessment has been undertaken by BSCCo in respect of all BSC systems, documentation and processes. The following have been identified as being potentially impacted by P211.

a) Impact on BSC Systems and Processes

BSC System / Process	Potential Impact of Proposed Modification
Settlement	The amendment of the Energy Imbalance Price calculation impacts the derivation of the Energy Imbalance Prices. The BMRA and SAA systems and processes will be impacted.
Reporting	It is envisaged that the revised Energy Imbalance Prices will be reported within the current interface structure. It will be necessary to amend the Settlement Report (SAA-I014) reflect the new price derivation (including any new parameters).

b) Impact on BSC Agent Contractual Arrangements

An initial assessment has been undertaken in respect of BSC Agent contractual arrangements and no areas have been identified as potentially being impacted by the Modification Proposal.

c) Impact on BSC Parties and Party Agents

As this Modification is a change to the Energy Imbalance Calculation, this is a significant change to one of the main tenets of the BSC Arrangements that will impact Settlement for all BSC Parties.

d) Impact on Transmission Company

The Transmission Company will need to ascertain if there is any impact on its ability to efficiently discharge its Transmission Licence obligations, and any impact on Security of Supply from the proposal due to any effect on incentives to balance. There may also be an impact on the computer systems and processes to accommodate the Bid/Offer and other BMU specific operational parameters information requirements of this Proposal.

e) Impact on BSCCo

Area of Business	Potential Impact of Proposed Modification
BSCCo Systems	The Trading Operations Market Assurance System (TOMAS) would be impacted
Other (e.g. costs, staffing, etc.)	Industry Guidance notes may require revision to reflect changes to the approach to calculation of Energy Imbalance Prices

f) Impact on Code

Code Section	Potential Impact of Proposed Modification
Section Q 'Balancing Mechanism Activities'	Section Q may require amendment if there are changes to the BM data provided by NGET.
Section T 'Settlement and Trading Charges'	Section T would require amendment to detail the changes to the Energy Imbalance Price calculation.
Section V 'Reporting'	Section V would require amendment to detail the Reporting changes.

Code Section	Potential Impact of Proposed Modification
Annex X	Annex X would require amendment to introduce new, and remove any redundant, definitions.

g) Impact on Code Subsidiary Documents

Document	Potential Impact of Proposed Modification
SAA SD	The SAA Service Description will be impacted.
BMRA SD	The BMRA Service Description will be impacted.
BSCP01 'Overview of Trading Arrangements'	BSCP01 will need to be updated to reflect the new price calculation.

h) Impact on Core Industry Documents and Other Documents

Document	Potential Impact of Proposed Modification
Grid Code	FPNs and/or other operational data will be used to create the ex-post unconstrained schedule.
BSAD Methodology Statement	May be impacted in the final solution.
BSUoS	May be impacted in the final solution.

i) Impact on Other Configurable Items

Document	Potential Impact of Proposed Modification
SAA User Requirements Specification (and system documentation)	SAA documentation would require amendment to detail the amendments to the Energy Imbalance Price calculation.
BMRA User Requirements Specification (and system documentation)	BMRA documentation would require amendment to detail the amendments to the Energy Imbalance Price calculation.
BSC Business Process Model	The ELEXON BPM would require amendment to reflect the amendments to the Settlement calculations.

j) Impact on BSCCo Memorandum and Articles of Association

No impact.

k) Impact on Governance and Regulatory Framework

No impact.

APPENDIX 3: COSTS AND TIMETABLE FOR PROGRESSION

ESTIMATED COSTS OF PROGRESSING MODIFICATION PROPOSAL[28]

Meeting Cost	£4,000[29]
Legal/Expert Cost	£5,000
Impact Assessment Cost	£10,000
ELEXON Resource	130 man days £41,390

[28] Clarification of the meanings of the cost terms in this appendix can be found on the BSC Website at the following link:
http://www.elexon.co.uk/documents/Change_and_Implementation/Modifications_Process_-_Related_Documents/Clarification_of_Costs_in_Modification_Procedure_Reports.pdf
[29] Note that this cost also includes P212 meeting costs as these will be held simultaneously.

ID	Task Name	Duration	Start	Finish
1	P211 and P212 assessment	91 days	Thu 10/05/07	Thu 13/09/07
2	Panel meeting	0 days	Thu 10/05/07	Thu 10/05/07
3	MG preparation (issues, P212 definition)	3 days	Thu 10/05/07	Mon 14/05/07
4	MG Meeting 1 (IWAs, Issues, P212 definition)	0 days	Tue 15/05/07	Tue 15/05/07
5	Finalise 1st consultation document	2 days	Wed 16/05/07	Thu 17/05/07
6	1st consultation (issues, assess approach)	11 days	Fri 18/05/07	Fri 01/06/07
7	MG Meeting 2 (P212 definition, requirements, issues)	1 day	Tue 22/05/07	Tue 22/05/07
8	Collate responses from 1st consultation	1 day	Mon 04/06/07	Mon 04/06/07
9	Draft requirement specifications	12 days	Fri 18/05/07	Mon 04/06/07
10	MG Meeting 3 (consider 1st consult, spec, model)	1 day	Wed 06/06/07	Wed 06/06/07
11	Update requirement specifications	4 days	Thu 07/06/07	Tue 12/06/07
12	MG Meeting 4 (finalise P212 definition, specs, model)	1 day	Wed 13/06/07	Wed 13/06/07
13	Finalise requirement specs and modelling reqs	3 days	Thu 14/06/07	Mon 18/06/07
14	BSC Agent Impact Assessment (Proposed Mod)	10 days	Tue 19/06/07	Mon 02/07/07
15	Modelling exercise	21 days	Tue 19/06/07	Tue 17/07/07
16	Assess BSC Agent IA	1 day	Tue 03/07/07	Tue 03/07/07
17	MG Meeting 5 (results of IA and alternatives)	1 day	Wed 04/07/07	Wed 04/07/07
18	Alternative requirement specification	9 days	Thu 05/07/07	Tue 17/07/07
19	MG Meeting 6 (modelling results, alternatives, 2nd consult)	1 day	Wed 18/07/07	Wed 18/07/07
20	Finalise Alternative requirement spec	2 days	Thu 19/07/07	Fri 20/07/07
21	BSC Agent Impact Assessment (Alternative)	10 days	Mon 23/07/07	Fri 03/08/07
22	Assess BSC Agent IA (Alternative)	2 days	Mon 06/08/07	Tue 07/08/07
23	Draft consultation document	24 days	Thu 05/07/07	Tue 07/08/07
24	MG Meeting 7 (finalise consultation document)	1 day	Wed 08/08/07	Wed 08/08/07
25	Update 2nd consultation document	2 days	Thu 09/08/07	Fri 10/08/07
26	2nd consultation	10 days	Mon 13/08/07	Fri 24/08/07
27	Draft Legal text	12 days	Thu 09/08/07	Fri 24/08/07
28	Collate 2nd consultation responses	2 days	Mon 27/08/07	Tue 28/08/07
29	Draft Assessment report	13 days	Thu 09/08/07	Mon 27/08/07
30	MG meeting 8 (consult responses, legal text, Assessment	1 day	Wed 29/08/07	Wed 29/08/07
31	Update Assessment Report and agree with MG	7 days	Thu 30/08/07	Fri 07/09/07
32	External Panel Paper day	0 days	Fri 07/09/07	Fri 07/09/07
33	Panel meeting (present assessment report)	0 days	Thu 13/09/07	Thu 13/09/07