

INITIAL WRITTEN ASSESSMENT for Modification Proposal P212 'Main Imbalance Price based on Market Reference Price'

Prepared by: ELEXON Limited¹

Date of Issue:	4 May 2007	Document Reference:	P212IR
Reason for Issue:	For Panel Decision	Version Number:	1.0

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

P212 seeks to replace part of the current Energy Imbalance Price methodology with an alternative method for determining the 'main' Energy Imbalance Price. The main Energy Imbalance Price is that paid by Parties who are in imbalance in the same direction as the system. P212 proposes that the main Energy Imbalance Price is the market price upwardly adjusted by a fixed percentage when the system is short, or the market price downwardly discounted by a fixed percentage when the system is long.

No change is proposed to the reverse price which is based on the market price.

BSCCO'S RECOMMENDATIONS

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

- **DETERMINE that Modification Proposal P212 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 P212 should be assessed in parallel to the assessment of P211;**
- **AGREE to request the Authority's agreement to a four-month Assessment Procedure;**
- **DETERMINE that the P212 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>.

CONTENTS TABLE

Summary of Impacted Parties and Documents	3
1 Description of Proposed Modification.....	4
1.1 Background	4
1.2 Modification Proposal.....	6
2 Areas for Consideration in Progressing Modification Proposal	8
2.1 Defining System Length	8
2.2 Defining Default Rules	8
2.3 Selecting the Percentage Premium/Discount Value	8
2.4 Cost Reflective Prices.....	8
2.5 Cashflow Analysis.....	9
2.6 Incentives.....	9
2.7 Impact on Settlement Calculation	9
2.8 Investigation into other Markets	9
3 Rationale for BSCCo's Recommendations to the Panel	10
4 Interaction With Project Isis	11
5 Terms Used in this Document	11
6 Document Control.....	12
6.1 Authorities.....	12
6.2 References	12
Appendix 1: Modification Proposal	13
Appendix 2: Initial Assessment of Impacts of Modification Proposal	18
Appendix 3: Costs and Timetable for Progression	20

Intellectual Property Rights, Copyright and Disclaimer

The copyright and other intellectual property rights in this document are vested in ELEXON or appear with the consent of the copyright owner. These materials are made available for you for the purposes of your participation in the electricity industry. If you have an interest in the electricity industry, you may view, download, copy, distribute, modify, transmit, publish, sell or creative derivative works (in whatever format) from this document or in other cases use for personal academic or other non-commercial purposes. All copyright and other proprietary notices contained in the document must be retained on any copy you make.

All other rights of the copyright owner not expressly dealt with above are reserved.

No representation, warranty or guarantee is made that the information in this document is accurate or complete. While care is taken in the collection and provision of this information, ELEXON Limited shall not be liable for any errors, omissions, misstatements or mistakes in any information or damages resulting from the use of this information or action take in reliance on it.

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 P212.

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

Parties	Sections of the BSC	Code Subsidiary Documents
Distribution System Operators <input type="checkbox"/>	A <input type="checkbox"/>	BSC Procedures <input checked="" type="checkbox"/>
Generators <input checked="" type="checkbox"/>	B <input type="checkbox"/>	Codes of Practice <input type="checkbox"/>
Interconnectors <input checked="" type="checkbox"/>	C <input type="checkbox"/>	BSC Service Descriptions <input checked="" type="checkbox"/>
Licence Exemptable Generators <input checked="" type="checkbox"/>	D <input type="checkbox"/>	Party Service Lines <input type="checkbox"/>
Non-Physical Traders <input checked="" type="checkbox"/>	E <input type="checkbox"/>	Data Catalogues <input checked="" type="checkbox"/>
Suppliers <input checked="" type="checkbox"/>	F <input type="checkbox"/>	Communication Requirements Documents <input type="checkbox"/>
Transmission Company <input checked="" type="checkbox"/>	G <input type="checkbox"/>	Reporting Catalogue <input checked="" type="checkbox"/>
Party Agents		
Data Aggregators <input type="checkbox"/>	H <input type="checkbox"/>	Core Industry Documents
Data Collectors <input type="checkbox"/>	I <input type="checkbox"/>	Ancillary Services Agreement <input type="checkbox"/>
Meter Administrators <input type="checkbox"/>	J <input type="checkbox"/>	System Operator – Transmission Owner Code <input type="checkbox"/>
Meter Operator Agents <input type="checkbox"/>	K <input type="checkbox"/>	Data Transfer Services Agreement <input type="checkbox"/>
ECVNA <input type="checkbox"/>	L <input type="checkbox"/>	Distribution Code <input type="checkbox"/>
MVRNA <input type="checkbox"/>	M <input type="checkbox"/>	Distribution Connection and Use of System Agreement <input type="checkbox"/>
BSC Agents		
SAA <input checked="" type="checkbox"/>	N <input type="checkbox"/>	Grid Code <input type="checkbox"/>
FAA <input type="checkbox"/>	O <input type="checkbox"/>	Master Registration Agreement <input type="checkbox"/>
BMRA <input checked="" type="checkbox"/>	P <input type="checkbox"/>	Supplemental Agreements <input type="checkbox"/>
ECVAA <input type="checkbox"/>	Q <input type="checkbox"/>	Use of Interconnector Agreement <input type="checkbox"/>
CDCA <input type="checkbox"/>	R <input type="checkbox"/>	BSCCo
TAA <input type="checkbox"/>	S <input type="checkbox"/>	Internal Working Procedures <input checked="" type="checkbox"/>
CRA <input type="checkbox"/>	T <input checked="" type="checkbox"/>	BSC Panel/Panel Committees
SVAA <input type="checkbox"/>	U <input type="checkbox"/>	Working Practices <input type="checkbox"/>
Teleswitch Agent <input type="checkbox"/>	V <input checked="" type="checkbox"/>	Other
BSC Auditor <input type="checkbox"/>	W <input type="checkbox"/>	Market Index Data Provider <input checked="" type="checkbox"/>
Profile Administrator <input type="checkbox"/>	X <input checked="" type="checkbox"/>	Market Index Definition Statement <input checked="" type="checkbox"/>
Certification Agent <input type="checkbox"/>		System Operator-Transmission Owner Code <input type="checkbox"/>
Other Agents		
Supplier Meter Registration Agent <input type="checkbox"/>		Transmission Licence <input type="checkbox"/>
Unmetered Supplies Operator <input type="checkbox"/>		
Data Transfer Service Provider <input type="checkbox"/>		

1 DESCRIPTION OF PROPOSED MODIFICATION

1.1 Background

1.1.1 Cash Out Review

In its decision letter³ 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 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 2007⁴. It was subsequent to this that the Proposer raised P212.

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 balancing⁵). NGET buys and sells electricity from Generators, Suppliers and large customers (mainly in the form of Bid/Offer Acceptances) to achieve this dual role.

Generator's, 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 'short') 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-

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.

Gate Closure trades (reflected in Balancing Services Adjustment Data or 'BSAD') with the Bids and Offers 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 500MWh⁶ 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-priced⁷ 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.

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 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 cost of these actions is not included in the main Energy Imbalance Price.

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.

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). During 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 Prices⁸. 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' reports⁹. 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 than 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 Energy Imbalance Prices being more peaky and volatile than it should be¹⁰.

1.1.5 Interaction with other relevant Modifications

Modification Proposal P211 'Main Imbalance Price Based on Ex-Post Unconstrained Schedule' seeks to address a similar defect to P212. P211 differs from P212 in its solution as it derives the main price from balancing mechanism inputs. Due to the similarity of the defect being addressed, P212 and P211 should be considered in parallel, however the assessment of P211 will be provided in a separate report.

1.2 Modification Proposal

P212 was raised on 27 April 2007 by Bizz Energy ('the Proposer'). P212 seeks to replace part of the current Energy Imbalance Price methodology with an alternative method for determining the 'main' Energy Imbalance Price. The main Energy Imbalance Price is that paid by Parties who are in imbalance in the same direction as the system. P212 proposes that the main Energy Imbalance Price is the market price upwardly adjusted by a fixed percentage when the system is short, or the market price downwardly discounted by a fixed percentage when the system is long.

The reverse price is not changed and will be based on the same market reference price as the main price but will not be adjusted.

1.2.1 Main Price Calculation

P212 will retain the current process for determining the market reference price for each Settlement Period as detailed in the Market Index Definition Statement¹¹. However, the main Energy Imbalance Price will also be discovered by reference to the market reference price and will be calculated as the market reference price adjusted by a fixed percentage. This can be described as:

1. When the **system is short and SBP is the main price** then this will be calculated as the market reference price increased by [5%]; and
2. When the **system is long and SSP is the main price** then this will be calculated as the market reference price decreased by [5%].

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 Market Index Definition Statement for Market Index Data Provider(s), Version 5, Effective Date 1 April 2006. Note that the proposal uses the term Market Index Development Statement when referring to the Market Index Definition Statement.

Note that the Proposer has chosen a level of 5% as an indicative value only. This may be subject to revision during the Assessment Phase of P212.

In terms of the BSC, Section T4.4.5 describes the calculation of SBP and T4.4.6 describes the calculation of SSP. T4.4.5(a) describes SBP when SBP is the main price and T4.4.6(a) describes the calculation of SSP when SSP is the main price. Therefore the description of P212 can be replicated in terms of the BSC as follows; P212 will replace T4.4.5(a) and T4.4.6(a) so that:

- T4.4.5(b) and T4.4.6(b) are modified such that the condition that caps the market price to the main price is removed; and then:
 - T4.4.5(a) is the same as T4.4.5(b) but with the product increased by [5%]; and
 - T4.4.6(a) is the same as T4.4.6(b) but with the product decreased by [5%].

For example, if the market reference price is £100/MWh and the system is:

- Short, then SBP will be £105/MWh and SSP (as the reverse price) will be £100/MWh; or
- Long, then SSP will be £95/MWh and SBP (as the reverse price) will be £100/MWh.

The premium or discount ($\pm[5]\%$) of the market price seeks to maintain the incentive for parties to contract for their generation or demand when the system is short. When the market reference price rises, indicating system stress, the monetary value of the incentive to balance (i.e. the actual cost for being in imbalance) will also increase. Conversely, when the system has excessive length, potentially indicated by a low market price, then the monetary value of the incentive to balance will be reduced.

1.2.2 Determining System Length

The Proposer suggests that the process for determining system length in any Settlement Period may require revision. The Proposer did not present a view on how system length should be determined but offered two concepts for consideration:

- The difference between total notified contract volumes and a measure of metered volumes; or
- Netting off Bids and Offers accepted by the SO.

Detail of the process for determining system length requires definition and assessment by the Modification Group. The second concept may involve a revision to the current methodology for determining system length.

1.2.3 Defaulting Rules

Default rules are those that are applied when the Market Index Data Provider is below the required threshold for liquidity. Currently, when the liquidity threshold is not met the market reference price will default to the main price. The Proposer suggests that a change will be required to the defaulting rules given both the main and reverse price will be based on the market reference price. The Proposer suggests that the default price might be derived from:

- The price discovered in the preceding Settlement Period; or
- An administered solution by reference to a floor price when the system is short.

Further detail of the process for determining system length requires definition and assessment by the Modification Group.

2 AREAS FOR CONSIDERATION IN PROGRESSING MODIFICATION PROPOSAL

An initial assessment of P212 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 Defining System Length

A definition of how to derive system length under Modification Proposal P212 will be required. The following areas of analysis and definition would prove beneficial:

- Whether a methodology for using notified contract volumes and metered volumes be used to determine system length;
- Whether the current determination of system length can be simplified;
- Whether there is any other method for defining system length;
- Comparison of Settlement Periods to identify any inconsistencies between the direction of the system (long or short) of the P212 methodology, once defined, and the current methodology; and
- Whether there is any impacts on the prompt publication of imbalance prices.

2.2 Defining Default Rules

The default rules will need to be defined as the current arrangements include defaulting to the current NIV/PAR based main price under certain scenarios. As this would be removed, the following areas of analysis and definition would prove beneficial:

- What is the appropriate level of Market Index Definition liquidity volume thresholds;
- Whether the preceding price discovered in the previous Settlement Period provides an acceptable solution;
- Whether an administered (e.g. floor price) provides an acceptable solution;
- Whether there is any other appropriate construction of default prices;
- A comparison between the potential options for default rules; and
- An assessment of any impact on the Market Index Data Provider.

2.3 Selecting the Percentage Premium/Discount Value

The Proposer has suggested that a level of 5% is used to as premium added to SBP when the system is short and to discount SSP when the system is long. The following areas of analysis would prove beneficial:

- Whether there is a more appropriate percentage to use; and
- Whether there should be a different level of uplift to SBP than there is discount to SSP.

2.4 Cost Reflective Prices

An assessment of the impact of Modification Proposal P212 on Energy Imbalance Prices will be required.

It is suggested by the Proposer of P212 that there is a high level of pollution of the Energy Imbalance Prices from costs that relate to maintaining the system balance (as opposed to energy balancing).

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 calculation¹²;
- Using historic data, calculating the Energy Imbalance Prices that would have been generated had the P212 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 P212 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.

It is not considered feasible to conduct analysis into the impact of P212 had the behaviour of market participants been different. Any observations in this area will be of a qualitative nature.

2.5 Cashflow Analysis

An assessment of the impact of Modification Proposal P212 on cashflows is required. The Residual Cashflow Reallocation Cashflow (RCRC) will need to be modelled under the P212 solution for comparison against the current arrangements such that any distributional impacts can be analysed.

2.6 Incentives

An assessment of the impact of Modification Proposal P212 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 the potential for Market Participants to game the market price and if there are any ways to address this¹³; and
- A qualitative view of the degree to which liquidity might be impacted and the incentive to enter forward contracts.

2.7 Impact on Settlement Calculation

An assessment of the impact of Modification Proposal P212 on the Settlement calculation is required. This will be informed by the BSC Agent impact assessment and information provided by the Transmission Company. This should include the timescales for calculating Energy Imbalance Prices and when these can feed into Settlement. Analysis provided to the Modification Group will need to identify if there is any difference between P212 and the current arrangements and establish a view on the materiality of any disparity in the timeliness of calculating this data.

2.8 Investigation into other Markets

As assessment of whether any other wholesale electricity market jurisdiction uses a similar approach for derivation of imbalance prices. For any other jurisdictions with similar arrangements to those proposed under P212, the following areas of analysis would prove beneficial in order to support this assessment:

- The reasons for introducing the Energy Imbalance Price calculation based on a market derived price into these jurisdictions including any benefit/dis-benefit (including costs) information that is publicly available; and

¹² This analysis will be available from the assessment of P211.

¹³ 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).

- The similarities and differences between the BSC arrangements and those of the other jurisdictions.

3 RATIONALE FOR BSCCO'S RECOMMENDATIONS TO THE PANEL

BSCCo believes that further consideration of P212 by a Modification Group is required in order to further assess, and consult upon, the areas raised by this IWA.

BSCCo recommends that P212 be submitted to a 4-month Assessment Procedure so that P212 can be assessed in parallel to P211. This will also allow for those areas that remain to be defined to be agreed. BSCCo believes that because the definitional issues are closely interweaved with those of assessment that there would be more efficiencies (particularly when considering P211 simultaneously) in proceeding directly to the Assessment Procedure. Given the similarity to P211 BSCCo recommends these are assessed in parallel.

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

- Eight Modification Group meetings (run in conjunction with P211 but for the purposes of P212 the initial focus will be on the definition of system length, default rules, and appropriate percentage value);
- 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 assessments (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 P212 are shown in Appendix 3. Interaction with Project ISIS is described in Section 4.

As this is a significant Modification that affects Energy Imbalance Price calculation and has a high level of complexity and requires initial definition, BSCCo has recommended a 4-month Assessment Procedure for P212. 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 P212. It is therefore recommended to seek the Authority's agreement to the 4-month Assessment Procedure.

BSCCo recommends that the P212 Modification Group be formed from members of the Pricing Standing Modification Group, 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
Energy balancing actions	Balancing actions taken purely to increase or decrease the level of generation or demand on the Transmission System.
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.
SAA	Settlement Administration Agent
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	1/05/07	Chris Stewart	Justin Andrews	For technical review
0.2	2/05/07	Chris Stewart	David Jones	For quality review
1.0	4/05/07	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/WhIMkts/CompandEff/CashoutRev	Ofgem	22/03/2007	

APPENDIX 1: MODIFICATION PROPOSAL

Modification Proposal – BSCP40/03	MP No: 212 <i>(mandatory by BSCCo)</i>
Title of Modification Proposal <i>(mandatory by originator):</i> Main Imbalance Price based on Market Reference Price.	
Submission Date <i>(mandatory by originator):</i> 27 April 2007	
Description of Proposed Modification <i>(mandatory by originator)</i> <p>The modification proposal seeks to replace part of the current energy imbalance price methodology with an alternative method for determining the main imbalance price paid by parties who are in imbalance in the same direction as the system. The solution would use a market-derived reference price.</p> <p>The market reference price for each settlement period will be established by (first) applying the process currently applied in the Market Index Development Statement. As at present the reverse price will be set to be equal to the market reference price. The terms of BSC T4.4.5(b) and T4.4.6(b) would as a consequence remain unchanged. The rules would however be varied so that the main price is also discovered by reference to the market reference price, but (second) with a price differential applied to it to retain incentives to contract.</p> <p>In terms of the main price, sections T4.4.5(a) and T4.4.6(a) will need to be replaced so that:</p> <ul style="list-style-type: none"> ▪ T4.4.5(a) is the same as T4.4.5(b) but with the product increased by [5%]; and ▪ T4.4.6(a) is the same as T4.4.6(b) but with the product decreased by [5%]. <p>For the purposes of determining system length in any settlement period, the existing rules could also need to be changed, and system length might be defined by the difference between total notified contract volumes and a measure of metered volumes in any half hour or by netting off accepted bids in an half hour from accepted offers.</p> <p>There will need to be a default price for the main price to replace the current method for any circumstances where the MIDS volume thresholds are not reached. This might be derived by reference to a price discovered in the preceding settlement period or be administered if the system overall is short perhaps by reference to a floor price.</p>	
Description of Issue or Defect that Modification Proposal Seeks to Address <i>(mandatory by originator)</i> <p>The current rules are not producing a “clean” energy price for the main price. This situation arises because the current tagging rules that seek to remove certain balancing actions from the pricing calculation are defective and are resulting in a high level of pollution of the energy price from costs that relate to maintaining the system balance.</p> <p>In the decision letter on P205 the Authority noted that, in its data sample to test that modification, acceptances arising from Cheviot constraints were apparent in 56 out of 63 periods used. At a presentation by National Grid as part of Ofgem’s cash-out review on 30 March, it was noted that only 25% of offers in the NIV stack between April 2006 and February 2007 were related to energy balancing only; the volume of bids was higher at 41%, but still represented the minority of balancing actions in the stack. National Grid also explained that use of a different energy stack net of “energy-plus” actions (that is acceptances that included costs of addressing at least in part system effects) would have resulted in materially different imbalance prices during November 2006 (SBP-9% on average; SSP+7%; spread 8%). These restated prices (compared against the actual average prices that applied) are shown as an attachment to this proposal form.</p> <p>As the main imbalance price in any settlement period is intended to reflect only the costs of energy acceptances by National Grid, this situation means that:</p> <ul style="list-style-type: none"> ▪ imbalance parties are frequently exposed to an inflated non-cost reflective price when SBP is 	

<h2 style="margin: 0;">Modification Proposal – BSCP40/03</h2>	MP No: 212 <i>(mandatory by BSCCo)</i>
<p>the main price; and</p> <ul style="list-style-type: none"> ▪ imbalance parties are frequently exposed to an understated, non-cost reflective price when SSP is the main price. <p>One consequence of the application of the current rules is that the main imbalance price is also more peaky and volatile than it should be. This has produced a strong incentive to contract producing a tendency for the system to be excessively long. In turn this has artificially reduced liquidity in the forward energy and created a need for the system operator to routinely constrain off plant in most settlement periods, which is inefficient.</p> <p>Given the complex nature of balancing the system and the interaction of energy and system balancing, it is contended that any tagging process will always be an approximation and one that is prone to producing volatile and highly inaccurate energy prices. A more reliable and consistent proxy for a true energy price is the MIDS derived price. The derivation using the market-based reference price is appropriate because it reflects the value of short-term energy trades, and it's use has an established track-record since the implementation of P78 for the purpose of setting the reverse price. It avoids complex allocation and tagging methodologies that depend on detailed technical rules and judgements that are applied after the event.</p>	
<p>Impact on Code <i>(optional by originator)</i></p> <p>Changes to section T (Settlement and trading changes), 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).</p>	
<p>Impact on Core Industry Documents or System Operator-Transmission Owner Code <i>(optional by originator)</i></p> <p>Possible changes to Grid Code and BSAD methodology statement.</p>	
<p>Impact on BSC Systems and Other Relevant Systems and Processes Used by Parties <i>(optional by originator)</i></p> <p>Changes to the imbalance price calculation and to the Settlement report (SAA-1014).</p>	
<p>Impact on other Configurable Items <i>(optional by originator)</i></p> <p>None identified</p>	

Modification Proposal – BSCP40/03

MP No: 212
(mandatory by BSCCo)

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

The fundamental justification for the proposed modification is that the current rules are systematically producing prices that unnecessarily increase risk in the market-place, amplify costs without cause onto imbalance parties and thus increase costs to consumers.

The proposed modification would be beneficial primarily in terms of objective (c):

- as it would remove competitive distortions inherent in the current imbalance pricing rules which impact on imbalance parties, who tend to be non-vertically integrated players, especially suppliers who are systematically exposed to forecast error, increasing their costs of production and supply relative to other participants; and
- it would also remove a systematic distortion that is discriminating against intermittent technologies who are also more prone to imbalance.

The proposal will also increase liquidity in the short-term market because operators will be less inclined towards “fear of cash-out”, and they will be less concerned to self-hedge and trade their imbalance. There would also be a reduction in imbalance risk in the market more generally. Incentives to vertically integrate would also be reduced.

In view of the simpler, transparent and possibly more predictable nature of imbalance price formation, liquidity of traded markets should also improve. The reduced risk in the market and increased liquidity (as well as reduced complexity and increased transparency) should also act to facilitate new entry. Both of these outcomes would facilitate competition in the sale and purchase of electricity.

There would also be significant benefits in terms of objective (d) given the simpler and more transparent derivation of the main price by reference to an established and proven market benchmark.

The change proposed removes distortions under the current rules because the current formulation of the imbalance price, and the tagging rules on which it depends, is acknowledged not to be cost reflective, thus delivering benefits under objective (b). There will also be benefits in terms of reducing the volatility and improving the predictability of the main imbalance price which should produce collateral improvements in terms of the smooth operation of the transmission system. Reduced “fear of cash-out” should reduce pressures to over-contract requiring fewer interactions (and lower costs) for the system operator.

The proposed modification as formulated also involves a clear incentive to contract by applying a premium to SBP and a discount to SSP when these are the main price respectively. As the system becomes tighter and market prices rise, the monetary value of the incentive will increase and will allow a minimum spread against the market price (except where the market price is zero), which will enhance security of supply.

The analysis referred to above has demonstrated a clear and damaging deficiency and therefore it is appropriate to proceed to assessment rather than a standing group. It is also very desirable that a market price model is considered in parallel to an alternative tagging methods such as that proposed by P211.

Modification Proposal – BSCP40/03	MP No: 212 <i>(mandatory by BSCCo)</i>
--	---

The proposer believes that a market price formulation better meets the applicable objectives and that the principal elements of the approach are defined in this proposal. Details of some aspects of the application of the proposal warrant consideration by the modification group. These include (but are not limited to):

- the size of the increment or decrement to the market price to determine the main price and whether it should be fixed
- the formulation for determining whether the market is long or short
- the definition of the default rules
- the interaction with RCRC.

However the proposer is of the view that the key features of the modification have been properly defined and the proposal should be sent to the assessment phase.

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

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

N/A

Details of Proposer:

Name.....Keith Munday.....

Organisation...BizzEnergy.....

Telephone Number 01905 368646.....

Email Address.....keithm@bizzenergy.com.....

Details of Proposer’s Representative:

Name... Keith Munday.....

Organisation...BizzEnergy.....

Telephone Number 01905 368646.....

Email Address.....keithm@bizzenergy.com.....

Modification Proposal – BSCP40/03	MP No: 212 <i>(mandatory by BSCCo)</i>
Details of Representative's Alternate: <i>Name... Chris Welby.....</i> <i>Organisation...Good Energy.....</i> <i>Telephone Number...01249 766090.....</i> <i>Email address.....chris.welby@good-energy.co.uk</i>	
Attachments: No <i>(delete as appropriate) (mandatory by originator)</i> If Yes, Title and No. of Pages of Each Attachment:	

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 P212.

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 support any additional 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	May be impacted in the final solution.
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.
Market Index Data Providers	May be impacted by the final solution.

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 PROPOSAL¹⁴**

Meeting Cost	£4,000 ¹⁵
Legal/Expert Cost	£5,000
Impact Assessment Cost	£10,000
ELEXON Resource	100 man days £32,510

¹⁴ 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

¹⁵ Note that this cost also includes P212 meeting costs as these will be held simultaneously.

