REQUIREMENTS SPECIFICATION
for Modification Proposal P194
'Revised Derivation of the 'Main' Energy Imbalance Price'

Prepared by: ELEXON on behalf of the P194 Modification Group

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Reason for Issue	Impact Assessment	**Issue/Version Number**	Final/1.0

PURPOSE OF THIS DOCUMENT

The primary purpose of this document is to specify the Modification Group's requirements for the requisite change to SAA and BMRA functionality in sufficient detail to allow impact assessment of the Modification Proposal.

For the purposes of this assessment, the reader should assume that the changes will be implemented as a standalone development project managed by BSCCo.

I CONTENTS TABLE

SUMMARY OF IMPACTED PARTIES AND DOCUMENTS

The following parties/documents have been identified as being potentially impacted by Modification Proposal P194.

Parties		Sections of the BSC		Code Subsidiary Documents	
Suppliers	☒	A	☐	BSC Procedures	☐
Generators	☒	B	☐	Codes of Practice	☐
Licence Exemptable Generators	☒	C	☐	BSC Service Descriptions	☒
Transmission Company	☒	D	☐	Service Lines	☐
Interconnector	☒	E	☐	Data Catalogues	☒
Distribution System Operators	☐	F	☐	Communication Requirements Documents	☐
Non-Physical Traders	☒	G	☐	Reporting Catalogue	☒
Party Agents		H	☐	MIDS	☐
Data Aggregators	☐	I	☐	**Core Industry Documents**	
Data Collectors	☐	J	☐	Grid Code	☐
Meter Operator Agents	☐	K	☐	Supplemental Agreements	☐
ECVNA	☐	L	☐	Ancillary Services Agreements	☐
MVRNA	☐	M	☐	Master Registration Agreement	☐
BSC Agents		N	☐	Data Transfer Services Agreement	☐
SAA	☒	O	☐	British Grid Systems Agreement	☐
FAA	☐	P	☐	Use of Interconnector Agreement	☐
BMRA	☒	Q	☐	Settlement Agreement for Scotland	☐
ECVAA	☐	R	☐	Distribution Codes	☐
CDCA	☐	S	☐	Distribution Use of System Agreements	☐
TAA	☐	T	☒	Distribution Connection Agreements	☐
CRA	☐	U	☐	**BSCCo**	
Teleswitch Agent	☐	V	☐	Internal Working Procedures	☒
SVAA	☐	W	☐	**Other Documents**	
BSC Auditor	☐	X	☒	Transmission Licence	☐
Profile Administrator	☐			System Operator-Transmission Owner Code	☐
Certification Agent	☐				
MIDP	☐				
Other Agents					
SMRA	☐				
Data Transmission Provider	☐				

1 INTRODUCTION

1.1 Proposed Modification

Modification Proposal P194 'Revised Derivation of the 'Main' Energy Imbalance Price' (P194) was raised on 26 August 2005 by National Grid (the 'Proposer'). P194 seeks to amend the Energy Imbalance Price calculation such that the volume weighted average of a pre-defined maximum volume of the most expensive[1] balancing actions remaining following application of the existing tagging mechanisms will set the 'Main'[2] Energy Imbalance Price (further background on the existing tagging mechanisms is provided below).

1.1.1 Current Arrangements

Under the current baseline, actions taken by the Transmission Company to balance Generation and Demand for a Settlement Period set the main Energy Imbalance Prices (System Buy Price or System Sell Price depending on the overall imbalance on the system). 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 Balancing Services Adjustment Data (BSAD).

In addition, trades undertaken on power exchanges are represented via information provided by Market Index Data Providers. 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.

The main price (i.e. the price applied to imbalances in the same direction as the system) is based on the volume weighted average of all priced balancing actions (accepted Bids/ Offers and Relevant Balancing Services) 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:** Matching volumes of Accepted Bids and Offers where no net energy has been delivered to the system but there has 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[3] in the price calculation;

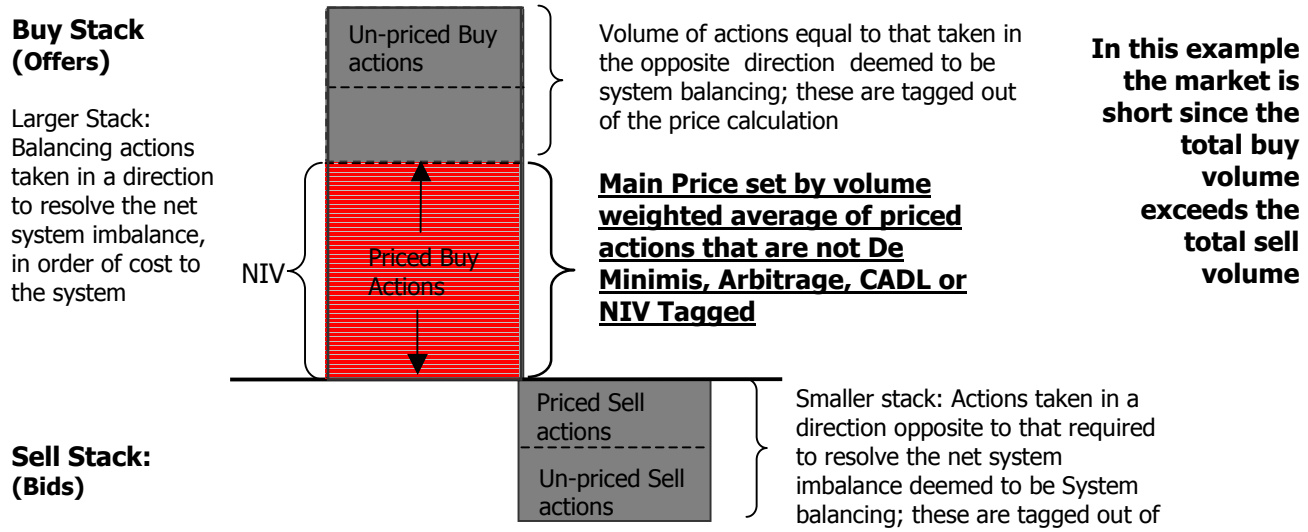
[1] It should be noted that 'most expensive' should, in this context, be considered in relation to the benefit of the system. Offers are bought by the system for an increase in energy, thus the 'most expensive' will be the Offer that cost the most to take. Since Bids are paid to the system by Parties for a reduction in energy, the most expensive Bid will be the one that pays the system the least. A negative Bid price will be even more expensive to the system, as the system is paying (rather than being paid) to reduce energy.

[2] The Energy Imbalance Price applied to imbalances in the same direction as the system.

[3] 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.

- **BSAD:** The Transmission Company determines whether Relevant Balancing Services will be treated as priced or un-priced. BSAD represents priced and un-priced Relevant Balancing Services in aggregate form;
- **Emergency Instructions:** On the determination of the Transmission Company, 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 (as illustrated below) is applied to determine which of the priced actions will contribute to the calculation of Energy Imbalance Prices.

The diagram below illustrates (simplistically) the NIV tagging mechanism. The NIV tagging mechanism derives the 'length' of the system by comparing the Accepted Offer (and BSAD Buy) volume with the Accepted Bid (and BSAD Sell) volume. For example, where the Buy volume exceeds the Sell volume, then the Net Imbalance Volume is positive, and the system is considered to have been short (insufficient generation to meet demand) in that Settlement Period (and, in this exmple, the main price will be System Buy Price).



1.1.2 Change Proposed by P194

The following changes to the mechanism for calculating Energy Imbalance Prices are proposed by P194:

- No changes to the submission or treatment of BSAD are proposed;
- The existing process for determining whether SSP or SBP was the main Energy Imbalance Price would not be changed;
- The method for calculating the reverse price would be unchanged;
- De Minimis, Arbitrage, CADL and NIV tagging will be performed as currently defined. In addition the treatment of Emergency Instructions would be unchanged; and
- Rather than using the volume weighted average of all priced balancing actions which are not De Minimis, Arbitrage, CADL or NIV tagged for the main price, a volume weighted average of a pre-defined portion of the most expensive[1] priced un-tagged actions will set the main price. For the purpose of this document this volume has been referred to as the 'Price Averaging Reference' (PAR) Volume. Under the Proposed Modification this volume would be set to 100MWh.

1.2 Potential Alternative Modifications

A potential Alternative Modification P194 is being considered where the PAR Volume would be calculated for each Settlement Period. The PAR volume would be a set percentage of the NIV, this volume would be parameterised with a minimum volume limit (i.e. if NIV is small such that the set percentage of NIV gives a volume below the minimum volume, the PAR volume would default to the minimum volume value).

It should be noted that potential Alternative Modifications where the PAR volume is a value other than 100MWh are also being considered by the P194 Modification Group. However the requirements for this change are identical to those for Proposed Modification P194 and are not considered separately in this document.

1.3 Background and Scope

The BSC Panel considered P194 at it meeting 8 September 2005 and submitted the proposal to a two month assessment procedure to be conducted by the P194 Modification Group (formed from members of the PSMG). The P194 Modification Group has met once to date (15 September 2005) and agreed the requirements for Proposed Modification P194 and a number of potential Alternative Modifications. This document sets out the requirements agreed by the P194 Modification Group and supports impact assessment by BSC Agents, BSC Parties, the Transmission Company and ELEXON.

2 PROPOSED MODIFICATION

This section sets out the requirements for Proposed Modification P194.

2.1 New Parameter

A new parameter would be introduced, the Price Average Reference Volume (PAR_d). This value would be parameterised and would be Settlement Day specific. PAR_d would be a MWh Energy Volume.

Initially PAR_d would be set to 100MWh. It should be possible to amend the value of PAR_d without incurring any cost. The value of PAR will be included in the BSC and will only change as a result of an Approved Modification; therefore the frequency of amendments will be low (of the order of one per year if at all). Amendments to PAR_d would be notified to BMRA and SAA by BSCCo (via BMRA-I012 and SAA-I023).

2.2 P194 Settlement Calculation

Under Proposed Modification P194 no changes are required to:

- The submission or treatment of BSAD;
- Derivation of the reverse price; and
- The existing tagging methodologies (De Minimis, Arbitrage, CADL and NIV tagging).

Following application of the existing tagging mechanisms, rather than using the volume weighted average of all untagged actions to calculate the main price, a volume weighted average of a defined portion of the most expensive priced untagged balancing actions would be used. This will require changes to SAA and BMRA functionality (BMRA-F004 and SAA-F009).

The required changes to SAA and BMRA functionality are illustrated below (this is based on the existing functional requirements as set out in BMRA-F004 and SAA-F009):

1. Short Duration Acceptances would be identified (as per the current baseline);

2. Total Priced and Unpriced Bid / Offer Volumes and Total Period Applicable Balancing Services Volume would be calculated (as per the current baseline);

3. De Minimis Acceptance Volumes would be identified and excluded from the price calculation (as per the current baseline);

4. Accepted Offers and Bids for all BM Units would be listed in order of Offer Price and Bid Price respectively (as per the current baseline);

5. Arbitrage tagging would be performed (as per the current baseline);

6. For Settlement Days before the P78 effective date Trade Tagging would be applied (as per the current baseline, SAA-F009a/BMRA-F004a). For Settlement Days on or after the P78 effective date but prior to the P194 effective date NIV tagging will be performed (SAA-F009b/BMRA-F004b). For Settlement Days on or after the P194 effective date the following process would be applied (new process SAA-F009 [c] / BMRA-F004 [c]).

7. BSAD would be inserted in the Bid and Offer stacks (as per the current baseline);

8. NIV tagging will be performed (as per the current baseline);

9. NIV Tagged elements of $TQUAB_j$, $SSVA_j$, $TQUAO_j$, and $SBVA_j$ ($TTQUAB_j$, $TSSVA_j$, $TTQUAO_j$, $TSBVA_j$ respectively), will be calculated in accordance with the current baseline.

10. It will be necessary to amend the calculation of the tagged proportion of $ESVA_j$ and $EBVA_j$ ($TEBVA_j$, $TEBVA_j$). This amendment will be required to include the additional volume tagged by the P194 mechanism. The following approach is required:

- New calculated items, NIV Tagged Energy Buy Volume Adjuster ($NTEBVA_j$) and NIV Tagged Energy Sell Volume Adjuster ($NTESVA_j$) will be introduced. NIV Tagged Energy Volumes will be the volume of Energy BSAD removed by NIV tagging (i.e. equivalent to the current $TEBVA_j$ and $TESVA_j$);
- New calculated items, PAR Tagged Energy Buy Volume Adjuster ($PTEBVA_j$) and PAR Tagged Energy Buy Volume Adjuster ($PTESVA_j$), will be introduced; and
- The calculation of $TEBVA_j$ and $TESVA_j$ data items will be amended to account for the additional tagging mechanism introduced under P194. $TEBVA_j$ and $TESVA_j$ will be renamed Tagged Energy Buy Volume Adjuster and Tagged Energy Sell Volume Adjuster (i.e. the reference to NIV Tagging will be removed).

This approach is required in order that the total Untagged Energy BSAD Energy volumes and prices can be included in the existing data items, minimising impact on the actual price calculation.

At this stage in the process it will not be possible to calculate PAR Tagged Volumes ($PTEBVA_j$ and $PTESVA_j$) or the total tagged Energy BSAD Volumes ($TEBVA_j$ and $TESVA_j$). These calculations will be preformed following application of the P194 mechanism.

The calculation of Total NIV Tagged Volume (TCQ_j) will be amended due to the revised definition of $TEBVA_j$ and $TESVA_j$.

$$TCQ_i = \{\{(\Sigma_i\Sigma^{n'} QAPB^n_{ij}) + TTQUAB_j + \mathbf{NTESVA_j} + TSSVA_j\} - \{(\Sigma_i\Sigma^{n*} QAPO^n_{ij}) + TTQUAO_j + \mathbf{NTEBVA_j} + TSBVA_j\}\} / 2$$

where

Σ_i represents the sum over all BM Units;

$\Sigma^{n'}$ represents the sum over all Priced Acceptance Bids which are NIV Tagged Bids;

Σ^{n*} represents the sum over all Priced Acceptance Offers which are NIV Tagged Offers;

$TTQUAB_j$ is the NIV Tagged $TQUAB_j$;

$NTESVA_j$ is the NIV Tagged $ESVA_j$;

$TSSVA_j$ is the NIV Tagged $SSVA_j$;

$TTQUAO_j$ is the NIV Tagged $TQUAO_j$;

$NTEBVA_j$ is the NIV Tagged $EBVA_j$; and

$TSBVA_j$ is the NIV Tagged $SBVA_j$.

The Calculation of Net Imbalance Volume (NIV_j) will not be changed.

11. PAR Tagging will then be performed. Referencing the remaining Offers (including buy BSAD volumes) and Bids (including sell BSAD volumes) (following NIV tagging), and starting from the most expensive[1] Bid and least expensive Offer, Bids and Offers are tagged until the total remaining volume is not more than the Price Averaging Reference Volume, PAR_d.

For example had the previous steps resulted in the following stack:

Offer Stack

Tagged Status	Offer Type	Price	Vol
T	$TQUAO_j$	-	100
T	$SBVA_j$	-	0
T	$QAPO_j$	30	150
U	$QAPO_j$	28	30
U	$QAPO_j$	25	95
U	$QAPO_j$	20	25
U	$EBVA_j$	15	50

Bid Stack

Tagged Status	Bid Type	Price	Vol
T	$ESVA_j$	15	75
T	$QAPB_j$	10	25
T	$QAPB_j$	-10	50
T	$SSVA_j$	-	50
T	$TQUAB_j$	-	50

Were PAR_d set to 100MWh the result of this process would be:

Offer Stack

	Tagged Status	Offer Type	Price	Vol	
	T	$TQUAO_j$	-	100	
	T	$SBVA_j$	-	0	
	T	$QAPO_j$	25	150	
Untagged	U	$QAPO_j$	10	30	
Untagged	U	$QAPO_j$	25	70	NB: £25 action Part Tagged
	T	$QAPO_j$	25	25	NB: £25 action Part Tagged
	T	$QAPO_j$	20	25	
	T	$EBVA_j$	15	50	

Bid Stack

Tagged Status	Bid Type	Price	Vol
T	$ESVA_j$	15	75
T	$QAPB_j$	10	25
T	$QAPB_j$	-10	50
T	$SSVA_j$	-	50
T	$TQUAB_j$	-	50

Note that for the £25/MWh price range, only 25 out of the 95 available MWh of Offers at that price will be tagged. Therefore, each Offer in that price range would have tagged by an amount equal to 25/95 of its entire volume.

11. The volumes tagged via the P194 mechanism would then be identified as follows:

PAR Tagged Energy Volumes ($PTEBVA_j$ and $PTESVA_j$) will be the volume of Energy BSAD removed by PAR tagging (which was not previously removed by NIV tagging).

The total tagged and untagged Energy BSAD Volumes can then be calculated as follows:

- $TEBVA_j = NTEBVA_j + PTEBVA_j$
- $TESVA_j = NTESVA_j + PTESVA_j$
- $UEBVA_j = EBVA_j - TEBVA_j$
- $UESVA_j = ESVA_j - TESVA_j$

Where part of the Energy BSAD Volume is tagged out by either NIV Tagging or PAR Tagging, then the price associated with the untagged volume is to be derived as follows (as per the current baseline). Note these data items would be renamed to remove references to NIV tagging:

$UEBCA_j = (EBCA_j / EBVA_j) * UEBVA_j$;

$UESCA_j = (ESCA_j / ESVA_j) * UESVA_j$.

If for that Settlement Period $EBVA_j$ is zero, then $UEBCA_j = 0$; and

If for that Settlement Period $ESVA_j$ is zero, then $UESCA_j = 0$.

Consideration should also be given in the impact assessment to options for identifying the total volume of Priced Bids and Offers removed via NIV Tagging and the P194 mechanism.

12. Energy Imbalance Prices will then be derived as follows (**changes to the existing calculation emphasised**):

SBP

In respect of each Settlement Period, if the Net Imbalance Volume is positive and the value of $\{\Sigma_i\Sigma^n \{QAPO^n_{ij} * TLM_{ij}\} + UEBVA_j\}$ is non-zero, then the System Buy Price will be determined as follows:

$$SBP_j = \frac{\{\Sigma_i\Sigma^n\{QAPO^n_{ij} * PO^n_{ij} * TLM_{ij}\} + UEBCA_j\}}{\{\Sigma_i\Sigma^n \{QAPO^n_{ij} * TLM_{ij}\} + UEBVA_j\}} + \{BPA_j\}$$

where

Σ_i represents the sum over all BM Units;

Σ^n represents the sum over those accepted Priced Accepted Offers, that are not De Minimis Acceptance volumes and not Arbitrage Accepted Offers and not NIV Tagged Offers **and not PAR Tagged Offers**;

PO^n_{ij} is the Offer Price for the Offer acceptance n, BM Unit i and Settlement Period j;

$UEBCA_j$ is the ~~**NIV**~~ Untagged Buy-Price Cost Adjustment (Energy);

$UEBVA_j$ is the ~~**NIV**~~ Untagged Buy-Price Volume Adjustment (Energy); and

BPA_j is the Buy-Price Price Adjustment.

Where NIV is less than or equal to zero or the value of $\{\Sigma_i\Sigma_n \{QAPO^n_{ij} * TLM_{ij}\} + UEBVA_j\}$ is zero, SBP will be derived in accordance with the current baseline (i.e. will be the market price or a default value).

SSP

In respect of each Settlement Period, if the Net Imbalance Volume is negative and the value of $\{\Sigma_i\Sigma^n \{QAPB^n_{ij} * TLM_{ij}\} + UESVA_j\}$ is non-zero, then the System Sell Price will be determined as follows:

$$SSP_j = \frac{\{\Sigma_i\Sigma^n\{QAPB^n_{ij} * PB^n_{ij} * TLM_{ij}\} + UESCA_j\}}{\{\Sigma_i\Sigma^n \{QAPB^n_{ij} * TLM_{ij}\} + UESVA_j\}} + \{SPA_j\}$$

Where:

Σ_i represents the sum over all BM Units;

Σ^n represents the sum over those accepted Priced Accepted Bids, that are not De Minimis Acceptance volumes and not Arbitrage Accepted Bids and not NIV Tagged Bids **and not PAR Tagged Bids;**

PB^n_{ij} is the Bid Price for the Bid acceptance n, BM Unit I and Settlement Period j:

$UESCA_j$ is the ~~**NIV**~~ **Untagged Sell-Price Cost Adjustment** (Energy):

$UESVA_j$ is the ~~**NIV**~~ **Untagged Sell-Price Volume Adjustment** (Energy); and

SPA_j is the Sell-Price Price Adjustment.

Where NIV is greater than or equal to zero or the value of $\{\Sigma_i\Sigma_n \{QAPB^n_{ij} * TLM_{ij}\} + UESVA_j\}$ is zero SSP will be derived in accordance with the current baseline (i.e. will be the market price or default value).

It should be noted that there would be no requirement change the Price Derivation Codes.

2.3 Reporting

Changes may be required to SAA reporting; in particular the Settlement Report (SAA- I014 all sub flows) may be amended to include the new data items and rename existing System Period Data items as follows:

Data Item	Definition
NIV Tagged Energy Buy Volume Adjuster	$NTEBVA_j$
NIV Tagged Energy Sell Volume Adjuster	$NTESVA_j$
PAR Tagged Energy Buy Volume Adjuster	$PTEBVA_j$
PAR Tagged Energy Buy Volume Adjuster	$PTESVA_j$
~~NIV~~ Untagged EBCA	$UEBCA_j$
~~NIV~~ Untagged EBVA	$UEBVA_j$
~~NIV~~ Untagged ESCA	$UESCA_j$
~~NIV~~ Untagged ESVA	$UESVA_j$

At this stage it is not considered that any further changes to SAA reporting would be required. However, any potential further changes to SAA reporting should be identified via impact assessment, (e.g. BM Unit level reporting or reporting of the total volume of tagged Offers and Bids).

At this stage it is not considered that changes to BMRA reporting are required. However, any potential changes to BMRA reporting should be identified via impact assessment.

A number of options have been identified for implementing the P194 reporting requirements:

Option A – No changes to SAA reporting will be made. This approach will reduce the impact of P194, both in terms of the changes to Central Systems and the impact on BSC Parties (and will have an associated reduction in testing requirements). However, under this approach, the ability of Parties to verify the Energy Imbalance Price calculation may be adversely impacted. Whilst it will be possible to identify the total volume of different actions removed via both NIV and PAR tagging, it may not be possible to separate the element removed by NIV tagging and those removed by the P194 mechanism. At this stage it is not clear whether this is of significance to impacted parties.

Option B – Changes to SAA reporting would be introduced on initial implementation of the change; and

Option C– No change to SAA reporting when the change is initially implemented, however reporting changes would be delivered as part of a later release.

2.4 Potential Changes to BSC Systems

BMRA and SAA systems will be amended in line with the requirements outlined above.

2.5 Potential Changes to BSCCo Systems

The introduction of P194 has an impact on the Trading Operations Market Analysis System (TOMAS).

2.6 Implementation Options

As considered previously there a number of implementation options relating to the reporting requirements of P194:

Approach A: P194 would be implemented without changing the SAA-I014 report;

Approach B: P194 would be implemented with changes to the SAA-I014; and

Approach C: P194 would be implemented without changing SAA reporting, changes to the SAA-I014 report would be implemented at a later date.

Under all approaches P194 would be implemented such that P194 would only apply to Settlement Days on or after the implementation date (as such the existing pricing mechanism would be supported for Settlement Days prior to the implementation date).

3 ALTERNATIVE MODIFICATION

The requirements of potential Alternative Modification P194 are identical to the Proposed Modification with the exception of the following:

A new parameter would be introduced, the Price Average Reference Proportion ($PARP_d$). This value would be Settlement Day specific. The value would be a fraction between zero and 1.

In addition another new parameter would be introduced, the Price Average Reference Limit ($PARL_d$). This value would be parameterised and would be Settlement Day specific. The value will be a MWH value.

Initially $PARP_d$ and $PARL_d$ would be set to values specified by BSCCo. It should be possible to amend the value of $PARP_d$ and $PARL_d$ without incurring any cost. The value of PARP and PARL will be included in the BSC and will only change as a result of an Approved Modification; therefore the frequency of amendments will be low (of the order of one per year if at all). Amendments to $PARP_d$ and $PARL_d$ would be notified to BMRA and SAA by BSCCo (via BMRA-I012 and SAA-I023).

PAR would then be a Settlement Period specific value (PAR_i) derived by the SAA and BMRA as follows:

If $PARP_d * \text{Absolute value of } NIV_j > PARL_d$

then $PAR_j = PARP_d * NIV_j$

Else $PAR_j = PARL_d$

The requirements of potential Alternative Modification are then consistent with those of Proposed Modification P194, with the exception of the use of PAR_j in place of PAR_d.

4 COMBINED SOLUTION

Consideration should be given to the implementation of a solution which will support either the Alternative or Proposed Modification.

This may require the flexibility for the PAR volume to be defined as a percentage of NIV with a minimum and maximum limit (which would allow fixed volume solution if theses values were equal).

4.1 Implementation Options

As Proposed Modification P194.

4.2 Potential Changes to Central Services Systems

As Proposed Modification P194.

4.3 Potential Changes to BSCCo Systems

As Proposed Modification P194.

5 DEVELOPMENT PROCESS

For the purposes of this assessment, the reader should assume that the changes will be implemented as a standalone development project managed by BSCCo.

5.1 Testing

BSCCo intend that responsibility for software testing should lie with the BSC Agents, but that BSCCo should have some visibility of the process, in order to gain assurance that the integrity of Trading and Settlement is maintained. The testing required will differ depending on the implementation approach as outlined below:

Approach A:

- Change Specific Testing
- Acceptance Testing
- Price calculation verification

Approach B:

- Change Specific Testing
- Acceptance Testing
- Participant Testing
- Price calculation verification

Approach C:

At initial implementation

- Change Specific Testing
- Acceptance Testing
- Price calculation verification

On implementation of reporting changes:

- Change Specific Testing
- Acceptance Testing
- Participant Testing

6 DOCUMENT CONTROL

a Authorities

Version	Date	Author	Reviewer	Reason for review
0.1	21/09/05	Tom Bowcutt	Sarah Jones	Peer Review
0.2	21/09/05	Tom Bowcutt	Kevin Swinton	Operational Review
0.2	21/09/05	Tom Bowcutt	Peter O'Donovan	Operational Review
0.2	21/09/05	Tom Bowcutt	Design Authority	Technical Review
0.2	21/09/05	Tom Bowcutt	Modification Group	Modification Group Review
1.0	10/10/05	Tom Bowcutt	Industry	Impact Assessment

b References

Ref	Document	Owner	Issue date	Version
1	Initial Written Assessment for Modification Proposal P194	ELEXON	04/09/05	1.0
2	P194IWA	ELEXON		1.0
3	P195 Assessment Consultation	ELEXON	7/10/05	1.0

P194 documentation can be found on the ELEXON Website:
http://www.elexon.co.uk/changeimplementation/ModificationProcess/modificationdocumentation/modProposalView.aspx?propID=212