Draft MODIFICATION REPORT for Modification Proposal P136
Marginal Definition of the 'main' Energy Imbalance Price

Prepared by: ELEXON on behalf of the BSC Panel

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This document has been distributed in accordance with Section F2.1.10[1] of the Balancing and Settlement Code.

RECOMMENDATIONS

The Balancing and Settlement Code Panel recommends that:

- **Proposed Modification P136 should not be made;**
- **If the Authority determine that P136 should be made, the Implementation Date should be 3 November 2004, if an Authority determination is received before or on 23 January 2004. If an Authority determination is received after that date but prior to, or on 31 March 2004, the Implementation Date should be 22 February 2005.**

CONTENTS TABLE

[1] The current version of the Balancing and Settlement Code (the 'Code') can be found at www.elexon.co.uk/ta/bscrel_docs/bsc_code.html

SUMMARY OF IMPACTED PARTIES AND DOCUMENTS

The following Parties/documents have been identified as being impacted by Proposed Modification P136.

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	☐
Party Agents		G	☐	Reporting Catalogue	☒
Data Aggregators	☐	H	☐	MIDS	☐
Data Collectors	☐	J	☐	**Core Industry Documents**	
Meter Operator Agents	☐	K	☐	Grid Code	☐
ECVNA	☐	L	☐	Supplemental Agreements	☒
MVRNA	☐	M	☐	Ancillary Services Agreements	☐
BSC Agents		N	☐	Master Registration Agreement	☐
SAA	☒	O	☐	Data Transfer Services Agreement	☐
FAA	☐	P	☐	British Grid Systems Agreement	☐
BMRA	☒	Q	☒	Use of Interconnector Agreement	☐
ECVAA	☐	R	☐	Settlement Agreement for Scotland	☐
CDCA	☐	S	☐	Distribution Codes	☐
TAA	☐	T	☒	Distribution Use of System Agreements	☐
CRA	☐	U	☐	Distribution Connection Agreements	☐
Teleswitch Agent	☐	V	☒	**BSCCo**	
SVAA	☐	W	☐	Internal Working Procedures / systems	☒
BSC Auditor	☐	X	☒	**Other Documents**	
Profile Administrator	☐			Transmission Licence	☐
Certification Agent	☐				
MIDP	☐				
TFLA	☐				
Other Agents					
SMRA	☐				
Data Transmission Provider	☐				

Cost of implementing Proposed Modification P136:	
Change specific	**£890,000**
Standalone Project	**£449,500**
Overhead	
BSC Auditor Effort	**£89,000**
Solution Variation Cost	**£89,000**
Test Environment	**£44,500**
Operational/maintenance	**£120,000**
Total:	**£1,562,000 + 750 ELEXON man days**

1 DESCRIPTION OF PROPOSED MODIFICATION AND ASSESSMENT AGAINST THE APPLICABLE BSC OBJECTIVES

1.1 Modification Proposal

Modification Proposal P136 'Marginal Definition of the 'main' Energy Imbalance Price' (P136) was raised by National Grid Transco on 1 August 2003.

The Panel considered the Initial Written Assessment for P136 at its meeting of 14 August 2003. The Panel noted the interaction between P136 and Modification Proposal P137 'Revised Definition of the System Buy Price and System Sell Price' (P137) (which was raised by Barclays Capital on 1 August 2003).

The Panel therefore agreed to submit both Proposals to a three month parallel Assessment Procedure, in recognition of the similarity of the issues each Modification Proposal seeks to address, with the assessment undertaken by the Pricing Issues Standing Modification Group (PSMG).

P136 seeks to implement a marginal Energy Imbalance Price methodology in respect of the main Energy Imbalance Price (i.e. the Energy Imbalance Price applied to Party imbalances in the same direction as the system), where the marginal price is derived from the last energy balancing action remaining in the Net Imbalance Volume (NIV), i.e. the most expensive Offer Acceptance / energy BSAD buy when the system is short, and the least expensive Bid Acceptance / energy BSAD sell when the system is long.

P136 also requires amendment to the composition of the NIV derivation, to better reflect the balancing actions taken by the Transmission Company, namely rather than reflecting a net volume in respect of forward energy trades taken by the Transmission Company in the NIV, each individual trade will be represented in a disaggregated format. Also, non Balancing Mechanism delivered standing reserve (not currently captured and included in the NIV) is to be incorporated. Furthermore, the treatment of option fees for standing reserve contracts is to be amended to be targeted at the BM Units that have standing reserve called.

It should be noted that this change in approach requires amendment to the Balancing Services Adjustment Data (BSAD) and the associated Methodology Statement. The Transmission Company has completed a consultation on the proposed amendments to the BSAD Methodology Statement to support P136 (and P137). The legal drafting provided for P136 reflects the outcome of this BSAD consultation. Therefore the Authority will have a consistent solution for P136 in terms of the amendments to the Balancing and Settlement Code and the Balancing Services Adjustment Data Methodology Statement for determination in respect of P136.

During the Assessment Procedure for P136 and P137, the PSMG met seven times, on 21 August 2003, 3, 12 and 23 September and 2 and 17 October 2003 and 4 November 2003. The PSMG have undertaken two consultations and one impact assessment from the BSC Central Service Agent, BSCCo and the Transmission Company.

It should be noted that due to the similarity of the issues involved, and for efficiency, one Assessment Report was produced covering the Assessment Procedure for both Modifications (ensuring that there was a clear delineation between the two Modifications). The Assessment Report for P136 and P137 is available on the BSC Website.

The Panel considered the Assessment Report and the PSMG recommendations in respect of P136 (and P137) at its meeting of 13 November 2003 and unanimously agreed with the recommendations of the PSMG, namely that Proposed Modification P136 should not be made.

1.2 Proposed Modification

It should be noted that there are numerous references to 'electricity (or energy) balancing' and 'system balancing' throughout this Modification Report. The P136 and P137 Assessment Report (section 1.2) provides the definition of these terms in the context of P136.

1.2.1 Overview

In summary the P136 mechanism is:

- Continuous Acceptance Duration Limit (CADL)[2] and De Minimis Tagging is undertaken, as currently defined;
- All balancing actions, Bid – Offer Acceptances, disaggregated BSAD energy buys and sells (each BSAD energy buy is represented by an Energy Buy Volume (EBV^n_j) with an associated Energy Buy Price (EBP^n_j), and each BSAD energy sell is represented by an Energy Sell Volume (ESV^n_j) with an associated Energy Sell Price (ESP^n_j)), and net aggregated System BSAD (SBVA and SSVA, as currently defined) are stacked in price order, least expensive first;
- Arbitrage Tagging is performed on Bid – Offer Acceptances and energy BSAD, which removes an equal and opposite volume from both the sell stack and the buy stack to remove balancing actions where the Offer / buy Price is less than the Bid / sell price for the balancing actions;
- The standing reserve option fee is added to the Bid – Offer price of Bid – Offer Acceptances made under standing reserve contracts (the BM Unit Offer Price Adjustment ($BOPA_{ij}$) is added to the Offer Price, and the BM Unit Bid Price Adjustment ($BBPA_{ij}$) is added to the Bid Price), and the stacks are re-ordered, if required to maintain price ordering;
- NIV Tagging, as currently defined, is undertaken; and
- The main Energy Imbalance Price will then be the most expensive energy balancing action remaining in the NIV, noting that this may be a partial balancing action remaining in the NIV after NIV Tagging.

The following amendments to the Balancing Services Adjustment Data (BSAD) are required to support P136:

- The application of Option fees (Buy Price Price Adjustment (BPA_j) and Sell Price Price Adjustment (SPA_j)) will be amended, such that the option fee for a standing reserve contract will be reflected in the Bid – Offer Acceptance price, using the 'BOPA' and 'BBPA' variables described above;
- Energy BSAD will be disaggregated, such that each 'trade' is provided as a volume with a price, as described above. Thus there will be a volume and a price notified for each of the following:
  - Energy Pre Gate Closure BM Unit Transactions (PGBTs);
  - Energy forward trades; and
  - Non Balancing Mechanism standing reserve.

A more detailed description of the mechanism is provided in Annex 8 of the P136 and P137 Assessment Report, with worked Energy Imbalance Price examples provided in Annex 9.

[2] The interaction with Urgent Modification P144 'Removal of CADL from the BSC' should be noted. It should also be noted that the P136 Modification Proposal indicates that CADL Tagging is a required part of P136.

1.2.2 P136 Mechanism

The following balancing actions are taken by the Transmission Company and volumes are derived / calculated (System and energy BSAD) / instructed (Bid – Offer Acceptances), as relevant:

1. System BSAD (SBVA / SSVA) will not be disaggregated, and will continue to be provided for each Settlement Period as a net volume without any associated price;
2. Energy BSAD will be disaggregated, and for each energy trade, a volume (MWh), price (£/MWh) will be provided; and
3. Bid – Offer Acceptances are taken in the same way as currently.

All of these balancing actions are notified to the BSC Central Service Agent.

The BSC Central Service Agent (BMRA or SAA, depending on the timescales – BMRA real time, and SAA for Settlement Runs) will, for each Settlement Period:

1. 'CADL' tag the Bid – Offer Acceptances. This results in:
   - A set of Priced Acceptances, i.e. non CADL'ed Bid – Offer Acceptances, deemed to have been taken for energy purposes, pending NIV Tagging; and
   - A set of Unpriced Acceptances, i.e. CADL'ed Bid – Offer Acceptances, deemed to have been taken for system purposes, and used only in the derivation of the NIV;
2. De Minimis tag the Bid – Offer Acceptances, resulting in the removal of small (<1MWh), 'unreal' acceptances;
3. Arbitrage tag all balancing actions, resulting in the removal of an equal and opposite volume from both the sell stack and the buy stack to remove balancing actions where the Offer / buy Price is less than the Bid / sell price for the balancing actions; and
4. For the remaining (Period) Bid – Offer Acceptances, use the BM Unit Bid - Offer Adjustment Price (BOPA or BBPA respectively) derived from a 'look up table', provided by the Transmission Company (and published to BSC Parties) to determine whether there are any adjustments to be reflected in the Bid – Offer prices for affected BM Units. Where a BM Unit has an adjustment to be applied then the £/MWh Bid – Offer Price will be adjusted, for all acceptances on the BM Unit, as specified by the look up table.

The remaining balancing actions go forward to NIV Tagging, undertaken as currently, and therefore not explored further. The main Energy Imbalance Price will then be the most expensive action remaining in the NIV. Figure 1 shows the general composition of the buy stack, and Figure 2, the sell stack.

Where the most expensive action remaining in the NIV is 'known' system balancing (i.e. system BSAD, system balancing services or CADL'ed acceptances), then **the most expensive energy balancing action in the NIV will set the marginal System Buy Price**.

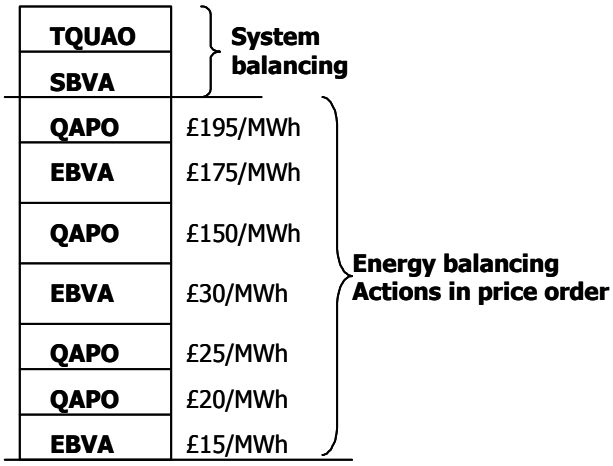

Figure 1: Composition of the Buy Stack

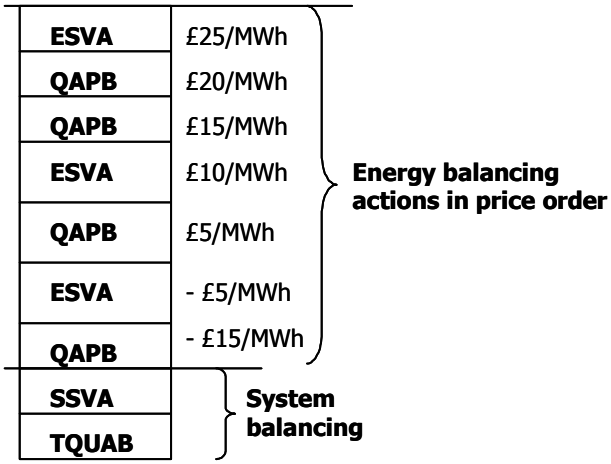

Figure 2: Composition of the Buy Stack

For the avoidance of doubt, NIV Tagging tags inwards (top down on the Offer / buy stack, and bottom up on the Bid / sell stack), so on both the Bid and the Offer stack, the system balancing actions are the first to be tagged out.

1.3 Issues raised by Proposed Modification P136

The Terms of Reference agreed by the Panel for the assessment of P136 set out the issues raised by P136. The Terms of Reference were provided as Annex 7A to the P136 and P137 Assessment Report, and formed the basis of the detailed deliberations of the PSMG (provided in Section 2 of the P136 and P137 Assessment Report). Therefore the issues are not detailed further in this Modification Report.

1.4 Assessment of Proposed Modification P136 in respect of the Applicable BSC Objectives

In summary, the Panel support the view of the majority of the PSMG in respect of P136 and the Applicable BSC Objectives. Therefore the Panel and the majority of the PSMG do not believe that P136 is better at facilitating the Applicable BSC Objectives 3(b) and 3(c) than the current baseline. It should be noted that P136 is considered to be neutral to Applicable BSC Objectives 3(a) and 3(d).

Section 2 of the P136 and P137 Assessment Report sets out the detailed deliberations of the PSMG in respect of P136 (and P137) and the Applicable BSC Objectives. Therefore this section of the Modification Report provides only a high level summary of the deliberations.

1.4.1 Applicable BSC Objective 3(b): Efficient, Economic and Co-ordinated Operation of the Transmission System by the Transmission Company

On balance, the Panel do not believe that P136 better facilitates Objective 3(b) for the reasons set out in the 'Against' below.

FOR:

1. A marginal Energy Imbalance Price sends more appropriate signals to the forwards and spot markets as to the true underlying cost of providing balancing energy and therefore the cost that Parties should face if they are in imbalance. This will have the effect of incentivising Parties to contract ahead to take a more efficient balanced position (forward contracting in sufficient volumes to cover their position, even at peak times), potentially aligning them more closely with the system, which in turn assists the Transmission Company in balancing the system;
2. The risk of exposure to imbalance, with more appropriate Energy Imbalance Prices (marginal) will financially incentivise generators to maintain efficient and reliable plant, and Suppliers to improve demand forecasting, which will improve the quality of the physical position information held by the Transmission Company, and assist them in balancing the system;
3. A marginal Energy Imbalance Price, particularly at times of system stress, will provide price signals that more appropriately value capacity at the margin, thus ensuring the availability of plant to meet demand under all circumstances;
4. Transparency of the marginal balancing action setting the Energy Imbalance Price means that actions are subject to scrutiny from the market and this, in conjunction with an improved view of the cost of the marginal energy balancing action, may improve competitive bidding into the Balancing Mechanism, resulting in a reduction of Bid – Offer prices overall, and in the overall reduction of Energy Imbalance Prices;

AGAINST:

5. A higher (main) Energy Imbalance Price (a postulated outcome of a marginal Energy Imbalance Price) will drive the market excessively and inefficiently long, by collective over contracting;
6. A higher (main) Energy Imbalance Price will incentivise Parties to breach the Grid Code by self insuring / self balancing (i.e. deviating from FPN on other plants in the event of a plant trip in order to meet contracted levels and mitigate exposure to imbalance). Plant may also withhold capacity for self insuring, or to try and avoid trip. Both actions will degrade the ability of the Transmission Company to balance the system;
7. In respect of the postulated incentive to improve Supplier demand forecasts, it could be argued that the quality of demand forecasts is already such that, irrespective of the methodology for calculating Energy Imbalance Prices, they cannot provide any better physical position information to the Transmission Company; and
8. Exposure to (large) imbalance (say plant trip) at the time of a higher Energy Imbalance Price increases the (potentially unmanageable) risk of exposure to imbalance, and may put smaller Parties out of business, creating capacity issues.

1.4.2 Applicable BSC Objective 3(c): Promoting Competition in the Generation and Supply of Electricity and the Sale and Purchase of Electricity

On balance, the Panel do not believe that P136 better facilitates Objective 3(c) for the reasons set out in the 'Against' below.

FOR:

1. A marginal Energy Imbalance Price sends strengthened signals from the Energy Imbalance Price to the forwards and spot markets as to the true underlying cost of electricity balancing the system than the current volume weighted average Energy Imbalance Price, better signalling the cost of electricity balancing, and better promoting efficient market responses to emerging price signals;

2. A volume weighted average Energy Imbalance Price consistently understates the marginal cost of electricity balancing and therefore sends inappropriate and less reflective price signals to the forwards and spot markets;

3. It is not possible to allocate the costs of each individual MWh to the individual Party in imbalance, and therefore each Party contributing to the system imbalance has incurred the marginal cost of electricity balancing the system and, since the Energy Imbalance Price mechanism is about reflecting the costs of electricity balancing (not recovering them), these Parties should incur the marginal cost, as it is more representative than a volume weighted average;

4. A marginal Energy Imbalance Price is, by definition, more cost reflective than an average Energy Imbalance Price, provided the correct energy balancing costs are fed through to the calculation. The enhancements to BSAD for P136 ensure that this proviso is met;

5. A marginal Energy Imbalance Price better targets costs and provides appropriate incentives over the long run, as Parties with unreliable generation or supply arrangements are likely to pay more in imbalance charges than those able to better manage their positions. This is an improvement over the current average arrangements, where underperformers are subsidised by the remainder of the market;

6. Accurate price signals sent by the main Energy Imbalance Price to the forwards and spot markets should encourage an efficient market response by incentivising Parties to forward contract to ensure that their position is covered under all circumstances. Over the longer term, appropriate price signals encourage efficient investment in generation capacity. Currently the volume weighted average Energy Imbalance Price methodology understates the underlying costs of energy balancing and as a consequence there is a weaker than expected link between forward prices and Energy Imbalance Prices, which is causing capacity to be undervalued by the market;

7. A volume weighted average pricing methodology understates the cost of electricity balancing which incentivises Parties to take the risk of being in imbalance, rather than to forward contract to ensure the position is covered;

8. A marginal Energy Imbalance Price is unlikely to result in extreme prices and therefore the risk of imbalance exposure is no greater than under the current mechanism, and is therefore a risk that can be factored into Bid – Offer and contract prices; and

9. Improved signals from a marginal Energy Imbalance Price may signal potential times of system stress and thus incentivise all Parties to respond appropriately. This may make extreme (system) events less likely, reducing the overall risk to the market.

AGAINST:

10. As a consequence of imperfect information and the inability to accurately differentiate between system and electricity balancing, a volume weighted average price methodology is more cost reflective than a marginal price methodology;

11. A marginal Energy Imbalance Price may consistently over or under recover the costs incurred in electricity balancing the system, and so it does not appropriately target the costs of electricity balancing, whereas a volume weighted average price is unlikely to consistently over or under recover the costs and is therefore a more appropriate cost targeting mechanism;

12. Small volumes of extremely priced Bids or Offers could set the marginal Energy Imbalance Price, especially at times of system stress, which are not cost reflective of market conditions, nor reflective of the Transmission Company costs of electricity balancing the system;

13. The current methodology sends adequate price signals to the forwards and spot markets, encouraging an appropriate response from Parties in respect of forward contracting to balance;

14. Volatile, inappropriately high Energy Imbalance Prices will incentivise excessive and inefficient length in the market, which in turn causes volatility in the forwards and spot markets. Such length may also stifle liquidity in the forwards and spot markets, as will withholding of capacity for the purposes of self balancing / self insurance;

15. In respect of the postulated incentive to improve Supplier demand forecasts, there is a point where, since demand forecasts will always contain errors, it becomes questionable whether the improved demand forecast actually provides any additional benefit when the costs of making those improvements are considered. Furthermore, it could be argued that the quality of demand forecasts is already such that, irrespective of the methodology for calculating Energy Imbalance Prices, they cannot provide any better physical position information to the Transmission Company;

16. Increased risk of exposure to inappropriately high Energy Imbalance Prices (if a marginal Energy Imbalance Price is not considered to be cost reflective, then it could be considered to be setting an inappropriate Energy Imbalance Price) is considered to be unmanageable, as events such as plant trip or demand forecast error occur within the Settlement Period and therefore cannot be insured against;

17. Thus a marginal Energy Imbalance Price will result in inappropriately higher Energy Imbalance Prices which increases the risk of exposure to imbalance, and consequently increases the cost of managing that risk. This could also present a barrier to entry for smaller Parties in terms of the disproportionate costs of risk management;

18. The risk of exposure to imbalance should be factored into Bid – Offer prices and contract prices, however, a large exposure to the marginal Energy Imbalance Price at a time of system stress could lead to catastrophic imbalance exposure, for which there is no way of adequately factoring the risk into Bid – Offer prices and contract prices; and

19. Furthermore, a large exposure to an extreme marginal Energy Imbalance Price could lead to a Party incurring imbalance charges far in excess of its Credit Cover, creating consequential risk for all other BSC Parties.

1.5 Implementation Costs and Timescales for Proposed Modification P136

The development and implementation of P136 will incur costs of approximately **£1,562,000**. This encompasses BSC Central Service Agent development and implementation costs of **£890,000**, plus

(standalone) project overhead costs of **£449,500**. The annual maintenance cost for Proposed Modification P136 will be **£120,000 p.a.**

This excludes ELEXON effort of approximately **750 man days**, and additional ELEXON costs of:

- **£89,000** (10% of the change specific cost for the BSC Auditor effort);
- **£89,000** (10% of the change specific cost for any variation in the solution during development); and
- **£44,500** (5% of the change specific costs for the test environment).

Due to the complexity and materiality of the amendments for P136 there is an additional 20% tolerance associated with these figures.

A lead time of approximately **40 to 45 weeks** is required.

Therefore, the Authority determination cut off date for the proposed Implementation Dates reflect this lead time, and therefore it is proposed that if:

- P136 is to be delivered in the **November 2004** (3 November 2004 Implementation Date) BSC Systems Release, an Authority determination is required by **23 January 2004**; and
- P136 is to be delivered in the **February 2005** (22 February 2005 Implementation Date) BSC Systems Release, an Authority determination is required by **31 March 2004**.

The Implementation Dates and Authority determination cut off dates have been aligned as far as possible for P136 and P137 in recognition of the similarity of the technical solution for the Modifications and noting that the P136 and P137 are mutually exclusive.

It should be noted that the shorter implementation timescales for P136 (approximately 5 to 6 weeks less than P137) has meant that P136 is a candidate for the November 2004 BSC Systems Release (should an Authority determination be received before, or on, 23 January 2004).

However, the implementation timescales for P137 have meant that P137 can only be considered for the November 2004 BSC Systems Release if the November 2004 BSC Systems release is delayed until 30 November 2004, as the lead time is too great (an Authority determination would be required by 15 December 2003 to meet the 2 November 2004 BSC Systems Release Date). It should be noted that this approach allows alignment of the Authority determination cut off dates for P136 and P137.

1.6 Governance and regulatory framework assessment

As noted in section 1.1, both P136 and P137 require amendment to the Transmission Company owned Balancing Services Adjustment Data Methodology Statement to reflect the amendments to BSAD required to give effect to P136 and P137.

It should be noted that the deliberations of the PSMG, and the views of respondents to the P136 and P137 consultations, in respect of the BSAD amendments for P136 and P137, informed the Transmission Company when compiling its consultation on the requisite BSAD amendments.

The Transmission Company has completed a consultation on the proposed amendments the BSAD Methodology Statement to support P136 (and P137). The legal drafting provided for P136 reflects the outcome of this BSAD consultation. Therefore the Authority will have a consistent solution for P136 in terms of the amendments to the Balancing and Settlement Code and the Balancing Services Adjustment Data Methodology Statement for determination in respect of P136.

2 IMPACT ON BSC SYSTEMS AND PARTIES

An assessment was undertaken in respect of BSC Systems and Parties and the following have been identified as being impacted by Proposed Modification P136.

2.1 BSCCo

BSCCo is also impacted by the requirement to include P136 in a BSC Systems Release.

1. The ELEXON CVA Programme estimates a resource requirement of between 509 and 709 man days for the delivery and implementation of P136 (noting a tolerance of 50% on these estimates). Therefore for the purposes of reflecting the requirement, it is assumed that P136 will incur CVA Programme resource of **600 man days**;
2. ELEXON Market Monitoring estimates a resource requirement of **81 man days for P136** (TOMAS amendments, amendment to the file receiver, documentation changes and testing);
3. ELEXON Assurance estimates a resource requirement of 50 to 70 man days for the systems assurance and ELEXON audit of the delivery of P136, plus 2 man days for amendments to the Business Process Model and the Obligations Register. Therefore for the purposes of reflecting the requirement, it is assumed that P136 will incur Assurance resource of **62 man days**; and
4. The following ELEXON departments have indicated that there is **no impact** from the implementation of P136; ELEXON Finance, ELEXON Governance and Regulatory Affairs and ELEXON Strategic Commercial Services.

Therefore the total ELEXON resource requirements are in the region of **750 man days** for P136. It is envisaged that an additional **15 weeks** would be required to be added to the BSC Central Service Agent development and implementation time for testing purposes.

2.2 BSC Systems

The following table details the impacts on the BSC Systems from the implementation of P136:

System / Process	Impact of Proposed Modification P136
Registration	No Impact
Contract Notification	No Impact
Credit Checking Systems	No Impact
Balancing Mechanism Activities	Impacted by the amendment to the BSAD variables for P136, and the amendment to the Indicative Energy Imbalance Price derivation.
Collection and Aggregation of Metered Data	No Impact
Supplier Volume Allocation	No Impact
Settlement	Impacted by the amendment to the BSAD variables for P136, and the amendment to the Energy Imbalance Price derivation.
Clearing, Invoicing and Payment	No Impact

System / Process	Impact of Proposed Modification P136
Reporting	The Balancing Mechanism Reporting Agent (BMRA) is impacted by the amendments to the BSAD variables, as the reporting of these will require amendment. The Settlement Administration Agent (SAA) is impacted by the amendments to the BSAD variables, as these will require amendment to the Settlement Report (SAA – I014).

The implementation of the functionality required to give effect to P136 within the BSC Systems will:

1. Incur BSC Central Service Agent development and implementation costs of **£889,000**;
2. Incur an annual maintenance cost of **£120,000 per annum**;
3. Incur, if implemented in a standalone release, BSC Central Service Agent Project Overheads of **£449,500**; and
4. Require a BSC Central Service Agent development time of **25 weeks**.

2.3 Balancing and Settlement Code

The following table summarises the impact of Proposed Modification P136 on the Code. The legal drafting to give effect to Proposed Modification P136 is provided in Annex 1.

Code Section	Impact of Proposed Modification P136
Q 'Balancing Mechanism Activities'	Section Q, 6.3 requires amendment to detail the changes to BSAD variables.
T 'Settlement and Trading Charges'	Section T, 4 and Annex T-1 and T-2 require amendment to detail the amendments to the Energy Imbalance Price calculation.
V 'Reporting'	Section V, 2.5 and 2.6 require amendment to reflect the changes to the formulation of BSAD and the amendment to the Energy Imbalance Price calculation.
X Annex X-2 'Technical Glossary'	Annex X-2 requires amendment to change the existing BSAD definitions and to create new definitions.

2.4 Code Subsidiary Documents

The following table sets out the amendments to the Code Subsidiary documents required to give effect to Proposed Modification P136:

Document	Impact of Proposed Modification P136
BMRA Service Description	The BMRA Service Description requires amendment to detail the amendments to the BSAD variables (and use of) and the changes to the Energy Imbalance Price calculation.

Document	Impact of Proposed Modification P136
SAA Service Description	The SAA Service Description requires amendment to detail the amendments to the BSAD variables (and use of) and the changes to the Energy Imbalance Price calculation.
The Reporting Catalogue	The Reporting Catalogue requires amendment to detail the changes to the reporting of the BSAD variables on BMRA and in the Settlement Report.
NETA Data File Catalogue	The NETA Data File Catalogue requires amendment to detail the changes to the reporting of the BSAD variables on BMRA and in the Settlement Report.

2.5 Impact on Other ELEXON Configurable Items

The following table sets out the amendments to the other ELEXON configurable items required to give effect to Proposed Modification P136:

Document	Impact of Proposed Modification P136
BMRA User Requirements Specification (and system documentation)	The BMRA documentation requires amendment to detail the amendments to the BSAD variables (and use of) and the changes to the Energy Imbalance Price calculation.
SAA User Requirements Specification (and system documentation)	The SAA documentation requires amendment to detail the amendments to the BSAD variables (and use of) and the changes to the Energy Imbalance Price calculation.
Interface Design and Definition document (Parts 1 and 2)	The IDD requires amendment to detail the changes to the receipt of BSAD variables, the reporting of the BSAD variables on BMRA and in the Settlement Report.
ELEXON Business Process Model	The ELEXON BPM requires amendment to reflect the amendments to the Settlement calculations.
ELEXON Obligations Register	The ELEXON Obligations Register requires amendment to reflect the amendments to the Settlement calculations.

2.6 Impact on Core Industry Documents and supporting arrangements

The following table sets out the amendments to Core Industry Documents required to give effect to Proposed Modification P136:

Document	Impact of Proposed Modification P136
Balancing Services Adjustment Data Methodology Statement	A supplemental agreement to the Grid Code, requires amendment to reflect the amended formulation and reporting of BSAD variables.
BMRA and SAA Interface Specification	A Transmission Company owned interface definition document requires amendment to reflect the amended reporting of BSAD variables to the BSC Central Service Agent.

2.7 Parties and Party Agents

BSC Parties will be impacted by:

1. The amendment to the Energy Imbalance Price calculation. If BSC Parties verify Trading Charges / any other aspects of the Settlement Report, then there will be an impact on any such processes / systems for such verification;
2. The amendment to the BSAD variables and the reporting on the BMRA. BSC Parties will be impacted by the amendment to the on screen reporting, and to the format of the relevant TIBCo messages to report the amended BSAD; and
3. The amendment to the Settlement Report (SAA – I014) to report the amended BSAD.

It is not expected that there be any impact on Party Agents from the implementation of Proposed Modification P136.

2.8 Transmission Company

The Transmission Company Analysis indicates that the amendments to the Transmission Company systems and processes to support the changes to BSAD are material, and the Transmission Company indicates a lead time of **10 months** for the changes.

3 SUMMARY OF CONSULTATIONS

[Pending receipt]

3.1 Summary of the consultation responses

[Pending receipt]

3.2 Comments and views of the Panel

[Pending deliberation]

4 DOCUMENT CONTROL

4.1 Authorities

Version	Date	Author	Reviewer	Change Reference
0.1	19/11/03	Mandi Francis	Dena Harris	Initial Review
0.1	19/11/03	Mandi Francis	Sarah Parsons	Initial Review
0.2	20/11/03	Change Delivery		

4.2 References

Ref	Document	Owner	Issue date	Version
P136_P137AR	Assessment Report for Modification Proposal P136 'Marginal Definition of the 'Main' Energy Imbalance Price' and Modification Proposal P137 'Revised Definition of the System Buy Price and System Sell Price'	BSCCo	07/11/03	V1.0

ANNEX 1 DRAFT LEGAL TEXT

See Attached document 'P136MR Annex 1.pdf'

ANNEX 2 CONSULTATION RESPONSES

[Pending Receipt]

