

FINAL URGENT MODIFICATION REPORT for Modification Proposal P144

Removal of CADL from the BSC

Prepared by: Pricing Issues Standing Modification Group

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Determination

This document has been distributed in accordance with Section F2.1.10¹ of the Balancing and Settlement Code.

RECOMMENDATIONS

On the basis of the analysis, consultation and assessment undertaken in respect of this Urgent Modification Proposal during the Modification Procedure, and the resultant findings of this report, the Panel recommends to the Authority that:

- **Proposed Modification P144 should not be made;**
- **If the Authority determine that the Proposed Modification should be made, the P144 Implementation Date should be 5 Business Days from the Authority determination.**

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

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II DOCUMENT CONTROL

a Authorities

Version	Date	Author	Signature	Change Reference
0.1	03/11/03	Mandi Francis		
0.2	03/11/03	Mandi Francis		
0.3	07/11/03	Change Delivery		
0.4	13/11/03	Mandi Francis		
1.0	13/11/03	Change Delivery		

b Distribution

Name	Organisation
Each BSC Party	Various
Each BSC Agent	Various
The Gas and Electricity Markets Authority	Ofgem
Each BSC Panel Member	Various
Energywatch	Energywatch
Core Industry Document Owners	Various

c Related Documents

Reference	Document
Reference 1	Modification Proposal P144 'Removal of CADL from the BSC' (First Hydro Company, 10 October 2003)

SUMMARY OF IMPACTED PARTIES AND DOCUMENTS

As far as BSCCo has been able to assess the following parties/documents have been initially identified as being potentially impacted by Urgent Modification Proposal P144.

Parties	Sections of the BSC	Code Subsidiary Documents	
Suppliers <input checked="" type="checkbox"/>	A <input type="checkbox"/>	BSC Procedures <input type="checkbox"/>	
Generators <input checked="" type="checkbox"/>	B <input type="checkbox"/>	Codes of Practice <input type="checkbox"/>	
Licence Exemptable Generators <input checked="" type="checkbox"/>	C <input type="checkbox"/>	BSC Service Descriptions <input checked="" type="checkbox"/>	
Transmission Company <input type="checkbox"/>	D <input type="checkbox"/>	Service Lines <input type="checkbox"/>	
Interconnector <input type="checkbox"/>	E <input type="checkbox"/>	Data Catalogues <input type="checkbox"/>	
LDSOs ² <input type="checkbox"/>	F <input type="checkbox"/>	Communication Requirements Documents <input type="checkbox"/>	
Party Agents			
Data Aggregators <input type="checkbox"/>	G <input type="checkbox"/>	Reporting Catalogue <input type="checkbox"/>	
Data Collectors <input type="checkbox"/>	H <input type="checkbox"/>	MIDS <input type="checkbox"/>	
Meter Operator Agents <input type="checkbox"/>	J <input type="checkbox"/>	Core Industry Documents	
ECVNA <input type="checkbox"/>	K <input type="checkbox"/>	Grid Code <input type="checkbox"/>	
MVRNA <input type="checkbox"/>	L <input type="checkbox"/>	Supplemental Agreements <input type="checkbox"/>	
BSC Agents			
SAA <input checked="" type="checkbox"/>	M <input type="checkbox"/>	Ancillary Services Agreements <input type="checkbox"/>	
FAA <input type="checkbox"/>	N <input type="checkbox"/>	Master Registration Agreement <input type="checkbox"/>	
BMRA <input checked="" type="checkbox"/>	O <input type="checkbox"/>	Data Transfer Services Agreement <input type="checkbox"/>	
ECVAA <input type="checkbox"/>	P <input type="checkbox"/>	British Grid Systems Agreement <input type="checkbox"/>	
CDCA <input type="checkbox"/>	Q <input type="checkbox"/>	Use of Interconnector Agreement <input type="checkbox"/>	
TAA <input type="checkbox"/>	R <input type="checkbox"/>	Settlement Agreement for Scotland <input type="checkbox"/>	
CRA <input type="checkbox"/>	S <input type="checkbox"/>	Distribution Codes <input type="checkbox"/>	
Teleswitch Agent <input type="checkbox"/>	T <input checked="" type="checkbox"/>	Distribution Use of System Agreements <input type="checkbox"/>	
SVAA <input type="checkbox"/>	U <input type="checkbox"/>	Distribution Connection Agreements <input type="checkbox"/>	
BSC Auditor <input type="checkbox"/>	V <input type="checkbox"/>	BSCCo	
Profile Administrator <input type="checkbox"/>	W <input type="checkbox"/>	Internal Working Procedures and Systems <input checked="" type="checkbox"/>	
Certification Agent <input type="checkbox"/>	X <input checked="" type="checkbox"/>	Other Documents	
MIDP <input type="checkbox"/>		Transmission Licence <input type="checkbox"/>	
TFLA <input type="checkbox"/>			
Other Agents			
SMRA <input type="checkbox"/>			
Data Transmission Provider <input type="checkbox"/>			

² Licensed Distribution System Operator

1 SUMMARY AND RECOMMENDATIONS

1.1 Recommendation

On the basis of the analysis, consultation and assessment undertaken in respect of this Modification Proposal, and the resultant findings of this report, the BSC Panel recommends to the Authority that:

- **Proposed Modification P144 should not be made;**
- **If the Authority determine that the Proposed Modification should be made, the P144 Implementation Date should be 5 Business Days following an Authority determination that Proposed Modification P144 should be made; and**
- **The initial development and implementation costs³ associated with Proposed Modification P144, namely zero BSC Central Service Agent costs, and 10 man days of ELEXON effort should be noted.**

1.2 Background: Process and Timetable

Modification Proposal P144 'Removal of CADL from the BSC' (P144, Reference 1) was raised by First Hydro Company on 10 October 2003. P144 seeks to remove the concept of Continuous Acceptance Duration Limit (CADL) Tagging from the Balancing and Settlement Code (the Code), such that the Energy Imbalance Price calculation is amended to remove the CADL Tagging undertaken as part of the derivation of the Energy Imbalance Prices.

The Proposer requested that this Modification Proposal be treated as Urgent on the grounds that P144 is seeking to address a defect in the current trading arrangements that could lead to issues regarding security of supply this winter. Implementation of P144 is required as soon as possible ahead of this winter (2003 / 2004), as a means to heighten the Energy Imbalance Price signals (by better reflecting the cost of electricity balancing in the main Energy Imbalance Price), thus better incentivising Parties to balance their positions ahead of Gate Closure, consequently improving the security of supply (see section 7).

Therefore the Proposer of P144 requested that, with agreement from the Transmission Company, the Modification Proposal should be treated as an Urgent Modification. On this basis, the Transmission Company requested that the Panel approve urgent treatment of P144.

The Panel agreed with the Transmission Company's recommendation that P144 be treated as urgent, and consequentially the Panel requested the Authority to grant Urgent status. The Authority granted urgency on 14 October 2003 and agreed that P144 be progressed to the following timetable by the Pricing Issues Standing Modification Group (PSMG):

- Week commencing 13 October 2003: Modification Group Meeting (17 October 2003);
- Weeks commencing 20 and 27 October 2003: Industry consultation, Transmission Company analysis and ELEXON and BSC Central Service Agent Impact Assessment;
- Week commencing 3 November 2003: Modification Group Meeting (4 November 2003) and Panel Paper/Urgent Report drafted (7 November 2003);
- 13 November 2003: Panel Meeting - Consideration of Urgent Report;

³ The implementation of P144 will be achieved initially by removing references to CADL in the Code, and by setting the value of CADL to zero in the BSC Systems. Step 2 of the implementation covers amendments to the remainder of the documentation and potentially the BSC Systems. Sections 1.3.2 and 10.1 explore and explain this approach further.

- 14 November 2003: Urgent Report provided to Authority for determination.

The PSMG met on 17 October 2003 to commence the assessment of P144. The PSMG reviewed the Urgent timetable associated with the Modification Proposal and considered the issues / defects set out in the Modification Proposal. The PSMG reviewed the assessment criteria associated with P144, to be used in determining whether P144 better facilitates the Applicable BSC Objectives. The PSMG also agreed the format of the consultation on P144. The results of the PSMG deliberations are set out in the remainder of this report.

At its meeting on 17 October 2003, the PSMG agreed that there is no Alternative Modification for P144, as the Modification Proposal covers only the removal of CADL from the Code, not whether other values of CADL are appropriate and this negates there being an Alternative Modification.

The consultation on P144 took the form of a consultation document setting out the initial deliberations of the PSMG in respect of P144, and providing a set of (historical) analysis (section 8) in respect of the removal of CADL from the Energy Imbalance Price calculation. This was issued for industry consultation (following PSMG review) on Thursday 23 October 2003, with responses requested by 9:00 Friday 31 October 2003. It should be noted that the request for Transmission Company analysis was issued at the same time as the consultation.

The PSMG met on 4 November 2003 to consider the responses made in respect of the consultation on P144, to finalise the assessment of P144 and to agree their recommendations in respect of P144.

The majority of the PSMG agreed that Proposed Modification P144 should not be made because they believe that Proposed Modification P144 does not better facilitate the Applicable BSC Objectives.

The PSMG agreed that if the Authority determined that P144 should be made, the Implementation Date should be 5 Business Days following any Authority determination that Proposed Modification P144 should be made. The draft Urgent Modification Report was amended to reflect the PSMG deliberations and final recommendations and was agreed by correspondence.

The draft Urgent Modification Report was provided to the Panel for consideration at its meeting of 13 November 2003. The Panel considered the deliberations and recommendations of the PSMG and unanimously agreed with the recommendations of the PSMG. Therefore the Panel agreed to recommend to the Authority that Proposed Modification P144 should not be made, on the basis that Proposed Modification P144 does not better facilitate the Applicable BSC Objectives.

1.3 Rationale for Panel and PSMG Recommendations

The Panel agreed with the recommendations and the rationale set out by the PSMG in respect of P144. The following section sets out the PSMG deliberations and rationale in respect of P144.

There are repeated references to system and electricity balancing throughout this Urgent Modification Report, and therefore the PSMG believe it to be appropriate to define what is meant (in the context of this document) when referring to system and electricity balancing.

Electricity balancing is considered to be the balancing actions taken by the Transmission Company for the purposes of matching generation to demand to address the imbalances of Parties. Therefore electricity balancing actions are those appropriate to include in the Energy Imbalance Price, in order to target the costs of electricity balancing to those in imbalance.

System balancing is considered to be the balancing actions taken by the Transmission Company for other reasons, for example frequency control, creation of reserve, and alleviation of system constraints. System balancing actions are those that are not taken for the purposes of managing the imbalances of

Parties and therefore it is not deemed to be appropriate to include them in the Energy Imbalance Price calculation.

It is widely acknowledged that differentiating between system and electricity balancing for the purposes of excluding system balancing actions from the Energy Imbalance Price calculation is difficult and inexact. Currently the Energy Imbalance Price derivation includes two mechanistic ways of performing this differentiation:

1. Continuous Acceptance Duration Limit (CADL) Tagging: This is based on the principle that certain system balancing actions are more likely to have been of short duration, and therefore seeks to identify and remove system balancing actions that fall below a specified duration, currently 15 minutes; and
2. Net Imbalance Volume (NIV) Tagging: This mechanism is based on the principle that certain system balancing actions have an equal and opposite compensatory action, and therefore seeks to identify and remove such system balancing actions with an equal and opposite action.

The PSMG note that these mechanisms are a proxy for identifying, and removing system balancing actions from the Energy Imbalance Price, and recognise that, inevitably, such proxies will not remove all system balancing actions and leave only and all electricity balancing actions.

However, the goal is to have a system – electricity balancing differentiation that is as effective as possible, and which thus results in an Energy Imbalance Price that is as cost reflective of the costs of electricity balancing actions as possible.

1.3.1 Rationale for Recommendations in Respect of Proposed Modification P144

The deliberations of the PSMG are set out in section 5, with section 5.1 detailing the assessment issues in relation to P144, and section 5.2 tying the assessment issues to the Applicable BSC Objectives.

In summary, the PSMG concluded that the belief as to whether P144 better facilitates the Applicable BSC Objectives depends on the perception as to whether the removal of CADL from the Energy Imbalance Price calculation results in a more cost reflective Energy Imbalance Price. As set out above, a more cost reflective Energy Imbalance Price is considered to be one where the Energy Imbalance Price is calculated, as far as is possible, from all electricity balancing actions.

A more cost reflective Energy Imbalance Price will have the effect of:

- More appropriately targeting the costs of electricity balancing at those in imbalance, and thus reducing cross subsidies; and
- Creating more appropriate price signals to the Parties of the costs of electricity balancing and therefore of being in imbalance and will thus incentivise Parties to forward contract to reach an efficient level of balance.

These two effects will have beneficial impacts on the Applicable BSC Objectives (as set out in section 5.2).

On balance the majority of the PSMG felt that P144 would not result in a more cost reflective Energy Imbalance Price, and therefore will not have a beneficial effect in respect of the Applicable BSC Objectives 3(a), (b) and (c). However, a minority of the PSMG believe that a more cost reflective Energy Imbalance Price would arise from the removal of CADL, and this would consequentially better facilitate the Applicable BSC Objectives 3(a), (b) and (c).

The PSMG also concluded, specifically in respect of Applicable BSC Objective 3(d) relating to the efficient administration of the balancing and settlement arrangements, that even if it is appropriate for the value of CADL to be zero at the moment, i.e. not required, it is inefficient to remove CADL from the Code, as it may be required in the future.

Those members of the PSMG that believe CADL to be redundant and not required at all (as, in their opinion it has been superseded by NIV Tagging), believe it to be more efficient to remove it from the Code. On balance the majority of the PSMG believe that there is a requirement for CADL to remain in the Code, and therefore do not believe it to be efficient to remove CADL, and therefore P144 does not better facilitate Applicable BSC Objective 3(d).

Thus, the majority of the PSMG believe that on balance, P144 does not better facilitate the Applicable BSC Objectives. However a minority of the PSMG believe that P144 will better facilitate the Applicable BSC Objectives.

1.3.2 P144 Proposed Modification: Implementation Approach

P144 can be implemented by setting the value of CADL to zero in the BSC Systems; the Central Registration Agent (CRA) where CADL is registered, and the Balancing Mechanism Reporting Agent (BMRA) and Settlement Administration Agent (SAA) where CADL is used in the Energy Imbalance Price calculation (section 3.2.2), and removing references to the concept of CADL (CADL, CAD, CADL Tagging, Priced and Unpriced Acceptances) from the Code and all supporting documentation.

To implement P144, there are two steps:

1. Setting CADL to zero in the BSC Systems and removing references to CADL and associated definitions from the Code;

It should be noted that there is no system implication from merely setting CADL to zero, rather than removing it from the BSC Systems, as for Settlement Days pre the implementation of P18 (the Approved Modification that implemented the concept of CADL, see section 4), CADL is set to zero in the systems and it should be noted that this has been comprehensively tested (during the implementation of P18).

The BSC Central Service Agent Impact Assessment in respect of P144 (summarised in section 10 and provided in full in Annex 4) indicates that there is no cost associated with undertaking the first of the steps detailed above (noting that there is an ELEXON effort of 10 man days involved with amending the Code).

2. Other amendments to ensure a consistent, efficient and cost effective implementation of P144, such as amending the Code Subsidiary Documents and BSC Central Service Agent systems and documentation to remove references to CADL, CADL Tagging, Priced and Unpriced Acceptances for Settlement Days from the P144 implementation date (noting that the concept of CADL has to be retained for Settlement Days prior to the implementation of P144, and thus the documentation should include CADL and associated references for these Settlement Days).

Therefore, in order to expedite the implementation of P144, and minimise the implementation costs associated with the Proposed Modification, it is proposed that Step 1 be implemented immediately on Authority determination to approve P144.

ELEXON will then explore all options and effect the most appropriate and cost effective implementation for step 2, such that any implementation will occur at an opportune time (for example during an

appropriate scheduled BSC Systems Release), thus potentially (significantly) reducing the costs (particularly the project overheads) associated with the amendments.

Hence the proposed Implementation Date for P144, namely 5 Business Days from any Authority determination to approve P144, reflects this implementation approach.

It should be noted that the BSC Central Service Agent Impact Assessment provided costs and timescales for the removal of the CADL concept from the BSC Systems in entirety (option 3 in the impact assessment), which indicate that this is (understandably) a material piece of development. In order to deliver the most efficient and cost effective implementation of P144, this aspect is not initially to be taken further (i.e. if P144 were to be approved by the Authority no systems changes would occur and CADL will remain within the system set to zero to give 'effect' to P144) and therefore is not considered further at this time. It may be considered appropriate, at some point in the future, to remove the concept of CADL from the BSC Systems in entirety, however, this is not a given.

1.3.3 P144 Proposed Modification: Implementation Costs and Timescales

The implementation costs associated with the implementation of P144 for the initial implementation of P144, i.e. setting of CADL to zero in the BSC Systems and removing references to CADL from the Code:

BSC Central Service Agent development and implementation costs	<u>NONE</u>
BSC Central Service Agent Lead time	<u>NONE</u>
BSC Central Service Agent Annual Maintenance cost	<u>NONE</u>
ELEXON effort	<u>10 man days</u>
ELEXON Lead Time	<u>5 Business Days</u>

It should be noted that the changes to the Code Subsidiary Documents and BSC Central Service Agent documentation and systems to remove references to CADL will not be undertaken as part of the initial implementation of P144, and these will be implemented at an opportune time, thus potentially (significantly) reducing the costs (particularly the project overheads) associated with amending the documentation, section 10.1 provides more information.

2 INTRODUCTION

This Report has been prepared by ELEXON Ltd., on behalf of the Balancing and Settlement Code Panel ('the Panel'), in accordance with the terms of the Balancing and Settlement Code ('the Code'). The Code is the legal document containing the rules of the Balancing Mechanism and Imbalance Settlement process and related governance provisions. ELEXON is the company that performs the role and functions of the BSCCo, as defined in the Code.

This Urgent Modification Report is addressed and furnished to the Gas and Electricity Markets Authority ('the Authority') and none of the facts, opinions or statements contained herein may be relied upon by any other person.

An electronic copy of this document can be found on the BSC website, at www.elexon.co.uk

3 DESCRIPTION OF THE MODIFICATION

3.1 Summary of the Modification Proposal

P144 seeks to remove the concept of the Continuous Acceptance Duration Limit from the Code.

The Modification Proposal asserts that the CADL mechanism is effectively redundant under the current mechanism as the Net Imbalance Volume Tagging makes the differentiation between system and electricity balancing (see section 1 and 4), and therefore an additional assessment as to the system / electricity purpose of a Bid – Offer Acceptance is superfluous and thus obsolete.

Furthermore, the Modification Proposal asserts that the way in which CADL Tagging is applied means that acceptances that are longer than the CADL are being CADL Tagged, as a consequence of the tagging of all acceptances for a BM Unit that fall in the same Settlement Period as an acceptance on the BM Unit that is less than CADL. This, in the opinion of the Proposer, is potentially removing electricity balancing actions from the Energy Imbalance Price calculation.

Thus the Proposer believes that removing the CADL from the Energy Imbalance Price calculation will create a more cost reflective Energy Imbalance Price, as it allows the NIV Tagging to make the differentiation between electricity and system balancing, and thus more appropriately target the costs of electricity balancing to those in imbalance.

Furthermore, a more cost reflective Energy Imbalance Price will send strengthened price signals to the market of the costs of being in imbalance. This in turn may have the effect of better incentivising Parties to balance. The Modification Proposal asserts that this aspect is particularly important given the negative generation surplus forecasted for this winter, as were P144 to be implemented in time for this winter, it may have the effect of enhancing incentives for Parties to cover their positions sufficiently to avoid exposure to imbalance, especially when the system is short, thus improving plant availability and reducing the generation shortfall, and improving security of supply.

The Proposer of P144 asserts that the Modification Proposal will better facilitate Applicable BSC Objective 3(a) relating to the efficient discharge by the Transmission Company of the obligations imposed under the Transmission Licence, by more appropriately targeting the costs of electricity balancing and thus incentivising Parties to balance for the benefit of all market participants.

Furthermore the Proposer of P144 believes that the Net Imbalance Volume (NIV) Tagging methodology is intended to ensure that system and electricity balancing actions are properly identified and appropriately targeted, thus including short duration trades in the price calculation will strengthen the signals to the market, in particular at times of system stress. This will further encourage participants to avoid going short reducing the actions that the Transmission Company must take to balance the system. The Proposer therefore believes that P144 better facilitates Applicable BSC Objective 3(b) relating to the efficient, economic and co-ordinated operation by the Transmission Company of the Transmission System.

The Proposer asserts that by improving the cost reflectivity of the calculation of the main Energy Imbalance Price, P144 will better facilitate Applicable BSC Objective 3(c) by promoting effective competition in the generation and supply of electricity, and (so far as consistent therewith) promoting such competition in the sale and purchase of electricity. Removal of CADL and associated cross subsidies will ensure that the costs of electricity balancing are appropriately targeted at those Parties that cause them.

The Proposer also notes that the CADL methodology requires the Panel to define certain short duration trades as system related while others are electricity related in a process that is complex and

cumbersome to manage and is reviewed at frequent intervals. Therefore the Proposer believes that removing CADL from the Code will remove risk and uncertainty and therefore better facilitate Applicable BSC Objective 3(d) by promoting efficiency in the implementation and administration of the balancing and settlement arrangements.

3.2 Description of the Proposed Modification

3.2.1 Current Mechanism

The CADL mechanism is applied to Bid – Offer Acceptances to determine whether each individual acceptance, or group of acceptances where the acceptances overlap, was of 'short duration', i.e. less than the value of CADL.

The mechanism deems those Bid – Offer Acceptances that are of short duration to have been taken for the purposes of system balancing, and therefore seeks to exclude these acceptances from setting / contributing to the Energy Imbalance Price.

Therefore, Bid – Offer Acceptances are tested to determine whether an individual acceptance / related acceptances (where the acceptances overlap, as defined in the Code Section T 3.1A) on a BM Unit has a duration of less than the Continuous Acceptance Duration Limit (currently 15 minutes).

Where this is the case, then all acceptances on that BM Unit for any Settlement Period where an acceptance, or part thereof, has been found to have been less than CADL, are removed and stopped from going forward to the Energy Imbalance Price calculation (as defined in the Code, Section T 3.8A.1)⁴. This is referred to as CADL Tagging, with CADL Tagged referring to the acceptances that are removed.

Bid – Offer Acceptances that are CADL Tagged (i.e. of short duration, or made on the same BM Unit in the same Settlement Period as a short duration acceptance / CADL Tagged acceptance), are referred to as 'unpriced', i.e. they do not go forward to the Energy Imbalance Price calculation. Bid – Offer Acceptances that are not CADL Tagged are referred to as 'priced' and these go forward to the Energy Imbalance Price calculation.

Under the current mechanism, although the CADL Tagged Unpriced acceptances cannot set / contribute to the Energy Imbalance Price, the volumes associated with the acceptances are used in the derivation of the Net Imbalance Volume, as indicated below. For the avoidance of doubt, where any CADL Tagged volume remains in the Net Imbalance Volume, it is excluded from contributing to the Energy Imbalance Price.

⁴ It is believed that this a consequence of software constraints due to the excessive complexity of identifying only those Acceptances on a BM Unit that are less than the value of CADL.

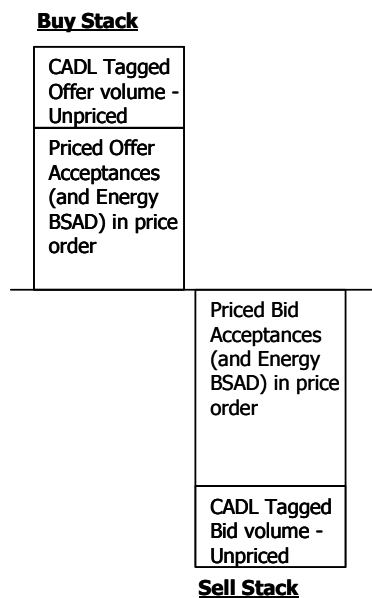


Figure 1: CADL Tagged Total Unpriced Acceptance Volumes – Contribution to the Net Imbalance Volume

3.2.2 P144 Solution

P144 seeks to remove the CADL Tagging mechanism, described in 3.2.1 above, from the Energy Imbalance Price calculation.

This will remove the concept of Priced and Unpriced Bid – Offer Acceptances, such that all Bid – Offer Acceptances go forward to the Energy Imbalance Price derivation, and, subject to De Minimis Tagging, Arbitrage Tagging and NIV Tagging, are eligible to contribute to the Energy Imbalance Price.

This also negates the requirement to add the CADL Tagged Bid – Offer Acceptance volume (the Total Period Unpriced Bid / Offer Acceptance Volume (TQUAB / TQUAO)) back into the NIV derivation, and therefore there will be no concept of NIV Tagged Total Unpriced Bid / Offer volumes.

The removal of CADL impacts the following:

- Section T of the Code;
- Section X, Annex X-2 of the Code;
- The Reporting Catalogue;
- The Central Registration Agent (CRA) Service Description to remove the reference to the registration of the value of CADL;
- The CRA User Requirements Specification to highlight the redundancy of CADL for Settlement Days from the implementation of P144;

- The Balancing Mechanism Reporting Agent (BMRA) Service Description, to remove references to CADL, CADL Tagging, Priced and Unpriced Acceptances;
- The BMRA User Requirements Specification, to remove references to CADL, CADL Tagging, Priced and Unpriced Acceptances for Settlement Days from the implementation of P144;
- The Settlement Administration Agent (SAA) Service Description, to remove references to CADL, CADL Tagging, Priced and Unpriced Acceptances;
- The SAA User Requirements Specification, to remove references to CADL, CADL Tagging, Priced and Unpriced Acceptances for Settlement Days from the implementation of P144; and
- BSCCo's Market Monitoring system TOMAS, to remove CADL (by setting it to zero).

The implementation aspects of P144 are explored in section 1.3.2.

4 ASSESSMENT OF P144: UNDERSTANDING CADL

4.1 Background

The Continuous Acceptance Duration Limit (CADL) was implemented within the Code as a consequence of Approved Modification P18 'Removing / Mitigating the Effect of System Balancing Actions in the Imbalance Price'. P18 was approved by the Authority on 22 August 2001, and implemented within the Code and the BSC Systems on 25 September 2001.

The Modification Proposal discussed two differing solutions, referred to as P18A and P18B. Furthermore P18A was broken down into a number of different options, including one referred to as option CID 1a (Continuous Instruction Duration definition 1a, subsequently renamed to Continuous Acceptance Duration). It was P18A and CID 1a that formed the option recommended by the Modification Group and Panel, and subsequently approved by the Authority for implementation. Hence the implemented solution is often referred to as P18A.

The initial recommendation of P18 was that the Continuous Acceptance Duration Limit should be set to 15 minutes (as a consequence of Bid – Offer Acceptance analysis undertaken as part of the Modification Procedure), and it was this value of CADL that was adopted on implementation. It should be noted that the Panel can, from time to time, initiate a review of the CADL and recommend a different value, with that recommendation subject to Authority approval. Such a review took place at the request of the Panel towards the end of the calendar year 2002, and another is currently underway (see section 4.3 below).

4.2 Rationale for P18

4.2.1 Modification Proposal P18

At the time P18 was raised, the pre P78⁵ Energy Imbalance Price calculation (which used Accepted Offers to set the System Buy Price and Accepted Bids to set the System Sell Price, with differentiation between system and electricity balancing actions undertaken by the application of the Balancing Reserve Level (BRL)) was resulting, under some circumstances, in high and volatile Energy Imbalance Prices, particularly in respect of the Energy Imbalance Price in the opposite direction to the overall system imbalance, i.e. the System Buy Price when the system was long and the System Sell Price when

⁵ Approved Modification P78 'Revised Definitions of System Buy Price and System Sell Price'.

the system was short. This effect was particularly evident in the System Buy Price when the system was long.

This effect seemed to have circular consequences, whereby the volatility exhibited in the System Buy Price drove the market long to avoid exposure to the System Buy Price, which in turn reduced the volume of Offers the Transmission Company needed to take for electricity balancing the system. This was postulated to have had the effect of causing the tagging for the purposes of differentiation between system and electricity balancing (by the application of the Balancing Reserve Level) to fail, as a consequence of the lack of volume in the reverse stack. This consequentially meant that the reverse stack was polluted with (more highly priced) system balancing actions that contributed to the Energy Imbalance Price. As the market went longer and longer in response to the volatility in the System Buy Price, the effect became more pronounced, and the circularity continued.

It should be noted that the system – electricity balancing differentiation was considered to have failed equally in respect of both the reverse and the main Energy Imbalance Price (i.e. the Energy Imbalance Price derived from balancing actions in the same direction as the market, so the System Sell Price when the system is long, and the System Buy Price when the system is short). However, the volume of acceptances on the main stack was often large enough to mitigate the price signal from the system balancing actions contributing to the Energy Imbalance Price, and thus the effect was not so nearly as pronounced as on the reverse stack.

Therefore P18 was raised in order to attempt to improve the differentiation between system and electricity balancing by using a mechanistic process to make an assessment as to the purpose of an acceptance, i.e. system or electricity, thus seeking to mitigate / remove the influence of the system balancing actions on the Energy Imbalance Prices.

It should be noted at this point that it is generally accepted that differentiating between system and electricity balancing actions is problematic and inexact, as any particular acceptance may have both system and electricity portions. Therefore any approach makes an approximation of system versus electricity, and therefore may not be perfect under all circumstances. P18A was considered by many to have been a better approximation than the baseline at the time of NETA implementation.

A number of ways were considered of making the system – electricity balancing assessment, for example the volume of an acceptance was considered (P18B). However, it was determined that the most appropriate mechanism would be the duration of an acceptance. The general principle was asserted as being that electricity balancing occurs at Settlement Period level, and thus acceptance made for electricity balancing are likely to be relatively long. However, system balancing was considered as likely to occur intra Settlement Period, for relatively short duration in order to address the system requirement, a cited example was TV pick up.

Analysis of the P18 options was undertaken by the Modification Group, and the Transmission Company, in respect of the likely duration threshold, under which was likely to have been system balancing and over which was likely to have been electricity balancing. The recommendation, supported by the Panel and the Authority was that 15 minutes was appropriate.

Thus a mechanism was implemented that sought to exclude balancing actions of less than a 15 minute duration from the Energy Imbalance Price calculation, on the basis that these acceptances are deemed by the mechanism, to have been taken for system balancing purposes.

4.2.2 P18 and Approved Modification P78

Approved Modification P78 'Revised Definitions of System Buy Price and System Sell Price' (P78) was implemented on 11 March 2003.

P78 sought to (further) address the issue of the differentiation between system and electricity balancing in respect of deeming equal and opposite balancing actions to have been taken for system balancing purposes. P78 argued that the market can only be in imbalance in one direction in any Settlement Period, and therefore the balancing actions in the reverse direction must have been taken for system balancing purposes, along with an equal and opposite amount in the main direction. Thus the P78 mechanism removes the reverse stack in entirety, and nets the volume of the reverse stack off the most expensive actions in the main stack. This is referred to as Net Imbalance Volume Tagging. The volume remaining after the netting off is referred to as the Net Imbalance Volume, and this is the volume deemed to be the electricity imbalance of the market. In order to derive the deemed electricity imbalance of the market (the Net Imbalance Volume), all balancing action volumes are required to be represented in the stacks for netting.

P78 retained CADL Tagging, but required that the volumes associated with CADL Tagging contribute to the Net Imbalance Volume derivation (as described below in section 5), in the form of 'known' system balancing volumes.

4.3 Interaction with the Current CADL Review

It should be noted that there is currently a CADL review being undertaken by BSCCo, in response to a request from the Panel. The intent, at the point of raising P144 was that the results of the CADL review be provided for consideration at the Panel meeting of 11 December 2003. However, in order to align the CADL review with P144, and provide both to the Authority for determination at the same time, the results of the CADL review will also be provided to the Panel meeting of 13 November 2003, where the Panel will consider the results of the review in respect of the value of CADL.

There has been some discussion by the PSMG as to whether there is an overlap between the CADL review and P144, in that a Code modification is not required to set CADL to zero, as a value of zero can be recommended by the CADL review as an appropriate value for CADL at this time. However, it should be noted that the CADL review does not address the principle of CADL, i.e. the review assumes that there is a variable called CADL that is applied in Settlement Calculations, at an appropriate value.

In terms of P144, the Modification Proposal seeks to remove CADL from the Code in entirety. This is different to the CADL review setting CADL to zero, as the Code will still allow for the value of CADL to be reviewed at a later date, which than may set CADL to a non zero value, whereas P144 seeks to remove CADL. If P144 is approved by the Authority, the CADL review is not required and references to CADL will be removed from the Code and other documentation.

If P144 is rejected by the Authority, then the CADL review continues and the value of CADL is assessed, and potentially amended as part of that review and it should be noted that this does not preclude a value of zero as a result of that review, if the principle of CADL is accepted, and it is considered that 0 is an appropriate value at this point in time.

The analysis to be undertaken for both no CADL (P144) and CADL = 0 (CADL review) will be the same, and therefore the analysis undertaken for P144, i.e. no CADL, will feed into the CADL review.

Furthermore, the solution to P144 is to remove CADL and therefore there is no Alternative Modification that is a different value for CADL over the currently defined value. On this basis the Modification Group assessed the principle of CADL, not what the CADL value should be.

5 ASSESSMENT OF P144: DELIBERATIONS OF THE PSMG

5.1 Assessment of P144

5.1.1 PSMG Deliberations

The PSMG considered the issues raised by P144 at its meetings of 17 October 2003 and 4 November 2003 (where the consultation responses were also considered).

The PSMG considered the principle of CADL, namely whether the principle of CADL still stands in light of the implementation of NIV Tagging.

The PSMG noted the Proposer's view of P144, namely that the implementation of NIV Tagging has made CADL Tagging redundant. NIV Tagging performs a differentiation between system and electricity balancing by removing an equal and opposite volume of balancing actions to leave the electricity imbalance of the system, the Net Imbalance Volume. Those balancing actions removed by the NIV Tagging mechanism are deemed to have been attributable to system balancing.

A number of the PSMG believe NIV Tagging to be a better mechanism for differentiating between system and electricity balancing than CADL Tagging, as they believe that CADL Tagged short duration acceptances may be relevant to electricity balancing and that they should not be treated differently to any other balancing action for the purposes of NIV Tagging, i.e. the NIV Tagging alone should make the differentiation between system and electricity, especially given that CADL Tagging removes more than just the short duration acceptances on a BM Unit in a Settlement Period (see section 3.2.1), and thus has the potential to remove electricity balancing volumes from the Energy Imbalance Price calculation. Thus some members of the PSMG believe that CADL Tagging was appropriate to the pre P78 mechanism (section 4), but that it has been superseded by NIV Tagging, and furthermore detracts from the NIV Tagging process by potentially overstating the system balancing volume.

In addition, a number of the PSMG considered the possibility that the volume delivered by a short duration Bid - Offer Acceptance could be far greater than the volume delivered from a Bid - Offer Acceptance that lasted for the whole Settlement Period. For example, with CADL set at 15 minutes, it is possible that a 70 MWh Bid - Offer Acceptance from a flexible BM Unit would be CADL Tagged whereas a less flexible BM Unit might only increase its output by a few MW across the Settlement Period, contributing perhaps 5 MWh to the electricity balance in a Settlement Period, but which would not be CADL Tagged. These members of the PSMG considered that the flexible BM Unit could be contributing a much greater volume to the electricity balance in the Settlement Period, but will be removed from the Energy Imbalance Price calculation by CADL Tagging. Thus some of the PSMG believed that it is therefore appropriate that all Bid - Offer Acceptances are treated in similar fashion.

Conversely, a number of the PSMG believe that CADL Tagging is still appropriate under the current mechanism as it performs a different type of system - electricity balancing differentiation to NIV Tagging. As stated above, NIV Tagging addresses the differentiation from the 'equal and opposite' aspect, i.e. building on the principle that for a system balancing action there should be an equal and opposite 'compensatory' action, (and the principle that the system can only be in electricity imbalance in one direction in a Settlement Period).

Thus, a number of the PSMG believe that NIV Tagging does not actively address the system - electricity balancing differentiation for intra Settlement Period system events where (short duration) acceptances are made that do not necessarily have an equal and opposite action taken, such as TV pick up and/ or Transmission Company response to system frequency.

Since the electricity market involves the trading and settlement of MWh delivered “flat” in a Settlement Period, a number of the PSMG believe that it is important that Energy Imbalance Prices are set on a basis consistent with this aspect and which therefore reflect the costs of balancing actions taken to meet imbalances across the Settlement Period, and not the cost of balancing actions which were taken for very short-durations to meet a dynamic profile of deliveries within a Settlement Period. For this reason, these members of the PSMG argued that setting the Energy Imbalance Price for a Settlement Period’s worth of electricity with the price of a balancing action taken for a very short-duration was unlikely to be cost reflective or to send a consistent economic imbalance price signal to the forward markets.

These members of the PSMG therefore believe that it is not appropriate to allow these sorts of balancing actions to contribute to the Energy Imbalance Price, as they could be considered to be for system balancing reasons, and would not be directly targeted by NIV Tagging, as it could be argued that identifying these sorts of balancing actions as system balancing was not the intent of the NIV Tagging mechanism. In their view, this rationale, which underpinned the consideration and development of P18A, continues to remain valid.

Furthermore, some members of the PSMG also believe that there is (potentially significant) value in retaining the concept of CADL and thereby retaining the flexibility to alter the limit (to more or less than 15 minutes) or to set CADL to zero. In their opinion, retaining this flexibility would be particularly valuable in the light of potential future changes to the Energy Imbalance Price methodology, which could affect the need for, and significance of, CADL in the Energy Imbalance Price methodology (including Modification Proposals P136 and P137 currently being considered).

These members of the PSMG believe that the removal of the concept of CADL from the Code in entirety removes this flexibility and, in their opinion, could therefore be seen as undermining the efficient administration of the balancing and settlement arrangements (contrary to the Applicable BSC objective 3 (d)).

Thus some members of the PSMG believe that CADL Tagging is necessary in addition to NIV Tagging, in order to achieve the best differentiation between system and electricity balancing that is reasonably possible mechanistically and thus to remove as much system balancing from the Energy Imbalance Price as is possible.

The PSMG noted that any assessment as to whether the removal of CADL Tagging improves cost reflectivity of the Energy Imbalance Price is likely to be predicated on the assessment / view as to whether the system – electricity balancing action differentiation is improved by the removal of CADL.

The PSMG also considered P144 specifically in relation to the grounds for urgency, noting that P144 asserts that the removal of CADL will have the effect of creating a more cost-reflective Energy Imbalance Price, which strengthens price signals, specifically aimed at strengthening them in time for this winter.

5.1.2 PSMG Consideration of the Consultation Responses and Transmission Company Analysis

The PSMG noted that the responses made in respect of the consultation on P144 centred around the key issues discussed by the PSMG, and set out in section 5.1.1 above, namely:

Key points raised in favour of P144:

1. Flexible generation that delivers into the Balancing Mechanism as a result of energy lost from the system (for example by plant trip) is delivering energy balancing, that will be tagged out by the

CADL mechanism, despite (potentially) a large volume being delivered, thus CADL Tagging is potentially removing electricity balancing actions;

2. CADL is an arbitrary tagging mechanism that has been superseded by the NIV Tagging mechanism for differentiating between system and electricity balancing actions and CADL is therefore redundant;
3. Demand is not 'flat' across a Settlement Period and therefore Parties forecasts should take into consideration profiles in demand across a Settlement Period (for example as a result of TV pick up), and integrate them into the resulting contract position, thus achieving a (more) balanced position; and
4. Improving the differentiation between electricity balancing and system balancing will improve the cost-reflectivity of the main Energy Imbalance Price, thus improving incentives to forward contract in response to price signals from a more reflective Energy Imbalance Price.

Key points raised against P144:

1. The issue / defect that CADL was raised to address has not changed / been removed since its implementation and therefore CADL is still a valid mechanism;
2. CADL Tagging performs a different system – electricity differentiation to NIV Tagging; NIV Tagging targets the system balancing actions where an equal and opposite balancing action is required, whereas CADL Tagging targets system balancing actions required within a Settlement Period where there is no equal and opposite action required, for example, frequency control and TV pick up. Therefore neither tagging mechanism on its own would work, and thus both are needed for the most effective system – electricity balancing differentiation;
3. Following from the above point (2), it is not evident that NIV Tagging captures all the system balancing actions that CADL Tagging captures, and therefore the removal of CADL Tagging means that there is an increased likelihood of system balancing actions inappropriately contributing to the Energy Imbalance Price, decreasing its cost reflectiveness and creating inappropriate price signals;
4. The data analysis (provided with the consultation, and included in Annex 1 of this report (summarised in section 8)) indicates (historically) that the removal of CADL has a minimal effect on the resulting Energy Imbalance Prices, with it appearing to dampen the resulting Energy Imbalance Prices. Therefore it is difficult to see how the incentives to balance ahead could be improved by the removal of CADL; and
5. Even if it is considered that CADL is not required at this point in time / under the current arrangements, keeping the CADL variable (and concept) means that there is the flexibility to change the value in the future in response to changes in the patterns of balancing actions where CADL is necessary, with the consequential efficiency that this approach offers, i.e. even if it is appropriate to have a zero value for CADL now, it may not be in the future.

The consultation responses indicate that the majority of respondents accord with the latter view of P144, namely that CADL is effective and necessary under the current arrangements and therefore should not be removed (11 of 13 respondents⁶). It should be noted that the consultation responses raised no new, substantive issues, additional to those previously explored by the PSMG, and simply reiterated the core arguments in respect of the relevance of CADL. The consultation responses are summarised in section 9 (and provided in full in Annex 2).

⁶ There were 14 responses, but one made a 'no comment' response and is thus excluded from the count here.

The PSMG noted that its deliberations, as set out in section 5.1.1 above, effectively encompass the views of the consultation responses, and therefore no consideration of new issues raised by the responses was required.

The Transmission Company was also requested, in accordance with the Code, Section F 2.8, to provide its assessment of P144, in relation to the efficacy of CADL and its continuing relevance, or not, under the current arrangements. This analysis is summarised in section 6 and provided in full in Annex 5.

In summary the Transmission Company believe that:

1. CADL continues to use duration to pragmatically distinguish between electricity and system balancing actions;
2. System balancing actions are not limited to 'equal and opposite' balancing actions, as targeted by NIV Tagging. The Transmission Company believes there to be other balancing actions that exhibit characteristics that make it more likely that such actions were taken for system balancing reasons, and as such should be excluded from contributing to the Energy Imbalance Price. The Transmission Company indicates that intra-Settlement Period actions, as targeted by CADL are one example of these sorts of actions. Therefore the Transmission Company indicates that CADL Tagging compliments NIV Tagging, as NIV Tagging does not render all other definitions of system balancing redundant;
3. Removing CADL increases the likelihood that system balancing actions will inappropriately contribute to the Energy Imbalance Price; and
4. There will be no improvement to the incentives to balance as signals from the Energy Imbalance Price will not alter sufficiently. Furthermore, the increase in the likelihood of system balancing actions contributing to the Energy Imbalance Price means that the Energy Imbalance Price will not provide a more appropriate signal.

The PSMG considered the response made by the Transmission Company and noted that the Transmission Company analysis also reiterated the core arguments in relation to the relevance of CADL under the current arrangements, and raised no new issues for PSMG consideration and therefore no consideration of new issues raised by the Transmission Company response was required.

5.2 P144 and the Applicable BSC Objectives

The following sections set out the views expressed in the consultation responses and the deliberations of the PSMG as to whether P144 better facilitates the Applicable BSC Objectives. In summary, the majority of the PSMG believe that on balance, P144 does not better facilitate the Applicable BSC Objectives, for the 'Against' reasons set out in the following sections. However a minority of the PSMG believe that P144 will better facilitate the Applicable BSC Objectives, for the 'for' reasons set out in the following sections.

5.2.1 Applicable BSC Objective 3(a): Efficient Discharge by the Transmission Company of its Obligations under its Licence

FOR:

1. P144 will better facilitate Objective 3(a) by more appropriately targeting the costs of electricity balancing and incentivising Parties to balance for the benefit of all market participants;

AGAINST:

2. Incorporating more (short duration) system actions into the Energy Imbalance Price (a proposed outcome of the removal of CADL) will detrimentally impact the Transmission Company in its discharge of its Licence obligations, as including system balancing actions in the Energy Imbalance Price does not more appropriately target electricity balancing actions on Parties who are in imbalance; and
3. Incorporating more (short duration) system actions into the Energy Imbalance Price (a proposed outcome of the removal of CADL) will not strengthen Energy Imbalance Price signals, but will result in inappropriate signals being created by reducing the cost reflectivity of the Energy Imbalance Price and increasing cross subsidies.

The PSMG considered P144 in respect of the arguments set out and its overall effect on the achievement of Applicable BSC Objective 3(a) and the majority of the PSMG concluded that P144 does not better facilitate Applicable BSC Objective 3(a).

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

FOR:

1. The NIV tagging methodology is intended to ensure that system and electricity balancing actions are properly identified and appropriately targeted. Including short duration trades in the Energy Imbalance Price calculation will strengthen the signals to the market, in particular at times of system stress. This will further encourage participants to avoid going short, thus reducing the actions that the Transmission Company must take to balance the system;
2. Furthermore, the retention of CADL has the effect of artificially decreasing the Energy Imbalance Prices by removing electricity balancing actions from the Energy Imbalance Price. As stated in (1) above, including short duration trades in the Energy Imbalance Price will create a more cost reflective Energy Imbalance Price, with the consequential effects;
3. The creation of consistent price signals (resulting from the removal of CADL) should reduce the overall cost of electricity balancing;

AGAINST:

4. Incorporating more short duration system actions into the Energy Imbalance Price (a proposed outcome of the removal of CADL) will not strengthen Energy Imbalance Price signals, but will result in inappropriate signals being created by reducing the cost reflectivity of the Energy Imbalance Price and increasing cross subsidies; and
5. A potential outcome of the removal of CADL is an artificial increase in the main Energy Imbalance Price. The increased risk of exposure to a high Energy Imbalance Price at times of system stress will not encourage capacity to be made available, especially from less reliable plant, as the risk of exposure to imbalance is too great, and this detrimentally impacts Objective 3(b).

A number of the PSMG noted, in respect to (7) that the historical analysis indicates that the removal of CADL will have little effect on the resulting Energy Imbalance Price and therefore did not agree with the assertion that P144 would result in high Energy Imbalance Prices. A number of the PSMG noted that the key assertion in (7) is the potential for an artificial (and therefore inappropriate) change to the Energy Imbalance Price, and believed that though historical data has not shown an increase, the risk remains that it could.

A number of the PSMG believe that P144 will not place any additional incentive properties on Parties to balance their contract position. Therefore the actions taken by the Transmission Company will not necessarily be increased as a consequence of P144. Thus P144, since it will not necessarily have a detrimental effect on the Transmission Company in managing an efficient, economic and co-ordinated Transmission System, could be considered to be neutral to this objective.

The PSMG considered P144 in respect of its effect on the achievement of Applicable BSC Objective 3(b) and concluded that the view as to whether P144 better facilitates Objective 3(b) depends on the view as to whether the removal of CADL results in a more cost reflective Energy Imbalance Price. On balance the majority of the PSMG felt that P144 would not result in a more cost reflective Energy Imbalance Price, and therefore will not result in more appropriate price signals to Parties, and therefore does not better facilitate Objective 3(b). However, a minority of the PSMG believe that a more cost reflective Energy Imbalance Price would arise from the removal of CADL, and this would consequentially better facilitate Objective 3(b).

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

FOR:

1. By improving the cost reflectivity of the main Energy Imbalance Price calculation, P144 will better facilitate Objective 3(c). Removal of CADL and associated cross subsidies will ensure that the costs of electricity balancing are appropriately targeted at the Parties that cause them;
2. Furthermore, the retention of CADL has the effect of artificially decreasing the Energy Imbalance Prices by removing electricity balancing actions from the Energy Imbalance Price. As stated in (1) above, including short duration trades in the Energy Imbalance Price will create a more cost reflective Energy Imbalance Price, and will ensure that the costs of electricity balancing are appropriately targeted at the Parties that cause them;
3. Removing CADL from the Code will remove risk and uncertainty on Parties (in respect to changes in the value of CADL);

AGAINST:

4. The Energy Imbalance Price should be calculated, as far as is possible, based on electricity balancing actions. Effective competition in the generation and supply of electricity will not be better facilitated by including more short duration system actions in the Energy Imbalance Price. Removing CADL will increase the potential for cross subsidies between participants as Energy Imbalance Price will be less reflective of the costs incurred by the Transmission Company in keeping the system in electricity balance;
5. Incorporating more short duration system actions into the Energy Imbalance Price (a proposed outcome of the removal of CADL) will not strengthen Energy Imbalance Price signals, but will result in inappropriate signals being created by reducing the cost reflectivity of the Energy Imbalance Price and increasing cross subsidies. Inappropriate price signals from an un-cost reflective Energy Imbalance Price may distort the short and longer term energy markets;
6. A potential outcome of the removal of CADL is an artificial increase in the main Energy Imbalance Price. The increased risk of exposure to an artificially high Energy Imbalance Price at times of system stress increases the risk of generators going out of business if in imbalance and exposed to a high main Energy Imbalance Price. Thus P144 will significantly increase the costs to Parties of managing their risk exposure;

7. Historical data analysis indicates that removal of CADL will dampen the resulting main Energy Imbalance Price, in turn weakening the incentive on Parties to forward contract, as there is less risk exposure; and
8. As CADL could be reintroduced following its removal, this means that there is no additional risk and uncertainty associated with keeping CADL than with removing it.

The PSMG considered P144 in respect of its effect on the achievement of Applicable BSC Objective 3(c) and concluded that the view as to whether P144 better facilitates Objective 3(c) again depends on the view as to whether the removal of CADL results in a more cost reflective Energy Imbalance Price. On balance the majority of the PSMG felt that P144 would not result in a more cost reflective Energy Imbalance Price, and therefore will not result in more appropriate cost targeting of electricity balancing to Parties. A number of PSMG members believe that P144 may disproportionately increase the risk exposure of Parties. Therefore P144 does not better facilitate Objective 3(c). However, a minority of the PSMG believe that a more cost reflective Energy Imbalance Price would arise from the removal of CADL, and this would consequentially better facilitate Objective 3(c).

5.2.4 Applicable BSC Objective 3(d): Promoting Efficiency in the Implementation and Administration of the Balancing and Settlement Arrangements

FOR:

1. The CADL methodology requires the Panel to define certain short duration trades as system related while others are electricity related in a process that is complex and cumbersome to manage and is reviewed at frequent intervals;

AGAINST:

2. CADL is reviewed routinely annually and it is not believed that this is a cumbersome or complex process to manage;
3. Keeping the CADL variable (and concept) means that there is the flexibility to change the value in the future in response to changes in the patterns of balancing actions where CADL is necessary, with the consequential efficiency that this approach offers. P144 removes the option of reintroducing CADL without additional cost at some point in the future.

A number of the PSMG noted that if there is a genuine requirement for CADL Tagging, then even if it is removed, it will be reinstated, incurring the costs of such reinstatement.

The PSMG considered P144 in respect of the arguments set out and its effect on the achievement of Applicable BSC Objective 3(d) and the majority of the PSMG concluded that P144 does not better facilitate Applicable BSC Objective 3(d).

6 TRANSMISSION COMPANY ANALYSIS

In accordance with paragraph F 2.8 of the Code, the Transmission Company were requested to respond to the following questions concerning P144 (and to provide the rationale for each response):

The Transmission Company references its consultation response made in respect of P144 in its analysis, and therefore the relevant consultation responses are provided against the relevant question.

Both the Transmission Company analysis response and its consultation response are provided in full in Annex 5.

Q1 Please outline any impact of the Proposed Modification on the ability of the Transmission Company to discharge its obligations efficiently under the Transmission Licence and on its ability to operate an efficient, economical and co-ordinated transmission system.

The proposed modification has no impact on our ability to discharge our obligations under the Transmission Licence.

Q2 Please provide an assessment (appropriately caveated, if necessary) as to the efficacy of the Continuous Acceptance Duration Limit (CADL) at targeting system balancing actions and removing them from the Energy Imbalance Price calculation.

We believe that CADL is efficacious in targeting system balancing actions and removing them from the Energy Imbalance Price calculation. Our further views on this issue have been included in our response to the Assessment Consultation for Modification P144.

Transmission Company Consultation Response:

As System Operator, we call off a number of Balancing Services in each Settlement Period in order to maintain the integrity and security of the transmission system and balance generation and demand in real time (taking account of transmission system constraints). Some of these actions will be required as a direct result of resolving energy imbalances caused by Market Participants. Other actions are taken regardless of the imbalance positions of Market Participants, and these actions are generally referred to as 'system' balancing actions. We believe that participants who have an energy imbalance should be exposed to imbalance prices which are reflective of the cost of balancing energy.

Currently CADL designates balancing actions that are short in duration (<15 mins) as 'system' actions. Such actions are generally taken to manage within half-hour effects and control system frequency in real time. At the time of introduction, it was our view that it was not appropriate for such actions to feed into the calculation of imbalance prices.

Short duration actions continue to be taken to manage within half-hour effects and control system frequency in real time. We therefore believe it is appropriate to retain CADL as a mechanism for removing these actions from the calculation of energy imbalance prices. CADL is a variable within the BSC that can be changed at the discretion of the BSC Panel (and approval by the Authority), and is the subject of periodic review by Elexon. We believe that this is the appropriate way to ensure that CADL continues to serve the purpose of using Duration to pragmatically distinguishing between actions which are taken for energy balancing reasons and those for system related reasons.

In summary we believe that if CADL were to be removed from the BSC, the likelihood of the costs of 'system' related actions feeding into energy imbalance prices would be increased.

Q3 Please provide an assessment (appropriately caveated, if necessary) as to whether, in your opinion, implementation of NIV Tagging has superseded CADL Tagging.

We do not believe that the implementation of NIV Tagging has superseded CADL Tagging and our views on this issue have been included in our response to the Assessment Consultation for Modification P144.

Transmission Company Consultation Response:

The BSC employs a set of rules for determining which balancing actions should be allowed to feature in the calculation of imbalance prices, and which should be discarded for this purpose by 'tagging' them out of the price calculation. NIV tagging removes the volume of balancing actions taken in the opposite direction to market length (i.e. the reverse stack) from the volume of actions taken in the same direction as market length, starting with the most expensive.

The NIV tagging methodology is based on the principle that 'system' actions taken in the opposite direction to market length must be replaced by actions in the same direction as market length. Hence it is appropriate to consider these 'replacement actions' as 'system' actions, as they would have been required regardless of the imbalance position presented to the SO by the market. It is our view that the definition of 'system' actions should not be limited to 'replacement actions' as described. If actions exhibit characteristics which make them more likely to be taken for system reasons, then it is appropriate to remove them from the calculation of imbalance prices. It is our view that within half-hour actions are an example of this and the existing mechanism for removing them from the imbalance price calculation compliments NIV tagging rather than NIV tagging rendering all other definitions of 'system' actions redundant.

Q4 Please outline the views and rationale of the Transmission Company as to whether the Proposed Modification would better facilitate achievement of the Applicable BSC Objectives.

We do not believe that the proposed modification better facilitates the BSC Applicable Objectives. We believe that the existing CADL methodology provides the appropriate signals to market participants and accurately reflects the costs associated with balancing the system. Our views are also outlined in our response to the Assessment Consultation for Modification P144.

Transmission Company Consultation Response:

It is our view that P144 does not better facilitate the achievement of the Applicable BSC objectives:

(a), (b) or (c), as removal of CADL from the BSC increases the likelihood that balancing actions taken for system reasons will feed into the calculation of energy imbalance prices. We do not believe that this will strengthen the signals provided by imbalance prices as asserted by the Proposer – rather that it could result in inappropriate signals being created by reducing the cost reflectivity of energy imbalance prices and increasing cross subsidies.

It is not our understanding that the process for reviewing CADL periodically is complex or cumbersome to manage. We work closely with Elexon to ensure that ISG and the BSC Panel have the appropriate information they require in order to determine an appropriate value for

CADL. We believe that removing CADL from the BSC, when the ability to change the value to zero (should that ever be deemed appropriate) already exists, does not better facilitate BSC object (d).

7 STATEMENT OF URGENCY

The supporting document for the Modification Proposal states, as justification for the request for Urgency, that:

“Edison Mission Energy requests that this BSC mod should be given urgent status. NGC is still forecasting a negative generation surplus this winter (6 October 2003 Operational Forum). If the modification is implemented in time for winter it will improve the incentives to contract sufficiently to avoid imbalance exposure when the system is short. In particular, strengthening these signals to the market at times of system stress will have a beneficial effect on security of supply.

To ensure these signals are in place for this winter, the modification needs to be implemented (subject to Ofgem’s approval) as soon as possible following the November 13 BSC Panel meeting. If the time taken to make software changes would delay the implementation of this modification, we suggest that, as an interim solution, the value of the Continuous Acceptance Duration Limit (CADL) is set to zero

We recognise that a review of the value of CADL is underway by the Imbalance Settlement Group (ISG). The ISG will review whether the current 15 minute value for CADL is appropriate not whether the tagging of short duration trades itself is appropriate. This modification seeks to remove CADL from the BSC altogether, not change its value. Whilst the ISG might recommend to the BSC Panel that the value of CADL should be set to zero (which would have the same effect as removing it from the BSC), the ISG will make a recommendation to the BSC Panel following their meeting on 25 November. The Panel meeting following on from the ISG meeting is on 11 December. We would like to see this BSC modification implemented in time for winter. Delaying a decision until after the BSC Panel meets in December, is in our opinion, too late for the coming winter”.

8 SUMMARY OF DATA ANALYSIS

8.1 Energy Imbalance Price Analysis

8.1.1 Comparison of Energy Imbalance Prices: 11 March 2003 to 8 October 2003

For all Settlement Periods since Settlement Period 1 on 11 March 2003 (implementation of the current (P78) mechanism) to Settlement Period 48 on 8 October 2003 (the last day that settlement data was available for at the point the analysis was undertaken), the Energy Imbalance Price was calculated with CADL set to 0, i.e. no CADL. The resulting Energy Imbalance Prices have been compared to those derived under the current mechanism, i.e. for CADL 15. This resulted in a comparison of CADL 15 with no CADL over 10,174 Settlement Periods.

It should be noted that this data analysis is based on historical data. Any amendment to the Energy Imbalance Price calculation may alter Parties behaviour, and this in turn may affect the resulting Energy Imbalance Prices. Therefore this data should be used with that caveat in mind.

A spreadsheet containing all of the data used in this comparison is provided with this consultation.

Approximately 22% of Settlement Periods are impacted by the removal of CADL, with the System Sell Price more often impacted (17.7%). However, this appears to be a feature of the predominance of the

System Sell Price as the main price (i.e. derived from balancing actions) rather than an indication that the System Sell Price is more sensitive to the removal of CADL Tagging (the System Sell Price is the main price generally three quarters of the time). Therefore it appears that the System Sell Price and System Buy Price are equally impacted.

From the comparison tables provided below, it can be seen that the removal of CADL Tagging will change the resulting Energy Imbalance Price by less than 1% in the vast majority of Settlement Periods. Of 2274 Settlement Periods (1794 on the SSP and 480 on the SBP), only 23 (1% of the changed Settlement Periods and 0.2% of the total Settlement Periods) had the resulting Energy Imbalance Price changed by more than 20%.

Furthermore, from the analysis, it can be seen that removing CADL increases System Sell Price or reduces System Buy Price, approximately two thirds of the time.

Comparison of the System Sell Price:

Of the 10,174 Settlement Periods, 1794 Settlement Periods (17.7%) showed a change to the Energy Imbalance Price from having no CADL tagging.

Of these 1794 Settlement Periods:

- In **634** Settlement Periods (35%) the System Sell Price reduced; and
- In **1160** Settlement Periods (65%) the System Sell Price increased.

The following table compares the percentage increase / decrease in the System Sell Price for these 1794 Settlement Periods:

Percentage change	Decrease in SSP	Increase in SSP
Less than 1%	89% 565 Settlement Periods	80.6% 935 Settlement Periods
1 to 5%	9% 57 Settlement Periods	15.4% 179 Settlement Periods
5 to 10%	None	2.7% 31 Settlement Periods
10 to 20%	1% 6 Settlement Periods	0.7% 8 Settlement Periods
Greater than 20%	1% 6 Settlement Periods Highest -123.85% change	0.6% 7 Settlement Periods Highest 113.72% change

The average difference between the System Sell Price derived with CADL set to 15 minutes, and no CADL over the 1794 Settlement Periods is (+)**£0.012 / MWh**.

Comparison of the System Buy Price:

Of the 10,174 Settlement Periods, 480 Settlement Periods (4.1%) showed a change to the Energy Imbalance Price from having no CADL tagging.

Of these 480 Settlement Periods:

- In **308** Settlement Periods (64.1%) the System Buy Price reduced; and
- In **172** Settlement Periods (35.9%) the System Buy Price increased.

The following table compares the percentage increase / decrease in the System Buy Price for these 480 Settlement Periods:

Percentage change	Decrease in SBP	Increase in SBP
Less than 1%	68.1% 210 Settlement Periods	77.9% 134 Settlement Periods
1 to 5%	23.1% 71 Settlement Periods	11.6% 20 Settlement Periods
5 to 10%	4.9% 15 Settlement Periods	None
10 to 20%	2.9% 9 Settlement Periods	3.5% 6 Settlement Periods
Greater than 20%	1% 3 Settlement Periods Highest -53.53% change	7% 12 Settlement Periods Highest 539.39% change

The average difference between the System Buy Price derived with CADL set to 15 minutes, and no CADL over the 480 Settlement Periods is (-)**£0.006 / MWh**.

8.1.2 Comparison of Energy Imbalance Prices: 10 December 2002

A comparison of 10 December 2002 was undertaken for the current mechanism with CADL 15 and no CADL. 10 December 2002 was chosen for analysis, as this was the Settlement Day that exhibited the highest peak demand (in Settlement Period 35) in the winter last year (2002 / 2003). The analysis is included in the data provided with this consultation.

It should be noted that 10 December 2002 was prior to the implementation of the current (P78) mechanism and therefore, the Energy Imbalance Prices for that day have been recalculated using the current mechanism, with CADL 15, and then again with the current mechanism and no CADL.

Comparing the resulting Energy Imbalance Prices indicates that removing CADL had an effect on fourteen of the forty-eight Settlement Periods. The table below contains the data for the affected Settlement Periods:

10 December 2002:

Settlement Period	No CADL	Current (CADL 15)	Main Price	Difference (£ / MWh)	Percentage Difference
43	75.330	103.679	SBP	-28.349	-27.34
42	61.181	81.744	SBP	-20.563	-25.16
41	110.081	137.140	SBP	-27.059	-19.73

Settlement Period	No CADL	Current (CADL 15)	Main Price	Difference (£ / MWh)	Percentage Difference
39	271.574	296.752	SBP	-25.178	-8.48
40	213.597	226.743	SBP	-13.146	-5.80
38	325.692	336.036	SBP	-10.344	-3.08
33	184.682	188.223	SBP	-3.541	-1.88
35	322.064	328.159	SBP	-6.095	-1.86
36	270.578	274.261	SBP	-3.683	-1.34
30	27.094	27.434	SBP	-0.340	-1.24
47	15.567	15.568	SBP	-0.001	-0.01
32	133.027	119.722	SBP	13.305	11.11
31	67.604	51.786	SBP	15.818	30.54
5	10.706	10.708	SSP	-0.002	-0.02

8.2 CADL Volumes Remaining in the Net Imbalance Volume

CADL Tagged volumes are added into the NIV derivation at the top of the stack, such that it is the first balancing action (other than system BSAD) to get NIV Tagged.

Analysis of all the Settlement Periods between 11 March 2003 and 8 October 2003 (inclusive) was undertaken to determine how often NIV Tagging resulted in CADL Tagged volumes remaining in the NIV (noting that these CADL Tagged volumes are excluded from setting / contributing to the main Energy Imbalance Price). The analysis is included in the data provided with this consultation.

Offers

When looking at the CADL Tagged volume in respect of CADL Tagged Accepted Offer volumes, only 15 Settlement Periods have CADL Tagged volumes remaining in the NIV. Of these 15 Settlement Periods, 5 of them have 100% of the CADL Tagged volume remaining in the Net Imbalance Volume.

Bids

When looking at the CADL Tagged volume in respect of CADL Tagged Accepted Bid volumes, 455 Settlement Periods have CADL Tagged volumes remaining in the NIV. Of these 455 Settlement Periods, 310 of them have 100% of the CADL Tagged volume remaining in the Net Imbalance Volume and a further 20 have between 90 and 100% remaining in the Net Imbalance Volume.

8.3 Only CADL In the Net Imbalance Volume

Taking a step on from the analysis of how often NIV Tagging leaves CADL Tagged volumes in the NIV, the same 10,174 Settlement Periods (11 March to 8 October 2003) were analysed to determine whether there were any Settlement Periods where CADL'ed volume was the only volume remaining in the Net Imbalance Volume, i.e. there had been no other balancing actions in that Settlement Period,

and under the circumstance where CADL is removed, those acceptances would have set the Energy Imbalance Price (without mitigation from other Acceptances).

Under the current baseline, should this circumstance occur, then the defaulting mechanism kicks in and sets the Energy Imbalance Price from the Market Index Data. However, without CADL, these acceptances would set the Energy Imbalance Price like any 'normal' acceptance(s) remaining in the Net Imbalance Volume.

There were no such Settlement Periods.

9 SUMMARY OF REPRESENTATIONS

Fourteen consultation responses (on behalf of 61 Parties and 1 non Party) were received in respect of the consultation on Urgent Modification Proposal P144. The consultation responses are provided in full in Annex 2 of this report and the key points raised therein are summarised and considered in section 5, with section 5.1 covering the key points raised in the responses in respect of the principle of removing CADL and section 5.2 covering the respondents views as to whether P144 better facilitates the Applicable BSC Objectives.

However, to summarise, of the fourteen responses received:

- Two respondents (10 Parties) supported P144 and believe that CADL should be removed from the Code, and that this removal of CADL better facilitates the Applicable BSC Objectives;
- Eleven respondents (50 Parties and 1 non Party) do not support P144 and thus do not believe that CADL should be removed from the Code, and that removal of CADL from the Code does not better facilitate the Applicable BSC Objectives; and
- One respondent (1 Party) provided a 'no comment' response.

The consultation responses raised no new, substantive issues, additional to those previously explored by the PSMG, and thus reiterated the core arguments in respect of the relevance of CADL. The PSMG noted that its deliberations, as set out in section 5.1 and 5.2, effectively encompass the views of the consultation responses, and therefore no consideration of new issues raised by the responses was required.

Two respondents raised the issue over the timing in respect of the raising of P144 and its urgent treatment, particularly in respect of the proximity to the current CADL review. Section 4.3 covers this aspect of P144.

10 SUMMARY OF IMPACT ASSESSMENTS

10.1 BSC Central Service Agent

The full impact assessment is provided in Annex 4.

The BSC Central Service Agent provided an impact assessment for three options:

Option	Description	Change Specific Cost	Total Cost	Implementation Timescale	Annual Maintenance Cost
1	Set CADL to zero.	None	None	Immediate	None
2	Amend BSC Central Service Agent documentation to remove CADL references.	£22,603	£85,333	7 weeks	£3,164
3	Amend BSC Systems to remove CADL	£167,013	£406,413	15 weeks	£23,382

Therefore, following the implementation approach set out in section 1.3.2, P144 will incur no immediate BSC Central Service Agent implementation costs.

However, at some opportune point in the future, amending the BSC Central Service Agent documentation may incur, in the worst case (i.e. standalone implementation, not mitigated by including with other amendments) implementation costs of £85,333, with a 7 week implementation timescale.

As noted in section 1.3.2, to ensure the most efficient and cost effective delivery of P144, there is currently no intention to deliver option 3. However, if it were to be delivered, amending the BSC Central Service Agent systems may incur, in the worst case (i.e. standalone implementation, not mitigated by including with other amendments) implementation costs of £406,413, with a 15 week implementation timescale.

10.2 Transmission Company

Provided in full in Annex 5.

The Transmission Company impact assessment indicates that it believes there to be no (identified) impact from the implementation of P144.

10.3 ELEXON

Provided in full in Annex 3.

ELEXON is impacted initially only by the requirement to amend the Code and associated documentation to remove references to CADL (and associated references), as follows:

- Section T of the Code;
- Section X, Annex X-2 of the Code;
- The Reporting Catalogue;

- The Central Registration Agent (CRA) Service Description to remove the reference to the registration of the value of CADL;
- The Balancing Mechanism Reporting Agent (BMRA) Service Description, to remove references to CADL, CADL Tagging, Priced and Unpriced Acceptances; and
- The Settlement Administration Agent (SAA) Service Description, to remove references to CADL, CADL Tagging, Priced and Unpriced Acceptances.

BSCCo's Market Monitoring system TOMAS, also requires amendment to remove CADL (by setting it to zero), with a minimal resource requirement.

Therefore the estimate of ELEXON effort required to implement the initial phase of P144 is **10 man days** (to amend the Code and to check the changes and place the amended documentation on the BSC Website), with a lead time of 5 Business Days.

Furthermore, since the proposed approach is to include the BSC Central Service Agent documentation changes at an opportune time in a scheduled BSC Systems Release, no ELEXON effort is quoted, as it is assumed that the effort of checking the amendments to the BSC Central Service Agent documentation will be subsumed into the overall effort of the BSC Systems Release.

However, the estimate of ELEXON effort required to implement the second phase of P144 is **80 man days** (to amend the Code Subsidiary Documents, the BSC Central Service Agent documentation and to check the systems and documentation changes and place the amended documentation on the BSC Website), with an unspecified lead time.

11 LEGAL TEXT TO GIVE EFFECT TO THE PROPOSED MODIFICATION

The redlining indicates the proposed amendments required to give effect to Proposed Modification P144.

See the attached document 'UMRP144 Section 11.pdf' for amendments to the Code to give effect to Proposed Modification P144.

ANNEX 1 – DATA ANALYSIS

This is provided as a spreadsheet attachment to this report, 'UMRP144 Annex 1'

ANNEX 2 - REPRESENTATIONS

Provided in attached document 'UMRP144 Annex 2.pdf'

Representations were received from the following parties:

No	Company	File Number	No. BSC Parties Represented	No. Non-Parties Represented
1.	Gaz de France	P144_ASS_001	1	0
2.	First Hydro	P144_ASS_002	1	0
3.	ScottishPower	P144_ASS_003	6	0
4.	ConocoPhillips	P144_ASS_004	2	0
5.	Powergen	P144_ASS_005	14	0
6.	InterGen	P144_ASS_006	4	1
7.	British Gas Trading	P144_ASS_007	5	0
8.	RWE	P144_ASS_008	9	0
9.	Scottish and Southern	P144_ASS_009	4	0
10.	British Energy	P144_ASS_010	3	0
11.	National Grid	P144_ASS_011	1	0
12.	EdF Energy	P144_ASS_012	9	0
13.	Aquila Networks	P144_ASS_013	1	0
14.	Barclays Capital	P144_ASS_014	1	0

ANNEX 3 – ELEXON IMPACT ANALYSIS

MP/CP No.	P144	Title:	Removal of CADL from the BSC					
Assessor Name	John Lucas		Assessor Team	Design Authority			Date	14/10/03
Stage of Assessment	Initial		Document Assessed			Proposal Form		
Likely Impacted Departments:								
CVA Programme	✓	SVA Programme		IT		Legal		
Governance		Comms	✓	Finance		Strategic Comm. Servs		
Commercial and SVAA Operations.		CVA Operations	✓	Market Monitoring	✓	Customer Services Management		
Assurance		P6		Other (please specify)				
Likely ELEXON Activities:								
Procurement Activity Required		MRA CP Required		Special Project / Working Group Required		Legal Guidance Required		
BSC System Related Changes:								
	BMRA	CDCA	CRA	ECVAA	FAA	SAA	TAA	TLFA
Software	Possible impact ⁷					Possible impact		
Code Subsidiary Documents	Possible impact					Possible impact		
Other Configurable Items	Possible impact					Possible impact		
	SVAA	PARMS	EAC/AA	MIDP	NHHDA	BSC Website	NGC	TOMAS
Software						✓		Possible impact
Code Subsidiary Documents								Possible impact
Other Configurable Items						✓		Possible impact

⁷ P144 could be delivered without any changes to the BMRA, SAA or TOMAS services, by simply setting the value of the CADL parameter to zero. In the short term, this may well be the best implementation strategy. In the longer term, however, changes to documentation and/or software are probably appropriate. This issue is discussed further under the heading *Design Authority Comments, Issues or Risks* overleaf.

Non-BSC System Related Changes:									
P144 could be implemented without changes to any of these configurable items, through a change to the CADL parameter. However, changes to reports and processes may be appropriate in the longer term, as discussed below. The following matrix identifies these possible impacts:									
BPM	✓	NDFC	✓	Reporting Catalogue	✓	SVA Data Catalogue		Communications Reqs Document	
IDD Part 1	✓	IDD Part 2	✓	EPFAL IDD Part 1		EPFAL IDD Part 2		Market Indicator Definition Statement	
Service Descriptions		BSC Auditor		Certification Agent		Profile Administrator		Teleswitch Agent	
BSC Code Sections	T		X-2						
Core Industry Documents									
BSCPs									
PSL									
SSL									
COPs									
Impacted Participants:									
BSC Parties	✓	Non BSC Parties		BSC Party Agents		BSC Agents			✓
Core Industry Document Owners					BSC Panel				✓
Related Mods, CPs or other Projects:-									
Design Authority Comments, Issues or Risks:-									
<p>If necessary, P144 could be implemented quickly and simply by setting the Continuous Acceptance Duration Limit (CADL) to zero. This would render the P18A provisions inactive (and is in fact the mechanism already used to calculate imbalance prices for pre-P18A Settlement Days). However, in the longer term, consideration may need to be given to removing some or all of the P18A functionality from Code Subsidiary Documents and BSC Systems. In increasing order of complexity, changes that might be considered include:</p> <ul style="list-style-type: none"> • Removing from the BMRA and SAA documentation the process for changing CADL to anything other than zero; • Physically disabling the BMRA and SAA functionality for changing CADL (so that it becomes impossible to enter an erroneous non-zero value); • Removing CADL-related data items (e.g. System Total Un-priced Accepted Offer Volume) from settlement reports and/or BMRA messages; • Removing from the settlement systems the functionality for calculating Acceptance Durations. <p>In order to make a decision on which (if any) of these changes are appropriate, the costs and benefits of each would need to be assessed. This could be done as part of the P144 Modification Procedure, or subsequently through the Change Proposal process.</p>									

ELEXON Finance: No impact.

ELEXON Assurance: No Impact, assuming the chosen solution is to set CADL to zero.

ELEXON Service Delivery: There would be minimal impact on Service Delivery. The interim solution proposed by First Hydro would also be our enduring solution. 2 minutes to set CADL to 0. 2 minutes for someone to check the change.

ELEXON CVA Programme:

5. Operational Impacts?	Y	
Description: This should be a data change only, and therefore can be managed by service delivery and NETA CSA service delivery. Changes will be to set CADL to zero from effective date.		
Ongoing Resources (man days per annum) (Post-implementation)		
6. Impact on Interfaces with BSC Agents, BSC Parties, BSC Party Agents and other ELEXON Departments?		
Description: Set CADL to zero in BMRA and SAA from effective settlement date. Update BSC website (system parameters) to state CADL zero from effective date. Update TOMAS to set CADL to zero from effective date.		
7. Any other Comments or Assumptions made:		
No other documentation or software change required. CADL will still exist in software and documentation but will be set to zero. No CVA Programme impact if this is the case.		
Overall Lead Time for Project		

ANNEX 4 – BSC CENTRAL SERVICE AGENT IMPACT ANALYSIS

<h1>NETA Change Form</h1>		ELEXON Reference
		MP144
Title		Version No.
Removal of CADL from the BSC		Version 0.1
		LogicaCMG Reference
		ICR549
Type of Assessment	Date CP Received	Date IA Issued
DLIA	22-Oct-2002	30-Oct-2003
Brief Summary of Change		
<p>It is proposed that the CADL methodology introduced under P18A is removed from the BSC. Short duration trades would be treated in the same way as all other trades. The Net Imbalance Volume (NIV) tagging process will be used to determine whether trades are electricity related or system related.</p>		
LogicaCMG's Proposed Solution		
<p>Three options have been proposed:</p> <ol style="list-style-type: none"> 1. Disabling CADL (i.e. setting it to zero); 2. Updating documentation to show that for dates $\geq x$ that CADL is not used and that priced/unpriced volumes are not relevant; 3. Indicative price for changing everything to actually remove CADL, priced and unpriced from external view - change CADL lookup to force to zero after P144 effective date, change BMRA and SAA reporting to remove references to CADL, priced and unpriced for dates $\geq x$. <p><u>Option 1</u> Set CADL to be zero as effective from a specified P144 date. Note that this solution does not involve any changes to the BMRA web text.</p> <p><u>Option 2</u> Change documentation (SAA and BMRA) to state that post-P144 effective date CADL is no longer effective and that priced/unpriced values and short/long acceptances have new meaning.</p> <p><u>Option 3</u> Have a P144 effective date system parameter.</p> <p>Modify Settlement Calculation so that post P144 no CADL is carried out and all acceptances are as priced (code to extract effective date; code to step around CADL processing, or set to zero).</p> <p>Modify SAA-I014 so CADL related data is reported correctly post-P144. Some fields will become optional and possibly renamed (code to extract effective date into global; code to force all post-P144 invalid fields are blank).</p>		

Change BMRA publishing (web/TIBCo) so post-P144 all references to CADL removed, priced/unpriced and short/long. Historic web pages would vary depending on date. Real time pages would be changed. Reports would stop reporting the data. Fields become optional (depending on settlement date), or change title. BMRA help text.

Other Considerations

The price of Option 3 may be sufficiently prohibitive that it is rejected. In light of this it may be worth considering a combination of Options 1 and 3. The value of CADL would be set to zero in line with the desired implementation effective date of P144 as an initial solution/workaround (as per Option 1). Then subsequently Option 3 could be implemented as part of another Settlement Calculation impacting modification, such that its price is reduced.

There are a number of modifications under consideration (such as P136) which include CADL in their definition. Option 1 has the advantage that CADL can be re-introduced at zero cost if modifications of this type are implemented.

Deviation from ELEXON’s Solution / Requirements

None.

Operational Solution and Impact

None.

Testing Strategy

Unit	X	Change Specific	X	End to End	
Module	X	Operational Acceptance		Participant Testing	
System	X	Performance		Parallel Running	
Regression		Volume		Deployment/ Backout	

Other:

Change Specific Testing (Option 2)

A new test script will be developed to test the changes to the BMRA help text. This new test will be executed once in a Main Run.

Change Specific Testing (Option 3)

A new test script will be developed to test the P144 functionality, namely:

- SAA calculation (control report) post-P144 Effective Date;
- modified historic and near real-time BMRA web pages and help text;
- generation of the SAA-I014 report to check the content of un-priced fields.

This new test will be executed in both Dry and Main Runs.

Core Business Functionality Testing (Option 3)

Regression Scripts RT-01 and RT-02 perform data set-up and these will be executed in the Dry and Main runs.

Regression Scripts RT-04 and R2T-28 will be executed in both Dry or Main runs to test existing SAA functionality (pre-CADL and pre-P144 Effective date respectively).

Validated Assumptions

None.

Outstanding Issues							
None.							
Changes to Service							
Services Impacted							
	BMRA	CDCA	CRA	ECVAA	SAA	TAA	Other
Software							
IDD Part 1 (Docs)	Option 2 Option 3				Option 2 Option 3		
IDD Part 1 (S'heet)	Option 2 Option 3				Option 2 Option 3		
IDD Part 2 (Docs)	Option 2 Option 3				Option 2 Option 3		
IDD Part 2 (S'heet)	Option 2 Option 3				Option 2 Option 3		
URS	Option 2 Option 3				Option 2 Option 3		
SS	Option 2 Option 3				Option 2 Option 3		
DS	Option 2 Option 3				Option 2 Option 3		
MSS							
OSM							
LWIs							
RTP	Options 2 & 3: <ul style="list-style-type: none"> Regression testing will involve tests RT-01 and RT-02 for data set-up plus RT-04, RT-11 and R2T-28 (for Option 3 only). Minimal updates to BMRA regression tests required (SAA settlement calculation will still work pre-CADL and with non-zero CADL pre-P144). No CRA, CDCA or ECVAA testing (either Regression or Change-specific) is required. No estimates have been included for Performance/Volume testing. For Option 2 it is assumed that the BMRA High and Low grade web is already set-up and running (no estimates for BMRA regression testing). 						
Comms							
Other							
Nature of Documentation Changes							
Amendments to Settlement Calculation details and SAA-I014 for Options 2 & 3.							
Nature / Size of System Changes							
Option 1 – none Option 2 – small Option 3 - medium							
Type of Release Costed:			Interim (Patch)				
Deployment Issues, e.g. Outage Requirements:			Option 3 only.				

Impact on Service Levels:	None.
Impact on System Performance:	None.

Responsibilities of ELEXON

- For all DCRs which are subject to review, LogicaCMG shall provide one draft issue and a maximum of 6 working days has been allowed for ELEXON to review and comment on the updates. Comments will be addressed and the final issue will be provided. A maximum of 2 working days has been allowed for review confirmation and signoff by ELEXON.
- Within reasonable levels, ELEXON will make available appropriate staff to assist LogicaCMG during the development of this change.

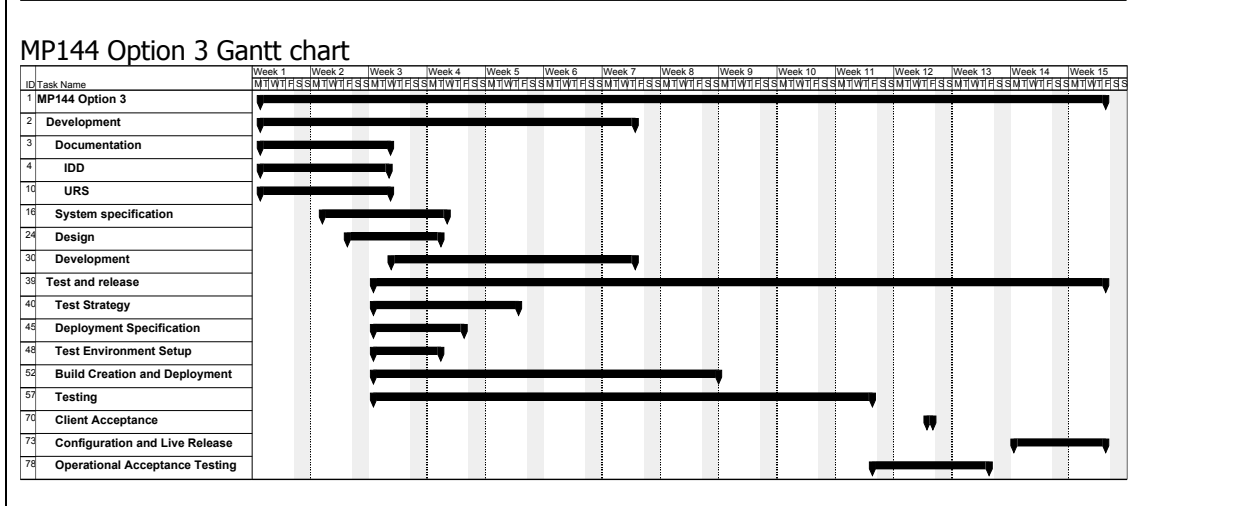
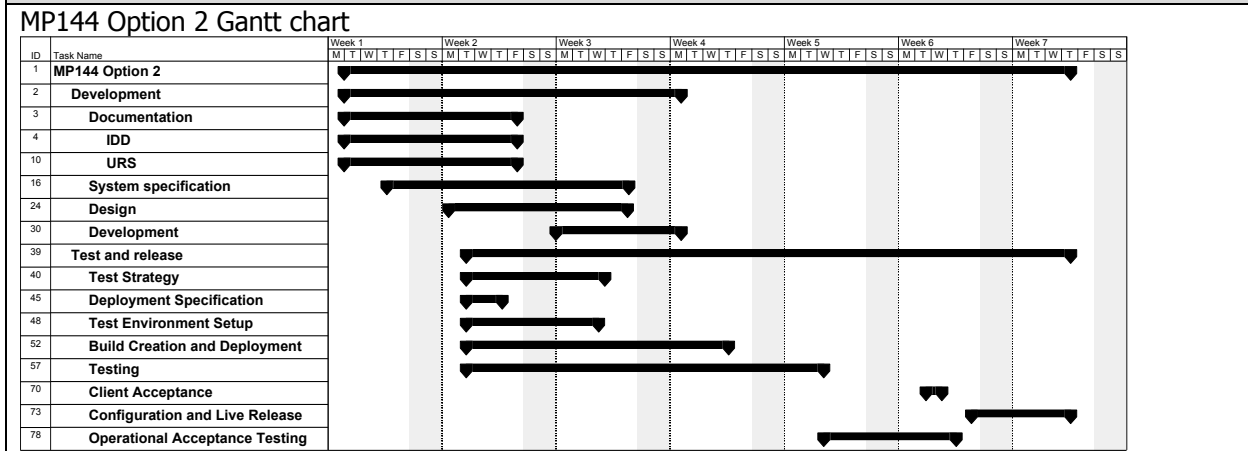
Acceptance Criteria

This is covered by the acceptance criterion 2 in the "CVA Program – Release Acceptance Criteria" document for the Feb03 release.

Any Other Information

None.

Attachments



PRICING		
Price Breakdown		
Item description	Remarks	Price (ex VAT)
Change Specific Cost	Option 1 Option 2 Option 3	£0 £22 603 £167 013
Project Overhead	Option 1 Option 2 Option 3	£0 £62 730 £239 400
Total Price (ex VAT)		Option 1 – £0 Option 2 – £85 333 Option 3 – £406 413
Project Duration		Option 1 – n/a Option 2 – 7 weeks Option 3 – 15 weeks
Operational Price (e.g. per annum or event) (ex VAT)		£0 (all options)
Rationale		
n/a		
Annual Maintenance Price (ex VAT)		Option 1 – £0 Option 2 – £3 164 Option 3 – £23 382
Rationale		
The Annual Maintenance Price is derived as 14% of the Change Specific Price.		
Validity Constraints		
<ul style="list-style-type: none"> Price and duration assume that this change is developed in isolation and the effects of other changes are excluded. Price is for creating DCRs, not a formal documentation issue. Maintain charges will be invoiced monthly in arrears. No allowance has been included for supporting PwC activities. <p>The validity period for this quote is 30 days.</p> <p>For Option 2, the offer is based on the following payment milestones:-</p> <ul style="list-style-type: none"> LogicaCMG will invoice in full for this change on deployment or within one month of the change being ready for deployment. <p>For Option 3, the offer is based on the following payment milestones:-</p> <ul style="list-style-type: none"> LogicaCMG will invoice 30% on receipt of Purchase Order or authorised start of work, 50% on completion of first build phase, 15% on live implementation and 5% made the earlier of either 		

1 month after the live implementation date or subject to the successful completion of the Success Criteria (to be agreed between Parties and defined in the Full Release Specification).	
Authorised Signature	Date Signed

ANNEX 5 – TRANSMISSION COMPANY ANALYSIS

Since the Transmission Company references its consultation response from the Transmission Company Analysis response (requested in accordance with paragraph F 2.8 of the Code), its consultation response has also been provided in full in this Annex.

Q	Question	Response
1	Please outline any impact of the Proposed Modification on the ability of the Transmission Company to discharge its obligations efficiently under the Transmission Licence and on its ability to operate an efficient, economical and co-ordinated transmission system.	The proposed modification has no impact on our ability to discharge our obligations under the Transmission Licence.
2	Please provide an assessment (appropriately caveated, if necessary) as to the efficacy of the Continuous Acceptance Duration Limit (CADL) at targeting system balancing actions and removing them from the Energy Imbalance Price calculation.	We believe that CADL is efficacious in targeting system balancing actions and removing them from the Energy Imbalance Price calculation. Our further views on this issue have been included in our response to the Assessment Consultation for Modification P144.
3	Please provide an assessment (appropriately caveated, if necessary) as to whether, in your opinion, implementation of NIV Tagging has superseded CADL Tagging.	We do not believe that the implementation of NIV Tagging has superseded CADL Tagging and our views on this issue have been included in our response to the Assessment Consultation for Modification P144.
4	Please outline the views and rationale of the Transmission Company as to whether the Proposed Modification would better facilitate achievement of the Applicable BSC Objectives.	We do not believe that the proposed modification better facilitates the BSC Applicable Objectives. We believe that the existing CADL methodology provides the appropriate signals to market participants and accurately reflects the costs associated with balancing the system. Our views are also outlined in our response to the Assessment Consultation for Modification P144.
5	Please outline the impact of the Proposed Modification on the computer systems and processes of the Transmission Company, including details of any changes to such systems and processes that would be required as a result of the implementation of the Proposed Modification (and, if applicable, any Alternative Modification	No impact has been identified.
6	Please provide an estimate of the development, capital and operating costs (broken down in reasonable detail) which the Transmission Company anticipates that it would incur in, and as a result of, implementing the Proposed Modification.	No costs have been identified.

Q	Question	Response
7	Please provide details of any consequential changes to Core Industry Documents that would be required as a result of the implementation of the Proposed Modification.	None identified.
8	Any other comments on the Proposed Modification.	No further comments.

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Q	Question	Response	Rationale
1.	Do you support P144, namely that, in principle, the Continuous Acceptance Duration Limit (CADL) should be removed from the Balancing and Settlement Code?	No	<p>As System Operator, we call off a number of Balancing Services in each Settlement Period in order to maintain the integrity and security of the transmission system and balance generation and demand in real time (taking account of transmission system constraints). Some of these actions will be required as a direct result of resolving energy imbalances caused by Market Participants. Other actions are taken regardless of the imbalance positions of Market Participants, and these actions are generally referred to as 'system' balancing actions. We believe that participants who have an energy imbalance should be exposed to imbalance prices which are reflective of the cost of balancing energy.</p> <p>Currently CADL designates balancing actions that are short in duration (<15 mins) as 'system' actions. Such actions are generally taken to manage within half-hour effects and control system frequency in real time. At the time of introduction, it was our view that it was not appropriate for such actions to feed into the calculation of imbalance prices.</p> <p>Short duration actions continue to be taken to manage within half-hour effects and control system frequency in real time. We therefore believe it is appropriate to retain CADL as a mechanism for removing these actions from the calculation of energy imbalance prices. CADL is a variable within the BSC that can be changed at the discretion of the BSC Panel (and approval by the Authority), and is the subject of periodic review by Elexon. We believe that this is the appropriate way to ensure that CADL continues to serve the purpose of using Duration to pragmatically distinguishing between actions which are taken for energy balancing reasons and those for system related reasons.</p> <p>In summary we believe that if CADL were to be removed from the BSC, the likelihood of the costs of 'system' related actions feeding into energy imbalance prices would be increased.</p>

Q	Question	Response	Rationale
2.	<p>Do you believe that CADL Tagging is redundant with the implementation of NIV Tagging?</p> <p>CADL Tagging is the differentiation of system and electricity balancing by removing acceptances of less than a defined duration and NIV Tagging is the differentiation of system and electricity balancing by removing equal and opposite volumes</p>	No	<p>The BSC employs a set of rules for determining which balancing actions should be allowed to feature in the calculation of imbalance prices, and which should be discarded for this purpose by 'tagging' them out of the price calculation. NIV tagging removes the volume of balancing actions taken in the opposite direction to market length (i.e. the reverse stack) from the volume of actions taken in the same direction as market length, starting with the most expensive.</p> <p>The NIV tagging methodology is based on the principle that 'system' actions taken in the opposite direction to market length must be replaced by actions in the same direction as market length. Hence it is appropriate to consider these 'replacement actions' as 'system' actions, as they would have been required regardless of the imbalance position presented to the SO by the market. It is our view that the definition of 'system' actions should not be limited to 'replacement actions' as described. If actions exhibit characteristics which make them more likely to be taken for system reasons, then it is appropriate to remove them from the calculation of imbalance prices. It is our view that within half-hour actions are an example of this and the existing mechanism for removing them from the imbalance price calculation compliments NIV tagging rather than NIV tagging rendering all other definitions of 'system' actions redundant.</p>
3.	<p>What impact do you think P144, if implemented, will have on incentives to contract ahead for this winter (2003 / 2004)?</p>		<p>It is our view that the analysis of imbalance prices under P144 provided by Elexon, indicates that P144 will not improve incentives on Market Participants to contract ahead of this winter, as the signals provided by imbalance prices are not altered sufficiently. Further we do not believe that increasing the likelihood of allowing system actions to feed into the calculation of imbalance prices provides a more appropriate price signal.</p>
4.	<p>Does P144 raise any issues that you believe have not been identified so far and that should be considered by the Modification Group?</p>	No	
5.	<p>Do you believe Urgent Modification P144 better facilitates the achievement of the Applicable BSC Objectives? Please give rationale and state which objective(s)</p>	No	<p>It is our view that P144 does <u>not</u> better facilitate the achievement of the Applicable BSC objectives: (a), (b) or (c), as removal of CADL from the BSC increases the likelihood that balancing actions taken for system reasons will feed into the calculation of energy imbalance prices. We do not believe that this will strengthen the signals provided by imbalance prices as asserted by the Proposer – rather that it could result in inappropriate signals being created by reducing the cost reflectivity of energy imbalance prices and increasing cross subsidies.</p>

Q	Question	Response	Rationale
			It is not our understanding that the process for reviewing CADL periodically is complex or cumbersome to manage. We work closely with Elexon to ensure that ISG and the BSC Panel have the appropriate information they require in order to determine an appropriate value for CADL. We believe that removing CADL from the BSC, when the ability to change the value to zero (should that ever be deemed appropriate) already exists, does not better facilitate BSC object (d).
6.	Are there any further comments on P144 that you wish to make?	No	