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Modification Proposal P38 and P18A Review - Report on Second Modification Group Meeting

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e Related Documents

The following documents are referenced from within this document using the following convention [RD/x]:

- 1 P18A Review and Modification Proposal P38 – First Consultation, Version 1.0, 12 November 2001
- 2 P15 / P18B Data Analysis, Version 1.0, 19 October 2001
- 3 Initial Assessment of Modification Proposal P38, Version 1.0, 12 October 2001
- 4 Panel Paper 31/002 - P18 (Option A), – Proposal for Review of Approved Modification – ISG Recommendation, 18 October 2001
- 5 Panel Paper 32/021 – P18A Review and P38 Assessment Phase, 31 October 2001
- 6 BSC Systems Release 2 – Project Circular 006 – 11/09/2001

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1

INTRODUCTION

This document is a report on the second Modification Group meeting held to discuss the P18A Review and Modification Proposal P38. This meeting was held on 21 November 2001 with the aim of discussing the results of the first consultation, narrowing down the list of potential solutions and determining how each of these may better achieve the Applicable BSC Objectives.

The meeting made more progress than anticipated and resulted in a series of recommendations on the progression of Modification Proposal P38 and the P18A Review.

1.1

Background

Modification Proposal P38 was raised on 19 September 2001 by Slough Energy Supplies Limited. It was raised as a result of the delay to the reporting of prices that will arise following the implementation of BSC Release 2, which includes the implementation of Modification P18A. P38 seeks to significantly alter the definition of the Continuous Acceptance Duration (CAD), such that it is not necessary to delay the reporting of Indicative Energy Imbalance Prices on the Balancing Mechanism Reporting System (BMRS).

A secondary justification for the proposal was that the proposer believed that under the current CAD definition any decisions to exclude Bid Offer Acceptances (BOA) are: "distorted because bids and offers are priced separately for each Settlement Period".

At their meeting on 15 October 2001 the Panel were presented with the Initial Written Assessment [RD/3] of P38. At the same meeting the Panel considered Paper 31/002 [RD/4] which contained a request from the Imbalance Settlement Group to undertake a review¹ of Urgent Modification P18 Option A (P18A).

The Modification Proposal was submitted to the Assessment Procedure with an interim report to be presented to the Panel on 13 December 2001. The Panel also agreed to undertake a review of P18A and determined that it should be conducted to the same timetable as the P38 Assessment Procedure. The process for conducting a review of an Urgent Modification is not prescribed in detail² within the BSC.

Paper 32/021 [RD/5] was presented to the Panel on 31 October 2001 and outlined the proposed approach for dealing with the P18A Review in conjunction with the P38 Assessment. The approach agreed by the Panel included two consultations. The first was to understand the business requirements for "prompt" price reporting. The second consultation was to review P38, and alternatives, against the facilitation of the Applicable BSC Objectives.

The first consultation took place between 12 November 2001 - 19 November 2001 and a second Modification Group was held 21 November 2001 to discuss the findings.

1.2

Modifications Group Recommendation Summary

After undertaking an initial consultation on the required accuracy and timeliness of the reporting of Energy Imbalance Prices, the Modification Group majority view³ was that P38

¹ In accordance with Section F2.9.7 of the Balancing and Settlement Code (BSC).

² With the exception of the establishment and conduct of Modification Groups.

³ All members of the Modification Group, apart from the Proposer's representative who did not agree with the remainder of the Modification Group

did not better facilitate the Applicable Objectives of the BSC. Section 3 outlines the detail of the discussions at the Modifications Group and the justification for their decision.

The next step within the published timetable for this review and modification was a second consultation to assess the shortened list of options in terms of how they achieved the Applicable BSC Objectives. As a result of the progress made in the second Modification Group meeting there is no need for this further level of refinement.

This report has been prepared with the aim of documenting the recommendations from the second meeting and will form the basis of the interim report to the Panel on 13 December 2001.

2

MODIFICATION GROUP DETAILS

This Consultation Paper has been prepared by ELEXON on behalf of the Pricing Issues Modification Group following meetings of the Group on 2 November 2001 and 21 November 2001. The make-up of the Modification Group and attendance at each meeting is shown below.

Name	Company	Role	Meeting Date	
			02/11	21/11
Peter Davies	ELEXON	(Chairman)	✓	✓
Gwilym Rowlands	ELEXON	Member	✓	✓
Richard Clarke	ELEXON	Member	✓	✓
Tony Doherty	Ofgem	Ofgem Representative	✓	✓
Maurice Smith	Campbell Carr	Proposer's Representative	✓	
Robert Barnett	Campbell Carr	Proposer's Representative		✓
Danielle Lane	British Gas	Member		✓
Paul Mott	London Electricity	Member	✓	
Ben Willis	Innogy	Member	✓	✓
Martin Mate	British Energy	Member	✓	✓
Paul Jones	Powergen	Member	✓	✓
Steve Wilkin	St Clements Services	Member	✓	✓
Paul Plumptre	NGC	Member	✓	✓
Libby Glazebrook	Edison Mission Energy	Member	✓	✓
Rekah Patel	Dynergy	Attendee	✓	✓
Jerome Williams	Ofgem	Attendee		✓
Nick Elms	Enron	Attendee	✓	✓
David Hicks	Logica	Attendee	✓	✓

3 P18A REVIEW AND P38 INITIAL CONSULTATION

3.1 Introduction

The initial consultation took place between 12 November 2001 and 19 November 2001. It questioned what value prompt price reporting was to each of the Parties, and outlined seven potential alternatives to be considered in relation to the P18A Review and P38.

3.2 Consultation Responses

The consultation responses represented a wide range of views and it was not possible for ELEXON to summarise the responses in any great detail prior to the meeting. Some of the general views that were expressed by the respondents include:

- concern that it was too early to change CAD definition;
- polarised views on promptness of price reporting;
- concern over current 7-day delay within the Interim Solution;
- one respondent believed that it was appropriate to revisit the value of CADL and that this may provide a better separation of "system" vs "energy" balancing;
- materiality of the difference between 15 and 45 minutes in relation to 3½ hour Gate Closure; and
- the ability to correctly separate "energy" from "system" balancing is still the expected criteria to measure whether P38 better achieves the Applicable BSC Objectives.

In addition to the descriptive comments, the first consultation on P38 [RD/1] introduced table 3.1 to represent the different approaches being considered by the Modification Group, and requested Parties to indicate their initial preferences for each of these options (Question 7).

Table 3.1 – Consultation Options

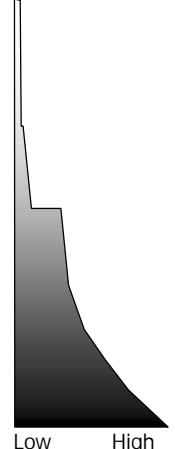
CAD	Consultation Option	Price Reporting				Complexity
		5/15 Mins P18A Correct	5 / 15 Mins P18A Indicative	x / y Mins P18A Correct	35 / 45 Mins P18A Correct	
Baseline P18A Definition	(i) continue with current baseline solution	-	-	-	Y	None – No change
	(ii) set an explicit CADL _{max} to a value less than 30 minutes	-	-	Y	-	
	(iii) calculate "P18A Indicative" prices soon after the period end	-	Y	-	-	
	(iv) calculate prices twice to produce "P18A Indicative" and corrected	-	Y	-	Y	
New Definition of CAD	(v) redefined the baselined P18A definition to create a CAD0 alternative definition	Y	-	-	-	
	(vi) propose a new CAD definition capable of prompt price reporting	Y	-	-	-	
	(vii) propose CAD definition P38 – a period based CAD definition	Y	-	-	-	

Table 3.2 represents the consolidated preferences for each option, as expressed by the respondents. The original responses (Low – High) have been numerically rated and an average response computed:

Table 3.2 – Consultation Response to Question 7

Party	(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)
NGC	5	3	1	3	1	1	1
Entergy-Koch	1	1	5	1	1	5	1
Edison Mission	2	3	1	2	5	1	0
TXU					3		5
SEEBOARD	5	3	1	3	3	3	3
London Electricity							
Slough	0	0	0	1	3	4	5
Dynegy	1	3	1	1	5	5	5
BGT	1	1	3	3	5	5	5
Innogy	3	1	3	3	3	5	1
Enron	5	3	5	5	1	1	1
Powergen	5	3	3	3	1	1	1
ScottishPower	1	1	3	3	5	5	1
Average	2.6	2.0	2.4	2.5	3.0	3.3	2.4

(Very Low - 0) (Low - 1) (Low/Med - 2) (Med - 3) (Med/High - 4) (High - 5)

The average response for each option can best be represented as Medium, although as the table shows, the responses themselves are polarised to the extremes. Furthermore, some of the views expressed in the rationale provided by each respondent, sometimes contradicted the view expressed in the table above. The responses could be effectively grouped into two camps:

- those that believed that the purity ("system" versus "energy") of P18A was very important, and that although prompt price reporting was important, it was not proven that it would deliver more benefit than giving time for the market to adapt to the inclusion of P18A within the BSC;
- those that believed that prompt price reporting was key to the development of a liquid forward market and that this would only be achieved by altering the CAD definition to ensure prices could be calculated immediately the period ended.

It was also clear from the consultation responses that a lot depended on the respondent's view of what was considered to be "prompt", which varied considerably, with one Party providing an argument that would support 18 hours.

4**MODIFICATION GROUP CONSIDERATION**

As stated in the previous section the consultation responses were varied and it was not going to be possible for the Modification Group to propose a number of preferred approaches simply based on ratings provided within the consultation responses.

The group recognised that:

- prices had been calculated under the current baseline, which includes P18A, for only two months and that any views on promptness could only be subjective whilst the Interim Solution was in place;
- with the exception of prompt price reporting, the consultations did not express any dissatisfaction with P18A.

The group was mindful that it was important to ensure that any recommendations for change must clearly deliver benefit and for there to be a strong argument that any change would better achieve the Applicable BSC Objectives.

As a result of the varied views it was necessary for the Modification Group to examine a number of different issues and establish *how* each proposal could be considered to better achieve the Applicable BSC Objectives.

This section of the report documents those discussions, the key areas were:

- **Price reporting on BMRS** – a discussion of some recent clarifications on the design of the BMRS solution to P18A and the resulting impact on Modification Proposal P38;
- **Consideration of Modification Proposal P12** – recognition of the future impact of a shorter Gate Closure period;
- **Promptness of reporting with a 3½ hour Gate Closure** – the issues affecting the promptness of price reporting within the existing BSC baseline and whether the inherent delay in the CAD definition for P18A is material;
- **Introduction of a new CAD definition** – the potential issues associated with the introduction of a new CAD definition, for either P38 (option vii) or an alternative (options (v) and (vi));
- **Prompt reporting within the current CAD definition** – a discussion of whether changes which keep the existing CAD definition and intellectual purity, but improve prompt reporting are justified (options ((i) to (iv)); and
- **Impact of shorter Gate Closure** – a brief discussion on the potential impact of a future reduction of Gate Closure.

Each of these areas is discussed in the next sections and then summarised in the conclusions section.

4.1**Price Reporting on BMRS**

In Section 5 of the original consultation [RD/1] one of the potential approaches (consultation option (ii)) was to reduce the value of CADL_{max}, or investigate the implications of starting the imbalance price calculation after CADL minutes.

The Central Service Provider representative at the Modification Group meeting (21 November 2001) informed the Group that recent design work on the Enduring P18A solution had identified that it would be possible to extend the delay before starting the BMRS imbalance price calculation by only CADL minutes, rather than the full CADL_{max} minutes, as originally expected. This approach would mean that with a value of CADL of 15, and a "end of period" delay of 5 minutes⁴, that the calculation could commence 20 minutes after the period end and typically complete a couple of minutes later (See Annex A for further details).

As a result of this improvement in reporting timescales the Modification Group agreed that that the initial consultation option (ii) was no longer relevant, as the current baseline (i.e. consultation option (i)) would itself report in a similar timescale. As a result ELEXON believe this would result in the following changes to the table discussed in the initial consultation:

- Consultation Option (ii) should be disregarded
- The title of the "Price Reporting" column "35 / 45 Mins P18A Correct" should be changed to "20 / 45 Mins P18A Correct"
- The "Price Reporting" column "x / y Mins P18A Correct" should be removed.

The Modification Group unanimously agreed that Consultation Option (ii) should not be considered further.

It should be noted that although P49 was not in the scope of this review, some of the Modification Group felt the new 45-minute limit in section V of the BSC (proposed in Modification P49) may better be expressed as 15 + <CADL> minutes. However it was noted that any limit would also need to consider the 45 minute limit already contained within the BSC Service Descriptions. In light of this it was suggested that Modification Proposal P49, that addresses the original omission, should continue to reflect the maximum delay that could occur when CADL is set to a maximum of 30 minutes.

4.2 Consideration of Modification Proposal P12

Following clarification from the Authority's representative, the Modification Group recognised that any assumptions about the progress of Modification Proposal P12 were outside the scope of this modification. They also recognised that the value placed on promptness of price reporting by the respondents had some relation to the Gate Closure period.

The group felt it was important to discuss both aspects, however it was also important to ensure any discussion of a reduced Gate Closure was kept separate and not confused with the primary discussion based on the existing 3½ Gate Closure.

4.3 Promptness Of Reporting with a 3½ Hour Gate Closure

In accordance with the views on Gate Closure the following section is restricted to consideration of the existing 3½ hour Gate Closure.

⁴ This is not new and is required by the BMRS to allow time for any outstanding BOA data to be received from NGC. The value of this delay is currently being investigated by the Central Systems Provider to determine whether it needs to be extended by a couple of minutes, see Annex A for further details.

The Modification Group initially discussed the question as to whether both 5/15 minutes⁵ and 35/45 minutes (or 20/45 as a result of the Central Service Provider's new information) could be considered to be "prompt". The Modification Group noted a number of factors:

- a number of the consultation responses reflected the view that the current 7-day delay in the Interim Solution was unacceptable;
- that the clarification on the design meant that the imbalance prices would typically only be delayed by 15-minutes more than the pre-P18A solution (i.e. after approximately 20 minutes) and that within a 3½ hour Gate Closure this would have little impact;
- that for Parties wishing to optimise factors like their BMU pricing strategies, rapid reaction to market conditions was less dependent on the calculated imbalance prices, than the nature of the Bids and Offers being accepted⁶;
- statistically it is expected that price changes would occur for a small number of Settlement Periods, as a result of BOA being taken late in the period (See Annex B for further details). Even though the average price change would be small, it was theoretically possible for a large price change to occur under certain circumstances.

The majority of the Modification group did not believe³ it was proven that with a 3½ Gate Closure, a 15 minutes delay in reporting imbalance prices on the BMRS would represent a material issue to parties.

4.4 Introduction of a new CAD Definition

As previously stated there were strong reservations within the Modification Group about attempting to alter the CAD Definition so early in the life of P18A, before it had been established how well it was actually working.

After the initial Modification Group meeting there was a concern that the full operation of P38 was not fully understood and ELEXON highlighted that:

- all three consultation options (v) to (vii) would equally meet the requirement for prompt price reporting;
- the P38 CAD definition was fundamentally different from the other options, in that it was based on the acceptance duration contained solely within a Settlement Period, rather than the original concept of the complete acceptance duration; and
- statistically P38 would strip the volume associated with a BMU from 50% of the first and last periods of any group of acceptances⁷ (See Annex C for further details) irrespective of the Bid Offer prices in those periods. This should not be confused with the discussion in Annex B of [RD/1] which considered the incidence of BOA crossing the same period boundaries where significant Bid Offer Price changes did occur. This analysis showed that the materiality of both events occurring concurrently was low,

⁵ Starting the calculation at 5 minutes and finishing by 15 minutes.

⁶ The proposer's representative dissented from this view, pointing out that demand side responses, such as from embedded generation, would want to be able to calculate prices as acceptances emerged, rather than having to wait until price publication.

⁷ For any group of continuous BOA which impact multiple Settlement Periods then the volume within each period will be considered separately. This means that if the first BOA starts after 15 minutes into the period, or the last BOA ends before 15 minutes into the last period, they will be removed from the Imbalance calculations during those Settlement Periods. This is based on the assumption that CADL would remain at 15 to ensure it treats any BOA contained entirely within the bounds of a Settlement Period in the same way as the existing P18A definition.

although P38 would ignore significant volume in order not to be impacted by this set of conditions.

In addition the Modification Group noted that:

- there had been no concern expressed within the consultation responses about P18A's ability to distinguish between "system" and "energy" balancing, or its impact on pricing;
- there would be a step change in complexity as soon as the CAD definition was changed and the Central Systems had to be able to perform settlement runs on both the CAD definitions – i.e. the one appropriate for the Settlement Day in question;
- the more extensive the change, the more difficult it would be to determine whether it could better distinguish between "system" and "energy" balancing than P18A⁸ and whether it better achieved the Applicable BSC Objectives; and
- for this modification a software change in the BMRS would best be implemented without the additional complexity of an Interim Solution. Although an Interim Solution may allow the modification to be implemented in the BSC earlier, it would also require the 7-day delay in price reporting, associated with the Interim Solution, to be continued. It was considered this would be an unacceptable side-effect for a Modification aimed at delivering prompt price reporting.

In relation to the P38 CAD Definition there was a concern that as P38 would remove volumes from an acceptance based purely on where they occurred within a Settlement Period. It was suggested that this could not be described as better differentiating between "energy" and "system" balancing. The proposer's representative stated that it should be remembered that this was an artificial measure and that any solution was better considered in terms of the materiality.

It was felt that any of these options (v to vii) represented a significant level of change for what was an unproven business benefit. The group recognised that option (v) represented the least level of change, and in terms of differentiating between "system" and "energy" could be considered to be the same as the original P18A definition. However, even for the comparatively small level of change required to create a CAD0 equivalent of the existing P18A solution, the majority felt the case for a change was not sufficiently strong.

The majority of the Modification Group agreed³ that under the current baseline of the BSC, with Gate Closure occurring at 3½ hours, there was not a proven business case / cost benefit for reporting prices any earlier. As a result, the cost and complexity of changing the CAD Definition for options (v), (vi) or (vii) could not be justified in terms of better achieving the Applicable BSC Objectives.

4.5 Prompt Reporting With Current CAD Definition

The Modification group had already recognised the scale of the problems associated with changing the CAD Definition. Consultation Option (iii) and (iv) are simpler in that they

⁸ Modification Proposal P18A was originally justified on the basis that it could refine the definition of system and energy balancing and this measure was used throughout the consideration of P18A. A number of the Modification Group would be reluctant to change the criteria by which the effectiveness of P18A, or any replacement, is measured.

attempt to improve the promptness of reporting within the constraints of the existing CAD definition.

Although these would still result in minor BSC and software modifications, they are best considered as implementation options and would not affect the financial calculations within the BSC.

The Modification Group recognised the low probability of prices changing between performing the calculation after 5 minutes and after 20 minutes (See Annex B).

They also recognised the problem of quantifying those changes and the chance that a large price change could occur under some circumstances. It was considered that this represented a material issue as the change could not be reliably quantified, and the majority of consultation responses expressed nervousness about a reduction in accuracy.

The Modification Group unanimously agreed that as Consultation Option (iii) made no attempt to correct a price once incorrectly calculated and reported, they should not recommend the option for further consideration.

Initial consultation option (iv) addressed the concern expressed against option (iii) as it would correct any errors in the initial calculation. It was felt that some of the implications underlying such an option would need to be examined. In particular whether the solution could simply use the existing interfaces to republish the data a second time (i.e. transparently to the listening parties), or whether something more sophisticated would be required. The Central Service Provider representative, who believed that reporting prices twice would indeed be more a complex change to BMRA software than altering when prices were reported, supported this concern.

Given the fact that the BMRS would only be re-publishing 15 minutes later, the decisions on the materiality of 15 minutes within a 3½ hour Gate Closure, the lack of intellectual purity and the outstanding questions on how to implement such a solution. The Modification Group did not feel this was an appropriate solution whilst Gate Closure remained at its present value.

The Modification Group felt that it could not be proven that there was sufficient business benefit to warrant the additional level of complexity. The Modification Group unanimously agreed not to further consider Option (iv) within the context of a 3½ Gate Closure.

4.6 Impact Of Shorter Gate Closure

As stated earlier, the Modification Group recognised the issue of prompt price reporting may become more important if Gate Closure were to be reduced.

It was agreed that if Gate Closure were reduced, prompt price reporting would naturally be more important. It was not so easy however, to quantify how much more important. A number of additional factors were considered. The fact that:

- a Party could respond quicker to events in the Balancing Mechanism had to be balanced against the fact that the time to the Wall was less and hence BOA would generally be of shorter visible duration; and

- imbalance prices can vary significantly between periods. The operation of mechanisms such as P18A / ATT, as well as the precise mix of Bids and Offers, can mean even small changes between periods can cause a volatile movement of the imbalance prices.

The Modification Group recognised that the dynamics of the market would change, however, it was not possible to be confident that:

- prompt price reporting would become sufficiently important to justify an extensive change;
- whether any of the proposed solutions would be the correct solution within the context of a reduced Gate Closure; and
- with a 1 hour Gate Closure whether there would be sufficient time for a Party to be able to make use of short-term imbalance pricing information, before the market changed sufficiently to reduce the relevance of those prices⁹.

In such circumstances a number of the Modification Group felt that in addition to considering the P38 CAD Definition (option (vii)), that options (iv) and (v) would need to be further considered within a shorter Gate Closure. Even though option (v) changes the CAD definition, initial analysis suggests it has little material impact on prices and volumes, sufficient to argue that it is equally good at distinguishing "system" and "energy" balancing and that it better achieves the Applicable BSC Objectives than pure P18A because it can report prices more promptly. P38 is sufficiently different that this argument would not hold.

Should Gate Closure be reduced in the future, then the Modification Group agreed that it may be advisable to reconsider the issue of prompt price reporting and whether under the new market dynamics any of the proposed options would address this.

It was agreed that in such circumstances that the P38 CAD definition, option (vii), could still be a material change and that options (iv) or (v) may better achieve the Applicable BSC Objectives than option (vii), and may be appropriate Alternative Modifications to P38.

⁹ The prices for Period 1 are reported sometime during Period 2. At this time the gate has already closed on Periods 3 and 4. It could be assumed that no matter what time the prices are published within a period, there would not be sufficient time to react prior to the next Gate Closure (i.e. 5). This means the next Period that could realistically be influenced is Period 6, which is 2½ hours after the original period.

4.7 Conclusion

Table 4.1 provides a summary of the above discussions and the majority recommendation³ of the Modification Group.

Table 4.1 – Consultation Options

Consultation Option					Modification Group Recommendations ³	
CAD Type	Description	Price Reporting		Complexity	BSC Baseline	Shorter Gate Closure Period
		5 to 15 Mins	20 to 45 Mins			
Baseline P18A Definition	(i) continue with current baseline solution	-	Y	None – No change	Reject Modification	Reject Modification
	(iv) calculate prices twice to produce "P18A Indicative" and corrected	Y	Y	Low	N/a	Alternative Modification
New Definition of CAD	(v) redefined the baselined P18A definition to create a CAD0 alternative definition	Y	-	Med	N/a	Alternative Modification
	(vii) propose CAD definition P38 – a period based CAD definition	Y	-	High	N/a	Proposed Modification

The majority of the Modification Group agreed³ that, within the current BSC baseline, they did not consider that any of the options would better achieve the Applicable BSC Objectives and that a change would be premature prior to any decision on P12.

The Modification Group recognised that assessment of a Modification can only note the existence of another Modification, and not make its recommendation conditional on the outcome of another Modification. The majority of the Modification Group agreed³ that the most appropriate action was to propose that the Modification P38 be sent to the Report Phase with a recommendation to Reject.

The Modification Group believed that should Modification P12 be approved at some stage in the future, that the issue of prompt price reporting might become an issue. In such circumstances they recommended that the options considered within this document should be re-considered, without prejudice, alongside any new alternative that may result from consideration of P12.

5 P18A REVIEW

The plan for the combined P18A review and P38 modification expects both to be reported within the same interim report to the Panel in December. The implications on the P18A Review need to be considered in light of the recommendation to reject Modification Proposal P38.

During the initial consideration of Modification Proposal P38 and the P18A Review, it was recognised that it would be inappropriate to recommend that P38 be implemented whilst the P18A Review was ongoing and could potentially present an alternative recommendation.

The converse does not hold and it is feasible that the P18A Review could continue once a decision has been taken to reject Modification P38.

In the process of considering Modification P38, a number of the issues related to the rapid progression of P18A through the Urgent Modification process had been identified:

- any BOA that starts or ends on the period boundary, i.e. minute 0 or 30, will be considered part of *both* Settlement Periods;
- the need for the Interim Solution had precluded the use of the more pure CAD definition 1B, which would have removed individual acceptance volumes, and not the total period volume for the BMU;
- the inability for CAD definition 1A to identify and remove the effect of enter/exit spin mode instructions, i.e. CAD definition 1C; and
- the legal drafting was generic for all the CAD definitions studied during the P18A assessment. With the adoption of one of the simpler definitions the legal drafting could have been implemented in a simpler manner, whilst achieving the same ends.

In contrast to these minor issues, the analysis presented as part of the first consultation showed that P18A was:

- working in line with NGC's original intent, and predictions;
- was not removing an excessive amount of energy attributed to the "normal" plant; and
- was not excessively dampening prices or the signals they provide.

Based on this it was considered that there were no major problems with P18A and that it was too early to consider questioning whether a better approach to separating "system" from "energy" balancing actions may exist, and whether the value of CADL should be changed.

The one aspect of differentiating between "system" and "energy" balancing that could be considered outstanding, relates to the consideration of other factors, such as Automatic Trade Tagging (ATT), identified during consideration of P18B [RD/2]. These were passed into the P18A Review, however, as they are not directly related to short-term BOA, they should not be allowed to stop the P18A Review from completing.

The Modification Group felt that there were no major issues with the implementation of P18A and that there was little to be gained from further consideration of P18A so early in the implementation of P18A within the BSC.

ANNEX A – SUPPORTING INFORMATION - DESCRIPTION OF BMRS REPORTING TIMESCALES

The nature of the Interim Solution means that it is not possible to correctly calculate imbalance prices, which contain the effect of P18A, until up to 7 working days after the Settlement Day. This will continue until the Enduring Solution is implemented in the Central Systems as part of BSC Systems Release 2 (Phase B). At that point (March 2002) the Central Systems will correctly calculate imbalance prices on both BMRA and SAA systems for all Settlement Runs. In addition any subsequent reconciliation runs, for Settlement Days originally processed using the Interim Solution, will have their imbalance prices correctly calculated by the SAA.

The 7-day delay is temporary and any consideration of it is outside the scope of this Modification Proposal or the P18A Review.

In addition, at the extreme, it is not possible to calculate the CAD for a BOA that starts in the last minute of the Settlement Period, and lasts for one minute less than CADL, until CADL minutes into the next period. The associated delay in the calculating and reporting of imbalance prices is a fundamental part of P18A. It was always recognised that the Central Systems may need to wait a maximum of CADL_{max} minutes, in addition to any time required for data to be received, before being able to start the calculations.

The BSC Service Descriptions also needed to recognise that any requirement on performance would also need to allow time to perform the calculations. Prior to P18A the SLA was drafted for the indicative prices to be reported within 15 minutes. However with a maximum value of CADL equal to 30 minutes this SLA limit was extended to be within 45 minutes.

Early in the specification of the Systems Release 2 Project it was recognised that the core P18A functionality could be implemented within the software earlier, if the new reporting requirements were delayed to a second phase. Originally this included the BMRS changes required to delay calculating the prices, and hence being able to include P18A in the calculation of the indicative imbalance prices.

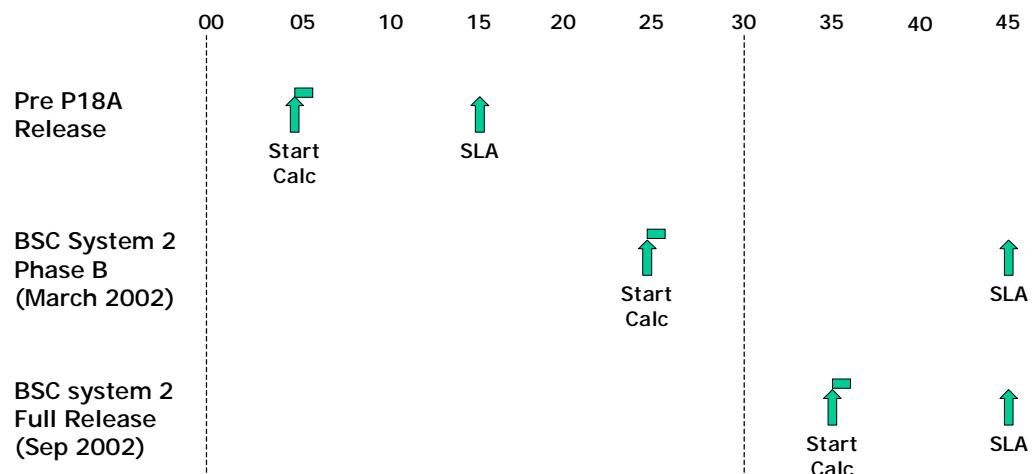
A consultation was performed within the BSC Systems Release 2 project [RD/6] to consider the most appropriate way forward in addressing this issue and making price reporting more prompt.

The results of the consultation were that in:

- Phase B of System Release 2 the calculation should start 25 minutes¹⁰ after the period end; and
- the final release this should increase to 35 minutes (i.e. CADL_{max} + 5 minutes)

This can be represented in the figure A.1, which was included in the first consultation. The rectangular box indicates typically the prices calculations will complete within a minute, even with this start time they would be allowed 10 minutes to complete.

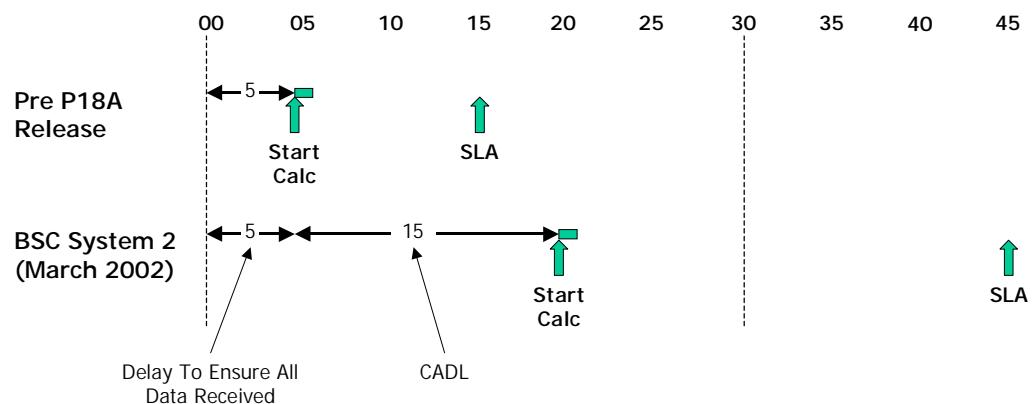
¹⁰ This avoided a potential issue about delaying the calculation into the next period.

Figure A.1 – Initial Price Reporting Timetable

Recent information from the Central Service Provider has clarified the design of the P18A changes and some additional flexibility they have been able to incorporate. The system will automatically initiate the calculation process after <CalculationDelay> + <CADL> minutes, and their procedures will ensure that this configuration parameter will reflect the underlying value of CADL. The current value of <CalculationDelay> is 5 minutes¹¹ and this is the time required to allow any BOA issued close to the period end to be received by BMRS.

This means that with the current volumes of BOA the imbalance prices should typically be reported 20-22 minutes¹² after the Settlement Period end.

This can be represented in the figure A.2:

Figure A.2 – Revised Price Reporting Timetable

As can be seen the SLA remains at 45 minutes, which is the contracted value in the Service Description.

¹¹ The Central Service Provider is performing an independent analysis of this value to see whether it should be increased by a minute or two, as there is a concern that some BOA may be arriving too late to be included in the imbalance calculations.

¹² Care should be taken when using this number as other changes in the system, such as an increase in the number of BOA, may delay reporting.

ANNEX B – SUPPORTING INFORMATION – MATERIALITY OF BOA CROSSING PERIOD BOUNDARIES

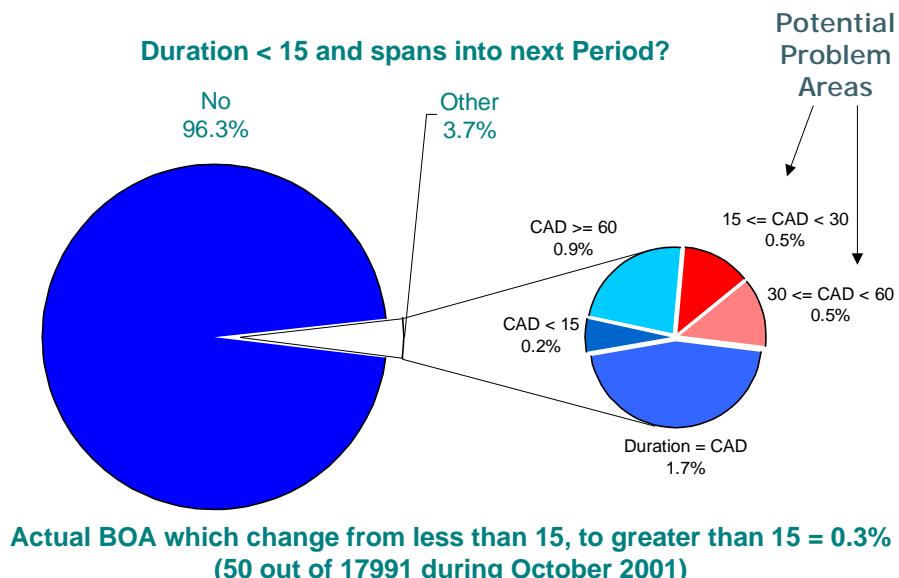
The first consultation [RD/1] provided a view of the number of BOA which crossed period boundaries and hence could potentially cause a problem with the calculation of CAD should a CAD0 equivalent of P18A be proposed, or indicative P18A imbalance prices were calculated at the end of the period.

It was described how only a BOA that:

- had an original duration of less than 15 minutes;
- crossed into the next period; and
- did not eventually become part of a group of acceptances with an overall CAD of greater than 15;

could cause a potential problem. As part of that annex a pie-chart was provided which categorised 6844 BOA taken during the original P15/P18B study. Figure B.1 is an update of that pie-chart but using 17991 BOA taken during October 2001.

Figure B.1 – Materiality of Short Duration BOA Crossing Period Boundary



In addition to the basic analysis, performed entirely on the initial duration and start time, this was analysed by the ELEXON using a modified version of the P18A algorithm. This showed that only:

- 50 of the original 17991 BOA (0.3%) changed their CAD value from less than 15 (CAD0 equivalent of P18A), to 15 or more (baseline P18A algorithm);
- 13 of the original 1490 periods (0.9%) changed the SBP prices by more than £1/MWh with the same change.

ANNEX C – SUPPORTING INFORMATION - P18A (CAD 0) AND P38 DATA ANALYSIS

In addition to the CAD0 equivalent of the P18A algorithm, a modified version was created for P38. This was used to obtain a high level view of the impact of P38 in relation to the other P18A models¹³.

Tables C.1 shows the impact on the SBP and Offer stack for these two new scenarios, as well as the baseline P18A algorithm and pre-P18A system.

The table provides three basic columns, along with columns to give the percentage change against the pre-P18A system:

- **SBP** – the average SBP for the month of October 2001;
- **TQPAO** - the average “Total Priced Accepted Offer Volume” (See T4.4.7) for the month of October; and
- **Count** – the average number of BMUs which provide volume into the TQPAO figure.

Figure C.1 – SBP modelled with P18A (CAD0 Equivalent) and P38

	SBP	TQPAO	BMUs	SBP	TQPAO	Count
Pre P18A	29.41	96.31	4.09	100.0%	100.0%	100.0%
P18A	24.48	93.78	3.80	83.2%	97.4%	92.9%
P18A (CAD0)	24.24	93.65	3.78	82.4%	97.2%	92.5%
P38	23.38	88.89	3.06	79.5%	92.3%	74.8%

It can be seen that the P18A (CAD0 equivalent) is very similar to the baseline P18A solution removing very little additional volume and having a minor impact on the overall SBP. The impact of P38 is more extensive, removing twice a much volume as the original P18A solution, even though the impact on the SBP itself is less.

Table C.2 provides the same information for the SSP. In this case it can be seen that both forms of P18A make very little difference compared to the pre-P18A baseline. However the effect of P38 stripping the leading and trail parts of a large number of the BOA can be clearly seen.

Figure C.2 – SSP modelled with P18A (CAD0 Equivalent) and P38

	SSP	TQPAB	BMUs	SSP	TQPAB	BMUs
Pre P18A	8.16	-761.11	14.23	100.0%	100.0%	100.0%
P18A	8.24	-760.64	14.02	101.0%	99.9%	98.5%
P18A (CAD0)	8.24	-760.59	14.01	101.0%	99.9%	98.4%
P38	8.22	-739.84	11.83	100.7%	97.2%	83.1%

¹³ The modified pricing algorithms were produced to aid the assessment of P38. They are both prototypes and have had limited testing. It had been the intention to refine these models and complete testing in the next phase of the assessment. Given the Modification Groups recommendation to reject P38 this will not be done. As such these should be treated as indicative figures and only used to give an impression of how the different algorithms would perform.

ANNEX D – CONSULTATION RESPONSES

This information is provided as a separate document.

ANNEX E – PRESENTATION SLIDES FROM SECOND MODIFICATION GROUP

This information is provided as a separate document.