

<p align="center">Change Proposal – F40/02 (Page 1 of 2)</p>	<p>CP No: R647 <i>(mandatory by BSCCo)</i></p>
<p>Title <i>(mandatory by originator)</i></p> <p>Removing / Mitigating The Effect Of System Balancing Actions In The Imbalance Price Calculations (MP18)</p>	
<p>Description of Change <i>(mandatory by originator)</i></p> <p>As part of the assessment of Urgent Modification MP18 it is necessary to obtain an assessment for implementing a number of the possible enduring solutions, and also associated interim solutions, for MP18 which would be needed during the interim period.</p> <p>This CP contains a number of independent, but related changes. Initially there are two possible interim system architectures, that have been included as the anticipated timescales of an enduring solution are expected to be significant:</p> <ul style="list-style-type: none"> • Interim System Architecture 2 • Interim System Architecture 1a <p>Next there are the two potential architectures for the enduring solution:</p> <ul style="list-style-type: none"> • Enduring System Architecture 2 • Enduring System Architecture 3 <p>Lastly there are two options which are to be considered in association with the enduring solutions:</p> <ul style="list-style-type: none"> • BMRA Changes • Enduring System Architecture 2 (Alternative CID Options) 	
<p>Proposed Solution(s) <i>(mandatory by originator)</i></p> <p>1. Interim System Architecture 2</p> <p>If MP18 is approved then the content of CP644 could be re-submitted, along with the other necessary changes to make a feasible workaround:</p> <p>Software Changes</p> <ul style="list-style-type: none"> • Technical content of CP644 <p>Interim Solution</p> <ul style="list-style-type: none"> • Manual ad-hoc query to obtain acceptances and their volumes for each period • New query/spreadsheet to identify those acceptances which must be tagged using CID Option 1a¹. • Simple process to issue query, analyse acceptances, manually set deemed flag using existing GUI, re-query and analyse to check results <p>The IA will need to identify the implementation timescales and associated costs to produce the interim solution (not constrained by the 1st September). A second IA should be given to assess the costs and risks associated with an implementation of 1st September 2001.</p>	

¹ The definition of CID Options can be found in the slides from the MP18 Modification Group 28th June.

2. Interim System Architecture 1a

Should Interim System Architecture 2 not be possible in a suitable timeframe, then the alternative is to use the Elexon TOMAS Monitoring system to calculate the prices. This process would be performed on the standard SAA-I014 output produced after the II Settlement Run, and the recalculated prices re-submitted to the Central Service Provider for inclusion into the system as modified BSAD data.

The TOMAS system is already capable of calculating prices that include the effect of the BPA/SPA coefficients and hence this workaround would replace W024. It would not replace W018 and hence the effects of changes in acceptance data prior to the SF run must still be considered. In common with the current W024 process this would require a pre-SF run to obtain the new volumes and allow new modified BSAD data to be calculated to achieve the original Elexon calculated prices.

The effect of any *change* on prices as a result of W018 will not be felt until the subsequent R1 run and hence the Central Services Provider should further recalculated prices from Elexon after the data from the SF Settlement Run is processed.

The estimate for this part of the IA should indicate the cost of developing the described interim solution, plus the cost of running it on a monthly basis until further notice (6 to 12 months). It should also highlight any impact on the costs of running the current W018.

3. Enduring System Architecture 2

This enduring solution is an enhancement to the Interim System Architecture 2 in that it uses the same underlying technical solution. However, in this case, it is being developed as an enduring solution and will have no associated interim solution.

There are three components to be considered in this part of the IA:

- Inclusion of the CP644 functionality
- Incorporating the "Deemed Flag" in the SAA-I014 report. This is considered a minor change and should be incorporated with the changes to develop MP8.
- Automatically setting the "deemed flag" at the earliest point possible after receipt (allowing for the definition of CID Option 1a).

This IA should **not** include the costs and timescales associated with any enhancements to the BMRA system to correctly report the new values in real time.

MP18 is classed as Urgent and, therefore, this IA should make as much use of the work within BSC Systems Release 2 as possible, to share on testing time. If this should mean the CP644 component could be delivered in BSC Systems Release 2, and the code to automatically set the flag as part of its own release, this should be indicated. Specifically the Central Systems work in this area is to:

- Receive Prices before SF from ELEXON
- Calculate the appropriate BSAD values that will need to be entered into the system
- Incorporate WA018.

4. Enduring System Architecture 3

This architecture is potentially required to deliver CID Option 3, should costs and timescales be acceptable. In this option two sets of volumes are associated with each acceptance, the ones used to derive the cashout prices (no change) and those used to calculate the imbalance prices. Two sets are needed, as certain acceptance profiles will create two or more sections within a single acceptance; one that does affect the imbalance prices and one that does not. The potential work within this CP includes:

- Creating an overall acceptance profile (i.e. the effective sum of all acceptances from FPN)
- Creation of new acceptance volumes for each acceptance, to include the volumes where the new acceptance profile deviates from zero (i.e. from FPN).
- Changes to the internal databases to allow these new acceptance volumes to be stored
- Calculation of new imbalance prices based on these volumes
- Reporting of the new volumes

In common with the IA for Enduring Systems Architecture 2 this should **not** include those BMRA costs which are related to the delay in publishing information, i.e. those that are common to both solutions. What should be included are any additional BMRA costs associated with only this definition of CID.

It is accepted that this is too big a change for BSC Systems Release 2 and will need to be delivered subsequently. The IA should indicate the factors that would determine whether this could be handled as an interim release, or whether it would need to wait for the next major systems release.

5. BMRA Changes

The proposed definition of CID means that it is not possible to calculate the value of the "Deemed Flag" until a period equal to the maximum value of CID (30 minutes) has passed since the acceptance was issued. In addition it is not possible to calculate the imbalance prices for a period of 30 minutes after the end of the period. Assuming this definition of CID is adopted then two mechanisms have been identified to allow the BMRA to calculate prices correctly:

- Delay the publishing of the acceptances (on TIBCO), or the calculation of the imbalance prices, for 30 minutes.
- Initially publish the acceptances immediately and calculate the imbalance prices without MP18, and then re-publish any changes to the acceptance or published prices.

It is anticipated that this will be a complex change and will probably have to go out for industry consultation before a final solution is chosen.

It is important to know when a BMRA solution could be delivered and how much it would cost, in order to make decisions about the definition of CID, and the anticipated period of operation, where the BMRA report prices would be wrong.

6. System Architecture 2 (Alternative CID Option)

This section of the IA should indicate the costs of upgrading Enduring Systems Architecture 2 to implement one a more sophisticated definition of CID, which takes into account the acceptance profile and FPN. This would use the same mechanism used to determine the overall acceptance profile within Enduring Systems Architecture 3. The difference, however, is that the information should only be used to set the "Deemed Flag".

It is accepted that this is too big a change for BSC Systems Release 2 and will need to be delivered subsequently. The IA should indicate the factors that would determine whether this could be handled as an interim release, or whether it would need to wait for the next major systems release.

Justification for Change *(mandatory by originator)*

Urgent MP18

Other Configurable Items Potentially Affected by Proposed Solution(s) *(optional by BSCCo)*

None

Impact on Core Industry Documents *(optional by originator)*

None

Related Changes and/or Projects *(mandatory by BSCCo)*

MP18, CP644

Originator's Details:

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Organisation..... *Elexon*.....

Email Address.....

Date..... *4 July 2001*.....

[BSC Panel Representative].....

Organisation.....

Attachments: N* (If Yes, No. of Pages attached:.....)
(delete as appropriate)