

Annex 5 to Modification Consultation Document

Introduction

This Annex sets down a first draft of the BSC changes that would be required to support Modification Proposal 18A. Four variants of the changes are included as follows:

- i) **CID-definition 1a and 1b** – this definition reflects the rule changes that would need to be made if it were decided to implement CID-definition 1b or 1a in the BSC. This definition basically identifies whether or not acceptances have an overall duration of less than CID. If not, then they do not contribute to price setting. It does also identify acceptances that overlap in time, and allow those that have an overall duration of greater than CID to continue to contribute to price setting. This is seen as a relatively simple definition because it uses only information in acceptances themselves, and does not require reference to FPNs nor does it require duplication of the functionality that allocates acceptances to bids and offers.
- ii) **CID-definition 2d** – This solution is considered to be somewhat more intellectually pure than CID-definition 1b. A more sophisticated method for deciding whether or not to include an acceptance is used (compared to CID-definition 1). Once decided, entire acceptances (and not just bits of them) are still included or excluded from the price calculation process.
- iii) **CID-definition 3**– this is based upon an understanding of the most detailed implementation of 18A, based on processing acceptances before they have been allocated to Bid-Offer Pairs. This CID-definition uses the more sophisticated decision functionality in CID-definition 2, and goes on to recalculate the accepted Bids and Offers based on those parts of acceptances that are not tagged.
- iv) **CID-definition 0** - this is similar to definition 1, but the way in which it is decided to include or exclude acceptances is amended so that it would permit prices to be determined immediately following the Settlement Period, rather than having to wait CID minutes.

The BSC changes proposed in this paper have not as yet been the subject of a legal review.

It is also noted that additional definitions would need to be developed for the purposes of Section X, and that these have not yet been produced.

Explanatory Text

After most sections of the BSC that has been identified for change, additional notes and explanatory text have been added in italics in order to aid understanding of the proposed changes. Clearly this would not form part of the BSC drafting changes were the CID-definition selected for implementation in the BSC.

CID-definitions 1a and 1b

Changes to BSC Section T.

Insert a new section 3.4AA between Section 3.4 and Section 3.4A as follows:

3.4AA Establishment of Set of Related Acceptances

3.4AA.1 In relation to each Acceptance, k, for a particular BM Unit, the set of Acceptances “relating” to Acceptance k shall be selected. Acceptances relating to Acceptance k shall be those Acceptances for the same BM Unit that have a Bid-Offer Acceptance Time that falls within the period:

- (a) from and including the spot time at the start of the Settlement Period prior to Settlement Period in which the Bid-Offer Acceptance Time for Acceptance k falls, and
- (b) to and including the spot time at the end of the Settlement Period which falls eight Settlement Periods after the Settlement Period in which the Bid-Offer Acceptance Time for Acceptance k falls.

This CID-definition selects a group of acceptances which are then checked to determine whether they overlap. As this is the case, the group of potentially relevant overlapping acceptances for a particular acceptance can only have an acceptance time that falls within a certain period. This period is CID minutes before the Settlement Period in which the acceptance time falls, and CID minutes after the end of the seventh Settlement Period after the Settlement Period in which the acceptance time falls. Only acceptances made in this period can overlap within CID either side of the acceptance in question. If it overlaps for more than CID, then we don't care for the purposes of processing the acceptance (because it won't be tagged anyway – we only need to know that the overlapping duration is at least CID long and not that it is greater). For convenience, an entire Settlement Period is added, and not just CID, and so the acceptances selected as being related are those with acceptance times falling in the period the start of the SP prior to the one in which the acceptance falls (SP-1), to the end of the eighth Settlement Period after the time in which the acceptance time falls (SP+8).

Note that the use of 8 Settlement Periods does not mean that it is necessary to wait until 4 hours after the Settlement Period before the prices can be calculated (in fact it is necessary to wait 30 minutes).

3.4AB Establishment of Continuous Acceptances

3.4AB.1 In relation to each Acceptance k, the set of “continuous” Acceptances shall be selected from the set of Acceptances relating to Acceptance k. An Acceptance shall be continuous with Acceptance k, if it belongs to the set of Acceptances relating to Acceptance k, and if:

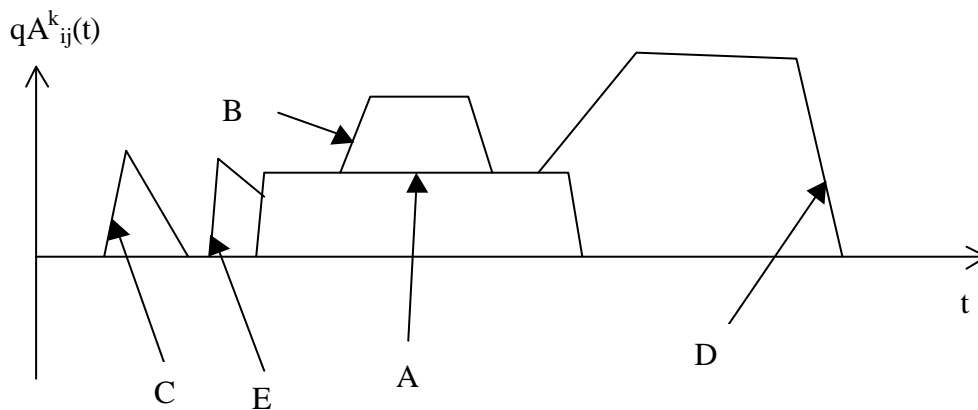
- (a) (i) the spot time associated with the last Point Acceptance Volume of the Acceptance is not earlier than the spot time associated with the first Point Acceptance Volume of Acceptance k; and
- (ii) the spot time associated with the first Point Acceptance Volume of the Acceptance is earlier than the spot time

associated with the first Point Acceptance Volume of Acceptance k; or

- (b) (i) the spot time associated with the first Point Acceptance Volume of the Acceptance is not later than the spot time associated with the last Point Acceptance Volume of Acceptance k; and
- (ii) the spot time associated with the last Point Acceptance Volume of the Acceptance is later than the spot time associated with the last Point Acceptance Volume of Acceptance k; or
- (c) it satisfies either of the criteria in sections (a) and (b) in relation to any other Acceptance that is determined (including, for the avoidance of doubt, by virtue of this paragraph (c)) to be a continuous Acceptance in relation to Acceptance k.

Continuous acceptances are selected from the set of relevant acceptances. It noted that this process is carried out for every acceptance. So acceptance A may be determined to be continuous with acceptance B when processing acceptance A, but B may not be continuous with A when processing B (see below). A set of continuous acceptances is shown in figure 7.

Figure 7 – Continuous Acceptances



In Figure 7, acceptances E and D only are determined to be continuous with acceptance A (note that when B is processed, A will be determined to be contiguous with it).

3.4AC Establishment of Continuous Acceptance Duration (CAD^{k_i})

3.4AC.1 In relation to each Acceptance k, for a particular BM Unit, the Continuous Acceptance Duration (CAD^{k_i}) shall be the duration of the period of time:

- (a) commencing from the earliest spot time associated with:
 - (i) any value of Point Acceptance Volume for Acceptance k; or
 - (ii) any Point Acceptance Volume for any Acceptance that is a continuous Acceptance in relation to Acceptance k, and
- (b) finishing at the latest spot time associated with:

- (i) any value of Point Acceptance Volume for Acceptance k; or
- (ii) any Point Acceptance Volume for any Acceptance that is a continuous Acceptance in relation to Acceptance k.

The Continuous Acceptance Duration is the time between the earliest spot time and the latest spot time in the set of continuous acceptances.

Insert new 3.8A as follows:

[If CID-definition 1a were chosen, then the following replacement 3.8A would be used:

3.8A Determination of Period Priced Accepted Offer Volume (QAPO^{kn_{ij}}) and Period Priced Accepted Bid Volume (QAPB^{kn_{ij}})

3.8A.1 In respect of each Acceptance k, for each BM Unit, the Period Priced Accepted Offer Volume and Period Priced Accepted Bid Volume shall be established as follows:

(a) If for BM Unit i, there exists an Acceptance k, such that $CAD^k_i < CID$ then¹ no values of the Period Priced Accepted Offer Volume and Period Priced Accepted Bid Volume for any Bid-Offer Pair will be established for that BM Unit i for any Settlement Period:

- (1) from and including the Settlement Period in which the first Point Acceptance Volume associated with Acceptance k falls, and
- (2) to and including the Settlement Period in which the last Point Acceptance Volume associated with Acceptance k falls.

(b) In any other case, the values of the Period Priced Accepted Offer Volume and Period Priced Accepted Bid Volume will be established for Acceptance k in relation to each Settlement Period as follows:

- (i) $QAPO^{kn_{ij}} = QAO^{kn_{ij}}$; and
- (ii) $QAPB^{kn_{ij}} = QAB^{kn_{ij}}$.

[If CID-definition 1b were chosen, then the following replacement 3.8A would be used:

3.8A Determination of Period Priced Accepted Offer Volume (QAPO^{kn_{ij}}) and Period Priced Accepted Bid Volume (QAPB^{kn_{ij}})

¹ Note that it would be possible to write this the other way round, i.e. if any acceptance has a $CAD > CID$, then all are kept, rather than as written where if any has a $CAD < CID$, then all are removed.

3.8A.1 In respect of each Settlement Period and Acceptance k, for each BM Unit, the Period Priced Accepted Offer Volume and Period Priced Accepted Bid Volume shall be established as follows:

(a) If, for Acceptance k, $CAD_i^k > CID$, then

(i) $QAPO_{ij}^{kn} = QAO_{ij}^{kn}$; and

(ii) $QAPB_{ij}^{kn} = QAB_{ij}^{kn}$,

(b) In any other case, no values of the Period Priced Accepted Offer Volume and Period Priced Accepted Bid Volume will be established for Acceptance k.]

If an acceptance has a CAD greater than CID, it is permitted to contribute to price setting, otherwise not.

Insert new 3.9A as follows

3.9A Determination of Period BM Unit Total Priced Accepted Offer Volume ($QAPO_{ij}^n$) and Period BM Unit Total Priced Accepted Bid Volume ($QAPB_{ij}^n$)

3.9A.1 In respect of each Settlement Period, for each BM Unit, the Period BM Unit Total Priced Accepted Offer Volume and shall be established as follows:

$$QAPO_{ij}^n = \sum^k QAPO_{ij}^{kn}$$

where \sum^k represents the sum over all Acceptances within the Settlement Period.

3.9A.2 In respect of each Settlement Period, for each BM Unit, the Period BM Unit Total Priced Accepted Bid Volume, and shall be established as follows:

$$QAPB_{ij}^n = \sum^k QAPB_{ij}^{kn}$$

where \sum^k represents the sum over all Acceptances within the Settlement Period.

Insert a new 4.4A.1 and 4.4A.2 to read as follows [changes based on Go-Live BSC, disregarding any other Modifications]

4.4A.1 In respect of each Settlement Period, the System Total Priced Accepted Offer Volume will be determined as follows:

$$TQAPO_j = \sum_i \sum^n QAPO_{ij}^n$$

where \sum_i represents the sum over all BM Units and \sum^n represents the sum over all Bid-Offer Pair Numbers for the BM Unit.

For reporting purposes only.

4.4A.2 In respect of each Settlement Period, the System Total Priced Accepted Bid Volume will be determined as follows:

$$TQPAB_j = \sum_i \sum^n QPAB^{n}_{ij}$$

where \sum_i represents the sum over all BM Units and \sum^n represents the sum over all Bid-Offer Pair Numbers for the BM Unit.

For reporting purposes only.

Change 4.4.5 to 4.4.8 to read as follows

4.4.5 In respect of each Settlement Period, if $\{\sum_i \sum^n \{QAPO^{n}_{ij} * TLM_{ij}\} + BVA_j\}$ is not equal to zero then the System Buy Price will be determined as follows:

$$SBP_j = \{\sum_i \sum^n \{QAPO^{n}_{ij} * PO^{n}_{ij} * TLM_{ij}\} + BCA_j\} / \{\sum_i \sum^n \{QAPO^{n}_{ij} * TLM_{ij}\} + BVA_j\}$$

where \sum_i represents the sum over all BM Units and \sum^n represents the sum over those accepted Offers that are not Arbitrage Accepted Offers and not Trade Tagged Offers.

If for any Settlement Period $\{\sum_i \sum^n \{QAPO^{n}_{ij} * TLM_{ij}\} + BVA_j\}$ is equal to zero, then:

- (a) if for that Settlement Period $\{\sum_i \sum^n \{QAPB^{n}_{ij} * TLM_{ij}\} + SVA_j\}$ is equal to zero, the System Buy Price for that Settlement Period will be equal to zero;
- (b) otherwise, the System Buy Price will be determined as the maximum of System Sell Price and:
 - (i) the Offer Price of the cheapest Offer available in that Settlement Period:
 - (1) which has a positive Bid-Offer Pair Number; and
 - (2) which has an Offer Price greater than the Offer Price of any Offer which is an Arbitrage Accepted Offer in respect of that Settlement Period; and
 - (3) for which the value of Bid-Offer Volume ($qBO^{n}_{ij}(t)$) is greater than zero for all spot times t in that Settlement Period;
 - (ii) or, if no such Offer exists, zero.

4.4.6 In respect of each Settlement Period, if $\{\sum_i \sum^n \{QAPB_{ij}^n * TLM_{ij}\} + SVA_j\}$ is not equal to zero then the System Sell Price will be determined as follows:

$$SSP_j = \{\sum_i \sum^n \{QAPB_{ij}^n * PB_{ij}^n * TLM_{ij}\} + SCA_j\} / \{\sum_i \sum^n \{QAPB_{ij}^n * TLM_{ij}\} + SVA_j\}$$

where \sum_i represents the sum over all BM Units and \sum^n represents the sum over those accepted Bids that are not Arbitrage Accepted Bids and not Trade Tagged Bids.

If for any Settlement Period $\{\sum_i \sum^n \{QAPB_{ij}^n * TLM_{ij}\} + SVA_j\}$ is equal to zero, then:

- (a) if for that Settlement Period $\{\sum_i \sum^n \{QAPO_{ij}^n * TLM_{ij}\} + BVA_j\}$ is equal to zero, the System Sell Price for that Settlement Period will be equal to zero;
- (b) otherwise, the System Sell Price will be determined as the minimum of System Buy Price and:
 - (i) the Bid Price of the most expensive Bid available in that Settlement Period:
 - (1) which has a negative Bid-Offer Pair Number; and
 - (2) which has a Bid Price less than the Bid Price of any Bid which is an Arbitrage Accepted Bid in respect of that Settlement Period; and
 - (3) for which the value of Bid-Offer Volume ($qBO_{ij}^n(t)$) is less than zero for all spot times t in that Settlement Period;
 - (ii) or, if no such Bid exists, zero.

4.4.7 In respect of each Settlement Period, the Total Accepted Priced Offer Volume will be determined as follows:

$$TQPAO_j = \sum_i \sum^n QAPO_{ij}^n$$

where \sum_i represents the sum over all BM Units and \sum^n represents the sum over those accepted Offers that are not Arbitrage Accepted Offers and not Trade Tagged Offers.

For reporting purposes only.

4.4.8 In respect of each Settlement Period, the Total Accepted Priced Bid Volume will be determined as follows:

$$TQPAB_j = \sum_i \sum^n QAPB_{ij}^n$$

where \sum_i represents the sum over all BM Units and \sum^n represents the sum over those accepted Bids that are not Arbitrage Accepted Bids and not Trade Tagged Bids.

For reporting purposes only.

Change Section 1.1 in Annex T-1 to read as follows:

- 1.1 For the purposes of the Code [*this Annex T-1?*], in relation to a BM Unit and Settlement Period, an "**accepted Offer**" means the Period BM Unit Priced Accepted Offer Volume ($QAPO_{ij}^n$), and an "**accepted Bid**" means the Period BM Unit Priced Accepted Bid Volume ($QAPB_{ij}^n$) but excluding Offers and Bids where the value of Period BM Unit Priced Accepted Offer Volume or Period BM Unit Priced Accepted Bid Volume (as the case may be) is zero.

Replace every occurrence of QAO and QAB in Annex T-1 with QAPO and QAPB respectively.

These changes are required only to recognise that it is the priced accepted offers and bids that will pass through the tagging process.

CID-definition 2

Changes to BSC Section T.

Insert a new Section 3.4AA between Section 3.4 and Section 3.4A, as follows:

3.4AA Reference to Settlement Periods and Spot Times

3.4AA.1 For the purposes of paragraphs 3.4AB to 3.4AD,

- (a) in relation to a particular Settlement Period j , references to Settlement Period “ $j-1$ ” shall be references to the Settlement Period immediately preceding that Settlement Period j , and references to Settlement Period “ $j+1$ ” shall be references to the Settlement Period immediately following that Settlement Period j ; and
- (b) in relation to a particular spot time t , references to spot time “ $t-1$ ” shall be references to the spot time immediately preceding that spot time t , and references to spot time “ $t+1$ ” shall be references to the spot time immediately following that spot time t .

[this may sit better in section X of the BSC]

3.4AB Establishment of Priced Acceptance Profile ($NA_{ij}(t)$)

3.4AB.1 In respect of each Settlement Period j , for each BM Unit, the Priced Acceptance Profile ($NA_{ij}(t)$) shall be established for each spot time commencing from first spot time at the start of Settlement Period $j-1$ to the last spot time at the end Settlement Period $j+1$ as follows:

- (a) for each spot time falling within Settlement Period $j-1$, other than for the last spot time in Settlement Period $j-1$,
 $NA_{ij}(t) = qA^{k'}_{ij-1}(t) - FPN_{ij-1}(t)$;
- (b) for each spot time falling within Settlement Period j , other than for the last spot time in Settlement Period j ,
 $NA_{ij}(t) = qA^{k'}_{ij}(t) - FPN_{ij}(t)$;
- (c) for each spot time falling within Settlement Period $j+1$,
 $NA_{ij}(t) = qA^{k'}_{ij+1}(t) - FPN_{ij+1}(t)$.

where:

$qA^{k'}_{ij-1}(t)$ represents the Acceptance Volume determined for Acceptance k' with the latest Bid-Offer Acceptance Time for which a value of Acceptance Volume has been determined in relation to Settlement Period $j-1$;

$qA^{k'}_{ij}(t)$ represents the Acceptance Volume determined for Acceptance k' with the latest Bid-Offer Acceptance Time for which a value of Acceptance Volume has been determined in relation to Settlement Period j ;

$qA^{k'}_{ij+1}(t)$ represents the Acceptance Volume determined for Acceptance k' with the latest Bid-Offer Acceptance Time for

which a value of Acceptance Volume has been determined in relation to Settlement Period $j+1$;

The Priced Acceptance Profile is defined for each Settlement Period, and is three Settlement Periods long for each, i.e. it is defined for the whole of periods $j-1$, j and $j+1$ in relation to Settlement Period j . The Priced Acceptance Profile shows the net change from FPN of the last acceptance (if any) for each of the Settlement Periods. This is equivalent to the cumulative change from FPN of all acceptances for the BM Unit in those Settlement Periods.

The reason that 3 Settlement Periods are sampled each time the calculation is undertaken is that in general terms, the modification tests for deviations from FPN of a duration of CID, which is anticipated to be set to some time less than or equal to 30 minutes (more periods would need to be sampled if CID were greater than 30 minutes). If an acceptance starts right at the end of Settlement Period j , it is necessary to examine what happens over Settlement Period $j+1$ to be able to determine whether the acceptance is of a 30 minute duration, hence data for Settlement Period $j+1$ is needed. Data after this time is not. Similarly, data for Settlement Period $j-1$ is needed to test those acceptances ending at the start of Settlement Period j .

3.4AC Establishment of End Times (te^n_{ij}) and associated Start Times (ts^m_{ij})

3.4AC.1 In relation to each Settlement Period j , for each BM Unit, the values of End Time (te^n_{ij}) shall be established where te^n_{ij} is the n^{th} earliest spot time t (if any), other than the spot time at the start of Settlement Period $j-1$ for which:

- (a) $NA_{ij}(t) = 0$; and
- (b) $NA_{ij}(t-1) \neq 0$.

[may need to clarify that $n=1$ for the first earliest, $n=2$ for the second earliest etc.]

[an alternative is to define NA as equal to the qA^k functions (i.e. not $qA^k - FPN$, and then to compare $NA(t)$ to $FPN(t)$. This doesn't matter although some may prefer this approach]

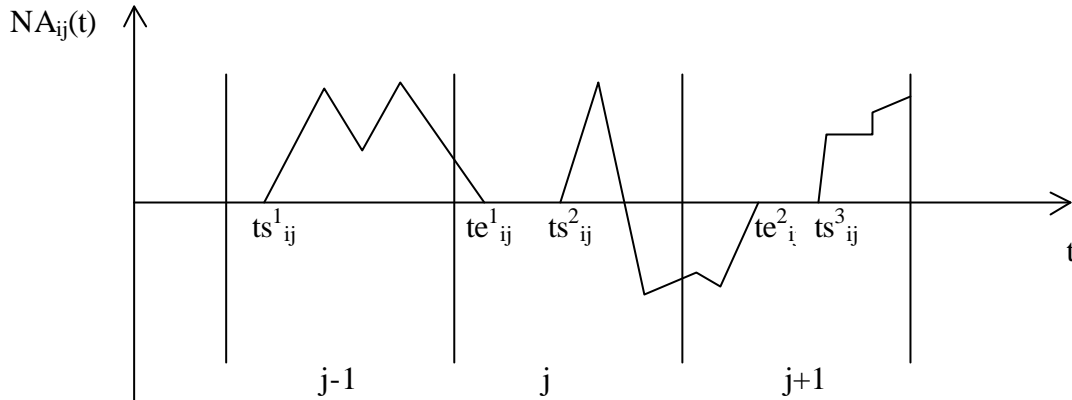
3.4AC.2 In relation to each Settlement Period j , for each BM Unit, the values of Start Time (ts^m_{ij}) shall be established where ts^m_{ij} is the m^{th} earliest spot time t (if any), other than the spot time at the end of Settlement Period $j+1$ for which:

- (a) $NA_{ij}(t) = 0$; and
- (b) $NA_{ij}(t-1) \neq 0$.

[there has been some discussion that this should be tested against a parameterised value, rather than zero, although it is believed that this would have more significant consequences for the drafting than simply a change here]

This functionality simply tests for starts and ends and numbers them sequentially. This is shown in figure 1 below.

Figure 1 – Start and End Times

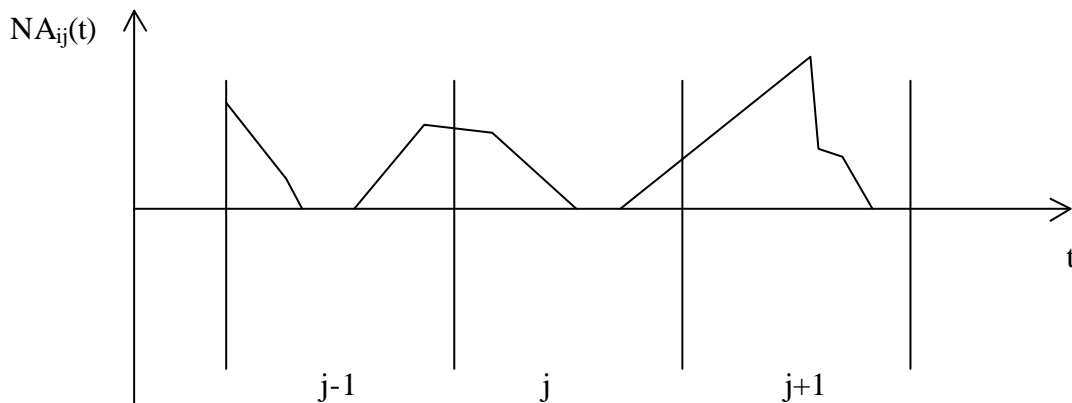


Note that no start or end time is generated as the $NA_{ij}(t)$ passes through zero.

3.4AC.3 In relation to each Settlement Period j , for each BM Unit, if the number of End Times (te^n_{ij}) exceeds the number of Start Times (ts^m_{ij}), then an additional Start Time ts^0_{ij} shall be created, where ts^0_{ij} is the time at the start of Settlement Period $j-1$.

This creates a Start Time at the start of Settlement Period $j-1$ if the number of End Times exceeds the number of Start Times. This is needed if $NA_{ij}(t)$ has the following form – see figure 2:

Figure 2 – Creation of Start Time



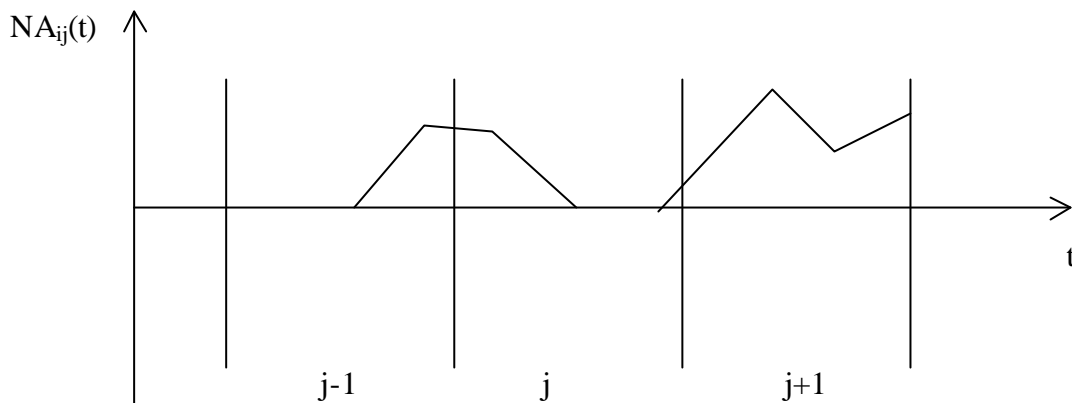
Given the above, a start time would be created at the start of SP $j-1$, this is because otherwise, the number of starts is less than the number of ends.

3.4AC.4 In relation to each Settlement Period j , for each BM Unit, if the number of Start Times exceeds the number of End Times, then an additional

End Time te^M_{ij} shall be created, where te^M_{ij} is the time at the end of Settlement Period $j+1$, and M is the total number of Start Times.

This creates an End Time at the start of Settlement Period $j-1$ if the number of Start Times exceeds the number of End Times. This is needed if $NA_{ij}(t)$ has the following form – see figure 3:

Figure 3 – Creation of End Time



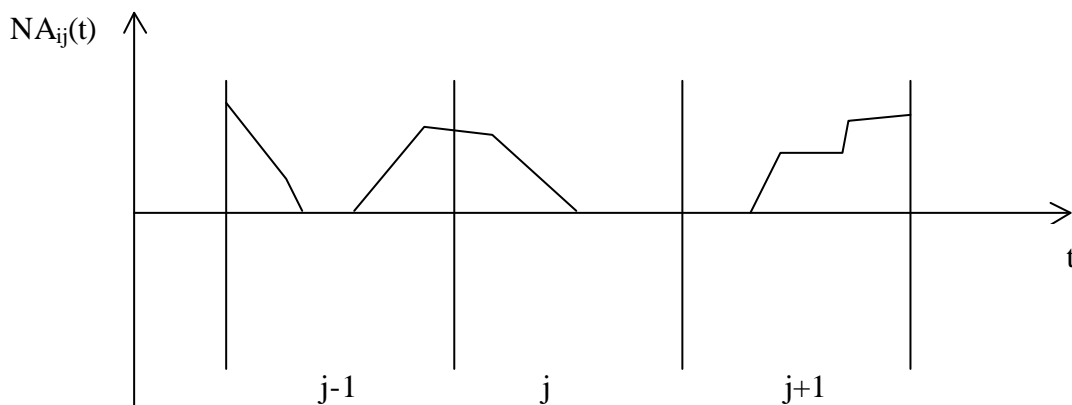
In this case, an end time is created at the end of SP $j+1$ because otherwise, the number of ends is less than the number of starts.

3.4AC.5 In relation to each Settlement Period j , for each BM Unit, if the number of End Times equals the number of Start Times and the earliest Start Time is earlier than the earliest End Time, then:

- (a) an additional Start Time ts^0_{ij} shall be created, where ts^0_{ij} is the time at the start of Settlement Period $j-1$; and
- (b) an additional End Time te^M_{ij} shall be created, where te^M_{ij} is the time at the end of Settlement Period $j+1$, and M is the total number of Start Times.

This creates a Start Time at the start of Settlement Period $j-1$ and an End Time at the end of Settlement Period $j+1$ if $NA_{ij}(t)$ has the following form – see figure 4:

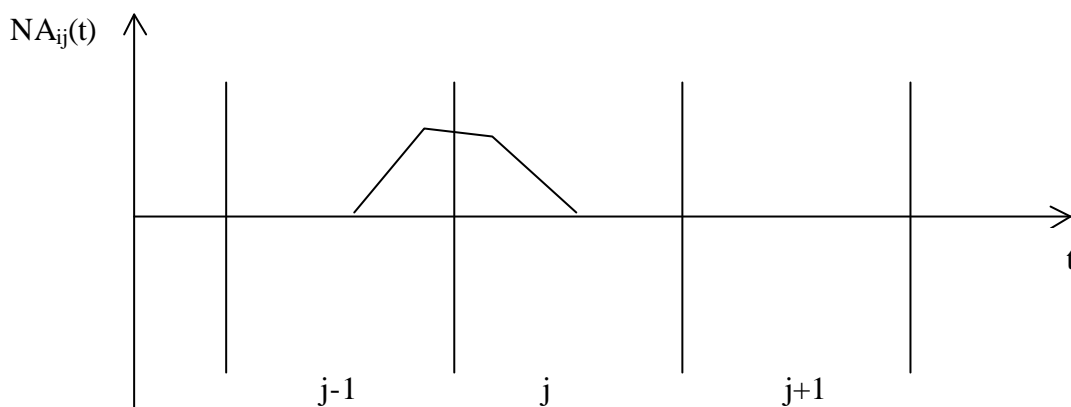
Figure 4 - Creation of both Start and End Times



In this case, both a start and end are created. This is needed when there are an equal number of starts and ends, but the first is an end.

In the final case, none are created – see figure 5 below.

Figure 5 – No Start or End Times created



There are an equal number of starts and ends, and the first is a start. Hence there is no need to create any further ones.

3.4AC.6 In relation to each Settlement Period j , for each BM Unit, each Start Time (if any) shall be “associated” with an End Time. The End Time associated with each particular Start Time shall be that End Time which falls most recently after the Start Time.

This pairs up starts and ends.

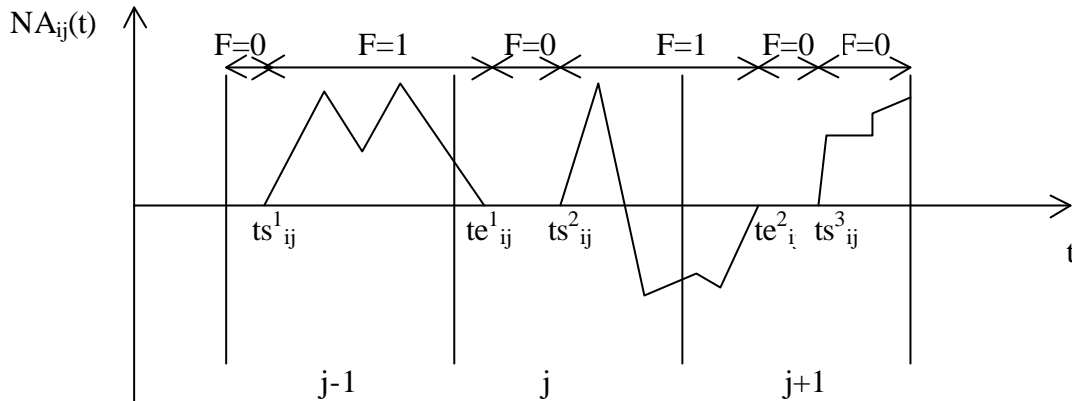
3.4AD Establishment of Price Flag ($FLAG_{ij}(t)$)

3.4AD.1 In relation to each Settlement Period j , and each BM Unit the Price Flag ($FLAG_{ij}(t)$) shall be established for each spot time commencing from first spot time at the start of Settlement Period $j-1$ to the last spot time at the end Settlement Period $j+1$ as follows:

- (a) If, for each Start Time (ts^m_{ij}) with an associated End Time (te^n_{ij}), $te^n_{ij} - ts^m_{ij} < CID_j$, then for all spot times from and including the spot time ts^m_{ij} to and including spot time te^n_{ij} , $FLAG_{ij}(t)=0$; and
- (b) For all other spot times $FLAG_{ij}(t)=1$

This sets a flag to 1 or zero across the period, depending upon whether the non-zero periods have a duration less than CID. This is shown in figure 6:

Figure 6 – Setting $FLAG_{ij}(t)$



In figure 6, the term F is used to denote $FLAG_{ij}(t)$. It is set to a value of 1 or zero for intervals of spot times. At the end of the period, despite the fact that there is a non-zero of $NA_{ij}(t)$, $FLAG_{ij}(t)$ is set to zero. This is because the non-zero period has a duration of less than CID.

3.4AE Establishment of Acceptance Price Flag $FLAG^k_i$

3.4AA.1 In respect each Acceptance for each BM Unit, the Acceptance Price Flag ($FLAG^k_i$) shall be established as follows:

- (a) if, for any spot time t , $qA^k_{ij}(t) \neq 0$, and $FLAG_{ij}(t) \neq 0$, then $FLAG^k_{ij} = 1$.
- (b) in any other case, $FLAG^k_{ij} = 0$.

[need to consider comparing against FPN or previous acceptance instead]

At this point, CID-definition 2 differs from CID-definition 3 (see below), in that a flag is set for the entirety of an individual acceptance. Basically if an acceptance has a non-zero value at any time in which the overall profile of acceptances has a non-zero value for a duration of CID, the effect of that acceptance is included in its entirety in the price setting process. Alternative sub-CID-definitions may be worthy of further consideration.

3.8A Determination of Period Priced Accepted Offer Volume ($QAPO^{kn}_{ij}$) and Period Priced Accepted Bid Volume ($QAPB^{kn}_{ij}$)

3.8A.1 In respect of each Settlement Period and each Acceptance, for each BM Unit, the Period Priced Accepted Offer Volume and Period Priced Accepted Bid Volume shall be established as follows:

- (a) If $FLAG^k_{ij} = 1$, then

$$QAPO_{ij}^{kn} = QAO_{ij}^{kn}; \text{ and}$$

$$QAPB_{ij}^{kn} = QAB_{ij}^{kn},$$

- (b) In any other case, no values of the Period Priced Accepted Offer Volume and Period Priced Accepted Bid Volume will be established for Acceptance k.

The other changes to the rest of Section T from 3.9A onwards are the same as those for CID-definition 1.

CID-definition 3

Changes to BSC Section T

Insert a new Section 3.4AA between Section 3.4 and Section 3.4A, as follows:

Duplicate changes for CID-definition 2 from 3.4AA to 3.4AD

3.4AE Establishment of Priced Acceptance Volume ($qAP_{ij}^k(t)$)

3.4AA.1 In respect each spot time in Settlement Period j , for each BM Unit, the Priced Acceptance Volume ($qAP_{ij}^k(t)$) shall be established as follows:

$$qAP_{ij}^k(t) = qA_{ij}^k(t) * FLAG_{ij}(t) + (1-FLAG_{ij}(t))*FPN_{ij}(t)$$

[Note that it would be possible to recalculate the Bid-Offer Upper and Lower Ranges for the purposes of pricing, it is not proposed to do this.]

[need also to confirm that it's clear which Settlement Period applies –i.e. is j general or specific?]

This determines a non-zero Priced Acceptance Volume for each Acceptance if the Flag is set to 1 at that spot time. Note that this calculation takes place only in relation to the acceptance quantities in Settlement Period j .

Insert new 3.6A as follows:

3.6A Determination of Priced Accepted Bid-Offer Volume ($qAPBO_{ij}^{kn}(t)$)

3.6.1 In respect of each Settlement Period, for each BM Unit, the volume (in MW) of Bid or Offer from the Bid-Offer Pair accepted as a result of a particular Acceptance shall, for the purposes of determination of System Sell Price and System Buy Price, be the Accepted Priced Bid-Offer Volume and shall be established as follows:

(a) For $n > 0$,

$$qAPBO_{ij}^{kn}(t) = \max \{ \min (qAP_{ij}^k(t), BOUR_{ij}^n(t)), BOUR_{ij}^{n-1}(t) \} \\ - \max \{ \min (qAP_{ij}^{k-1}(t), BOUR_{ij}^n(t)), BOUR_{ij}^{n-1}(t) \}, \text{ and}$$

(b) For $n < 0$,

$$qAPBO_{ij}^{kn}(t) = \min \{ \max (qAP_{ij}^k(t), BOLR_{ij}^n(t)), BOLR_{ij}^{n+1}(t) \} \\ - \min \{ \max (qAP_{ij}^{k-1}(t), BOLR_{ij}^n(t)), BOLR_{ij}^{n+1}(t) \}$$

where, from all Acceptances for which a Priced Acceptance Volume has been determined for the Settlement Period, k - represents that Priced Acceptance with the Bid-Offer Acceptance Time most recently preceding that of the Priced Acceptance.

- 3.6.2 If there is no Priced Acceptance for which a Priced Acceptance Volume has been determined in the Settlement Period which has a Bid-Offer Acceptance Time that precedes that of the Priced Acceptance, $qAP^{kn}_{ij}(t)$ shall be set equal to $FPN_{ij}(t)$.

This allocates the priced acceptance volumes to Bids and Offers for price calculation purposes (in the same way that this takes place for normal Bids and Offers for BM Payment purposes).

Insert a new 3.7A as follows:

3.7A Priced Accepted Offer Volume ($qAPO^{kn}_{ij}(t)$) and Priced Accepted Bid Volume $qAPB^{kn}_{ij}(t)$

- 3.7A.1 In respect of each Settlement Period, for each BM Unit, the Priced Accepted Offer Volume ($qAPO^{kn}_{ij}(t)$) and Priced Accepted Bid Volume $qAPB^{kn}_{ij}(t)$ shall be determined in the same manner as the Accepted Offer Volume ($qAO^{kn}_{ij}(t)$) and Accepted Bid Volume $qAB^{kn}_{ij}(t)$ respectively, except that for the purposes of the determination, the Accepted Bid-Offer Volume ($qABO^{kn}_{ij}(t)$) shall be replaced by the Accepted Priced Bid-Offer Volume ($qAPBO^{kn}_{ij}(t)$).

Insert new 3.8A as follows:

3.8A Determination of Period Priced Accepted Offer Volume ($QAPO^{kn}_{ij}$) and Period Priced Accepted Bid Volume ($QAPB^{kn}_{ij}$)

- 3.8A.1 In respect of each Settlement Period, for each BM Unit, the Period Priced Accepted Offer Volume shall be established by integrating the Priced Accepted Offer Volume over all spot times in the Settlement Period.
- 3.8A.2 In respect of each Settlement Period, for each BM Unit, the Period Priced Accepted Bid Volume shall be established by integrating the Priced Accepted Bid Volume over all spot times in the Settlement Period.

The other changes to the rest of Section T from 3.9A onwards are the same as those for CID-definition 1.

CID-definition 0

Changes to BSC Section T.

[note that these changes are very provisional indeed]

The changes are the same as for CID-definition 1 except that 3.4AC and 3.8A are replaced with the following:

3.4AC Establishment of Continuous Acceptance Duration ($CAD^{k_{ij}}$)

3.4AC.1 In relation to each Acceptance k, for a BM Unit and in relation to each Settlement Period j, from and including the Settlement Period in which the first spot time associated with a Point Acceptance Volume for Acceptance k falls, to and including the Settlement Period in which the last spot time associated with a Point Acceptance Volume for Acceptance k falls, the Continuous Acceptance Duration ($CAD^{k_{ij}}$) shall be the duration of the period of time:

- (a) from the earliest spot time associated with:
 - (i) any value of Point Acceptance Volume for Acceptance k; or
 - (ii) if there exists an Acceptance continuous with k, which:
 - (1) has a Bid-Offer Acceptance Time falling prior to the Bid-Offer Acceptance Time of Acceptance k, or prior to the start of Settlement Period j; and
 - (2) has a spot time associated with a Point Acceptance Volume that falls prior to the earliest spot time associated with a Point Acceptance Volume of Acceptance k; and
 - (3) is such that the period between the first spot time associated with a Point Acceptance Volume and the last spot time associated with a Point Acceptance Volume is of a duration that is greater than CID;the earliest spot time associated with a Point Acceptance Volume for that acceptance, and
- (b) to at the latest spot time associated with:
 - (i) any value of Point Acceptance Volume for Acceptance k; or
 - (ii) any Point Acceptance Volume for any Acceptance that:
 - (1) is a continuous Acceptance in relation to Acceptance k; and
 - (2) has a Bid-Offer Acceptance Time which falls prior to the Bid-Offer Acceptance Time of Acceptance k or prior to the start of Settlement Period j; and
 - (3) has a spot time associated with a Point Acceptance Volume that falls after the last spot time associated with Acceptance k.

[it is likely that this option could be drafted in a more sophisticated manner. It has been drafted here as a minimum change from CID-definition 1a for comparison purposes. Note that CAD is now a function of Settlement Period for each Acceptance]

3.8A Determination of Period Priced Accepted Offer Volume ($QAPO^{kn}_{ij}$) and Period Priced Accepted Bid Volume ($QAPB^{kn}_{ij}$)

3.8A.1 In respect of each Acceptance k , for each BM Unit, the Period Priced Accepted Offer Volume and Period Priced Accepted Bid Volume shall be established as follows:

(a) If for BM Unit i , in Settlement Period j , there exists an Acceptance k , such that $CAD^{k}_{ij} > CID$ then the values of the Period Priced Accepted Offer Volume and Period Priced Accepted Bid Volume for any Bid-Offer Pair will be established for that BM Unit i for that Settlement Period as follows:

(i) $QAPO^{kn}_{ij} = QAO^{kn}_{ij}$; and

(ii) $QAPB^{kn}_{ij} = QAB^{kn}_{ij}$.

(b) In any other case, the values of the Period Priced Accepted Offer Volume and Period Priced Accepted Bid Volume will not be established for BM Unit i in Settlement Period j .