

## ATTACHMENT 7 – PRELIMINARY DRAFT LEGAL TEXT

### MODIFICATION P211

#### POTENTIAL ALTERNATIVE SOLUTION

##### Section Q (Version 16.0)

*Paragraph 1.1.1 shall be amended as follows:*

1.1.1 This Section Q provides for:

- (a) the submission of data items in respect of relevant BM Units in accordance with the Grid Code;
- (b) the submission of Physical Notifications in accordance with the Grid Code such as to enable Final Physical Notification Data to be submitted by the Transmission Company and Point FPNs to be established by the SAA in respect of BM Units for each Settlement Period;
- (c) the submission of Final Physical Notification Data to enable Period FPNs to be established by the ECVA in respect of Interconnector BM Units for each Settlement Period;
- (d) the submission of Maximum Export Limits and Maximum Import Limits in accordance with the Grid Code such as to enable Maximum Export Limit Data and Maximum Import Limit Data to be submitted by the Transmission Company and Period MELs and Period MILs to be established by the SAA in respect of BM Units for each Settlement Period;
- (~~e~~) the submission of data items in accordance with the Grid Code such as to enable Dynamic Data Sets to be submitted by the Transmission Company and Applicable Run-Up Rates, Applicable Run-Down Rates, Applicable Notice to Deviate from Zero, Applicable Stable Export Limits and Applicable Stable Import Limits ("Applicable Dynamic Data") to be established by the SAA in respect of BM Units for each Settlement Period;
- (~~ef~~) arrangements for the submission by Lead Parties of Bid-Offer Pairs in respect of relevant BM Units and for the acceptance of Bids and Offers by the Transmission Company;
- (~~eg~~) the submission by the Transmission Company of Acceptance Data for the purposes of Section T and Section V;
- (~~fh~~) the submission by the Transmission Company of Balancing Services Adjustment Data for the purposes of Settlement; and
- (~~gi~~) the submission by the Transmission Company to the BMRA of other operational data items for the purposes of Section V.

*Paragraph 1.2.3(a) shall be amended as follows:*

1.2.3 For the avoidance of doubt:

- (a) the Final Physical Notification Data, the Bid-Offer Data, the Maximum Export Limit Data, the Maximum Import Limit Data and the Acceptance Data submitted by the Transmission Company pursuant to this Section Q shall be converted into point values by the SAA and the BMRA in accordance with the provisions of Section T and Section V respectively; and
- (b) the Final Physical Notification Data submitted by the Transmission Company pursuant to this Section Q shall be converted into point values by the ECVA in accordance with the provisions of this section Q.

*Paragraph 2.1.1 shall be amended as follows:*

## **2.1 Dynamic Data Set**

- 2.1.1 For each relevant BM Unit, the Lead Party shall ensure that those data items forming part of the Dynamic Data Set listed in paragraph 2.1.2(a) to (j) are submitted to (or can be determined by) the Transmission Company ~~to the extent required by and~~ in accordance with the provisions of the Grid Code such as to enable the Dynamic Data Set to be submitted by the Transmission Company under this Section Q and Applicable Dynamic Data to be established by the SAA under Section T, consistent with the requirements of paragraph 2.1.3 , for each Settlement Period and BM Unit.

*A new paragraph to be numbered 2.1.3 shall be inserted after paragraph 2.1.2 to read as follows:*

### 2.1.3 The requirements referred to in paragraph 2.1.1 are:

- (a) the Run-Up Rate shall comprise:
  - (i) no more than three positive MW/minute values representing the fastest rates at which the BM Unit can increase its level of Active Power while Exporting electricity, each of which (other than the first) shall have associated with it a positive MW breakpoint value;
  - (ii) no more than three positive MW/minute values representing the fastest rates at which the BM Unit can increase its level of Active Power while Importing electricity, each of which (other than the first) shall have associated with it a positive MW breakpoint value; and
  - (iii) an effective time.
- (b) the Run-Down Rate shall comprise:
  - (i) no more than three positive MW/minute values representing the fastest rates at which the BM Unit can decrease its level of Active Power while Exporting, each of which (other than the first) shall have associated with it a positive MW breakpoint value;
  - (ii) no more than three positive MW/minute values representing the fastest rates at which the BM Unit can decrease its level of Active

Power while Importing, each of which (other than the first) shall have associated with it a positive MW breakpoint value; and

(iii) an effective time.

(c) the Notice to Deviate from Zero shall comprise:

(i) a single value, expressed as a whole number of minutes; and

(ii) an effective time.

(d) the Stable Export Limit shall comprise:

(i) a single value, expressed as a positive number of MW; and

(ii) an effective time.

(e) the Stable Import Limit shall comprise:

(i) a single value, expressed as a negative number of MW; and

(ii) an effective time.

*Paragraph 2.1.3 shall be re-numbered as follows:*

- 2.1.~~43~~ The Lead Party may change any data item included in the Dynamic Data Set for a relevant BM Unit at any time by notifying the Transmission Company in accordance with the Grid Code, and any such change shall be effective from such time as provided in the Grid Code.

Paragraph 2.2 shall be amended as follows:

## 2.2 Maximum Export Limits and Maximum Import Limits

2.2.1 For each relevant BM Unit, the Lead Party shall ensure that the Maximum Export Limit and the Maximum Import Limit ~~(in each case, as defined in the Grid Code)~~ are submitted (or can be determined) in accordance with the Grid Code such as to enable Maximum Export Limit Data and Maximum Import Limit Data to be submitted by the Transmission Company to the extent required by and in accordance with the provisions of the Grid Code under this Section Q and Point MELs and Point MILs to be established by the SAA under Section T, consistent with the requirements of paragraph 2.2.4, for each Settlement Period and for each BM Unit.

2.2.2 In the Code references to a "submission" of the Maximum Export Limit or Maximum Import Limit in respect of a BM Unit include a determination of such limit by the Transmission Company as provided in paragraph 1.2.1(a).

2.2.3 For each Settlement Period, the Maximum Export Limit Data and Maximum Import Limit Data in respect of a relevant BM Unit shall be:

- (a) the data comprised in each submission of Maximum Export Limit or Maximum Import Limit prevailing at any time within the Settlement Period, , so far as relating to the Settlement Period; and
- (b) the Notification Time and Notification Sequence Number in relation to each such submission.

2.2.42 The requirements referred to in paragraph 2.2.1 are:

- (a) Maximum Export Limit Data shall comprise one or more values, each of which shall comprise a MW 'from' level with an associated 'from' time and a MW 'to' level with an associated 'to' time;
- (b) Maximum Import Limit Data shall comprise one or more values, each of which shall comprise a MW 'from' level with an associated 'from' time and a MW 'to' level with an associated 'to' time;
- (c) in each case, the MW level shall be an amount representing a quantity of Active Power expressed in whole MW and for spot time 't' falling within the relevant Settlement Period, where 't' is a time expressed in a whole number of minutes;
- (d) Maximum Export Limit Data and Maximum Import Limit Data shall comply with the conventions established in Section X; and
- (e) in respect of Interconnector BM Units:
  - (i) the MW level in value of Maximum Import Limit Data for the Production BM Unit shall be zero; and
  - (ii) the MW level in value of Maximum Export Limit Data for the Consumption BM Unit shall be zero.

2.2.35 Without prejudice to paragraph 2.2.42(e), the Lead Party may change the Maximum Export Limit and/or the Maximum Import Limit for a relevant BM Unit at any time by notifying

the Transmission Company in accordance with the Grid Code and any such change shall be effective from such time as provided in the Grid Code.

*Paragraph 5.1.14 shall be deleted as follows:*

~~5.1.14 The Transmission Company may classify an Acceptance which falls within paragraph 5.1.3(b) (other than one within paragraph 5.1.5) as an 'Excluded' Emergency Acceptance.~~

*Paragraph 5.3.1 shall be amended as follows:*

5.3.1 Acceptance Data for a BM Unit shall comprise the following data items:

- (a) a set comprising one or more Acceptance Volume Pairs, each with a 'from' MW level and an associated 'from' time and a 'to' MW level and an associated 'to' time and where:
  - (i) the MW levels are expressed in whole MW measured from the zero point (of no energy export or import); and
  - (ii) the times are expressed in a whole number of minutes and the first 'from' time is not earlier than the Bid-Offer Acceptance Time and the last 'to' time is not later than the end of the last Settlement Period for which Gate Closure fell before the Bid-Offer Acceptance Time; and
- (b) the associated Bid-Offer Acceptance Number 'k' expressed as an integer greater than the value of k for the Acceptance Data (for that BM Unit) with the immediately preceding Bid-Offer Acceptance Time or, where any Acceptance Data exists with identical Bid-Offer Acceptance Time, greater than the highest value of k which exists with such Bid-Offer Acceptance Time; and
- (c) the associated Bid-Offer Acceptance Time; ~~and~~
- ~~(d) in the case of an Acceptance within paragraph 5.1.3(b) (other than one within paragraph 5.1.5) that the Acceptance was an Emergency Acceptance; and~~
- ~~(e) in the case of an Acceptance within paragraph 5.1.3(b) (other than one within paragraph 5.1.5) whether the Transmission Company has classified such Acceptance as an 'Excluded' Emergency Acceptance.~~

*Paragraph 6.1.10 shall be amended as follows:*

6.1.10 Not later than 15 minutes following Gate Closure for each Settlement Period, the Transmission Company shall send to the BMRA the following data, so far as relating to that Settlement Period, received by Gate Closure, for each BM Unit for which it has so received such data:

- (a) ~~the~~ Maximum Export Limit ~~data~~ Data ~~or the~~ and Maximum Import Limit ~~data~~ Data (including any change to such data) ~~submitted~~ in accordance with paragraph 2.2, and
- (b) any Quiescent Physical Notification data (including any change to such data) submitted in accordance with paragraph 2.3;

and where after Gate Closure the Transmission Company is notified of any change in any such data (so far as relating to such Settlement Period) the Transmission Company shall send to the BMRA such changed data, and the time of notification and the effective time of such change, not later than 5 minutes following receipt of notification of such change.

*Paragraph 6.2 shall be amended as follows:*

## **6.2 Submission of Balancing Mechanism data to the SAA**

6.2.1 In respect of each Settlement Day, for each BM Unit for which such data is received or determined by the Transmission Company under this Section Q, the Transmission Company shall send to the SAA (so that such data has been sent by the time which is 15 minutes following the end of such Settlement Day) the following data:

- (a) the Final Physical Notification Data established pursuant to paragraph 3.2 in respect of each Settlement Period within such Settlement Day;
- (b) changes to the Dynamic Data Set data received by the Transmission Company pursuant to the Grid Code to apply in respect of such Settlement Day and the notification time of each such receipt by the Transmission Company;
- (c) changes to the ~~Maximum Export Limit and Maximum Import Limit data and~~ Quiescent Physical Notification data received by the Transmission Company to apply in respect of such the Settlement Day in accordance with paragraph 2.2 and 2.3 respectively;
- (d) Bid-Offer Data in respect of each Settlement Period within such Settlement Day submitted or determined in accordance with paragraph 4; ~~and~~
- (e) Acceptance Data, other than in relation to Acceptances which fall within paragraph 5.1.3(b); ~~and~~
- (f) the Maximum Export Limit Data and Maximum Import Limit Data established pursuant to paragraph 2.2 in respect of each Settlement Period within such Settlement Day.

## **Section T (Version 17.0)**

*Paragraph 1.3.2 shall be amended as follows:*

1.3.2 Data required from the Transmission Company are:

- (a) Final Physical Notification Data;
- (b) Bid-Offer Data;
- (c) Acceptance Data;
- (d) Balancing Services Adjustment Data; ~~and~~
- (e) Applicable Balancing Services Volume Data; ~~-~~
- (f) Maximum Export Limit Data and Maximum Import Limit Data; and-
- (g) Dynamic Data Sets.

*Paragraph 1.7 shall be amended as follows:*

**1.7 Not Used De Minimis Acceptance Threshold**

- ~~1.7.1 For the purposes of the Code the "**De Minimis Acceptance Threshold**" (DMAT) shall be 1 MWh or such other amount (in MWh) as the Panel may from time to time determine, after consultation with, the Transmission Company and Trading Parties and subject to the approval of the Authority, as the de minimis level below which it would be appropriate to disregard accepted Bids and accepted Offers from the calculation of the energy imbalance prices.~~
- ~~1.7.2 Where a revised value for the De Minimis Acceptance Threshold is approved by the Authority:~~
- ~~(a) such revised value shall be effective from such date as the Panel shall determine with the approval of the Authority, not being less than 20 Business Days after the date of the Panel's determination;~~
  - ~~(b) the Panel Secretary shall promptly give notice of the revised value and its effective date to each Party, the SAA and the BMRA and shall copy such notice to the Authority;~~

*Paragraph 3.1.1 shall be amended as follows:*

- 3.1.1 It is recognised that Final Physical Notification Data, Bid-Offer Pairs, Maximum Export Limit Data, Maximum Import Limit Data and Acceptance Data derived from data submitted or determined under the Grid Code (and received by the SAA from the Transmission Company) will contain values with associated from/to times whereas the equivalent data required for the purposes of this Section T are required to contain point values (as defined in Annex X-2).

*Paragraph 3.1.2 shall be amended as follows:*

- 3.1.2 Accordingly, the SAA shall convert such data received from the Transmission Company for the purposes of Settlement using the following conventions:
- (a) in the case of Final Physical Notification Data:
    - (i) each value, comprising a MW 'from' level and associated 'from' time and a MW 'to' level and associated 'to' time, shall be allocated a Point Value Identification Number;
    - (ii) the 'to' MW level and associated 'to' time shall be a Point FPN ( ${}^f\text{FPN}_{ijt}$ ) which is allocated a Point Value Identification Number of '1';
    - (iii) the 'from' MW level and associated 'from' time shall be a Point FPN ( ${}^f\text{FPN}_{ijt}$ ) which is allocated a Point Value Identification Number of '2';

- (iv) the associated time of each Point FPN with a Point Value Identification Number of 2 shall be equal to the associated time of the Point FPN with a Point Value Identification Number of 1 of the immediately preceding pair of Point FPNs;
- (b) in the case of Bid-Offer Pairs:
- (i) each value, comprising a MW 'from' level and associated 'from' time and a MW 'to' level and associated 'to' time, shall be allocated a Point Value Identification Number;
  - (ii) the 'to' MW level and associated 'to' time shall be a Point Bid-Offer Volume ( ${}^f\text{qBO}^n_{ijt}$ ) which is allocated a Point Value Identification Number of '1';
  - (iii) the 'from' MW level and associated 'from' time shall be a Point Bid-Offer Volume ( ${}^f\text{qBO}^n_{ijt}$ ) which is allocated a Point Value Identification Number of '2';
  - (iv) the associated time of each Point Bid-Offer Volume with a Point Value Identification Number of 2 shall be equal to the associated time of the Point Bid-Offer Volume with a Point Value Identification Number of 1 of the immediately preceding pair of Point Bid-Offer Volumes;
- (c) in the case of Acceptance Data:
- (i) for each Acceptance Volume Pair, a Point Acceptance Volume ( $\text{qA}^k_{it}$ ) shall be created where the MW level is set equal to the 'from' MW level of the Acceptance Volume Pair, the time  $t$  shall be set equal to the 'from' time of the Acceptance Volume Pair and the value of  $k$  shall be set equal to the Bid-Offer Acceptance Number of the Acceptance Volume Pair; and
  - (ii) for each Acceptance Volume Pair, a Point Acceptance Volume ( $\text{qA}^k_{it}$ ) shall be created where the MW level is set equal to the 'to' MW level of the Acceptance Volume Pair, the time  $t$  shall be set equal to the 'to' time of the Acceptance Volume Pair and the value of  $k$  shall be set equal to the Bid-Offer Acceptance Number of the Acceptance Volume Pair;<sup>2</sup>
- (d) in the case of Maximum Export Limit Data, in relation to each submission of Maximum Export Limit:
- (i) each value, comprising a MW 'from' level and associated 'from' time and a MW 'to' level and associated 'to' time, shall be allocated a Point Value Identification Number;
  - (ii) the 'to' MW level and associated 'to' time shall be a Point MEL ( ${}^f\text{MEL}_{itr}$ ) which is allocated a Point Value Identification Number of '1' and for which the value of  $r$  shall be set equal to the Notification Time and Notification Sequence Number of such submission;
  - (iii) the 'from' MW level and associated 'from' time shall be a Point MEL ( ${}^f\text{MEL}_{itr}$ ) which is allocated a Point Value Identification Number of



'2' and for which the value of r shall be set equal to the Notification Time and Notification Sequence Number of such submission; and

(iv) the associated time of each Point MEL with a Point Value Identification Number of 2 shall be equal to the associated time of the Point MEL with a Point Value Identification Number of 1 of the immediately preceding pair of Point MELs;

(e) in the case of Maximum Import Limit Data, in relation to each submission of Maximum Import Limit:

(i) each value, comprising a MW 'from' level and associated 'from' time and a MW 'to' level and associated 'to' time, shall be allocated a Point Value Identification Number;

(ii) the 'to' MW level and associated 'to' time shall be a Point MIL ( $^f\text{MIL}_{\text{itr}}$ ) which is allocated a Point Value Identification Number of '1' and for which the value of r shall be set equal to the Notification Time and Notification Sequence Number of such submission;

(iii) the 'from' MW level and associated 'from' time shall be a Point MIL ( $^f\text{MIL}_{\text{itr}}$ ) which is allocated a Point Value Identification Number of '2' and for which the value of r shall be set equal to the Notification Time and Notification Sequence Number of such submission; and

(iv) the associated time of each Point MIL with a Point Value Identification Number of 2 shall be equal to the associated time of the Point MIL with a Point Value Identification Number of 1 of the immediately preceding pair of Point MILs.

*Paragraphs 3.1A and 3.1B shall be deleted as follows:*

**~~3.1A Continuous Acceptance Duration ( $\text{CAD}^k_i$ )~~**

~~3.1A.1 In relation to each Acceptance, k, for a particular BM Unit, another Acceptance for the same BM Unit is "related" to Acceptance k where such other Acceptance has a Bid Offer Acceptance Time that falls within the period:~~

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

~~3.1A.2 In relation to each Acceptance k, another Acceptance is "continuous" with Acceptance k if it is related to Acceptance k, and:~~

~~(a) the spot time associated with:~~

~~(i) the first Point Acceptance Volume of the Acceptance is earlier, and~~

~~(ii) 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; or~~

~~(b) the spot time associated with:~~

~~(i) the last Point Acceptance Volume of the Acceptance is later, and~~

~~(ii) 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; or~~

~~(c) the Acceptance is continuous (in accordance with paragraph (a) or (b)) with another Acceptance which is determined (including, for the avoidance of doubt, by virtue of this paragraph (c)) to be a continuous Acceptance in relation to Acceptance k.~~

~~3.1A.3 In relation to each Acceptance k, for a particular BM Unit, the Continuous Acceptance Duration (CAD<sup>k</sup>) shall be the duration of the period:~~

~~(a) commencing at 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) ending 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.~~

### **3.1B Continuous Acceptance Duration Limit (CADL)**

~~3.1B.1 For the purposes of the Code the "Continuous Acceptance Duration Limit" (CADL) shall be 15 minutes or such other amount (in minutes) determined by the Panel and approved by the Authority.~~

~~3.1B.2 The Panel may revise such amount from time to time subject to the approval of the Authority.~~

~~3.1B.3 In revising the amount of the Continuous Acceptance Duration Limit from time to time, the Panel shall consult with Parties and consider the views expressed in the course of such consultation prior to making its determination (and shall provide a detailed summary of such views to the Authority).~~

*Paragraph 3.4A shall be amended as follows:*

### **3.4A Establishment of Bid-Offer Upper Range (BOUR<sup>n<sub>ij</sub>(t)</sup>) and Bid-Offer Lower Range (BOLR<sup>n<sub>ij</sub>(t)</sup>) in relation to FPN and Submitted Bid-Offer Pairs**

3.4A.1 In respect of each Settlement Period, for each BM Unit, for each Submitted Bid-Offer Pair for which the associated Bid-Offer Pair Number  $n$  is greater than zero (if any), other than the Submitted Bid-Offer Pair with the greatest Bid-Offer Pair Number which is greater than zero, the Bid-Offer Upper Range  $(BOUR^n_{ij}(t))$  and Submitted Bid-Offer Upper Range  $(SBOUR^n_{ij}(t))$  for each spot time in the Settlement Period shall be established as follows:

$$(a) \quad BOUR^n_{ij}(t) = FPN_{ij}(t) + \Sigma^{n+} qBO^n_{ij}(t)$$

$$\underline{SBOUR^n_{ij}(t) = BOUR^n_{ij}(t)}$$

where  $\Sigma^{n+}$  represents the sum over the range of positive Bid-Offer Pair Numbers 1 to  $n$  of Submitted Bid-Offer Pairs; and

$$(b) \quad BOUR^0_{ij}(t) = FPN_{ij}(t)$$

$$\underline{SBOUR^n_{ij}(t) = BOUR^n_{ij}(t)}$$

3.4A.2 In respect of each Settlement Period, for each BM Unit, for the Submitted Bid-Offer Pair with the greatest Bid-Offer Pair Number  $n$  which is greater than zero (if any), the Bid-Offer Upper Range  $(BOUR^n_{ij}(t))$  and Submitted Bid-Offer Upper Range  $(SBOUR^n_{ij}(t))$  for each spot time in the Settlement Period shall be established as follows:

$$(a) \quad \text{if } FPN_{ij}(t) \geq 0 \text{ and } qA^k_{ij}(t) > FPN_{ij}(t) + \Sigma^{n+} qBO^n_{ij}(t) \text{ for any Bid-Offer Acceptance Number } k,$$

then:

$$BOUR^n_{ij}(t) = \text{Max}^k(qA^k_{ij}(t))$$

$$\underline{SBOUR^n_{ij}(t) = FPN_{ij}(t) + \Sigma^{n+} qBO^n_{ij}(t)}$$

where  $\text{Max}^k(qA^k_{ij}(t))$  represents the maximum value of  $qA^k_{ij}(t)$  for any value of  $k$  for BM Unit  $i$  at spot time  $t$  in Settlement Period  $j$ ;

$$(b) \quad \text{in any other case:}$$

$$BOUR^n_{ij}(t) = FPN_{ij}(t) + \Sigma^{n+} qBO^n_{ij}(t)$$

$$\underline{SBOUR^n_{ij}(t) = BOUR^n_{ij}(t)}$$

where  $\Sigma^{n+}$  represents the sum over the range of positive Bid-Offer Pair Numbers 1 to  $n$  of Submitted Bid-Offer Pairs.

3.4A.3 In respect of each Settlement Period, for each BM Unit, for Submitted Bid-Offer Pairs for which the associated Bid-Offer Pair Number  $n$  is less than zero, other than the Submitted Bid-Offer Pair with the least Bid-Offer Pair Number which is less than zero, the Bid-Offer Lower Range  $(BOLR^n_{ij}(t))$  and Submitted Bid-Offer Lower Range  $(SBOLR^n_{ij}(t))$  for each spot time in the Settlement Period shall be established as follows:

$$(a) \quad BOLR^n_{ij}(t) = FPN_{ij}(t) + \Sigma^{n-} qBO^n_{ij}(t)$$

$$\underline{SBOLR^n_{ij}(t) = BOLR^n_{ij}(t)}$$

where  $\Sigma^{n-}$  represents the sum over the range of negative Bid-Offer Pair Numbers -1 to  $n$  of Submitted Bid-Offer Pairs; and

$$(b) \quad BOLR^0_{ij}(t) = FPN_{ij}(t)$$

$$\underline{SBOLR_{ij}^n(t) = BOLR_{ij}^n(t)}$$

3.4A.4 In respect of each Settlement Period, for each BM Unit, for the Submitted Bid-Offer Pair with the least Bid-Offer Pair Number  $n$  which is less than zero (if any), the Bid-Offer Lower Range ( $BOLR_{ij}^n(t)$ ) and Submitted Bid-Offer Lower Range ( $SBOLR_{ij}^n(t)$ ) for each spot time in the Settlement Period shall be established as follows:

- (a) if  $FPN_{ij}(t) \leq 0$  and  $qA_{ij}^k(t) < FPN_{ij}(t) + \sum^n qBO_{ij}^n(t)$  for any Bid-Offer Acceptance Number  $k$ ,

then:

$$BOLR_{ij}^n(t) = \text{Min}^k(qA_{ij}^k(t))$$

$$\underline{SBOLR_{ij}^n(t) = FPN_{ij}(t) + \sum^n qBO_{ij}^n(t)}$$

where  $\text{Min}^k(qA_{ij}^k(t))$  represents the minimum value of  $qA_{ij}^k(t)$  for any value of  $k$  for BM Unit  $i$  at spot time  $t$  in Settlement Period  $j$ ;

- (b) in any other case:

$$BOLR_{ij}^n(t) = FPN_{ij}(t) + \sum^n qBO_{ij}^n(t)$$

$$\underline{SBOLR_{ij}^n(t) = BOLR_{ij}^n(t)}$$

where  $\sum^n$  represents the sum over the range of negative Bid-Offer Pair Numbers  $-1$  to  $n$  of Submitted Bid-Offer Pairs.

*Paragraph 3.8A shall be deleted as follows:*

**~~3.8A Determination of Period Priced Accepted Offer Volume ( $QAPO_{ij}^{kn}$ ) and Period Priced Accepted Bid Volume ( $QAPB_{ij}^{kn}$ )~~**

~~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, there exists any Acceptance  $k'$  (including for the avoidance of doubt Acceptance  $k$ ) relating to the BM Unit, for which  $CAD_{i,t}^{k'} < CAD_{i,t}^k$ , then no values of the Period Priced Accepted Offer Volume and Period Priced Accepted Bid Volume will be determined in relation to Acceptance  $k$  in any Settlement Period:~~

~~(i) from and including the Settlement Period in which the earliest Point Acceptance Volume associated with Acceptance  $k'$  falls, and~~

~~(ii) to and including the Settlement Period in which the latest Point Acceptance Volume associated with Acceptance  $k'$  falls.~~

- ~~(b) if Acceptance  $k$  is an Excluded Emergency Acceptance, then no values of the Period Priced Accepted Offer Volume and Period Priced Accepted Bid Volume will be determined in relation to Acceptance  $k$  in any Settlement Period;~~

- ~~(c) in any case other than one within paragraph (a) or (b), the Period Priced Accepted Offer Volume and Period Priced Accepted Bid Volume will be determined as follows:~~

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

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

*Paragraph 3.9A shall be deleted 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 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 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.~~

*New paragraphs 4.3A, 4.3B and 4.3C, 4.3D, 4.3E, 4.3F, 4.3G, 4.3H, 4.3I, 4.3J, 4.3K, 4.3L, shall be inserted after paragraph 4.3.8 as follows:*

**4.3A Determination of the Period MEL ( $MEL_{ij}$ )**

4.3A.1 In respect of each Settlement Period j, BM Unit i and submission of Maximum Export Limit, the value of MEL Submission ( $MEL_{ij}^r(t)$ ) shall be established for all spot times t for which data was submitted by linear interpolation of Point Maximum Export Limit values  $^rMEL_{itr}$  included in such submission.

4.3A.2 In respect of each Settlement Period j, for each BM Unit i, the value of Gate Closure MEL ( $MEL_{ij}^{GC}(t)$ ) for spot times falling within the Settlement Period shall be equal to the value of  $MEL_{ij}^r(t)$  for the submission having the latest Notification Time and Notification Sequence Number r for which the Notification Time was at or before Gate Closure for Settlement Period j, and data was submitted for spot time t.

4.3A.3 In respect of each Settlement Period j, for each BM Unit i, the value of Period End MEL ( $MEL_{ij}^E(t)$ ) for spot times falling within the Settlement Period shall be equal to the value of  $MEL_{ij}^r(t)$  for the submission having the latest Notification Time and Notification Sequence Number r for which data was submitted for spot time t.

4.3A.4 In respect of each Settlement Period j, for each BM Unit i, the value of  $MEL_{ij}(t)$  for spot times falling within the Settlement Period shall be determined as:

$MEL_{ij}(t) = \min \{ MEL_{ij}^{GC}(t), MEL_{ij}^E(t) \}$

**4.3B Determination of the Period MIL ( $MIL_{ij}$ )**

4.3B.1 In respect of each Settlement Period j, BM Unit i and submission of Maximum Import Limit, the value of MIL Submission ( $MIL_{ij}^r(t)$ ) shall be established for all spot times t for

which data was submitted by linear interpolation of Point Maximum Import Limit values  ${}^f\text{MIL}_{ijtr}$  included in such submission.

4.3B.2 In respect of each Settlement Period  $j$ , for each BM Unit  $i$ , the value of Gate Closure MIL ( $\text{MIL}_{ij}^{\text{GC}}(t)$ ) for spot times falling within the Settlement Period shall be equal to the value of  $\text{MIL}_{ij}^r(t)$  for the submission having the latest Notification Time and Notification Sequence Number  $r$  for which the Notification Time was at or before Gate Closure for Settlement Period  $j$ , and data was submitted for spot time  $t$ .

4.3B.3 In respect of each Settlement Period  $j$ , for each BM Unit  $i$ , the value of Period End MIL ( $\text{MIL}_{ij}^E(t)$ ) for spot times falling within the Settlement Period shall be equal to the value of  $\text{MIL}_{ij}^r(t)$  for the submission having the latest Notification Time and Notification Sequence Number  $r$  for which data was submitted for spot time  $t$ .

4.3B.4 In respect of each Settlement Period  $j$ , for each BM Unit  $i$ , the value of  $\text{MIL}_{ij}(t)$  for spot times falling within the Settlement Period shall be determined as:

$$\text{MIL}_{ij}(t) = \max \{ \text{MIL}_{ij}^{\text{GC}}(t), \text{MIL}_{ij}^E(t) \}$$

#### **4.3C Determination of Applicable Dynamic Data**

4.3C.1 In respect of each Settlement Period, for each BM Unit, the SAA shall determine the Applicable Dynamic Data as follows:

(a) the Run-Up Rate effective at Gate Closure for the Settlement Period shall be the Applicable Run-Up Rate, and:

(i) the MW/minute values contained within the Applicable Run-Up Rate in accordance with paragraph Q2.1.3(a)(i) shall be Run-Up Rate Export 1 ( $\text{RURE1}_{ij}$ ), Run-Up Rate Export 2 ( $\text{RURE2}_{ij}$ ) and Run-Up Rate Export 3 ( $\text{RURE3}_{ij}$ );

(ii) the MW values contained within the Applicable Run-Up Rate in accordance with paragraph Q2.1.3(a)(i) shall be Run-Up Rate Export Breakpoint 2 ( $\text{RUREBP2}_{ij}$ ) and Run-Up Rate Export Breakpoint 3 ( $\text{RUREBP3}_{ij}$ );

(iii) the MW/minute values contained within the Applicable Run-Up Rate in accordance with paragraph Q2.1.3(a)(ii) shall be Run-Up Rate Import 1 ( $\text{RURI1}_{ij}$ ), Run-Up Rate Import 2 ( $\text{RURI2}_{ij}$ ) and Run-Up Rate Import 3 ( $\text{RURI3}_{ij}$ );

(iv) the MW values contained within the Applicable Run-Up Rate in accordance with paragraph Q2.1.3(a)(ii) shall be Run-Up Rate Import Breakpoint 2 ( $\text{RURIBP2}_{ij}$ ) and Run-Up Rate Import Breakpoint 3 ( $\text{RURIBP3}_{ij}$ );

(b) the Run-Down Rate effective at Gate Closure for the Settlement Period shall be the Applicable Run-Down Rate, and:

(i) the MW/minute values contained within the Applicable Run-Down Rate in accordance with paragraph Q2.1.3(b)(i) shall be Run-Down Rate Export 1 ( $\text{RDRE1}_{ij}$ ), Run-Down Rate Export 2 ( $\text{RDRE2}_{ij}$ ) and Run-Down Rate Export 3 ( $\text{RDRE3}_{ij}$ );

(ii) the MW values contained within the Applicable Run-Down Rate in accordance with paragraph Q2.1.3(b)(i) shall be Run-Down Rate Export Breakpoint 2 (RDREBP2<sub>ij</sub>) and Run-Down Rate Export Breakpoint 3 (RDREBP3<sub>ij</sub>);

(iii) the MW/minute values contained within the Applicable Run-Down Rate in accordance with paragraph Q2.1.3(b)(ii) shall be Run-Down Rate Import 1 (RDRI1<sub>ij</sub>), Run-Down Rate Import 2 (RDRI2<sub>ij</sub>) and Run-Down Rate Import 3 (RDRI3<sub>ij</sub>);

(iv) the MW values contained within the Applicable Run-Down Rate in accordance with paragraph Q2.1.3(b)(ii) shall be Run-Down Rate Import Breakpoint 2 (RDRIBP2<sub>ij</sub>) and Run-Down Rate Import Breakpoint 3 (RDRIBP3<sub>ij</sub>);

(c) the Notice to Deviate from Zero effective at Gate Closure for the Settlement Period shall be the Applicable Notice to Deviate from Zero, and the value in minutes contained within it in accordance with paragraph Q2.1.3(c)(i) shall be the Gate Closure NDZ (NDZ<sup>GC</sup><sub>ij</sub>);

(d) the Stable Export Limit effective at Gate Closure for the Settlement Period shall be the Applicable Stable Export Limit, and the MW value contained within it in accordance with paragraph Q2.1.3(d)(i) shall be the Gate Closure SEL (SEL<sup>GC</sup><sub>ij</sub>); and

(e) the Stable Import Limit effective at Gate Closure for the Settlement Period shall be the Applicable Stable Import Limit, and the MW value contained within it in accordance with paragraph Q2.1.3(e)(i) shall be the Gate Closure SIL (SIL<sup>GC</sup><sub>ij</sub>).

4.3C.2 If the data required to calculate any of RURE1<sub>ij</sub>, RURI1<sub>ij</sub>, RDRE1<sub>ij</sub>, RDRI1<sub>ij</sub>, NDZ<sup>GC</sup><sub>ij</sub>, SEL<sup>GC</sup><sub>ij</sub> or SIL<sup>GC</sup><sub>ij</sub> has not been submitted to the SAA by the Transmission Company, then the value of that item shall be zero.

4.3C.3 If the data required to calculate any of RURE2<sub>ij</sub>, RURE3<sub>ij</sub>, RURI2<sub>ij</sub>, RURI3<sub>ij</sub>, RDRE2<sub>ij</sub>, RDRE3<sub>ij</sub>, RDRI2<sub>ij</sub>, RDRI3<sub>ij</sub>, RUREBP2<sub>ij</sub>, RUREBP3<sub>ij</sub>, RURIBP2<sub>ij</sub>, RURIBP3<sub>ij</sub>, RDREBP2<sub>ij</sub>, RDREBP3<sub>ij</sub>, RDRIBP2<sub>ij</sub>, or RDRIBP3<sub>ij</sub> has not been submitted to the SAA by the Transmission Company, then no value shall be determined for that item.

#### **4.3D Determination of Gate Closure FPN (FPN<sup>GC</sup><sub>ij</sub>)**

4.3D.1 In respect of each Settlement Period j, for each BM Unit, the Gate Closure FPN (FPN<sup>GC</sup><sub>ij</sub>) shall be determined as follows:

$$\text{FPN}^{\text{GC}}_{ij} = \text{FPN}_{ij'}(t)$$

where t is the spot time corresponding to Gate Closure for Settlement Period j, and j' is the Settlement Period that begins at spot time t.

#### **4.3E Determination of Run-Up Profile (RUP<sub>ij</sub>(t))**

4.3E.1 In respect of each Settlement Period j, for each BM Unit, a set of Relevant Run-Up Rates, all except one of which will have an associated Run-Up End Level, shall be determined as follows:

(a) if:

(i)  $FPN_{ij}^{GC} < 0$ ; and

(ii)  $FPN_{ij}^{GC} < -RURIBP2_{ij}$ , or no value of  $RURIBP2_{ij}$  was determined

then  $RURI1_{ij}$  shall be a Relevant Run-Up Rate, and its associated Run-Up End Level shall be  $-RURIBP2_{ij}$ , or zero if no value of  $RURIBP2_{ij}$  was determined;

(b) if a value of  $RURI2_{ij}$  was determined, and:

(i)  $FPN_{ij}^{GC} < 0$ ; and

(ii)  $FPN_{ij}^{GC} < -RURIBP3_{ij}$ , or no value of  $RURIBP3_{ij}$  was determined

then  $RURI2_{ij}$  shall be a Relevant Run-Up Rate, and its associated Run-Up End Level shall be  $-RURIBP3_{ij}$ , or zero if no value of  $RURIBP3_{ij}$  was determined;

(c) if a value of  $RURI3_{ij}$  was determined, and:

$FPN_{ij}^{GC} < 0$

then  $RURI3_{ij}$  shall be a Relevant Run-Up Rate, and its associated Run-Up End Level shall be zero;

(d) if:

$FPN_{ij}^{GC} < RUREBP2_{ij}$ , or no value of  $RUREBP2_{ij}$  was determined

then  $RURE1_{ij}$  shall be a Relevant Run-Up Rate, and its associated Run-Up End Level shall be  $RUREBP2_{ij}$ ;

(e) if a value of  $RURE2_{ij}$  was determined, and:

$FPN_{ij}^{GC} < RUREBP3_{ij}$ , or no value of  $RUREBP3_{ij}$  was determined

then  $RURE2_{ij}$  shall be a Relevant Run-Up Rate, and its associated Run-Up End Level shall be  $RUREBP3_{ij}$ ;

(f) if a value of  $RURE3_{ij}$  was determined, then  $RURE3_{ij}$  shall be a Relevant Run-Up Rate

4.3E.2 In respect of each Settlement Period  $j$ , for each BM Unit, the Relevant Run-Up Rates and their associated Run-Up End Levels determined in accordance with paragraph 4.3E.1 shall be ranked in Run-Up End Level order, such that the Relevant Run-Up Rate with the least Run-Up End Level value is allocated a Relevant Run-Up Rate Number  $c$  of 1, the Relevant Run-Up Rate with the next least Run-Up End Level value is allocated a Relevant Run-Up Rate Number  $c$  of 2, and so on). The Relevant Run-Up Rate with no associated Run-Up End Level value shall be allocated the highest Relevant Run-Up Rate Number. The result is an ordered set of Relevant Run-up Rates ( $RRUR_{ij}^c$ ) and associated Run-Up End Levels ( $RUEL_{ij}^c$ ).

4.3E.3 For the purposes of this paragraph 4.3E, the Gate Closure FPN shall be treated as belonging to the set of Relevant Run-Up Rates with a Relevant Run-Up Rate Number of zero, as follows:

$RRUR_{ij}^0 = 0$ ; and

$RUEL_{ij}^0 = FPN_{ij}^{GC}$



4.3E.4 For each Settlement Period j, for each BM Unit and for each Relevant Run-Up Rate Number c, the Run-Up End Time (RUET<sup>c</sup><sub>ij</sub>) shall be determined as follows:

- (a) for c=0, RUET<sup>c</sup><sub>ij</sub> shall be the time of Gate Closure for Settlement Period j;
- (b) for c>0, if c is less than the highest Relevant Run-Up Rate Number for the BM Unit and Settlement Period:

- (i) the Run-Up Duration (RUD<sup>c</sup><sub>ij</sub>) shall be determined as:

$$\text{RUD}_{ij}^c = (\text{RUEL}_{ij}^c - \text{RUEL}_{ij}^{(c-1)}) / \text{RRUR}_{ij}^c; \text{ and}$$

- (ii) RUET<sup>c</sup><sub>ij</sub> shall be the spot time RUD<sup>c</sup><sub>ij</sub> minutes after RUET<sup>(c-1)</sup><sub>ij</sub>

- (c) if c is equal to the highest Relevant Run-Up Rate Number for the BM Unit and Settlement Period, then:

- (i) RUET<sup>c</sup><sub>ij</sub> shall be the later of RUET<sup>(c-1)</sup><sub>ij</sub> and the spot time that falls at the end of Settlement Period j; and

- (ii) a value of RUEL<sup>c</sup><sub>ij</sub> shall be determined as:

$$\text{RUEL}_{ij}^c = \text{RUEL}_{ij}^{(c-1)} + (\text{RUET}_{ij}^c - \text{RUET}_{ij}^{(c-1)}) * \text{RRUR}_{ij}^c.$$

4.3E.5 In respect of each Settlement Period, for each BM Unit, the MW levels RUEL<sup>c</sup><sub>ij</sub> and their associated spot times RUET<sup>c</sup><sub>ij</sub> form a sequence of points that represent the maximum level of output the BM Unit could reach if it ran up from Gate Closure at the Applicable Run-Up Rate. For each spot time t falling within the Settlement Period, the value of Run-Up Profile (RUP<sub>ij</sub>(t)) shall be established by linear interpolation of these RUEL<sup>c</sup><sub>ij</sub> and RUET<sup>c</sup><sub>ij</sub> values.

#### **4.3F Determination of Run-Down Profile (RDP<sub>ij</sub>(t))**

4.3F.1 In respect of each Settlement Period j, for each BM Unit, a set of Relevant Run-Down Rates, all except one of which will have an associated Run-Down End Level, shall be determined as follows:

- (a) if:

- (i) FPN<sup>GC</sup><sub>ij</sub> > 0; and

- (iii) FPN<sup>GC</sup><sub>ij</sub> > RDREBP2<sub>ij</sub>, or no value of RDREBP2<sub>ij</sub> was determined

then RDRE1<sub>ij</sub> shall be a Relevant Run-Down Rate, and its associated Run-Down End Level shall be RDREBP2<sub>ij</sub>, or zero if no value of RDREBP2<sub>ij</sub> was determined;

- (b) if a value of RDRE2<sub>ij</sub> was determined, and:

- (i) FPN<sup>GC</sup><sub>ij</sub> > 0; and

- (iii) FPN<sup>GC</sup><sub>ij</sub> > RDREBP3<sub>ij</sub>, or no value of RDREBP3<sub>ij</sub> was determined

then RDRE2<sub>ij</sub> shall be a Relevant Run-Down Rate, and its associated Run-Down End Level shall be RDREBP3<sub>ij</sub>, or zero if no value of RDREBP3<sub>ij</sub> was determined;

(c) if a value of  $RDRE3_{ij}$  was determined, and:

$$FPN_{ij}^{GC} > 0$$

then  $RDRE3_{ij}$  shall be a Relevant Run-Down Rate, and its associated Run-Down End Level shall be zero;

(d) if:

$$FPN_{ij}^{GC} > -RDRIBP2_{ij}, \text{ or no value of } RDRIBP2_{ij} \text{ was determined}$$

then  $RDR1_{ij}$  shall be a Relevant Run-Down Rate, and its associated Run-Down End Level shall be  $-RDRIBP2_{ij}$ ;

(e) if a value of  $RDR12_{ij}$  was determined, and:

$$FPN_{ij}^{GC} > -RDRIBP3_{ij}, \text{ or no value of } RDRIBP3_{ij} \text{ was determined}$$

then  $RDR12_{ij}$  shall be a Relevant Run-Down Rate, and its associated Run-Down End Level shall be  $-RDRIBP3_{ij}$ ;

(f) if a value of  $RDR13_{ij}$  was determined, then  $RDR13_{ij}$  shall be a Relevant Run-Down Rate

4.3F.2 In respect of each Settlement Period  $j$ , for each BM Unit, the Relevant Run-Down Rates and their associated Run-Down End Levels determined in accordance with paragraph 4.3F.1 shall be ranked in Run-Down End Level order, such that the Relevant Run-Down Rate with the highest Run-Down End Level value is allocated a Relevant Run-Down Rate Number  $c$  of 1, the Relevant Run-Down Rate with the next least Run-Down End Level value is allocated a Relevant Run-Down Rate Number  $c$  of 2, and so on). The Relevant Run-Down Rate with no associated Run-Down End Level value shall be allocated the highest Relevant Run-Down Rate Number. The result is an ordered set of Relevant Run-Down Rates ( $RRDR_{ij}^c$ ) and associated Run-Down End Levels ( $RDEL_{ij}^c$ ).

4.3F.3 For the purposes of this paragraph 4.3F, the Gate Closure FPN shall be treated as belonging to the set of Relevant Run-Down Rates with a Relevant Run-Down Rate Number of zero, as follows:

$$RRDR_{ij}^0 = 0; \text{ and}$$

$$RDEL_{ij}^0 = FPN_{ij}^{GC}$$

4.3F.4 For each Settlement Period  $j$ , for each BM Unit and for each Relevant Run-Down Rate Number ' $c$ ', the Run-Down End Time ( $RDET_{ij}^c$ ) shall be determined as follows:

(a) for  $c=0$ ,  $RDET_{ij}^c$  shall be the time of Gate Closure for Settlement Period  $j$ :

(b) for  $c>0$ , if  $c$  is less than the highest Relevant Run-Down Rate Number for the BM Unit and Settlement Period:

(iii) the Run-Down Duration ( $RDD_{ij}^c$ ) shall be determined as:

$$RDD_{ij}^c = (RDEL_{ij}^{(c-1)} - RDEL_{ij}^c) / RRDR_{ij}^c; \text{ and}$$

(iv)  $RDET_{ij}^c$  shall be the spot time  $RDD_{ij}^c$  minutes after  $RDET_{ij}^{(c-1)}$

(c) if c is equal to the highest Relevant Run-Up Rate Number for the BM Unit and Settlement Period, then:

(iii)  $RDET_{ij}^c$  shall be the later of  $RDET_{ij}^{(c-1)}$  and the spot time that falls at the end of Settlement Period j; and

(iv) a value of  $RDEL_{ij}^c$  shall be determined as:

$$RDEL_{ij}^c = RDEL_{ij}^{(c-1)} - (RDET_{ij}^c - RDET_{ij}^{(c-1)}) * RRDR_{ij}^c.$$

4.3F.5 In respect of each Settlement Period, for each BM Unit, the MW levels  $RDEL_{ij}^c$  and their associated spot times  $RDET_{ij}^c$  form a sequence of points that represent the minimum level of output the BM Unit could reach if it ran down from Gate Closure at the Applicable Run-Down Rate. For each spot time t falling within the Settlement Period, the value of Run-Down Profile ( $RDP_{ij}(t)$ ) shall be established by linear interpolation of these  $RDEL_{ij}^c$  and  $RDET_{ij}^c$  values.

#### **4.3G Determination of Deemed Maximum Achievable Export ( $DMAE_{ij}(t)$ ) and Deemed Maximum Achievable Import ( $DMAI_{ij}(t)$ )**

4.3E.3 In respect of each Settlement Period, for each BM Unit, the Deemed Maximum Achievable Export ( $DMAE_{ij}(t)$ ) and the Deemed Maximum Achievable Import ( $DMAI_{ij}(t)$ ) shall be determined as:

$$DMAE_{ij}(t) = \min \{ RUP_{ij}(t), MEL_{ij}(t) \}$$

$$DMAI_{ij}(t) = \max \{ RDP_{ij}(t), MIL_{ij}(t) \}$$

#### **4.3H Determination of Unadjusted Deemed Available Volumes ( $UDAOV_{ij}^n$ , $UDABV_{ij}^n$ )**

4.3H.1 In respect of each Settlement Period, for each BM Unit, for each Submitted Bid-Offer Pair for which the associated Bid-Offer Pair Number n is greater than zero (if any) the Unadjusted Deemed Available Offer Volume ( $UDAOV_{ij}^n$ ) shall be determined as follows:

(a) if  $NDZ_{ij}^{GC} > 89$  and  $FPN_{ij} = 0$ , then  $UDAOV_{ij}^n = 0$ ;

(b) if  $FPN_{ij}^{GC} < SEL_{ij}^{GC}$  and  $FPN_{i(j-2)} > FPN_{i(j-1)}$  and  $FPN_{ij} > 0$ , then  $UDAOV_{ij}^n = 0$ ;

(c) in all other cases,  $UDAOV_{ij}^n(t)$  shall be determined as:

$$UDAOV_{ij}^n(t) = \max [0, \max \{ \min (RUP_{ij}(t), SBOUR_{ij}^n(t)), SBOUR_{ij}^{n-1}(t) \} - SBOUR_{ij}^{n-1}(t) ]$$

and  $UDAOV_{ij}^n$  will be calculated by integrating the value of  $UDAOV_{ij}^n(t)$  over all spot times falling within the Settlement Period in question.

4.3H.2 In respect of each Settlement Period, for each BM Unit, for each Submitted Bid-Offer Pair for which the associated Bid-Offer Pair Number n is less than zero (if any) the Unadjusted Deemed Available Bid Volume ( $UDABV_{ij}^n$ ) shall be determined as follows:

(a) if  $NDZ_{ij}^{GC} > 89$  and  $FPN_{ij} = 0$ , then  $UDABV_{ij}^n = 0$ ;

(b) if  $FPN_{ij}^{GC} < SEL_{ij}^{GC}$  and  $FPN_{i(j-2)} > FPN_{i(j-1)}$  and  $FPN_{ij} > 0$ , then  $UDABV_{ij}^n = 0$ ;

(c) in all other cases,  $UDABV_{ij}^n(t)$  shall be determined as:

$$\text{UDABV}_{ij}^n(t) = \min [0, \min \{ \max (\text{RDP}_{ij}(t), \text{SBOLR}_{ij}^n(t)), \text{SBOLR}_{ij}^{n+1}(t) \} \\ - \text{SBOLR}_{ij}^{n+1}(t) ]$$

and  $\text{UDABV}_{ij}^n$  will be calculated by integrating the value of  $\text{UDABV}_{ij}^n(t)$  over all spot times falling within the Settlement Period in question.

**4.3I** Not used

**4.3J Determination of Below-SEL Deemed Available Volumes ( $\text{BSDAOV}_{ij}^n$ ,  $\text{BSDABV}_{ij}^n$ )**

4.3J.1 In respect of each Settlement Period, for each BM Unit, for each Submitted Bid-Offer Pair for which the associated Bid-Offer Pair Number n is greater than zero (if any) the Below-SEL Deemed Available Offer Volume ( $\text{BSDAOV}_{ij}^n$ ) shall be determined as follows:

(a) if  $\text{UDAOV}_{ij}^n = 0$ , then  $\text{BSDAOV}_{ij}^n$  shall be zero

(b) in all other cases,  $\text{BSDAOV}_{ij}^n(t)$  shall be determined as:

$$\text{BSDAOV}_{ij}^n(t) = \max [0, \max \{ \min(\min(\text{RUP}_{ij}(t), \text{SEL}_{ij}^{\text{GC}}), \text{SBOUR}_{ij}^n(t)), \\ \text{SBOUR}_{ij}^{n-1}(t) \} - \max \{ \min(\max(\text{FPN}_{ij}(t), 0), \text{SBOUR}_{ij}^n(t)), \text{SBOUR}_{ij}^{n-1}(t) \} ]$$

and  $\text{BSDAOV}_{ij}^n$  shall be calculated by integrating the value of  $\text{BSDAOV}_{ij}^n(t)$  over all spot times falling within the Settlement Period in question.

4.3J.2 In respect of each Settlement Period, for each BM Unit, for each Submitted Bid-Offer Pair for which the associated Bid-Offer Pair Number n is less than zero (if any) the Below-SEL Deemed Available Bid Volume ( $\text{BSDABV}_{ij}^n$ ) shall be determined as follows:

(a) if  $\text{UDABV}_{ij}^n = 0$ , then  $\text{BSDABV}_{ij}^n$  shall be zero

(b) in all other cases,  $\text{BSDABV}_{ij}^n(t)$  shall be determined as:

$$\text{BSDABV}_{ij}^n(t) = \min [0, \min \{ \max(\max(\text{RDP}_{ij}(t), \text{SEL}_{ij}^{\text{GC}}), \text{SBOLR}_{ij}^n(t)), \\ \text{SBOLR}_{ij}^{n+1}(t) \} - \min \{ \max(\min(\text{FPN}_{ij}(t), 0), \text{SBOLR}_{ij}^n(t)), \text{SBOLR}_{ij}^{n+1}(t) \} ]$$

and  $\text{BSDABV}_{ij}^n$  shall be calculated by integrating the value of  $\text{BSDABV}_{ij}^n(t)$  over all spot times falling within the Settlement Period in question.

**4.3K Determination of Above-SIL Deemed Available Volumes ( $\text{ASDAOV}_{ij}^n$ ,  $\text{ASDABV}_{ij}^n$ )**

4.3K.1 In respect of each Settlement Period, for each BM Unit, for each Submitted Bid-Offer Pair for which the associated Bid-Offer Pair Number n is greater than zero (if any) the Above-SIL Deemed Available Offer Volume ( $\text{ASDAOV}_{ij}^n$ ) shall be determined as follows:

(a) if  $\text{UDAOV}_{ij}^n = 0$ , then  $\text{ASDAOV}_{ij}^n$  shall be zero

(b) in all other cases,  $\text{ASDAOV}_{ij}^n(t)$  shall be determined as:

$$\text{ASDAOV}_{ij}^n(t) = \max [0, \max \{ \min(\max(\text{RUP}_{ij}(t), \text{SIL}_{ij}^{\text{GC}}), \text{SBOUR}_{ij}^n(t)), \\ \text{SBOUR}_{ij}^{n-1}(t) \} - \max \{ \min(\min(\text{FPN}_{ij}(t), 0), \text{SBOUR}_{ij}^n(t)), \text{SBOUR}_{ij}^{n-1}(t) \} ]$$

and ASDAOV<sup>n</sup><sub>ij</sub> shall be calculated by integrating the value of ASDAOV<sup>n</sup><sub>ij</sub>(t) over all spot times falling within the Settlement Period in question.

4.3K.2 In respect of each Settlement Period, for each BM Unit, for each Submitted Bid-Offer Pair for which the associated Bid-Offer Pair Number n is less than zero (if any) the Above-SIL Deemed Available Bid Volume (ASDABV<sup>n</sup><sub>ij</sub>) shall be determined as follows:

(a) if UDABV<sup>n</sup><sub>ij</sub> = 0, then ASDABV<sup>n</sup><sub>ij</sub> shall be zero

(b) in all other cases, ASDABV<sup>n</sup><sub>ij</sub>(t) shall be determined as:

$$\text{ASDABV}_{ij}^n(t) = \min [0, \min \{ \max(\min(\text{RDP}_{ij}(t), \text{SIL}^{\text{GC}}_{ij}), \text{SBOLR}_{ij}^n(t)),$$

$$\text{SBOLR}_{ij}^{n+1}(t)) \} - \min \{ \max(\max(\text{FPN}_{ij}(t), 0), \text{SBOLR}_{ij}^n(t)), \text{SBOLR}_{ij}^{n+1}(t)) \} ]$$

and ASDABV<sup>n</sup><sub>ij</sub> shall be calculated by integrating the value of ASDABV<sup>n</sup><sub>ij</sub>(t) over all spot times falling within the Settlement Period in question.

**4.3L Determination of Deemed Available Volumes (DAOV<sup>nc</sup><sub>ij</sub>, DABV<sup>nc</sup><sub>ij</sub>) and Deemed Available Prices (DAOP<sup>nc</sup><sub>ij</sub>, DABP<sup>nc</sup><sub>ij</sub>)**

4.3L.1 It is recognised that the calculation of Energy Imbalance Prices requires a number of different Deemed Available Volumes to be calculated for each BM Unit and Settlement Period. For this purpose each Deemed Available Volume will be allocated a Deemed Available Volume Type ‘c’ in accordance with paragraphs 4.3L.2 and 4.3L.3 and the following conventions:

(a) A Deemed Available Volume Type ‘c’ of 0 indicates a Deemed Available Volume from a BM Unit that is operating at a level of Active Power output greater than SEL<sup>GC</sup><sub>ij</sub> or less than SIL<sup>GC</sup><sub>ij</sub>;

(b) A Deemed Available Volume Type ‘c’ of 1 indicates a Deemed Available Volume from a BM Unit that is operating at a level of Active Power output greater than zero and less than SEL<sup>GC</sup><sub>ij</sub>;

(c) A Deemed Available Volume Type ‘c’ of –1 indicates a Deemed Available Volume from a BM Unit that is operating at a level of Active Power output greater than SIL<sup>GC</sup><sub>ij</sub> and less than zero.

4.3L.2 In respect of each Settlement Period, for each BM Unit, for each Submitted Bid-Offer Pair for which the associated Bid-Offer Pair Number n is greater than zero (if any), the Deemed Available Offer Volume (DAOV<sup>nc</sup><sub>ij</sub>) and Deemed Available Offer Price (DAOP<sup>nc</sup><sub>ij</sub>) shall be calculated for each Deemed Available Volume Type ‘c’ as follows:

(a) For c = 0:

$$\text{DAOV}_{ij}^{\text{nc}} = \text{UDAOV}_{ij}^n - \text{BSDAOV}_{ij}^n - \text{ASDAOV}_{ij}^n$$

$$\text{DAOP}_{ij}^{\text{nc}} = \text{PO}_{ij}^n$$

(b) For c = 1:

$$\text{DAOV}_{ij}^{\text{nc}} = \text{BSDAOV}_{ij}^n$$

$$\text{DAOP}_{ij}^{\text{nc}} = \Sigma^n (\text{BSDAOV}_{ij}^n * \text{PO}_{ij}^n) / \Sigma^n (\text{BSDAOV}_{ij}^n)$$

unless  $\sum^n (\text{BSDAOV}_{ij}^n)$  is zero in which case  $\text{DAOP}_{ij}^{\text{nc}} = 0$

(c) For  $c = -1$ :

$$\text{DAOV}_{ij}^{\text{nc}} = \text{ASDAOV}_{ij}^n$$

$$\text{DAOP}_{ij}^{\text{nc}} = \sum^n (\text{ASDAOV}_{ij}^n * \text{PO}_{ij}^n) / \sum^n (\text{ASDAOV}_{ij}^n)$$

unless  $\sum^n (\text{ASDAOV}_{ij}^n)$  is zero in which case  $\text{DAOP}_{ij}^{\text{nc}} = 0$

4.3L.3 In respect of each Settlement Period, for each BM Unit, for each Submitted Bid-Offer Pair for which the associated Bid-Offer Pair Number  $n$  is less than zero (if any), the Deemed Available Bid Volume ( $\text{DABV}_{ij}^{\text{nc}}$ ) and Deemed Available Bid Price ( $\text{DABP}_{ij}^{\text{nc}}$ ) shall be calculated for each Deemed Available Volume Type ‘c’ as follows:

(a) For  $c = 0$ :

$$\text{DABV}_{ij}^{\text{nc}} = \text{UDABV}_{ij}^n - \text{BSDABV}_{ij}^n - \text{ASDABV}_{ij}^n$$

$$\text{DABP}_{ij}^{\text{nc}} = \text{PB}_{ij}^n$$

(b) For  $c = 1$ :

$$\text{DABV}_{ij}^{\text{nc}} = \text{BSDABV}_{ij}^n$$

$$\text{DABP}_{ij}^{\text{nc}} = \sum^n (\text{BSDABV}_{ij}^n * \text{PB}_{ij}^n) / \sum^n (\text{BSDABV}_{ij}^n)$$

unless  $\sum^n (\text{BSDABV}_{ij}^n)$  is zero in which case  $\text{DABP}_{ij}^{\text{nc}} = 0$

(c) For  $c = -1$ :

$$\text{DABV}_{ij}^{\text{nc}} = \text{ASDAOV}_{ij}^n$$

$$\text{DABP}_{ij}^{\text{nc}} = \sum^n (\text{ASDABV}_{ij}^n * \text{PB}_{ij}^n) / \sum^n (\text{ASDABV}_{ij}^n)$$

unless  $\sum^n (\text{ASDABV}_{ij}^n)$  is zero in which case  $\text{DABP}_{ij}^{\text{nc}} = 0$

*Paragraphs 4.4.2A, 4.4.2B and 4.4.2C shall be deleted as follows:*

~~4.4.2A In respect of each Settlement Period, some of the accepted Bids and accepted Offers may be defined as De Minimis Accepted Bids and De Minimis Accepted Offers respectively in accordance with the provisions in Annex T-1, and all such De Minimis Accepted Bids and De Minimis Accepted Offers shall be disregarded for the purposes of the calculation of energy imbalance prices.~~

~~4.4.2B In respect of each Settlement Period, the System Total Un-Priced Accepted Offer Volume will be determined as follows:~~

$$\text{TQAO}_j = \sum_i \sum^n \text{QAO}_{ij}^n - \sum_i \sum^n \text{QAPO}_{ij}^n$$

~~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.~~

~~4.4.2C In respect of each Settlement Period, the System Total Un-Priced Accepted Bid Volume will be determined as follows:~~

$$\text{TQUAB}_j = \sum_i \sum^n \text{QAB}_{ij} - \sum_i \sum^n \text{QAPB}_{ij}$$

~~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.~~

*Paragraphs 4.4.3, 4.4.4 and 4.4.4A shall be amended as follows:*

4.4.3 In respect of each Settlement Period, some of the Deemed Available Bid Volumes~~accepted Bids~~ and ~~accepted Offers~~Deemed Available Offer Volumes may be defined as Arbitrage Deemed Available Bid Volume~~Accepted Bids~~ and Arbitrage Deemed Available Offer Volume~~Accepted Offers~~ respectively in accordance with the provisions in Annex T-1, and all such Arbitrage Deemed Available Bid Volume~~Accepted Bids~~ and Arbitrage Deemed Available Offer Volume~~Accepted Offers~~ shall be disregarded for the purposes of the calculation of energy imbalance prices.

4.4.4 In respect of each Settlement Period:

- (a) some or all of the Deemed Available Bid Volumes~~accepted Bids~~ and Deemed Available Offer Volumes~~accepted Offers~~ may be defined as NIV Tagged Deemed Available Bid Volumes~~Bids~~ and NIV Tagged Deemed Available Offer Volumes~~Offers~~ respectively in accordance with the provisions in Annex T-1; and
- (b) some or all of the Buy Price Volume Adjustment (Energy) (EBVA) and Sell Price Volume Adjustment (Energy) (ESVA) may be defined as NIV Tagged EBVA and NIV Tagged ESVA respectively in accordance with the provisions in Annex T-1;
- ~~(c) some or all of the Buy Price Volume Adjustment (System) (SBVA) and Sell Price Volume Adjustment (System) (SSVA) may be defined as NIV Tagged SBVA and NIV Tagged SSVA respectively in accordance with the provisions in Annex T-1;~~
- ~~(d) some or all of the System Total Un-priced Bid Volume and System Total Un-priced Offer Volume may be defined as NIV Tagged System Total Un-priced Bid Volume and NIV Tagged System Total Un-priced Offer Volume respectively in accordance with the provisions in Annex T-1.~~

4.4.4A In respect of each Settlement Period, the Net Imbalance Volume will be determined as follows:

$$\text{NIV}_j = \{(\sum_i \sum^n \text{QAPB}_{ij} + \text{EBVA}_j + \text{SBVA}_j - \text{TQUAO}_j) - \{\sum_i \sum^n (-\text{QAPB}_{ij}) + (-\text{ESVA}_j) + (-\text{SSVA}_j) - (-\text{TQUAB}_j)\}$$

where  $\sum_i$  is the sum over all BM Units and  $\sum^n$  is either the sum over all Accepted Offers ~~that are not De Minimis Accepted Offers and not Arbitrage Accepted Offers~~, or the sum over all Accepted Bids ~~that are not De Minimis Accepted Bids and not Arbitrage Accepted Bids~~, as the case may be.

*Paragraphs 4.4.4C, 4.4.5, 4.4.6, 4.4.6A, 4.4.7, 4.4.8, 4.4.9 and 4.4.10 shall be amended as follows:*

4.4.4C In respect of each Settlement Period:

- (a) some or all of the ~~Deemed Available Bid Volumes~~~~accepted Bids~~ and ~~Deemed Available Offer Volumes~~~~accepted Offers~~ which are not NIV Tagged ~~Deemed Available Bid Volumes~~~~Bids~~ and NIV Tagged ~~Deemed Available Offer Volumes~~~~Offers~~ respectively may be defined as PAR Tagged ~~Deemed Available Bid Volumes~~~~Bids~~ and PAR Tagged ~~Deemed Available Offer Volumes~~~~Offers~~ respectively in accordance with the provisions in Annex T-1;
- (b) some or all of the NIV-Untagged Buy Price Volume Adjustment (Energy) (NUEBVA) and NIV-Untagged Sell Price Volume Adjustment (Energy) (NUESVA) may be defined as PAR Tagged EBVA and PAR Tagged ESVA respectively in accordance with the provisions in Annex T-1.

4.4.5 In respect of each Settlement Period:

- (a) if the Net Imbalance Volume is not equal to zero, and is a positive number, and  $\{\sum_i \Sigma^{nc} \{ \text{DAOVQAPQ}^{nc}_{ij} * \text{TLM}_{ij} \} + \text{UEBVA}_j\}$  is not equal to zero, then the System Buy Price will be determined as follows:

$$\text{SBP}_j = \{ \{ \sum_i \Sigma^{nc} \{ \text{DAOVQAPQ}^{nc}_{ij} * \text{DAOPPQ}^{nc}_{ij} * \text{TLM}_{ij} \} + \text{UEBCA}_j \} / \{ \sum_i \Sigma^{nc} \{ \text{DAOVQAPQ}^{nc}_{ij} * \text{TLM}_{ij} \} + \text{UEBVA}_j \} \} + \{ \text{BPA}_j \}$$

where  $\Sigma_i$  represents the sum over all BM Units and  $\Sigma^{nc}$  represents the sum over those ~~Deemed Available Offer Volumes~~~~accepted Offers~~ that are not ~~De Minimis Accepted Offers and not Arbitrage Accepted~~ ~~Deemed Available Offer Volumes~~~~Offers~~ and not NIV Tagged ~~Deemed Available Offer Volumes~~~~Offers~~ and not PAR Tagged ~~Deemed Available Offer Volumes~~~~Offers~~;

- (b) if the Net Imbalance Volume is equal to zero, or is a negative number, and / or  $\{\sum_i \Sigma^{nc} \{ \text{DAOVQAPQ}^{nc}_{ij} * \text{TLM}_{ij} \} + \text{UEBVA}_j\}$  is equal to zero, then the System Buy Price will (subject to paragraph 4.4.6A) be determined as follows:

$$\text{SBP}_j = \Sigma_s \{ \text{PXP}_{sj} * \text{QXP}_{sj} \} / \Sigma_s \{ \text{QXP}_{sj} \}$$

where  $\Sigma_s$  represents the sum over all Market Index Data Providers;

provided that, if the Net Imbalance Volume is a negative number and  $\text{SSP}_j$  as determined in accordance with paragraph 4.4.6(a) would exceed  $\text{SBP}_j$  as determined in this paragraph (b), then  $\text{SBP}_j$  shall instead be equal to  $\text{SSP}_j$  as determined in accordance with paragraph 4.4.6(a).

4.4.6 In respect of each Settlement Period:

- (a) if the Net Imbalance Volume is not equal to zero, and is a negative number, and  $\{\sum_i \Sigma^{nc} \{ \text{DABVQAPB}^{nc}_{ij} * \text{TLM}_{ij} \} + \text{UESVA}_j\}$  is not equal to zero, then the System Sell Price will be determined as follows:

$$\text{SSP}_j = \{ \{ \sum_i \Sigma^{nc} \{ \text{DABVQAPB}^{nc}_{ij} * \text{DABPPB}^{nc}_{ij} * \text{TLM}_{ij} \} + \text{UESCA}_j \} / \{ \sum_i \Sigma^{nc} \{ \text{DABVQAPB}^{nc}_{ij} * \text{TLM}_{ij} \} + \text{UESVA}_j \} \} + \{ \text{SPA}_j \}$$

where  $\Sigma_i$  represents the sum over all BM Units and  $\Sigma^{nc}$  represents the sum over those ~~Deemed Available Bid Volumes~~~~accepted Bids~~ that are not ~~De Minimis Accepted Bids and not Arbitrage Accepted~~ ~~Deemed Available Bid Volumes~~~~Bids~~ and not NIV Tagged ~~Deemed Available Bid Volumes~~~~Bids~~ and not PAR Tagged ~~Deemed Available Bid Volumes~~~~Bids~~;



- (b) if the Net Imbalance Volume is equal to zero, or is a positive number, and / or  $\{\Sigma_i \Sigma^{nc} \{ \text{DABVQAPB}^{nc}_{ij} * \text{TLM}_{ij} \} + \text{UESVA}_j\}$  is equal to zero, then the System Sell Price will (subject to paragraph 4.4.6A) be determined as follows:

$$\text{SSP}_j = \Sigma_s \{ \text{PXP}_{sj} * \text{QXP}_{sj} \} / \Sigma_s \{ \text{QXP}_{sj} \}$$

where  $\Sigma_s$  represents the sum over all Market Index Data Providers;

provided that, if the Net Imbalance Volume is a positive number and  $\text{SSP}_j$  as so determined would exceed  $\text{SBP}_j$  as determined in accordance with paragraph 4.4.5(a), then  $\text{SSP}_j$  shall instead be equal to  $\text{SBP}_j$  as determined in accordance with paragraph 4.4.5(a).

- 4.4.6A Without prejudice to paragraph 1.5A.4(b) and 1.5A.6(b), if for whatever reason (including the submission or deemed submission of zero values or the absence of Market Index Data) in respect of a Settlement Period:

$$\Sigma_s \text{QXP}_{sj} = 0$$

where  $\Sigma_s$  represents the sum over all Market Index Data Providers,

then (notwithstanding paragraphs 4.4.5(b) and 4.4.6(b)):

- (a) if the Net Imbalance Volume is a positive number, and  $\{\Sigma_i \Sigma^{nc} \{ \text{DAOVQAPO}^{nc}_{ij} * \text{TLM}_{ij} \} + \text{UEBVA}_j\}$  is not equal to zero,  $\text{SSP}_j$  shall be equal to  $\text{SBP}_j$  as determined in accordance with paragraph 4.4.5(a);
- (b) if the Net Imbalance Volume is a positive number, and  $\{\Sigma_i \Sigma^{nc} \{ \text{DAOVQAPO}^{nc}_{ij} * \text{TLM}_{ij} \} + \text{UEBVA}_j\}$  is equal to zero, each  $\text{SBP}_j$  and  $\text{SSP}_j$  shall be zero;
- (c) if the Net Imbalance Volume is a negative number, and  $\{\Sigma_i \Sigma^{nc} \{ \text{DABVQAPB}^{nc}_{ij} * \text{TLM}_{ij} \} + \text{UESVA}_j\}$  is not equal to zero,  $\text{SBP}_j$  shall be equal to  $\text{SSP}_j$  as determined in accordance with paragraph 4.4.6(a);
- (d) if the Net Imbalance Volume is a negative number, and  $\{\Sigma_i \Sigma^{nc} \{ \text{DABVQAPB}^{nc}_{ij} * \text{TLM}_{ij} \} + \text{UESVA}_j\}$  is equal to zero, each  $\text{SBP}_j$  and  $\text{SSP}_j$  shall be zero; and
- (e) if the Net Imbalance Volume is zero, each of  $\text{SBP}_j$  and  $\text{SSP}_j$  shall be zero.

- 4.4.7 ~~Not Used In respect of each Settlement Period, the Total Accepted Priced Offer Volume will be determined as follows:~~

~~$$\text{TQPAO}_j = \Sigma_i \Sigma^n \text{QAPO}^n_{ij}$$~~

~~where  $\Sigma_i$  represents the sum over all BM Units and  $\Sigma^n$  represents the sum over those accepted Offers that are not De Minimis Accepted Offers and not Arbitrage Accepted Offers and not NIV Tagged Offers.~~

- 4.4.8 ~~Not Used In respect of each Settlement Period, the Total Accepted Priced Bid Volume will be determined as follows:~~

~~$$\text{TQPAB}_j = \Sigma_i \Sigma^n \text{QAPB}^n_{ij}$$~~

~~where  $\Sigma_i$  represents the sum over all BM Units and  $\Sigma^n$  represents the sum over those accepted Bids that are not De Minimis Accepted Bids and not Arbitrage Accepted Bids and not NIV Tagged Bids.~~

4.4.9 ~~Not Used~~ In respect of each Settlement Period, the Total Arbitrage Volume will be determined as follows:

$$TAQ_j = \frac{\sum_i (\sum^{n^1} QAPB_{ij} - \sum^{n^2} QAPO_{ij})}{2}$$

where  $\sum_i$  represents the sum over all BM Units and  $\sum^{n^1}$  represents the sum over those accepted Bids that are Arbitrage Accepted Bids and  $\sum^{n^2}$  represents the sum over those accepted Offers that are Arbitrage Accepted Offers.

4.4.10 ~~Not Used~~ In respect of each Settlement Period, the Total NIV Tagged Volume will be determined as follows:

$$TCQ_j = \frac{\{(\sum_i \sum^{n^1} QAPB_{ij}) + TTQUAB_j + NTESVA_j + TSSVA_j\} - \{(\sum_i \sum^{n^2} QAPO_{ij}) + TTQUAO_j + NTEBVA_j + TSBVA_j\}}{2}$$

where  $\sum_i$  represents the sum over all BM Units and  $\sum^{n^1}$  represents the sum over those accepted Bids which are NIV Tagged Bids and  $\sum^{n^2}$  represents the sum over those accepted Offers which are NIV Tagged Offers.

Annex T-1 (Version 17.0) shall be amended as follows:

## ANNEX T-1: CALCULATIONS

### 1. ~~Not used~~ Interpretation

~~1.1 For the purposes of this Annex T-1, and paragraph 4.4, in relation to a BM Unit and Settlement Period, an "accepted Offer" means the Period BM Unit Total Priced Accepted Offer Volume ( $QAPO_{ij}^n$ ), and an "accepted Bid" means the Period BM Unit Total Priced Accepted Bid Volume ( $QAPB_{ij}^n$ ) but excluding Offers and Bids where the value of Period BM Unit Total Priced Accepted Offer Volume or Period BM Unit Total Priced Accepted Bid Volume (as the case may be) is zero.~~

~~1.2 For the purposes of any other provision of the Code, in relation to a BM Unit and Settlement Period, an "accepted Offer" means the Period BM Unit Total Accepted Offer Volume ( $QAO_{ij}^n$ ), and an "accepted Bid" means the Period BM Unit Total Accepted Bid Volume ( $QAB_{ij}^n$ ) but excluding Offers and Bids where the value of Period BM Unit Total Accepted Offer Volume or Period BM Unit Total Accepted Bid Volume (as the case may be) is zero.~~

### 1A De Minimis Volumes

~~1A.1 In respect of each Settlement Period, De Minimis Accepted Offers and De Minimis Accepted Bids will be defined in the following way:~~

~~(a) All accepted Bids for which  $|QAPB_{ij}^n| < DMAT_d$  shall be tagged as De Minimis Accepted Bids.~~

~~(b) All accepted Offers for which  $QAPO_{ij}^n < DMAT_d$  shall be tagged as De Minimis Accepted Offers.~~

~~1A.2 All accepted Bids and accepted Offers which are not De Minimis Accepted Bids and De Minimis Accepted Offers will be defined as Non-De Minimis Bids and Non-De Minimis Offers respectively.~~

### 2. Arbitrage

2.1 In respect of each Settlement Period, Arbitrage ~~Accepted Offers~~ Deemed Available Offer Volumes and Arbitrage ~~Accepted Bids~~ Deemed Available Bid Volumes ~~will~~ shall be defined in the following way.

2.2 If, for the highest priced ~~accepted non-De Minimis Bid~~ Deemed Available Bid Volume,  $QAPB_{ij}^n - DABV_{ij}^{gc}$  (if any) which is not an Arbitrage ~~Accepted~~ Deemed Available Bid Volume, there exists any ~~accepted non-De Minimis Offer~~ Deemed Available Offer Volume which is not an Arbitrage ~~Accepted~~ Deemed Available Offer Volume  $QAPO_{ij}^n - DAOV_{ij}^{nc}$  for which it is true that  $DAOV_{ij}^{nc} \leq DABPB_{ij}^{gc}$ , then the following procedure will be carried out:

(a) All ~~accepted Non-De Minimis Offers~~ Deemed Available Offer Volumes for which  $DAOV_{ij}^{nc} \leq DABPB_{ij}^{gc}$  will be ranked in price order, cheapest first.

(b) The set of ~~accepted Non-De Minimis Offers~~ Deemed Available Offer Volumes  $\{DAOV_{ij}^{nc}, DAOV_{ij}^{nc}, \dots, DAOV_{ij}^{nc}\}$  is then a ranked set of ~~accepted Offers~~ Deemed Available Offer Volumes for all of which it is true that  $DAOV_{ij}^{nc} \leq DABPB_{ij}^{gc}$ .

- (c) Then for all v such that

$$\sum^v DAOV^{n_v c}_{ij} \leq -DABV^{gc}_{ij}$$

where  $\sum^v$  is the sum over all ranked ~~accepted Non-De Minimis Offers~~Deemed Available Offer Volumes up to v,

the  $DAOV^{n_v c}_{ij}$  will be defined as Arbitrage ~~Accepted Offers~~Deemed Available Offer Volumes and the fraction  $\phi$  of  $DABV^{gc}_{ij}$  which is equal to

$\sum^v (-DAOV^{n_v c}_{ij})$  will be defined as an Arbitrage ~~Accepted Bid~~Deemed Available Bid Volume (this fraction may be one (1)).

- (d) If:

$$\sum^v DAOV^{n_v c}_{ij} < -DABV^{gc}_{ij}$$

where  $\sum^v$  is the sum over all ranked ~~accepted Non-De Minimis Offers~~Deemed Available Offer Volumes up to v,

then, if a ranked ~~accepted Non-De Minimis Offer~~Deemed Available Offer Volume, v+1 exists, the fraction  $\gamma$  of  $DAOV^{n_{v+1} c}_{ij}$  which satisfies

$$\sum^v DAOV^{n_v c}_{ij} + \gamma * DAOV^{n_{v+1} c}_{ij} = -DABV^{gc}_{ij}$$

will also be defined as an Arbitrage ~~Accepted Offer~~Deemed Available Offer Volume and  $DABV^{gc}_{ij}$  will be defined as an Arbitrage ~~Accepted Bid~~Deemed Available Bid Volume. All ~~accepted Bids~~Deemed Available Bid Volumes and ~~accepted Offers~~Deemed Available Offer Volumes which are not Arbitrage ~~Accepted Bids~~Deemed Available Bid Volumes and Arbitrage ~~Accepted Offers~~Deemed Available Offer Volumes will be defined as Non-arbitrage ~~Bids~~Deemed Available Bid Volumes and Non-arbitrage ~~Offers~~Deemed Available Offer Volumes respectively.

- 2.3 The process in paragraphs 2.1 and 2.2 will then be repeated for the highest priced ~~accepted Non-De Minimis Bid~~Deemed Available Bid Volume (if any) that remains a Non-arbitrage ~~Bid~~Deemed Available Bid Volume.

- 2.4 If, for the purposes of carrying out the procedure in paragraphs 2.1 and 2.2:

- (a) there are two or more ~~accepted Non-De Minimis Bids~~Deemed Available Bid Volumes that are Non-arbitrage ~~Bids~~Deemed Available Bid Volumes, that have the same highest Bid Price, or
- (b) there are two or more ranked ~~accepted Non-De Minimis Offers~~Deemed Available Offer Volumes that have the same Offer Price

then one of the ~~accepted Bids~~Deemed Available Bid Volumes or (as the case may be) ranked ~~accepted Offers~~Deemed Available Offer Volumes will be selected at random.

- 2.5 If the completed application of paragraphs 2.1 to 2.4 inclusive (the 'initial calculation') would result in there being any ~~accepted Non-De Minimis Bid~~Deemed Available Bid

Volume or ranked ~~accepted Non-De-Minimis-Offer~~Deemed Available Offer Volume which:

- (1) is not an Arbitrage ~~Accepted-Bid~~Deemed Available Bid Volume or (as the case may be) Arbitrage ~~Accepted-Offer~~Deemed Available Offer Volume, but
- (2) has the same price (other than merely by virtue of being a fraction  $(1 - \gamma)$  or  $(1 - \phi)$  pursuant to the initial calculation) as ~~an-accepted Non-De-Minimis-Bids~~Deemed Available Bid Volume which is an Arbitrage ~~Accepted-Bid~~Deemed Available Bid Volume or (as the case may be) ranked ~~accepted Non-De-Minimis-Offer~~Deemed Available Offer Volume which is an Arbitrage ~~Accepted-Offer~~Deemed Available Offer Volume,

then:

- (i) all such ~~accepted Non-De-Minimis-Bids~~Deemed Available Bid Volumes  $DABV^{n_r, c}_{ij}$  or ranked ~~accepted Non-De-Minimis-Offers~~Deemed Available Offer Volumes  $DAOV^{n_r, c}_{ij}$  (whether or not Arbitrage ~~Accepted-Bids~~Deemed Available Bid Volumes or Arbitrage ~~Accepted-Offers~~Deemed Available Offer Volumes on the basis of the initial calculation) which have the same price are "threshold ~~Bids~~Deemed Available Bid Volumes" or "threshold ~~Offers~~Deemed Available Offer Volumes";
- (ii) no threshold ~~Bid-Deemed Available Bid Volume~~ or threshold ~~Offer-Deemed Available Offer Volume~~ shall be defined as an Arbitrage ~~Accepted-Bid~~Deemed Available Bid Volume or Arbitrage ~~Accepted-Offer~~Deemed Available Offer Volume pursuant to the relevant provision, but instead the fraction  $\delta$  of each threshold ~~Bid-Deemed Available Bid Volume~~  $DABV^{n_r, c}_{ij}$  or threshold ~~Deemed Available Offer Volume~~  $DAOV^{n_r, c}_{ij}$  which satisfies the following shall be defined as a Arbitrage ~~Accepted-Bid~~Deemed Available Bid Volume or (as the case may be) Arbitrage ~~Accepted-Offer~~Deemed Available Offer Volume:

$$\delta * \sum^{n_r, c} DABV^{n_r, c}_{ij} = \sum^{n_r, c} DABV^{n_r, c}_{ij}$$

or (as the case may be)

$$\delta * \sum^{n_r, c} DAOV^{n_r, c}_{ij} = \sum^{n_r, c} DAOV^{n_r, c}_{ij}$$

where

$\sum^{n_r, c}$  is the sum over all threshold ~~Bids-Deemed Available Bid Volumes~~ or (as the case may be) threshold ~~Offers-Deemed Available Offer Volumes~~, and

$\sum^{n_r, c}$  is the sum over all threshold ~~Bids-Deemed Available Bid Volumes~~ or (as the case may be) threshold ~~Offers-Deemed Available Offer Volumes~~ (including a fraction  $\gamma$  or  $\phi$ ) which, on the basis of the initial calculation would have been defined as Arbitrage ~~Accepted-Bids~~Deemed Available Bid Volumes or Arbitrage ~~Accepted-Offers~~Deemed Available Offer Volumes.

### NIV Tagging

- 3.1 In respect of each Settlement Period, NIV Tagged ~~Offers~~Deemed Available Offer Volumes, NIV Tagged ~~Bids~~Deemed Available Bid Volumes, NIV Tagged EBVA, ~~NIV Tagged SBVA and~~, NIV Tagged ESVA, ~~NIV Tagged SSVA, NIV Tagged System Total Un-priced Offer Volume and NIV Tagged System Total Un-priced Bid Volume~~ shall~~will~~ be defined in the following way:

~~(a) If:~~

$$\{(\sum^{n^*} (-QAPB_{ij}^{n^*})) + (-ESVA_j) + (-SSVA_j) + (-TQUAB_j)\} = 0$$

~~where  $\sum^{n^*}$  is the sum over those accepted Bids that are both Non-De Minimis Bids and Non-arbitrage Bids; or~~

$$\{(\sum^{n^*} QAPO_{ij}^{n^*}) + EBVA_j + SBVA_j + TQUAO_j\} = 0$$

~~where  $\sum^{n^*}$  is the sum over those accepted Offers that are both Non-De Minimis Offers and Non-arbitrage Offers;~~

~~then no Bids or Offers or ESVA volume or SSVA volume or EBVA volume or SBVA volume or System Total Un-priced Offer Volume or System Total Un-priced Bid Volume will be NIV Tagged.~~

- ~~(ba)~~ Otherwise, the following procedure will be carried out. The set of all accepted Bids~~Deemed Available Bid Volumes~~, which are ~~neither not De Minimis Bids nor Arbitrage~~ Accepted Bids~~Deemed Available Bid Volumes~~, will be ranked in price order, cheapest first (where the cheapest is allocated a  $n'$  value of 1, the next cheapest a  $n'$  value of 2 and so on). In any case where such Bids~~Deemed Available Bid Volumes~~ have the same price as each other, the ordering of such Bids~~Deemed Available Bid Volumes~~ will be random, subject to paragraph (gh). The set of ~~Non-De Minimis and Non-arbitrage Bids~~ Deemed Available Bid Volumes  $\{DABV_{ij}^{n'_{ic}}, DABV_{ij}^{n'_{2c}}, \dots, DABV_{ij}^{n'_{wc}}\}$  is then a set of "**Ranked Priced Bids**Deemed Available Bid Volumes".

The Sell Price Volume Adjustment (Energy) (ESVA<sub>j</sub>) will be added into the set of Ranked Priced Bids~~Deemed Available Bid Volumes~~ according to the Sell Price Cost Adjustment (Energy) (ESCA<sub>j</sub>) (converted to a price in £/MWh, i.e. ESCA<sub>j</sub> / ESVA<sub>j</sub>). The volume will, for the purposes of the NIV calculation only, be assigned a  $n'$  value and the  $n'$  values of the Ranked Priced Bids~~Deemed Available Bid Volumes~~ will be adjusted accordingly. The set of Ranked Priced Bids~~Deemed Available Bid Volumes~~ including the Sell Price Volume Adjustment (Energy) (ESVA<sub>j</sub>) will then be a set of "**Ranked Bids**".

Where the price of the Sell Price Volume Adjustment (Energy) is the same as any other Ranked Priced Bid~~Deemed Available Bid Volume~~, then the Sell Price Volume Adjustment (Energy) volume will be given the highest  $n'$  value of the Bid(s) with the same price.

~~The System Total Un-priced Bid Volume (TQUAB<sub>j</sub>) will then be added into the set of Ranked Bids as  $n' = 1$  and the  $n'$  values of the Ranked Bids will be adjusted accordingly. The volume will, for the purposes of the NIV calculation only, be assigned a  $n'$  value.~~

~~The Sell Price Volume Adjustment (System) (SSVA<sub>j</sub>) will then be added into the set of Ranked Bids as  $n' = 2$  and the  $n'$  values of the Ranked Bids will be~~

~~adjusted accordingly. The volume will, for the purposes of the NIV calculation only, be assigned a n\* value.~~

This then, for the purposes of the NIV Tagging calculation only, will constitute a set of "**Ranked Bid Volumes**", as follows:

$$(-TQUAB^{n^*}_j), (-SSVA^{n^*}_j), ((-QAPB^{n^*}_{ij}, DABV^{n^*c}_{ij} \dots)) (-ESVA^{n^*}_j))$$

The set of all ~~accepted~~ Deemed Available Offer Volumes ~~Offers~~, which are ~~neither De Minimis Offers nor not~~ Arbitrage ~~Accepted Offers~~ Deemed Available Offer Volumes will be ranked in price order, most expensive first (where the most expensive is allocated a n\* value of 1, the next most expensive a n\* value of 2 and so on). In any case where such ~~Offers~~ Deemed Available Offer Volumes have the same price as each other, the ordering of such ~~Offers~~ Deemed Available Offer Volumes will be random, subject to paragraph (gh). The set of ~~Non-De Minimis and~~ Non-arbitrage Deemed Available Offer Volumes ~~Offers~~  $\{DAOV^{n^*c}_{ij}, DAOV^{n^*2c}_{ij}, \dots, DAOV^{n^*xc}_{ij}\}$  is then a set of "**Ranked Priced Offers** Deemed Available Offer Volumes".

The Buy Price Volume Adjustment (Energy) (EBVA<sub>j</sub>) will be added into the set of Ranked ~~Priced Offers~~ Deemed Available Offer Volumes according to the Buy Price Cost Adjustment (Energy) (EBCA<sub>j</sub>) (converted to a price in £/MWh, i.e. EBCA<sub>j</sub> / EBVA<sub>j</sub>). The volume will, for the purposes of the NIV calculation only, be assigned a n\* value and the n\* values of the Ranked ~~Priced Offers~~ Deemed Available Offer Volumes will be adjusted accordingly. The set of Ranked ~~Priced Offers~~ Deemed Available Offer Volumes including the Buy Price Volume Adjustment (Energy) (EBVA<sub>j</sub>) will then be a set of "**Ranked Offers**".

Where the price of the Buy Price Volume Adjustment (Energy) is the same as any other Ranked ~~Priced Offer~~ Deemed Available Offer Volume, then the Buy Price Volume Adjustment (Energy) volume will be given the highest n\* value of the Offer(s) with the same price.

~~The System Total Un-priced Offer Volume (TQUAO<sub>j</sub>) will then be added into the set of Ranked Offers as n\*=1 and the n\* values of the Ranked Offers will be adjusted accordingly. The volume will, for the purposes of the NIV calculation only, be assigned a n\* value.~~

~~The Buy Price Volume Adjustment (System) (SBVA<sub>j</sub>) will then be added into the set of Ranked Offers as n\*=2 and the n\* values of the Ranked Offers will be adjusted accordingly. The volume will, for the purposes of the NIV calculation only, be assigned a n\* value.~~

This then, for the purposes of the NIV Tagging calculation only, will constitute a set of "**Ranked Offer Volumes**", as follows:

$$(-TQUAO^{n^*}_j), (-SBVA^{n^*}_j), ((-DAOVQAPO^{n^*c}_{ij} \dots)) (EBVA^{n^*}_j))$$

(be) If  $NIV_j > 0$ :

$$\{\sum^{n^*} (-QAPB^{n^*}_{ij}) + (-ESVA^{n^*}_j) + (-SSVA^{n^*}_j) + (-TQUAB^{n^*}_j)\} \leq \{\sum^{n^*} QAPO^{n^*}_{ij} + EBVA^{n^*}_j + SBVA^{n^*}_j + TQUAO^{n^*}_j\}$$

where  $\sum^{n^*}$  is the sum over the Ranked Priced Bids and  $\sum^{n^*}$  is the sum over the Ranked Priced Offers,



then all the Ranked Bid Volumes (for all values of n') will be defined as NIV Tagged ~~Bids Deemed Available Bid Volumes~~, or the NIV Tagged ESVA, ~~or the NIV Tagged SSVA or the NIV Tagged System Total Un-priced Bid Volume~~ (as the case may be).

- (dc) Since  $\{\sum^{n'} (-QAPB_{ij}^{n'}) + (-ESVA_j^{n'}) + (-SSVA_j^{n'}) + (-TQUAB_j^{n'})\}$  If  $0 < NIV_j \leq \{\sum^{n*} QDAOV_{ij}^{n*} + EBVA_j^{n*} + SBVA_j^{n*} + TQUAO_j^{n*}\}$  there must exist a number e and a number  $\phi$  (which may be a fraction or zero) for which

$$\frac{NIV_j}{\{\sum^{n'} (-QAPB_{ij}^{n'}) + (-ESVA_j^{n'}) + (-SSVA_j^{n'}) + (-TQUAB_j^{n'})\}} = \{(\sum^{n*} \frac{v < e, c}{(DAOV_{ij}^{n*} + EBVA_j^{n*} + SBVA_j^{n*} + TQUAO_j^{n*})} + \phi * ((QAPDAOV_{ij}^{n*} + EBVA_j^{n*} + SBVA_j^{n*} + TQUAO_j^{n*}))\}$$

where  ~~$\sum^{n'}$  is the sum over all Ranked Bid Volumes and~~  $\sum^{n*} \frac{v < e, c}{v < e, c}$  is the sum over those Ranked Offer Volumes for which v is less than e.

Subject to paragraph (gh), each Ranked Offer Volume of the Ranked Offer Volumes numbered 1 to e-1 for which this is true will be defined as NIV Tagged ~~Offers Deemed Available Offer Volumes~~, or the NIV Tagged EBVA, ~~or the NIV Tagged SBVA, or the NIV Tagged System Total Un-priced Offer Volume~~ (as the case may be). If  $\phi$  is a fraction rather than 0, then the fraction  $\phi$  of the Ranked Offer Volume numbered e will be defined as a NIV Tagged ~~Offer Deemed Available Offer Volume, or the NIV Tagged EBVA, or the NIV Tagged SBVA, or the NIV Tagged System Total Un-priced Offer Volume~~ (as the case may be).

For the purposes of PAR Tagging and the determination of Untagged EBVA (UEBVA<sub>j</sub>) (paragraph 4(f) of this Annex T-1):

The NIV Untagged EBVA (NUEBVA<sub>j</sub>) is the portion of Buy Price Volume Adjustment (Energy) (EBVA<sub>j</sub>) which is not NIV Tagged EBVA (NTEBVA<sub>j</sub>) for the relevant Settlement Period. If none of the Buy Price Volume Adjustment (Energy) (EBVA<sub>j</sub>) is NIV Tagged EBVA, the NIV Untagged EBVA shall be equal to the Buy Price Volume Adjustment (Energy) (EBVA<sub>j</sub>) (and the NIV Tagged EBVA shall be set to zero). If all of the Buy Price Volume Adjustment (Energy) (EBVA<sub>j</sub>) is NIV Tagged EBVA, the NIV Untagged EBVA shall be set to zero.

- (d) If  $NIV_j > 0$  and  $NIV_j > \{\sum^{n*} DAOV_{ij}^{n*} + EBVA_j^{n*}\}$ :

then no Deemed Available Offer Volume or EBVA volume will be NIV Tagged.

For the purposes of reporting:

If none of the Buy Price Volume Adjustment (System) (SBVA<sub>j</sub>) for the relevant Settlement Period is NIV Tagged SBVA (TSBVA<sub>j</sub>), the value of NIV Tagged SBVA (TSBVA<sub>j</sub>) shall be set to zero for that Settlement Period.

If none of the System Total Un-priced Offer Volume for the relevant Settlement Period is NIV Tagged System Total Un-priced Offer Volume (TTQUAO<sub>j</sub>), the value of NIV Tagged System Total Un-priced Offer Volume (TTQUAO<sub>j</sub>) shall be set to zero for that Settlement Period.

- (e) If  $NIV_j < 0$ :



$$\{\sum^{n^*} (-QAPB_{ij}^{n^*}) + (-ESVA_j^{n^*}) + (-SSVA_j^{n^*}) + (-TQUAB_j^{n^*})\} > \{\sum^{n^*} QAPO_{ij}^{n^*} + EBVA_j^{n^*} + SBVA_j^{n^*} + TQUAO_j^{n^*}\}$$

where  $\sum^{n^*}$  is the sum over the Ranked Priced Bids and  $\sum^{n^*}$  is the sum over the Ranked Priced Offers,

then all the Ranked Offer Volumes (for all values of  $n^*$ ) will be defined as NIV Tagged Deemed Available Offer Volumes Offers, or the NIV Tagged EBVA, ~~or the NIV Tagged SBVA, or the NIV Tagged System Total Un-priced Offer Volume~~ (as the case may be).

- (f) ~~Since~~ If  $NIV_j < 0$  and  $\{\sum^{n^*} (-QAPB_{ij}^{n^*}) + (-ESVA_j^{n^*}) + (-SSVA_j^{n^*}) + (-TQUAB_j^{n^*})\} > -NIV_j \{\sum^{n^*} QAPO_{ij}^{n^*} + EBVA_j^{n^*} + SBVA_j^{n^*} + TQUAO_j^{n^*}\}$  there must exist a number  $e$  and a number  $\phi$  (which may be a fraction or zero) for which

$$\{\sum^{n^*} (QAPO_{ij}^{n^*}) - (EBVA_j^{n^*}) - (SBVA_j^{n^*}) - (TQUAO_j^{n^*})\} - NIV_j = \{(\sum^{n^*} \phi^{v < e} (-QAPB_{ij}^{n^*}) + (-ESVA_j^{n^*}) + (-SSVA_j^{n^*}) + (-TQUAB_j^{n^*})) + \phi * ((-QAPB_{ij}^{n^*}) + (-ESVA_j^{n^*}) + (-SSVA_j^{n^*}) + (-TQUAB_j^{n^*}))\}$$

where  $\sum^{n^*}$  is the sum over all Ranked Offer Volumes and  $\sum^{n^* \phi^{v < e}}$  is the sum over those Ranked Bid Volumes for which  $v$  is less than  $e$ .

Subject to paragraph (gh), each Ranked Bid Volume of the Ranked Bid Volumes numbered 1 to  $e-1$  for which this is true will be defined as NIV Tagged Bids Deemed Available Bid Volumes, or the NIV Tagged ESVA, ~~or the NIV Tagged SSVA or the NIV Tagged System Total Un-priced Bid Volume~~ (as the case may be). If  $\phi$  is a fraction rather than 0, then the fraction  $\phi$  of the Ranked Bid Volume numbered  $e$  will be defined as a NIV Tagged Bid Deemed Available Bid Volume, or the NIV Tagged ESVA, ~~or the NIV Tagged SSVA or the NIV Tagged System Total Un-priced Bid Volume~~ (as the case may be).

For the purposes of PAR Tagging and the determination of Untagged ESVA (UESVA<sub>j</sub>) (paragraph 4(d) of this Annex T-1):

The NIV Untagged ESVA (NUESVA<sub>j</sub>) is the portion of the Sell Price Volume Adjustment (Energy) (ESVA<sub>j</sub>) which is not NIV Tagged ESVA (NTESVA<sub>j</sub>) for the relevant Settlement Period. If none of the Sell Price Volume Adjustment (Energy) (ESVA<sub>j</sub>) is NIV Tagged ESVA, the NIV Untagged ESVA shall be equal to the Sell Price Volume Adjustment (Energy) (ESVA<sub>j</sub>) (and the NIV Tagged ESVA shall be set to zero). If all of the Sell Price Volume Adjustment (Energy) (ESVA<sub>j</sub>) is NIV Tagged ESVA, the NIV Untagged ESVA shall be set to zero.

- (g) ~~If~~  $NIV_j < 0$  and  $\{\sum^{n^*} (-DABV_{ij}^{n^*}) + (-ESVA_j^{n^*})\} < -NIV_j$ :

~~then no Deemed Available Bid Volume or ESVA volume will be NIV Tagged.~~

~~For the purposes of reporting:~~

~~If none of the Sell Price Volume Adjustment (System) (SSVA<sub>j</sub>) for the relevant Settlement Period is NIV Tagged SSVA (TSSVA<sub>j</sub>), the value of NIV Tagged SBVA (TSSVA<sub>j</sub>) shall be set to zero for that Settlement Period.~~

~~If none of the System Total Un-priced Bid Volume for the relevant Settlement Period is NIV Tagged System Total Un-priced Bid Volume (TTQUAB<sub>j</sub>), the~~

~~value of NIV Tagged System Total Un-priced Bid Volume (TTQUAB<sub>i</sub>) shall be set to zero for that Settlement Period.~~

(gh) However, for each of paragraphs (c), (d), (e) and (f) (each a "relevant provision") separately, if the application of the relevant provision (the "initial calculation") would result in there being any Ranked Bid Volume or Ranked Offer Volume which:

- (1) is not defined as (as the case may be) a NIV Tagged ~~Bid~~Deemed Available Bid Volume, NIV Tagged Deemed Available Offer Volume, NIV Tagged ESVA or NIV Tagged EBVA, but
- (2) has the same price (other than merely by virtue of being a fraction (1 - φ) pursuant to the initial calculation) as, in the case of a Ranked Bid Volume, a Ranked ~~Bid~~Deemed Available Bid Volume or NIV Tagged ESVA or, in the case of Ranked Offer Volume, a Ranked Offer Volume which is a NIV Tagged ~~Offer~~Deemed Available Offer Volume or NIV Tagged EBVA,

then:

- (i) all such Ranked Bid Volumes  $DABV^{n'c}_{ij}$  or  $ESVA^{n'_j}$  or Ranked Offer Volumes  $DAOV^{n'c}_{ij}$  or  $EBVA^{n'_j}$  (whether or not NIV Tagged Deemed Available Bid Volumes, NIV Tagged ESVA, NIV Tagged Deemed Available Offer Volumes or NIV Tagged EBVA on the basis of the initial calculation) which have the same price are "threshold Bids" (in the case of Ranked Bid Volumes) or "threshold Offers" (in the case of Ranked Offer Volumes);
- (ii) no threshold Bid or threshold Offer shall be defined as a NIV Tagged ~~Bid~~Deemed Available Bid Volume or NIV Tagged ESVA or NIV Tagged ~~Offer~~Deemed Available Offer Volume or NIV Tagged EBVA (as the case may be) pursuant to the relevant provision, but instead the fraction δ of each threshold Bid  $DABV^{n'c}_{ij}$  or  $ESVA^{n'_j}$  or threshold Offer  $DAOV^{n'c}_{ij}$  or  $EBVA^{n'_j}$  which satisfies the following shall be defined as NIV Tagged ~~Bids~~Deemed Available Bid Volumes, NIV Tagged ESVA, NIV Tagged ~~Offers~~Deemed Available Offer Volumes or NIV Tagged EBVA (as the case may be):

$$\delta * (\sum^{n'c} DABV^{n'c}_{ij}, ESVA^{n'_j}) = \sum^{n'c} DABV^{n'c}_{ij}, ESVA^{n'_j}$$

or (as the case may be)

$$\delta * (\sum^{n'c} DAOV^{n'c}_{ij}, EBVA^{n'_j}) = \sum^{n'c} DAOV^{n'c}_{ij}, EBVA^{n'_j}$$

where

$\sum^{n'c}$  is the sum over all threshold Bids or (as the case may be) threshold Offers, and

$\sum^{n_{p,c}}$  is the sum over all threshold Bids or (as the case may be) threshold Offers (including a fraction  $\phi$  thereof) which, on the basis of the initial calculation would have been defined as NIV Tagged ~~Bids~~Deemed Available Bid Volumes or NIV Tagged ESVA or (as the case may be) NIV Tagged ~~Offers~~Deemed Available Offer Volumes or NIV Tagged EBVA.

## 4 PAR Tagging

4.1 In respect of each Settlement Period, PAR Tagged ~~Offers~~Deemed Available Offer Volumes, PAR Tagged ~~Bids~~Deemed Available Bid Volumes, PAR Tagged EBVA and PAR Tagged ESVA will be defined in the following way:

- (a) The set of all ~~accepted Bids~~Deemed Available Bid Volumes, which are neither ~~De Minimis Bids nor~~ Arbitrage ~~Accepted Bids~~Deemed Available Bid Volumes nor NIV Tagged ~~Bids~~Deemed Available Bid Volumes, will be ranked in price order, cheapest first (where the cheapest is allocated a  $n$  value of 1, the next cheapest a  $n$  value of 2 and so on). In any case where such ~~Bids~~Deemed Available Bid Volumes have the same price as each other, the ordering of such ~~Bids~~Deemed Available Bid Volumes will be random, subject to paragraph (g). The set of ~~Non-De Minimis and~~ Non-arbitrage and NIV-Untagged ~~Bids~~Deemed Available Bid Volumes  $\{DABV^{n_{1c}}_{ij}, DABV^{n_{2c}}_{ij}, \dots, DABV^{n_{wc}}_{ij}\}$  is then a set of "**Ranked ~~Priced Bids~~Deemed Available Bid Volumes**".

The NIV-Untagged Sell Price Volume Adjustment (Energy) (NUESVA<sub>j</sub>) will be added into the set of Ranked ~~Priced Bids~~Deemed Available Bid Volumes according to the Sell Price Cost Adjustment (Energy) (ESCA<sub>j</sub>) (converted to a price in £/MWh, i.e. ESCA<sub>j</sub> / ESVA<sub>j</sub>). The volume will, for the purposes of the PAR calculation only, be assigned a  $n$  value and the  $n$  values of the Ranked ~~Priced Bids~~Deemed Available Bid Volumes will be adjusted accordingly. The set of Ranked ~~Priced Bids~~Deemed Available Bid Volumes including the NIV-Untagged Sell Price Volume Adjustment (Energy) (NUESVA<sub>j</sub>) will then be a set of "**Ranked Bids**".

Where the price of the NIV-Untagged Sell Price Volume Adjustment (Energy) is the same as any other ~~Ranked Priced Bid~~Deemed Available Bid Volume, then the NIV-Untagged Sell Price Volume Adjustment (Energy) volume will be given the highest  $n$  value of the Bid(s) with the same price.

This then, for the purposes of the PAR Tagging calculation only, will constitute a set of "**Ranked Bid Volumes**", as follows:

((~~-QAPB<sup>n</sup>~~DABV<sup>n<sub>c</sub></sup><sub>ij</sub>...), (-NUESVA<sup>n</sup><sub>j</sub>))

- (b) The set of all ~~accepted Offers~~Deemed Available Offer Volumes, which are neither ~~De Minimis Offers nor~~ Arbitrage ~~Accepted Offers~~Deemed Available Offer Volumes nor NIV Tagged ~~Offers~~Deemed Available Offer Volumes will be ranked in price order, most expensive first (where the most expensive is allocated a  $n$  value of 1, the next most expensive a  $n$  value of 2 and so on). In any case where such ~~Offers~~Deemed Available Offer Volumes have the same price as each other, the ordering of such ~~Offers~~Deemed Available Offer Volumes will be random, subject to paragraph (g). The set of ~~Non-De Minimis and~~ Non-arbitrage and NIV-Untagged ~~Deemed Available~~ Offer Volumes

$\{DAOV^{n_1c}_{ij}, DAOV^{n_2c}_{ij}, \dots, DAOV^{n_{xc}}_{ij}\}$  is then a set of "**Ranked ~~Priced Offers~~ Deemed Available Offer Volumes**".

The NIV Untagged Buy Price Volume Adjustment (Energy) (NUEBVA<sub>j</sub>) will be added into the set of Ranked **~~Priced Offers~~ Deemed Available Offer Volumes** according to the Buy Price Cost Adjustment (Energy) (EBCA<sub>j</sub>) (converted to a price in £/MWh, i.e. EBCA<sub>j</sub> / EBVA<sub>j</sub>). The volume will, for the purposes of the PAR calculation only, be assigned a n" value and the n" values of the Ranked **~~Priced Offers~~ Deemed Available Offer Volumes** will be adjusted accordingly. The set of Ranked **~~Priced Offers~~ Deemed Available Offer Volumes** including the NIV-Untagged Buy Price Volume Adjustment (Energy) (NUEBVA<sub>j</sub>) will then be a set of "**Ranked Offers**".

Where the price of the NIV-Untagged Buy Price Volume Adjustment (Energy) is the same as any other Ranked **~~Priced Offer~~ Deemed Available Offer Volume**, then the NIV-Untagged Buy Price Volume Adjustment (Energy) volume will be given the highest n" value of the Offer(s) with the same price.

This then, for the purposes of the PAR Tagging calculation only, will constitute a set of "**Ranked Offer Volumes**", as follows:

$$((\text{DAOV}^{n_c}_{ij} \dots), (\text{NUEBVA}^{n_j}))$$

(c) If:

$$\{\sum^{n"} (-\text{QAPB}^{n_c} \text{DABV}^{n_c}_{ij}) + (-\text{NUESVA}^{n_j})\} \leq \text{PAR}$$

where  $\sum^{n"}$  is the sum over the Ranked **~~Priced Bids~~ Deemed Available Bid Volumes**,

then none of the Ranked Bid Volumes (for all values of n") will be defined as PAR Tagged **~~Bids~~ Deemed Available Bid Volumes** or the PAR Tagged ESVA (as the case may be).

(d) If  $\{\sum^{n"} (-\text{QAPB}^{n_c} \text{DABV}^{n_c}_{ij}) + (-\text{NUESVA}^{n_j})\} > \text{PAR}$  there must exist a number f and a number  $\phi$  (which may be a fraction or one) for which

$$\text{PAR} = \{(\sum^{n"}_{v < f, c} (-\text{QAPB}^{n_c} \text{DABV}^{n_c}_{ij}), (-\text{NUESVA}^{n_j})) + \phi * ((-\text{QAPB}^{n_c} \text{DABV}^{n_c}_{ij}), (-\text{NUESVA}^{n_j}))\}$$

where  $\sum^{n"}_{v < f, c}$  is the sum over those Ranked Bid Volumes for which v is less than f.

Subject to paragraph (g), each Ranked Bid Volume of the Ranked Bid Volumes numbered f+1 or higher for which this is true will be defined as a PAR Tagged **~~Bid~~ Deemed Available Bid Volume** or the PAR Tagged EBVA (as the case may be). If  $\phi$  is a fraction rather than 1, then the fraction (1- $\phi$ ) of the Ranked Bid Volume numbered f will be defined as a PAR Tagged **~~Bid~~ Deemed Available Bid Volume** or the PAR Tagged ESVA (as the case may be).

For the purposes of the energy imbalance price calculation (Section T 4.4.5 and 4.4.6):

The Untagged ESVA (UESVA<sub>j</sub>) is the portion of NIV Untagged Sell Price Volume Adjustment (Energy) (NUESVA<sub>j</sub>) which is not PAR Tagged ESVA (PTESVA<sub>j</sub>) for the relevant Settlement Period. If none of the NIV Untagged

Sell Price Volume Adjustment (Energy) (NUESVA<sub>j</sub>) is PAR Tagged ESVA, the Untagged ESVA shall be equal to the NIV Untagged Sell Price Volume Adjustment (Energy) (NUESVA<sub>j</sub>) (and the PAR Tagged ESVA shall be set to zero). If all of the Sell Price Volume Adjustment (Energy) (ESVA<sub>j</sub>) is NIV Tagged ESVA or PAR Tagged ESVA, the Untagged ESVA shall be set to zero.

The Untagged ESCA (UESCA<sub>j</sub>) is then the portion of the Sell Price Cost Adjustment (Energy) associated with the Untagged ESVA for the relevant Settlement Period determined as follows:

$$\text{UESCA}_j = \text{UESVA}_j * (\text{ESCA}_j / \text{ESVA}_j)$$

(e) If:

$$\{\sum^{n^c} (\text{QAPO}^{\#} \text{DAOV}^{n^c}_{ij}) + (\text{NUEBVA}^{n^c}_j)\} \leq \text{PAR}$$

where  $\sum^{n^c}$  is the sum over the Ranked ~~Priced Offers~~ Deemed Available Offer Volumes,

then none of the Ranked Offer Volumes (for all values of  $n^c$ ) will be defined as PAR Tagged ~~Offers~~ Deemed Available Offer Volumes or the PAR Tagged EBVA (as the case may be).

(f) If  $\{\sum^{n^c} (\text{QAPO}^{\#} \text{DAOV}^{n^c}_{ij}) + (\text{NUEBVA}^{n^c}_j)\} > \text{PAR}$  there must exist a number  $f$  and a number  $\phi$  (which may be a fraction or one) for which

$$\text{PAR} = \{(\sum^{n^c}_{v < f^c} (\text{QAPO}^{\#} \text{DAOV}^{n^c}_{ij}), (\text{NUEBVA}^{n^c}_j)) + \phi * ((\text{QAPO}^{\#} \text{DAOV}^{n^c}_{ij}), (\text{NUEBVA}^{n^c}_j))\}$$

where  $\sum^{n^c}_{v < f^c}$  is the sum over those Ranked Offer Volumes for which  $v$  is less than  $f$ .

Subject to paragraph (g), each Ranked Offer Volume of the Ranked Offer Volumes numbered  $f+1$  or higher for which this is true will be defined as a PAR Tagged ~~Offer~~ Deemed Available Offer Volume or the PAR Tagged EBVA (as the case may be). If  $\phi$  is a fraction rather than 1, then the fraction  $(1-\phi)$  of the Ranked Offer Volume numbered  $f$  will be defined as a PAR Tagged ~~Offer~~ Deemed Available Offer Volume or the PAR Tagged EBVA (as the case may be).

For the purposes of the energy imbalance price calculation (Section T 4.4.5 and 4.4.6):

The Untagged EBVA (UEBVA<sub>j</sub>) is the portion of NIV Untagged Buy Price Volume Adjustment (Energy) (NUEBVA<sub>j</sub>) which is not PAR Tagged EBVA (PTEBVA<sub>j</sub>) for the relevant Settlement Period. If none of the NIV Untagged Buy Price Volume Adjustment (Energy) (NUEBVA<sub>j</sub>) is PAR Tagged EBVA, the Untagged EBVA shall be equal to the NIV Untagged Buy Price Volume Adjustment (Energy) (NUEBVA<sub>j</sub>) (and the PAR Tagged EBVA shall be set to zero). If all of the Buy Price Volume Adjustment (Energy) (EBVA<sub>j</sub>) is NIV Tagged EBVA or PAR Tagged EBVA, the Untagged EBVA shall be set to zero.

The Untagged EBVA (UEBCA<sub>j</sub>) is then the portion of the Buy Price Cost Adjustment (Energy) associated with the Untagged EBVA for the relevant Settlement Period determined as follows:

$$UEBCA_j = UEBVA_j * (EBCA_j / EBVA_j)$$

- (g) However, for each of paragraphs (c), (d), (e) and (f) (each a "relevant provision") separately, if the application of the relevant provision (the "initial calculation") would result in there being any Ranked Bid or Ranked Offer which:

- (1) is not defined as (as the case may be) a PAR Tagged ~~Bid~~Deemed Available Bid Volume, PAR Tagged ~~Offer~~Deemed Available Offer Volume, PAR Tagged ESVA or PAR Tagged EBVA, but
- (2) has the same price (other than merely by virtue of being a fraction  $\phi$  pursuant to the initial calculation) as, in the case of a Ranked Bid, a Ranked Bid which is a PAR Tagged ~~Bid~~Deemed Available Bid Volume or PAR Tagged ESVA or, in the case of Ranked Offer, a Ranked Offer which is a PAR Tagged ~~Offer~~Deemed Available Offer Volume or PAR Tagged EBVA,

then:

- (i) all such Ranked Bids  $DABV^{n''_{r,c}}_{ij}$  or  $ESVA^{n''_{r,j}}$  or Ranked Offers  $DAOV^{n''_{r,c}}_{ij}$  or  $EBVA^{n''_{r,j}}$  (whether or not PAR Tagged ~~Bids~~Deemed Available Bid Volumes, PAR Tagged ESVA, PAR Tagged Deemed Available Offer Volumes or PAR Tagged EBVA on the basis of the initial calculation) which have the same price are "threshold Bids" (in the case of Ranked Bids) or "threshold Offers" (in the case of Ranked Offers);
- (ii) no threshold Bid or threshold Offer shall be defined as a PAR Tagged Deemed Available Bid Volume or PAR Tagged ESVA or PAR Tagged Deemed Available Offer Volume or PAR Tagged EBVA (as the case may be) pursuant to the relevant provision, but instead the fraction  $\delta$  of each threshold Bid  $DABV^{n''_{r,c}}_{ij}$  or  $ESVA^{n''_{r,j}}$  or threshold Offer  $DAOV^{n''_{r,c}}_{ij}$  or  $EBVA^{n''_{r,j}}$  which satisfies the following shall be defined as PAR Tagged ~~Bids~~Deemed Available Bid Volumes, PAR Tagged ESVA, PAR Tagged ~~Offers~~Deemed Available Offer Volumes or PAR Tagged EBVA (as the case may be):

$$\delta * (\sum^{n''_{r,c}} DABV^{n''_{r,c}}_{ij}, ESVA^{n''_{r,j}}) = \sum^{n''_{r,c}} DABV^{n''_{r,c}}_{ij}, ESVA^{n''_{r,j}}$$

or (as the case may be)

$$\delta * (\sum^{n''_{r,c}} DAOV^{n''_{r,c}}_{ij}, EBVA^{n''_{r,j}}) = \sum^{n''_{r,c}} DAOV^{n''_{r,c}}_{ij}, EBVA^{n''_{r,j}}$$

where

$\sum^{n''_{r,c}}$  is the sum over all threshold Bids or (as the case may be) threshold Offers, and

$\sum^{n_{r,c}}$  is the sum over all threshold Bids or (as the case may be) threshold Offers (including a fraction  $1-\phi$  thereof) which, on the basis of the initial calculation would have been defined as PAR Tagged ~~Bids~~ Deemed Available Bid Volumes or PAR Tagged ESVA or (as the case may be) PAR Tagged ~~Offers~~ Deemed Available Offer Volumes or PAR Tagged EBVA.