



Redlined Market Index Definition Statement text for 'Amending Gate Closure references in Market Index Data'

This Modification proposes changes to sections 2.2, 4.1, 4.2, 4.4.1, 4.4.2, A1. We have redlined these changes against Version 8.0.

There is no impact on any other part of this document for this Modification.

Amend section 2.2 as follows:

2.2 List of Definitions

Market Index Definition Statement	has the meaning given to that term in Section T of the Code;
Individual Liquidity Threshold	has the meaning given to that term in Section T of the Code;
Market Index Data Provider	has the meaning given to that term in Section T of the Code;
Market Index Data	means the data to be provided by the Market Index Data Provider(s) in accordance with the Market Index Definition Statement or, in relation to a particular Market Index Data Provider, the data to be so provided by that Market Index Data Provider, in each case as set out in Section T of the Code;
Market Index Price	In relation to a Market Index Data Provider and a Settlement Period, the price data to be provided by that Market Index Data Provider in accordance with the Market Index Definition Statement or (where applicable) deemed in accordance with Section T of the Code;
Market Index Volume	In relation to a Market Index Data Provider and a Settlement Period, the volume data to be provided by that Market Index Data Provider in accordance with the Market Index Definition Statement or (where applicable) deemed in accordance with Section T of the Code;
qualifying contract/product	A qualifying contract or product is a contract or product which is traded on the spot market in the short term and which is eligible for inclusion in the Market Index Data calculation. Qualifying contracts or products for each Market Index Data Provider are defined in the individual methodology statements in this Market Index Definition Statement;
short term	has the meaning given to that term in Section T of the Code; Short term is defined in Section T of the Code, as no more than 3 Business Days prior to Gate Closure for the relevant Settlement Period;
time weighting	Trades nearer to the Submission Deadline Gate Closure will be weighted so these trades have more influence on the Market Index Data than trades notified earlier;
timebands	are the time periods used for the time weighting, and are as defined in section 4.4.1 of this Market Index Definition Statement;
product weighting	Products traded nearer to real time are weighted to ensure that they have a more proportionate effect on the Market Index Price than those products traded earlier thus making the Market Index more reflective of the price of short term energy and ensuring that unrepresentative products do not have a disproportionate effect on the resulting Market Index Data.

Amend section 4.1 as follows:

4.1 Principles to be applied in setting Individual Liquidity Thresholds

- (a) Individual Liquidity Thresholds should be set to the same value(s) for every MIDP;
- (b) Individual Liquidity Thresholds may be set to zero;
- (c) Individual Liquidity Thresholds may be set to different values for different Settlement Periods in the day and may vary by Season or Day Type;

- (d) Individual Liquidity Thresholds should be set based on the analysis of historical data;
- (e) Individual Liquidity Thresholds should be set at a level that minimises the likelihood that the Market Index Price will be set by a single trade;
- (f) Individual Liquidity Thresholds should be set to ensure that the Market Index Price is defaulted in the minimum number of Settlement Periods, subject to (e) above.

Amend section 4.2 as follows:

4.2 Principles to be applied in setting product and time weighting values

- (a) Weightings should be applied to the components that make up the Market Index Price;
- (b) Weightings should not be applied to the Market Index Volume and should not be used in determining whether the traded volume meets the Liquidity Threshold for the half hour;
- (c) Weightings may be applied to reflect how close to real time a trade was made (timeband weighting);
- (d) Weightings may be applied to the product or contract types which qualify in the index calculation (i.e. those which are traded in the short term as defined in the BSC);
- (e) The same weightings must be applied to equivalent qualifying products and timebands across all MIDPs (e.g. 4 Hour blocks, Half Hour blocks);
- (f) Weightings may be set to ensure that the Market Index Price is reflective of the price of trades as close as possible to ~~the Submission Deadline~~ ~~closure~~;
- (g) Weightings may be set to minimise the flattening effect on the Market Index Price of including traded products used in the methodology that have one price for a time period longer than one Settlement Period;
- (h) Weightings may take values from 0 to 1;
- (i) Where a weighting is set to 0, the weighting is effectively null, trades in the related product type and timeband will be excluded from the Market Index Volume (and Price) calculation.

Amend section 4.4.1 as follows:

4.4.1 Description of Timebands

ELEXON has specified that each MIDP's systems must have the capability to support (without a system change) trades made within the following timebands:

No	Timeband	Timeband Description
1	1 Hour	Submission Deadline (for the relevant Settlement Period) to ≥ -1 hour

2	2 Hours	> -1 hour to >= -2 hours
3	3 Hours	> -2 hours to >= -3 hours
4	4 Hours	> -3 hours to >= -4 hours
5	8 Hours	> -4 hours to >= -8 hours
6	12 Hours	> -8 hours to >= -12 hours
7	16 Hours	> -12 hours to >= -16 hours
8	20 Hours	> -16 hours to >= -20 hours
9	24 Hours	> -20 hours to >= -24 hours
10	1 calendar day	> -24 hours to SP 1 on CD-1
11	2 calendar days	SP 1 to SP48 on CD-2
12	3 calendar days	SP 1 to SP48 on CD-3

These timebands are represented pictorially in section 4.4.2.

For the avoidance of doubt, in terms of inclusivity of trades into a timeband:

- Where the trade was done at HH:29:59 or HH:59:59, then it will fall into the earlier timeband;
- Where the trade was done at HH:30:00 or HH:00:00 then it will fall into the later timeband.

For example, a trade on CD-2 at 23:59:59 will fall into timeband 11, however, a trade made 1 second later at 00:00:00 will fall into timeband 10 (or 9 if it is Settlement Period 1, within day, as reflected in section 4.4.2).

Similarly, for Settlement Period 1 within day, where a trade is made at 06:59:59, then this falls into timeband 8, whereas a trade made at 07:00:00 falls into timeband 7.

Amend section 4.4.2 as follows:

4.4.2 Graphical Representation of Timebands

Note: a trade for delivery in the ‘Delivery time’ area of the diagram has a trade time before ~~the Submission DeadlineGate Closure~~. The trade time determines which Timeband the trade applies to. For example a trade at 13:00 for delivery at Settlement Period 10 on the next calendar day falls within Timeband7.

Amend section A1 as follows:

A1 Methodology Statement for EPEX SPOT SE (EPEX)

The methodology is designed to generate a Market Index Price (representing a weighted average price relating to qualifying contracts) for each Settlement Period.

A qualifying contract may take the form of any of the following relevant EPEX Products, specifically traded on or after the third calendar day prior to ~~the Submission DeadlineGate Closure~~ for the relevant Settlement Period.

1. Relevant EPEX Product definitions:

Half Hour – duration of 30 minutes, commencing either on the hour or half hour.

1 Hour Block – normal duration of 1 hour, commencing at: 01:00, 02:00, 03:00, 04:00, 05:00, 06:00, 07:00, 08:00, 09:00, 10:00, 11:00, 12:00, 13:00, 14:00, 15:00, 16:00, 17:00, 18:00, 19:00, 20:00, 21: 00, 22: 00, 23: 00, & 00:00. On the March clock change day, there is no block commencing at 01:00.

2 Hour Block – normal duration of 2 hours, commencing at: 01:00, 03:00, 05:00, 07:00, 09:00, 11:00, 13:00, 15:00, 17:00, 19:00, 21:00 & 23:00. On the March clock change day, the block starting at 01:00 has a duration of one hour. On the October clock change day, the block starting at 01:00 (BST) has a duration of three hours.

4 Hour Block – normal duration of 4 hours, commencing at: 03:00, 07:00, 11:00, 15:00, 19:00 & 23:00. On the March clock change day, the block starting at 23:00 has a duration of three hours. On the October clock change day, the block starting at 23:00 has a duration of five hours.

Overnight – normal duration of 8 hours, commencing at 23:00. On the March clock change day the product has a duration of seven hours. On the October clock change day the product has a duration of nine hours.

Peak – duration of 12 hours, commencing at 07:00. This product is not affected by clock change days.

Extended Peak – duration of 16 hours commencing at 07:00. This product is not affected by clock change days.

Day Ahead Auction – Duration of 1 hour. Trades are made by 10:50 for the following day. Traded blocks commence at 23:00, 00:00, 01:00, 02:00, 03:00, 04:00, 05:00, 06:00, 07:00, 08:00, 09:00, 10:00, 11:00, 12:00, 13:00, 14:00, 15:00, 16:00, 17:00, 18:00, 19:00, 20:00, 21: 00 & 22: 00. On the March clock change day, there is no block commencing at 01:00.

All relevant EPEX Products are for delivery via an Energy Contract Volume Notification to the ECVAA.

Each qualifying contract's contribution to the Market Index Price is weighted. The weighting varies both according to product and to time of trade. Each qualifying contract falls within a specific Timeband and has a specific Weighting (defined as follows):

SHORT-TERM TIMEBANDS – for qualifying contracts traded less than or equal to 24 hours prior to ~~the Submission Deadline~~~~Gate Closure~~ for the relevant Settlement Period:

ID	Difference between time of trade and the Submission Deadline Gate Closure for the relevant Settlement Period (Hours)
1	0 <= AND <=1
2	1 < AND <=2
3	2 < AND <=3
4	3 < AND <=4
5	4 < AND <=8
6	8 < AND <=12
7	12 < AND <=16
8	16 < AND <=20
9	20 < AND <=24

LONGER-DATED TIMEBANDS – for qualifying contracts traded greater than 24 hours prior to ~~the Submission Deadline~~~~Gate Closure~~ for the relevant Settlement Period:

ID	Day of Trade relative to Day of Gate Closure for the relevant Settlement Period
ID	Day of Trade relative to Day of the Submission Deadline Gate Closure for the relevant Settlement Period
10	D-1
11	D-2
12	D-3

For the avoidance of doubt, as Market Index Prices are calculated on a Settlement Period basis, the Timeband is calculated by reference to the difference in time between the time the contract was traded and ~~the Submission Deadline~~~~Gate Closure~~ for the Settlement Period for which the price is being calculated, not the difference in time between the time the contract was traded and ~~the Submission Deadline~~~~Gate Closure~~ for the first Settlement Period of a

multi-period contract. E.g. if the contract is a 2 Hour Block, (which has a duration of 4 Settlement Periods), the weighting given to individual periods within this contract could vary if the difference in time between the time the contract was traded and the Submission DeadlineGate Closure for the individual Settlement Periods falls within different Timebands.

Timebands will need no adjustment on clock change days, as they refer to the absolute time between the Submission DeadlineGate Closure for the Settlement Period and the time the product was traded, not the difference in the local time of the Submission DeadlineGate Closure and the time the product was traded.

2. Weightings

Weighting (W_c)	Timebands											
Relevant EPEX Product	1	2	3	4	5	6	7	8	9	10	11	12
Half-Hour	1	1	1	1	1	0+	0	0	0	0	0	0
1 Hour Block	1	1	1	1	1	0+	0	0	0	0	0	0
2 Hour Block	1	1	1	1	1	0+	0	0	0	0	0	0
4 Hour Block	1	1	1	1	1	0+	0	0	0	0	0	0
Overnight	0	0	0	0	0	0	0	0	0	0	0	0
Peak	0	0	0	0	0	0	0	0	0	0	0	0
Extended Peak	0	0	0	0	0	0	0	0	0	0	0	0
Day Ahead Auction	0	0	0	0	0	0	0	0	0	0	0	0

The Weightings Table is fixed for all contracts delivering on any particular Settlement Day and is the same value in all Settlement Periods.

3. Price Formula

The half-hourly Traded Price (TP_j) is calculated as the weighted average price of all qualifying contracts.

$$\text{If } \sum_{c=1}^n (V_{jc} \cdot W_c) = 0 \quad \text{then } TP_j = 0$$

else

$$TP_j = \frac{\left\{ \sum_{c=1}^n (P_{jc} \cdot V_{jc} \cdot W_c) \right\}}{\left\{ \sum_{c=1}^n (V_{jc} \cdot W_c) \right\}}$$

The half hourly Traded Volume (TV_j) is calculated as the sum of the volume of all qualifying contracts, where W_c for that qualifying contract is non-zero.

$$TV_j = \sum_{c=1}^m V_{jc} \quad (\text{excluding values of } V_{jc} \text{ where } W_c = 0)$$

The Market Index Volume (MIV_j) and Market Index Price (MIP_j) are calculated as follows:

If $\{LT_j > TV_j\}$ then $MIV_j = 0$ and $MIP_j = 0$
 else $MIV_j = TV_j$ and $MIP_j = TP_j$

Where:

P_{jc} is the price (£/MWh) of a qualifying contract 'c' in period 'j';

V_{jc} is the volume (MWh) of a qualifying contract 'c' delivered in period 'j';

W_c is the Weighting of qualifying contract 'c', with respect to the Relevant EPEX Product and the Timeband in which it was traded;

LT_j is the volume (MWh) of the Liquidity Threshold in period 'j'.

Sub-scripts:

'j' Settlement Period;

'c' qualifying contract.

Where no Liquidity Threshold has been provided for a Settlement Period the value will be set to 0, (except where the rules below for clock change days would otherwise apply).

If ELEXON does not provide Liquidity Thresholds specifically for the clock change days, then the following rules will be applied.

For a 'short' day, having 46 Settlement Periods (i.e. the spring clock change when 1am GMT changes to 2am BST):

Settlement Periods 1 to 2 (00:00 to 01:00 GMT) of the 'short' day take the values of Settlement Periods 1 to 2 (00:00 to 01:00 local time) of the 'normal' day data;

Settlement Periods 3 to 46 (02:00 to 24:00 BST) of the 'short' day take the values of Settlement Periods 5 to 48 (02:00 to 24:00 local time) of the 'normal' day data;

Settlement Periods 3 and 4 of the 'normal' day data are not used on a short day.

For a 'long' day, having 50 Settlement Periods (i.e. the autumn clock change when 2am BST changes to 1am GMT):

Settlement Periods 1 to 4 (00:00 to 02:00 BST) of the 'long' day take the values of Settlement periods 1 to 4 (00:00 to 02:00 local time) of the 'normal' day data;

Settlement Periods 5 to 6 (01:00 to 02:00 GMT) of the 'long' day take the values of Settlement Periods 3 to 4 (01:00 to 02:00 local time) of the 'normal' day data;

Settlement Periods 7 to 50 (02:00 to 24:00 GMT) of the 'long' day take the values of Settlement Periods 5 to 48 (02:00 to 24:00 local time) of the 'normal' day data.

The Market Index Price will be calculated in Pounds Sterling per MWh, supplied rounded to two decimal places, Market Index Volume will be supplied in MWh, rounded to three decimal

places. Standard rounding rules will be applied, i.e. less than five round down, more than or equal to five round up.

EPEX shall submit Market Index Data to the BMRA no later than the end of the Settlement Period to which the data pertains and shall submit Market Index Data to the SAA and BSCCo no later than the end of the next Business Day following the relevant Settlement Day.

Relevant EPEX Products cease trading at or before ~~the Submission Deadline~~~~Gate Closure~~ for the first Settlement Period of delivery.

4. Erroneous Trades

Errors are determined in accordance with the provisions contained within the EPEX Master Service and Participation Agreement. Where EPEX, in its absolute discretion, determines that a trade has been contracted through error, EPEX may reverse such a trade and make the necessary amendments to notifications and settlement. ~~Such reversed trades shall not be included within the calculation of the Market Index Data.~~

Should EPEX become aware of an error or change that affects the underlying data of a previously submitted Market Index Data, such that the Market Index Data submitted is no longer the data that would have been submitted by EPEX in respect of that Settlement Period, EPEX will promptly inform the BSCCo of such change and its effect on the Market Index Data, recalculate and resubmit the Market Index Data for the relevant Settlement Period(s) and Settlement Day(s) taking account of such change.

A2 Methodology Statement for Nord Pool AS (Nord Pool)

The methodology is designed to generate a Market Index Price (representing a weighted average price relating to qualifying contracts) for each Settlement Period.

A qualifying contract may take the form of any of the following relevant Nord Pool Products, specifically traded on or after the third calendar day prior to ~~the Submission Deadline~~~~Gate Closure~~ for the relevant Settlement Period.

1. Relevant Nord Pool Product definitions:

Half Hour – duration of 30 minutes, commencing either on the hour or half hour.

1 Hour Block – normal duration of 1 hour, commencing at: 01:00, 02:00, 03:00, 04:00, 05:00, 06:00, 07:00, 08:00, 09:00, 10:00, 11:00, 12:00, 13:00, 14:00, 15:00, 16:00, 17:00, 18:00, 19:00, 20:00, 21: 00, 22: 00, 23: 00, & 00:00. On the March clock change day, there is no block commencing at 01:00. On the October clock change day, the block starting at 01:00 has a duration of two hours.

2 Hour Block – normal duration of 2 hours, commencing at: 01:00, 03:00, 05:00, 07:00, 09:00, 11:00, 13:00, 15:00, 17:00, 19:00, 21:00 & 23:00. On the March clock change day, the block starting at 01:00 has a duration of one hour. On the October clock change day, the block starting at 01:00 (BST) has a duration of three hours.

4 Hour Block – normal duration of 4 hours, commencing at: 03:00, 07:00, 11:00, 15:00, 19:00 & 23:00. On the March clock change day, the block starting at 23:00 has a duration of three

hours. On the October clock change day, the block starting at 23:00 has a duration of five hours.

Overnight – normal duration of 8 hours, commencing at 23:00. On the March clock change day the product has a duration of seven hours. On the October clock change day the product has a duration of nine hours.

Peak – duration of 12 hours, commencing at 07:00. This product is not affected by clock change days.

Extended Peak – duration of 16 hours commencing at 07:00. This product is not affected by clock change days.

Day Ahead Auction – Duration of 1 hour. Trades are made by 09:30 each Working Day for the following day (except for Saturdays, Sundays and Mondays where Trades are made by 09:15, 09:30 and 09:45 respectively each Friday. For Public Holidays and the days following Public Holidays, agreement is made with the market as to the auction timing). Traded blocks commence at 23:00, 00:00, 01:00, 02:00, 03:00, 04:00, 05:00, 06:00, 07:00, 08:00, 09:00, 10:00, 11:00, 12:00, 13:00, 14:00, 15:00, 16:00, 17:00, 18:00, 19:00, 20:00, 21:00 & 22:00. On the March clock change day, there is no block commencing at 01:00. On the October clock change day, the block starting at 01:00 has a duration of two hours.

All relevant Nord Pool Products are for delivery via an Energy Contract Volume Notification to the ECVAA.

Each qualifying contract's contribution to the Market Index Price is weighted. The weighting varies both according to product and to time of trade. Each qualifying contract falls within a specific Timeband and has a specific Weighting (defined as follows):

SHORT-TERM TIMEBANDS – for qualifying contracts traded less than or equal to 24 hours prior to [the Submission DeadlineGate-Closure](#) for the relevant Settlement Period:

ID	Difference between time of trade and the Submission DeadlineGate-Closure for the relevant Settlement Period (Hours)
1	0 <= AND <=1
2	1 < AND <=2
3	2 < AND <=3
4	3 < AND <=4
5	4 < AND <=8
6	8 < AND <=12
7	12 < AND <=16
8	16 < AND <=20
9	20 < AND <=24

LONGER-DATED TIMEBANDS – for qualifying contracts traded greater than 24 hours prior to [the Submission DeadlineGate-Closure](#) for the relevant Settlement Period:

ID	Day of Trade relative to Day of <u>the Submission DeadlineGate Closure</u> for the relevant Settlement Period
10	D-1
11	D-2
12	D-3

For the avoidance of doubt, as Market Index Prices are calculated on a Settlement Period basis, the Timeband is calculated by reference to the difference in time between the time the contract was traded and the Submission DeadlineGate Closure for the Settlement Period for which the price is being calculated, not the difference in time between the time the contract was traded and the Submission DeadlineGate Closure for the first Settlement Period of a multi-period contract. E.g. if the contract is a 2 Hour Block, (which has a duration of 4 Settlement Periods), the weighting given to individual periods within this contract could vary if the difference in time between the time the contract was traded and the Submission DeadlineGate Closure for the individual Settlement Periods falls within different Timebands.

Timebands will need no adjustment on clock change days, as they refer to the absolute time between the Submission DeadlineGate Closure for the Settlement Period and the time the product was traded, not the difference in the local time of the Submission DeadlineGate Closure and the time the product was traded.

2. Weightings

Weighting (W_c)	Timebands												
	1	2	3	4	5	6	7	8	9	10	11	12	
<i>Relevant Nord Pool Product</i>													
Half-Hour	1	1	1	1	1	0	0	0	0	0	0	0	
1 Hour Block	1	1	1	1	1	0	0	0	0	0	0	0	
2 Hour Block	1	1	1	1	1	0	0	0	0	0	0	0	
4 Hour Block	1	1	1	1	1	0	0	0	0	0	0	0	
Overnight	0	0	0	0	0	0	0	0	0	0	0	0	
Peak	0	0	0	0	0	0	0	0	0	0	0	0	
Extended Peak	0	0	0	0	0	0	0	0	0	0	0	0	
Day Ahead Auction	0	0	0	0	0	0	0	0	0	0	0	0	

The Weightings Table is fixed for all contracts delivering on any particular Settlement Day and is the same value in all Settlement Periods.

3. Price Formula

The half-hourly Traded Price (TP_j) is calculated as the weighted average price of all qualifying contracts.

If $\sum_{c=1}^n (V_{jc} W_c) = 0$ then $TP_j = 0$

else

$$TP_j = \frac{\left\{ \sum_{c=1}^n (P_{jc} \cdot V_{jc} \cdot W_c) \right\}}{\left\{ \sum_{c=1}^n (V_{jc} \cdot W_c) \right\}}$$

The half-hourly Traded Volume (TV_j) is calculated as the sum of the volume of all qualifying contracts, where W_c for that qualifying contract is non-zero.

$$TV_j = \sum_{c=1}^m V_{jc} \quad (\text{excluding values of } V_{jc} \text{ where } W_c = 0)$$

The Market Index Volume (MIV_j) and Market Index Price (MIP_j) are calculated as follows:

_____ If $\{LT_j > TV_j\}$ then $MIV_j = 0$ and $MIP_j = 0$
 _____ else $MIV_j = TV_j$ and $MIP_j = TP_j$

_____ Where:

_____ P_{jc} is the price (£/MWh) of a qualifying contract 'c' in period 'j';

_____ V_{jc} is the volume (MWh) of a qualifying contract 'c' delivered in period 'j';

_____ W_c is the Weighting of qualifying contract 'c', with respect to the Relevant Nord Pool Product and the Timeband in which it was traded;

_____ LT_j is the volume (MWh) of the Liquidity Threshold in period 'j'.

_____ Sub-scripts:

_____ 'j' Settlement Period;

_____ 'c' qualifying contract.

Where no Liquidity Threshold has been provided for a Settlement Period the value will be set to 0, (except where the rules below for clock change days would otherwise apply).

If ELEXON does not provide Liquidity Thresholds specifically for the clock change days, then the following rules will be applied.

For a 'short' day, having 46 Settlement Periods (i.e. the spring clock change when 1am GMT changes to 2am BST):

Settlement Periods 1 to 2 (00:00 to 01:00 GMT) of the 'short' day take the values of Settlement Periods 1 to 2 (00:00 to 01:00 local time) of the 'normal' day data;

Settlement Periods 3 to 46 (02:00 to 24:00 BST) of the 'short' day take the values of Settlement Periods 5 to 48 (02:00 to 24:00 local time) of the 'normal' day data;

Settlement Periods 3 and 4 of the 'normal' day data are not used on a short day.

For a 'long' day, having 50 Settlement Periods (i.e. the autumn clock change when 2am BST changes to 1am GMT);

Settlement Periods 1 to 4 (00:00 to 02:00 BST) of the 'long' day take the values of Settlement periods 1 to 4 (00:00 to 02:00 local time) of the 'normal' day data;

Settlement Periods 5 to 6 (01:00 to 02:00 GMT) of the 'long' day take the values of Settlement Periods 3 to 4 (01:00 to 02:00 local time) of the 'normal' day data;

Settlement Periods 7 to 50 (02:00 to 24:00 GMT) of the 'long' day take the values of Settlement Periods 5 to 48 (02:00 to 24:00 local time) of the 'normal' day data.

The Market Index Price will be calculated in Pounds Sterling per MWh, supplied rounded to two decimal places, Market Index Volume will be supplied in MWh, rounded to three decimal places. Standard rounding rules will be applied, i.e. less than five round down, more than or equal to five round up.

Nord Pool shall submit Market Index Data to the BMRA no later than the end of the Settlement Period to which the data pertains and shall submit Market Index Data to the SAA and BSCCo no later than the end of the next Business Day following the relevant Settlement Day.

Relevant Nord Pool Products cease trading at or before ~~the Submission Deadline~~Gate Closure for the first Settlement Period of delivery.