



**LOW CARBON  
CONTRACTS COMPANY**

**POWERING NET ZERO**

# Strike Price Adjustment Guidance

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March 2024

**Version 5**

Applicable to Investment Contracts and CFD Standard Terms and Conditions.

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## Disclaimer

This guidance does not and is not intended to supersede or replace the provisions of the CfD. In the event of a contradiction between this guidance and the terms of the CfD, the latter shall prevail. Whilst we make a reasonable effort to keep the information in here accurate, complete, and up to date, we do not represent that the information contained in here will always remain as such nor do we have an obligation to maintain it as such. We hereby disclaim any express or implied warranties as to the completeness or accuracy.

LCCC further reserves the right to amend, replace or remove this guidance and any associated guidance from time to time. This guidance does not constitute legal or investment advice and should not be relied upon as such. We do not make recommendations regarding investments and nothing in this guidance shall be deemed to constitute financial, investment or other professional advice in any way. The Generators should consult their professional advisors where they require advice, whether financial, tax, legal or otherwise.

This guidance should not be viewed as in any way restricting LCCC in the nature, type and/or amount of evidence, information and documentation it will require to satisfy itself of the Generator's fulfilment of the Initial Conditions Precedent, nor as to the nature, level and timing of our consideration or reconsideration of the evidence that is provided. LCCC reserves the right at any time to amend this guidance and/or request further or additional evidence, and to review or reconsider the evidence already provided.

# 1. Introduction

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LCCC performs the **Strike Price Adjustment (SPA)** calculations annually as per the relevant CFD clauses and communicates the revised **Strike Prices** to the **Generators** by the 5th business day post the 1st of April each year.

- 1.1 This guidance is intended to help generators understand the series of calculations that result in a Generators annual adjusted Strike Price.
- 1.2 This document provides non-binding guidance and simplified worked examples in respect of various Strike Price adjustments for CfD contracts.

Strike Price adjustments covered by this guidance include:

  - Indexation Adjustment
  - TLM(D) Strike Price Adjustment
  - Balancing System Charge Strike Price Adjustment
  - Base Year initial Balancing System Charge
- 1.3 Appendix A lists the publicly available data sources that the SPA calculations utilise.
- 1.4 In addition, LCCC publishes the interim-calculations;<sup>1</sup> essentially these are the results per calculation step which at the end of the process leads to the revised Strike Price.
- 1.5 The Strike Price Adjustment calculation process is occasionally modified for different contracts, depending on the date they were awarded, and what additional clauses apply to them. Refer to your CfD and the most recent regulatory updates to determine how your SPA is calculated.
- 1.6 Previous versions of this document provided guidance and illustrative examples for formulas, and referenced mathematical abbreviations that have subsequently been updated, either in the most recent CfD Standard Terms and Conditions,<sup>2</sup> or to increase the useability of this document.
- 1.7 Please note that for all of the illustrative examples presented below a certain illustrative accuracy has been used. This accuracy is not necessarily representative of the accuracies that may be used either in the CfD or the data published by the various sources of data cited in this document.

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<sup>1</sup> For more details see: [Strike Price Adjustments - Low Carbon Contracts](#)

<sup>2</sup> For the most recent CfD Standard Terms and Conditions: [Contracts for Difference \(CfD\) Allocation Round 5: standard terms and conditions - GOV.UK \(www.gov.uk\)](#)

## 2. Definitions

- 2.1 The “CFD Counterparty” is the Low Carbon Contracts Company Ltd.
- 2.2 Please refer to Defined terms used in this guidance and not defined herein should be given the meaning provided in the “CFD” (which is comprised of the CFD Agreement and the CFD Standard Terms and Conditions).<sup>3</sup>
- 2.3 This guidance is also applicable to Investment Contracts. However, Generators with Investment Contracts are advised to review the equivalent clauses.
- 2.4 In respect of the Investment Contracts, also considered are the Amended Notification (from DECC, dated July 2014); and the Amended Notification (from LCCC, dated August 2014) (together these form an “Investment Contract” or “IC”).
- 2.5 By following *Figure 1.0* below, Generators can find the Adjusted Strike Price formula relevant to their CfD, by answering the questions with the information in their CfD, the relevant CfD Standard Terms and Conditions, or contractual changes to these documents subsequently adhered to by the Generator.
- Note that “charges pursuant to Part 10 of the CfD Standard Terms and Conditions”, refers to Balancing System and Transmission Loss charges.

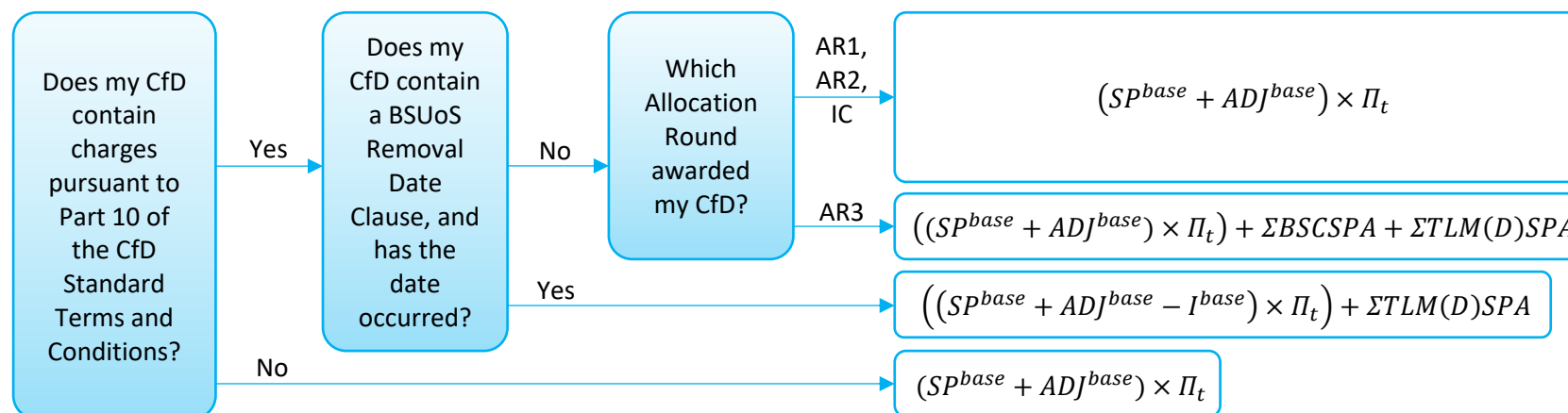


Figure 1.0

<sup>3</sup> For the most recent CfD Standard Terms and Conditions: [Contracts for Difference \(CfD\) Allocation Round 5: standard terms and conditions - GOV.UK \(www.gov.uk\)](http://www.gov.uk)

### 3. Indexation Adjustment

- 3.1 Each calendar year the Low Carbon Contracts Company (LCCC) calculates an Indexation Adjustment which becomes effective on the first day of the Summer Season (starting 1 April) of such year.
- 3.2 Strike Price Indexation Adjustments are calculated using one of the formulas in the following *Figure 1.1*, in accordance with the CfD Standard Terms and Conditions.<sup>4</sup>
  - Note that the top formula, previously simplified to include  $ADJ^{base}$  has here been, and will subsequently be, expanded out to include what makes up the  $ADJ^{base}$  calculation, which will be covered in more detail below. This has been done to show how the previous guidance documents made use of  $ADJ^{base}$ , but that in this document a redesigned formula has been used, to better explain the process of making a Strike Price Adjustment.
  - Note that for the top formula (and the other three formulas)  $ADJ^{base}$  would also be used to capture any one-off adjustments. However, as one-off adjustments have never been used we have been able to take  $ADJ^{base}$  out of the formula examples used below.

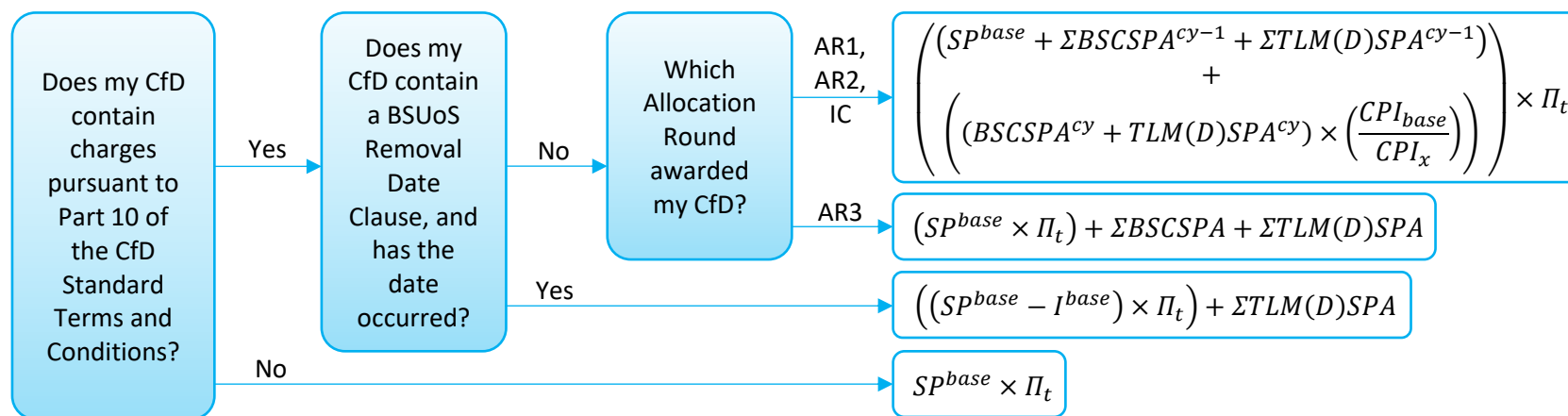


Figure 1.1: Possible CfD Formulas.

- 3.3 The above *Figure 1.1* is re-made in the following sections, featuring highlighting and dimming to show what the section is referring to.
- 3.4 The following sections use illustrative examples to explain how the calculations are formed. All numeric values and calculation figures are for illustrative purposes only.

<sup>4</sup> FIT CONTRACT FOR DIFFERENCE STANDARD TERMS AND CONDITIONS, versions: [2014](#), [2017](#), [2019](#), [2021](#), [2023](#).

## 4. Initial Strike Price and Inflation Factor

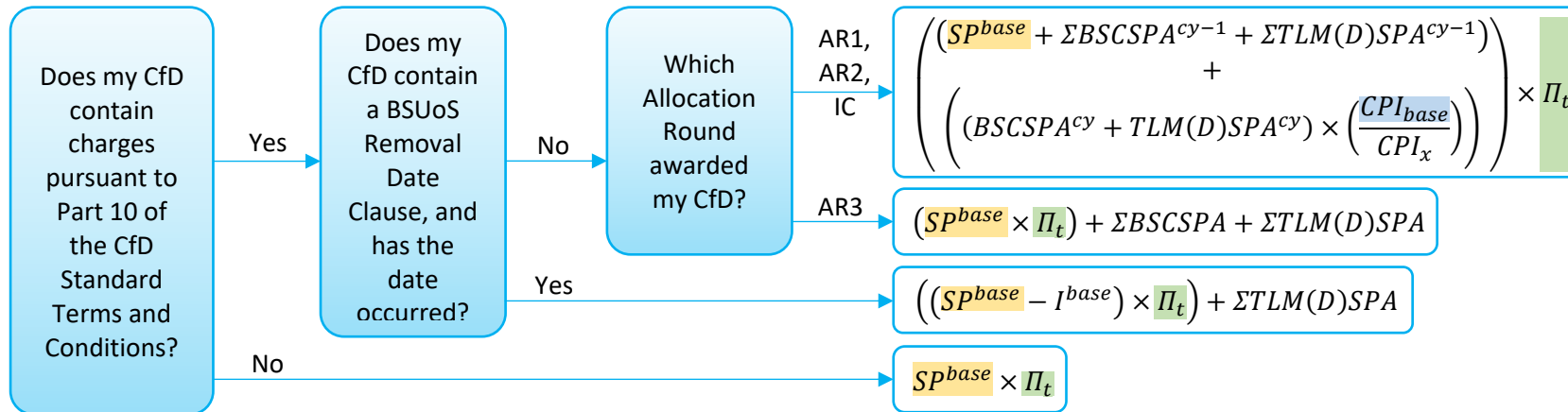


Figure 1.2 Highlighting Initial Strike Price and Inflation Factor.

- 4.1 All of the above CfD formulas contain both an  $SP_{base}$  which is the Initial Strike Price expressed in Base Year Terms detailed in a Generator's CfD; and,
- 4.2 An Inflation Factor,  $\Pi_t$ , calculated as per the formula below:<sup>5</sup>

$$\Pi_t = \frac{CPI_t}{CPI_{base}}$$

Where:

$\Pi_t$

is the Inflation Factor;

$CPI_t$

denotes the CPI for January of the relevant calendar year or, where the CPI for January is not published by the first (1<sup>st</sup>) day of the Summer Season in such a calendar year the Reference CPI, which is applicable to the Settlement Unit (t):<sup>6</sup> and,

$CPI_{base}$

denotes the Base Year CPI, as defined in the CfD; currently this is the CPI for October 2011. However, this could be re-based, see section 6. Inflation Factor (CPI Re-based) for more information.

<sup>5</sup> See CfD: Definitions "Inflation Factor". See IC: Definitions "Inflation Factor".

<sup>6</sup> At the time of this report, CPI can be sourced from data published by the ONS: [Inflation and price indices - Office for National Statistics \(ons.gov.uk\)](https://www.ons.gov.uk/economy/priceindices/inflationandpriceindices)

# 5. Initial Strike Price and Inflation Factor, Illustrative Example

5.1 An illustrative example is presented below:

Where the Initial Strike Price is:

$SP_{base} = 80.48$  denotes a hypothetical Initial Strike Price, taken from a CfD.

Where the Inflation Factor is:

$CPI_t = 114.9$  denotes the CPI for January 2022;

$CPI_{base} = 94.5$  denotes an assumed Base Year CPI of 94.5; and,

$\Pi_t = \frac{114.9}{94.5} = 1.216$  1.216 is then the Inflation Factor used for the Strike Price Indexation Adjustment.

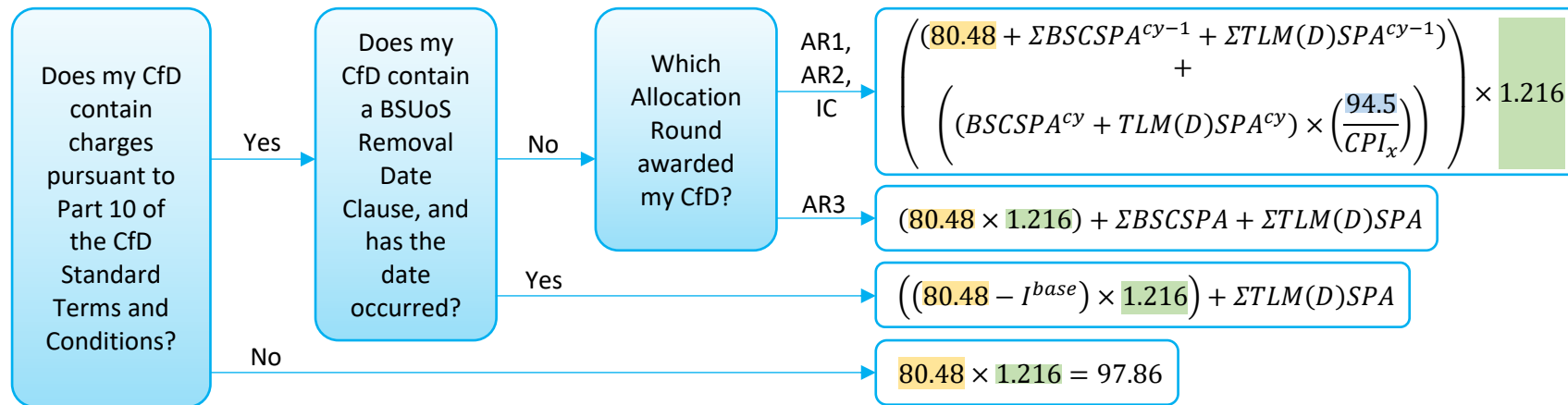


Figure 1.3: Formulas populated with Initial Strike Prices and Inflation Factors.

5.2 Note that in Figure 1.3 CfDs without Part 10 pursuant charges, now have a Strike Price Adjustment, shown above as 97.86.<sup>7</sup>

5.3 Note that the  $CPI_{base}$  has been used to fill in part of the top most formula, the rest of which will be covered in section 18 and 19.

<sup>7</sup> Numbers and calculations are for illustrative purposes only.

## 6. Inflation Factor (CPI Re-based)

- 6.1 Where the CPI index is re-based by the ONS, and such re-basing has taken effect in the twelve months prior to the Indexation Anniversary, a different formula, being the Re-basing Formula set out at limb (B) of the definition of “Inflation Factor”, should be used.<sup>8</sup>
- 6.2 This re-basing formula makes a conversion of the Base Year CPI as defined in each contract, as this will be presented using a different ONS index base than the applicable CPI of the calculation period.<sup>9</sup>

For example, the Base Year CPI may be presented on the basis of 2005=100, while the applicable CPI may be presented on the basis of 2015=100. Where such a re-basing has occurred, the following formula is used:

$$\Pi_t = \frac{CPI_t^{new}}{CPI_{base}^{old}} \times \frac{CPI_b^{old}}{CPI_b^{new}}$$

Where:

$\Pi_t$  is the Inflation Factor;

$CPI_t^{new}$  is the CPI applicable to Settlement Unit (t), using the new (re-based) index;

$CPI_{base}^{old}$  is the Base Year CPI, using the original index;

$CPI_b^{old}$  is the CPI in the month in which the re-basing has occurred, using the original index; and,

$CPI_b^{new}$  is the CPI in the month in which the re-basing has occurred, using the new (re-based) index.

<sup>8</sup> See CfD: Definitions “Inflation Factor” (B) See IC: Definitions “Inflation Factor” (B)

<sup>9</sup> In the event of a rebasing of the index, the user will need to use both the monthly CPI published under the previous index as well as the monthly CPI data published under the rebased index. At the time of this report, the CPI was last rebased (as 2015=100) in January 2016. At the time of this report, monthly CPI data published under the previous index (as 2005=100) could be sourced from the archived time series data published by the ONS under the D7BT category via the following website:

<http://webarchive.nationalarchives.gov.uk/20160105160709/http://ons.gov.uk/ons/publications/re-reference-tables.html?edition=tcm%3A77-323665>

At the time of this report, monthly CPI as per the rebased index (2015=100) could be sourced from the time series data published by the ONS under the D7BT category via the below website:

<https://www.ons.gov.uk/economy/inflationandpriceindices/timeseries/d7bt>



# 7. Inflation Factor (CPI Re-based), Illustrative Example

7.1 An illustrative example is presented below:

Where:

$\Pi_t$  is the Inflation Factor;

$CPI_t^{new} = 99.8$  is the CPI applicable to Settlement Unit (t), using the new (re-based) index;

$CPI_{base}^{old} = 94.5$  is the Base Year CPI, using the original index;

$CPI_b^{old} = 127.5$  is the CPI in the month in which the re-basing has occurred, using the original index; and,

$CPI_b^{new} = 99.5$  is the CPI in the month in which the re-basing has occurred, using the new (re-based) index.

$\Pi_t = \frac{99.8}{94.5} \times \frac{127.5}{99.5} = 1.353$  1.353 is then the new (re-based) Inflation Factor used for the Strike Price Indexation Adjustment.

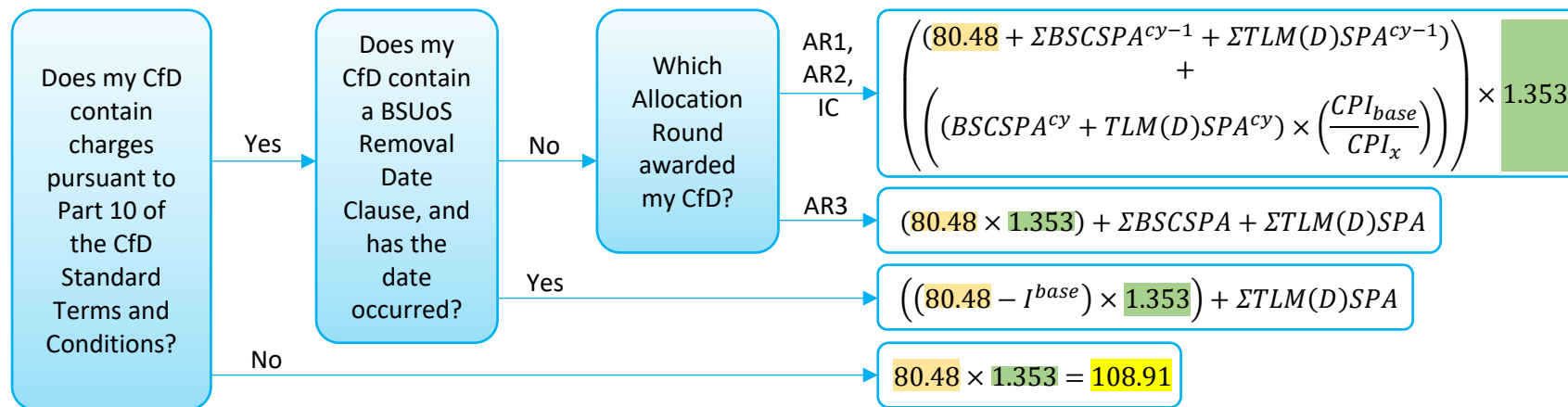


Figure 1.4: Formulas populated with re-based Inflation Factors.

7.2 Note how the Inflation Factor has changed in the different formulas due to the CPI being re-based.

7.3 Note that, using the previously calculated  $SP_{base}$  of 80.48 from sections 4 and 5, the Strike Price Adjustment has been re-calculated for those CfDs without Part 10 pursuant charges, due to CPI re-basing, now shown as 108.91.

7.4 Note that calculations in the following sections will make use of the original, (non-re-based), Inflation Factor, of 1.216, and  $CPI_{base}$  of 94.5.

## 8. Balancing System Charge Strike Price Adjustment (*BSCSPA*)

- 8.1 The Balancing System Charge Strike Price Adjustment (*BSCSPA*), is applicable only to generators which receive a BSC Strike Price Adjustment, pursuant to Part 10 of the CfD Standard Terms and Conditions.

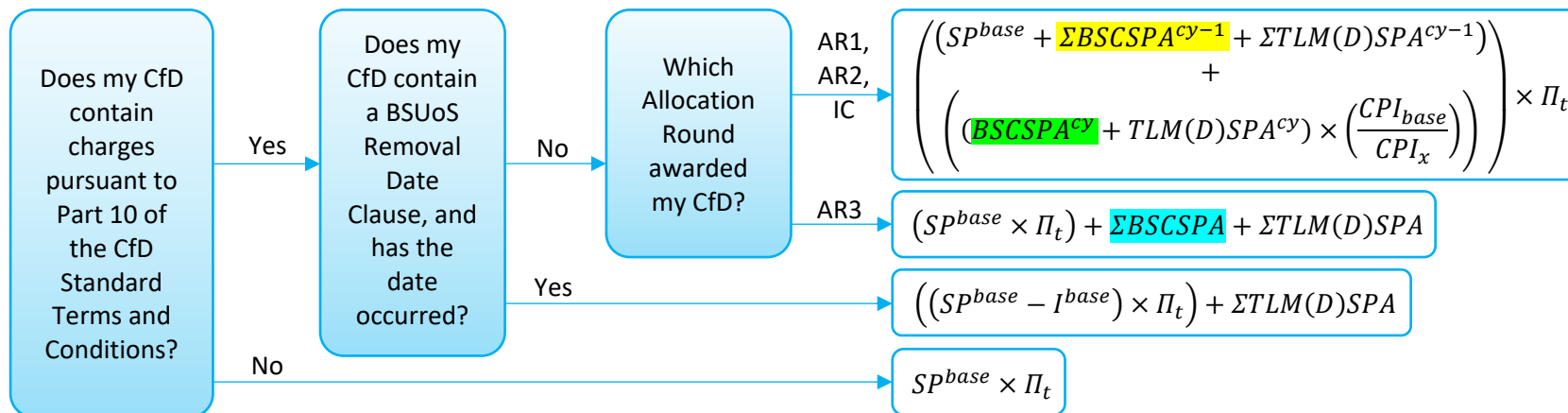


Figure 1.5: Highlighting the different aspects of the equations which include Balancing System Charge Strike Price Adjustments

- 8.2 The above Figure 1.5 highlights all the formula components that make up BSC Strike Price Adjustments, listed here as:

$\Sigma BSCSPA^{cy-1}$  denotes the sum of all prior years' Balancing System Charge Strike Price Adjustments.

$BSCSPA^{cy}$  denotes the Balancing System Charge Strike Price Adjustment for the current year; and,

$\Sigma BSCSPA$  denotes the sum of both the  $\Sigma BSCSPA^{cy-1}$  and the  $BSCSPA^{cy}$ .

- 8.3 The *BSCSPA* is calculated each year, which then applies from the relevant Indexation Anniversary, and is in turn calculated as per the formula below:

$$BSCSPA^{cy} = BSCD^{cy} - BSCD^{cy-1}$$

Where:

$BSCSPA^{cy}$  denotes the Balancing System Charge Strike Price Adjustment for the current year;

$BSCD^{cy}$  denotes the Balancing System Charge Difference (*BSCD*), for the current year; and,

$BSCD^{cy-1}$  denotes the Balancing System Charge Difference (*BSCD*), for the previous year.<sup>10</sup>

<sup>10</sup>  $BSCD^{cy-1}$  is not expanded on in this guidance document, but would follow the same calculation process as  $BSCD^{cy}$ , instead using the data relevant to that year.

# 9. Balancing System Charge Difference ( $BSCD^{cy}$ ) and Actual Balancing System Charge ( $ABC$ )

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9.1 The Balancing System Charge Difference ( $BSCD^{cy}$ ), is in turn is calculated as per the formula below:<sup>11</sup>

$$BSCD^{cy} = ABC - IBC$$

Where:

$BSCD^{cy}$  denotes the Balancing System Charge Differences;

$ABC$  denotes the Actual Balancing System Charge; and,

$IBC$  denotes the Indexed Initial Balancing System Charge.

9.2 The Actual Balancing System Charge is as calculated using the following formula:

$$ABC = \frac{(BSUoS_{cy} - RCRC_{cy})}{BSUoS_{cy}^V}$$

Where:

$ABC$  denotes the Actual Balancing System Charge;<sup>12</sup>

$BSUoS_{cy}$  denotes the total BSUoS Charges in the current year, and is provided by the GB System Operator;

$RCRC_{cy}$  denotes the total net RCRC Credits in the current year, and is provided by a BSC Company; and,

$BSUoS_{cy}^V$  denotes the total BSUoS Metered Volume Output.

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<sup>11</sup> See CfD: Condition 46.1; Condition 46.1 (E) See IC: Condition 44.2; Condition 44.2 (G),

<sup>12</sup> ABC data is calculated and collected from relevant generator data for the period from 01 February in the calendar year immediately preceding the relevant Balancing System Charge Report Year, to 31 January in a Balancing System Charge Report Year,

# 10: Balancing System Charge Difference (*BSCD*) and Actual Balancing System Charge (*ABC*), Illustrative Example

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10.1 An illustrative example is presented in the table below:

$$BSUoS_{cy} = \text{£}830,503,996.69$$

presented here is the total BSUoS Charges in 2021;

$$RCRC_{cy} = \text{£}60,845,807.84$$

presented here is the total net RCRC Credits in 2021;

$$BSUoS_{cy}^V = 180,625,944.89MWh$$

presented here is the total BSUoS Metered Volume Output in 2021; and

$$ABC = \frac{(830,503,996.69 - 60,845,807.84)}{180,625,944.89} = 4.26$$

4.26 is then the Actual Balancing System Charge for 2021.

Where:

$$ABC = 4.26$$

denotes the Actual Balancing System Charge;

*IBC*

denotes the Indexed Initial Balancing System Charge; and,

$$BSCD^{cy} = 4.26 - IBC$$

note that the *BSCD<sup>cy</sup>* has not yet been calculated, as the Indexed Initial Balancing System Charge (*IBC*) still needs to be detailed.

# 11: Indexed Initial Balancing System Charge (*IBC*) and Initial Balancing System Charge (*I*)

- 11.1 When calculating the Inflation Factor ( $\Pi_t$ ) for the *IBC*,  $CPI_t$  is the CPI for January in the Balancing System Charge Report Year is used, and for the purposes of  $CPI_{base}$ , the CPI for the penultimate month of the Initial Balancing System Charge Window is used.<sup>13</sup>
- 11.2 Note that the  $CPI_t$ , and the  $CPI_{base}$ , are different from their previously cited versions used for calculating the Inflation Factors mentioned above.
- 11.3 With the above caveats, the Indexed Initial Balancing System Charge (*IBC*) is calculated as per the formula below:

$$IBC = \Pi_t \times I$$

Where:

*IBC* is the Indexed Initial Balancing System Charge;

$\Pi_t$  is the applicable Inflation Factor; and,

*I* is the Initial Balancing System Charge, seen in a CfD.

Where:

$\Pi_t = \frac{CPI_t}{CPI_{base}}$  is the applicable Inflation Factor;

$CPI_t$  denotes the CPI for January in the Balancing System Charge Report Year save where the CPI for January is not published by the first (1st) day of the Summer Season in such Balancing System Charge Report Year in which case  $CPI_t$  shall be the Reference CPI; and,

$CPI_{base}$  denotes the value of the CPI for the penultimate month of the Initial Balancing System Charge Window.

<sup>13</sup> See CfD: Condition 46.1 (D) See IC: Condition 44.2 (F)

## 12: Indexed Initial Balancing System Charge (*IBC*) and Initial Balancing System Charge (*I*), Illustrative Example

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12.1 An illustrative example is presented below:

$$CPI_t = 127.1$$

denotes the CPI for January in the Balancing System Charge Report Year;

$$CPI_{base} = 126.1$$

CPI for the penultimate month of the CFD balancing system charge window, e.g. Jan 2014; and,

$$\Pi_t = \frac{127.1}{126.1} = 1$$

1 is then the Inflation factor for the Indexed Initial Balancing System Charge.

Where:

$$\Pi_t = 1$$

is the applicable Inflation Factor;

$$I = 1$$

is the Initial Balancing System Charge, with the example here set as 1; and,

$$IBC = 1 \times 1 = 1$$

1 is then the Indexed Initial Balancing System Charge for the purposes of calculating the Balancing System Charge Differences for the current year (*BSCD<sup>cy</sup>*).

12.2 Note: numbers and calculation are for illustrative purposes only. Only a simple, single example is presented and other scenarios may exist.

# 13: Final Balancing System Charge Differences ( $BSCD^{cy}$ )

13.1 In this section we are able to consolidate the calculated  $ABC$ , from sections 9 and 10, and the calculated  $IBC$ , from the previous sections 11 and 12. Together these are used to show how to calculate  $BSCD^{cy}$ , which forms part of the equations present in the “Possible CfD Formulas” Figures used throughout.

13.2 The Balancing System Charge Difference ( $BSCD^{cy}$ ), first highlighted in section 8, can now be calculated as per the formula below:

$$BSCD^{cy} = ABC - IBC \quad \text{denotes the Balancing System Charge Differences.}$$

Where:

$BSCD^{cy}$  denotes the Balancing System Charge Differences;

$ABC$  denotes the Actual Balancing System Charge; and,

$IBC$  denotes the Indexed Initial Balancing System Charge.

13.3 An illustrative example is presented below:

$$ABC = 4.26$$

4.26 is then the Actual Balancing System Charge from section 10;

$$IBC = 1$$

1 is the Indexed Initial Balancing System Charge from section 12; and,

$$BSCD^{cy} = 4.26 - 1 = 3.26$$

3.26 is then the Balancing System Charge Differences to be used in this example.

# 14: Final Balancing System Charge Strike Price Adjustment (*BSCSPA*)

14.1 This now allows us to calculate the *BSCSPA<sup>cy</sup>* highlighted in section 8, using the following formula, from the same section:

$$BSCSPA^{cy} = BSCD^{cy} - BSCD^{cy-1}$$

Where:

*BSCSPA<sup>cy</sup>*

denotes the Balancing System Charge Strike Price Adjustment for the current year;

*BSCD<sup>cy</sup>*

denotes the Balancing System Charge Difference (*BSCD*), for the current year; and,

*BSCD<sup>cy-1</sup>*

denotes the Balancing System Charge Difference (*BSCD*), for the previous year.<sup>14</sup>

14.2 An illustrative example is presented below:

$$BSCD^{cy} =$$

3.26 is the Balancing System Charge Differences from section 13.

$$BSCD^{cy-1} = 2.5$$

2.5 is an illustrative number and has been used for this scenario, see footnote on this section.

$$BSCSPA^{cy} = 3.26 - 2.5 = 0.9$$

0.9 is then the Balancing System Charge Strike Price Adjustment used in these examples.

14.3 Formula components that make up BSC Strike Price Adjustments, re-listed from section 8 here as:

$\Sigma BSCSPA^{cy-1}$

denotes the sum of all prior years' Balancing System Charge Strike Price Adjustments.

*BSCSPA<sup>cy</sup>*

denotes the Balancing System Charge Strike Price Adjustment for the current year; and,

$$\Sigma BSCSPA = \Sigma BSCSPA^{cy-1} + BSCSPA^{cy}$$

denotes the sum of both the  $\Sigma BSCSPA^{cy-1}$  and the *BSCSPA<sup>cy</sup>*.

14.4 An illustrative example is presented below:

$$\Sigma BSCSPA^{cy-1} = 1.76$$

1.76 is an illustrative hypothetical sum of all prior years' Balancing Service Adjustments.

$$BSCSPA^{cy} = 0.9$$

0.9 is the Balancing Service Price Adjustment calculated in point 14.2;

$$\Sigma BSCSPA = 1.76 + 0.9 = 2.66$$

2.66 is the sum of both the  $\Sigma BSCSPA^{cy-1}$  and the *BSCSPA<sup>cy</sup>*.

<sup>14</sup> *BSCD<sup>cy-1</sup>* is not expanded on in this guidance document, but would follow the same calculation process as *BSCD<sup>cy</sup>*, instead using the data relevant to that year.



# 15: Revisiting the Possible CfD Formulas Figure

15.1 The below Figure 1.5 displays how most of the mathematical abbreviations have now been populated using the calculations from the above sections.

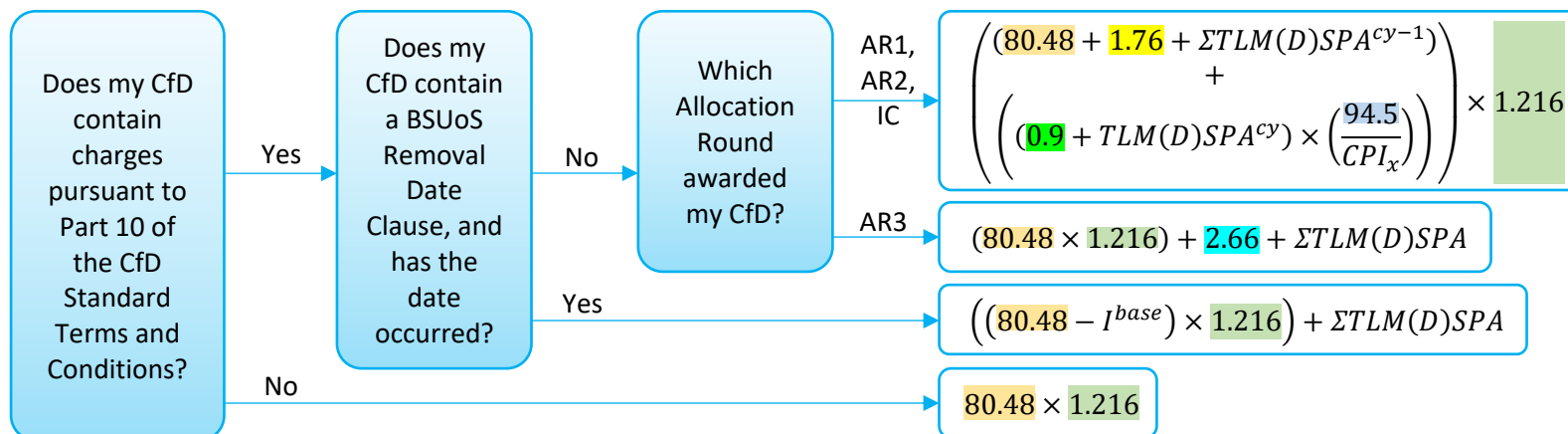


Figure 1.6: Populated with the majority of required values.

15.2 Below is a list of the values and their mathematical abbreviations with their descriptions:

- $80.48 = SP_{base}$  denotes a hypothetical Initial Strike Price, taken from a CfD;
- $1.76 = \Sigma BSCSPA^{cy-1}$  denotes the sum of all prior years' Balancing System Charge Strike Price Adjustments;
- $0.9 = BSCSPA^{cy}$  denotes the Balancing System Charge Strike Price Adjustment for the current year;
- $2.66 = \Sigma BSCSPA$  denotes the sum of both the  $\Sigma BSCSPA^{cy-1}$  and the  $BSCSPA^{cy}$ ;
- $94.5 = CPI_{base}$  denotes the Base Year CPI, as defined in the CfD; and,
- $1.216 = \Pi_t$  denotes the Inflation Factor.

# 16: TLM(D) Strike Price Adjustments

16.1 The Transmission Loss Multiplier for Delivered Volume (*TLM(D)*) Strike Price Adjustments (*TLM(D)SPA*) are applicable only to generators which receive a TLM(D) Strike Price Adjustment, pursuant to Part 10 of the CfD Standard Terms and Conditions.

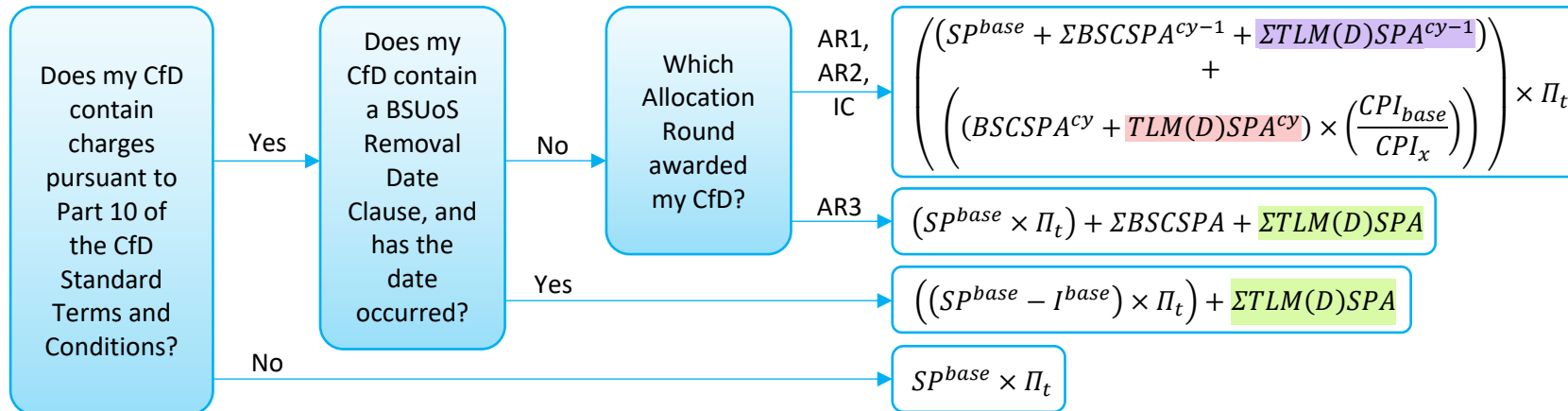


Figure 1.7: Highlighting the different aspects of the equations which include Balancing System Charge Strike Price Adjustments

16.2 The above Figure 1.6 highlights all the formula components that make up TLM(D) Strike Price Adjustments. The Transmission Loss Multiplier for Delivered Volume (*TLM(D)*) Strike Price Adjustments (*TLM(D)SPA*), like the Balancing System Charge Strike Price Adjustments, has three mathematical abbreviations used in this guidance document, listed here as:

- $\Sigma TLM(D)SPA^{cy-1}$  denotes the sum of all prior years' TLM(D) Price Adjustments;
- $TLM(D)SPA^{cy}$  denotes the TLM(D) Price Adjustment for the current year; and
- $\Sigma TLM(D)SPA$  denotes the sum of both  $TLM(D)SPA^{cy}$  and the  $\Sigma TLM(D)SPA^{cy-1}$

16.3 The TLM(D) Strike Price Adjustment is calculated each year, which then applies from the relevant Indexation Anniversary, which is calculated as per the formula below:<sup>15</sup>

$$TLM(D)SPA^{cy} = TCD^{cy} - TCD^{cy-1}$$

Where:

$TLM(D)SPA^{cy}$  denotes the TLM(D) Price Adjustment for the current year;  
 $TCD^{cy}$  denotes the TLM(D) Charges Difference for the current year; and,  
 $TCD^{cy-1}$  denotes the TLM(D) Charges Difference for the previous year.

16.4 The TLM(D) Charges Difference ( $TCD^{cy}$ ), is in turn calculated as per the formula below:

$$TCD^{cy} = \left( SP^{base} \times \Pi_t - IBC \right) \times \left( \frac{ATLM - ITLM}{1 - ATLM} \right)$$

Where:

$TCD^{cy}$  denotes the TLM(D) Charges Difference;<sup>16</sup>  
 $SP^{base}$  denotes the Initial Strike Price, taken from a CfD;  
 $\Pi_t$  denotes the Inflation Factor;  
 $IBC$  denotes the Indexed Initial Balancing System Charge;  
 $ATLM$  denotes the Actual TLM(D), sourced from publicly available data;<sup>17 18</sup> and,  
 $ITLM$  denotes the Initial TLM(D), sourced from the CfD.<sup>19</sup>

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<sup>15</sup> See CfD: Condition 47.1 (E) See IC: Condition 45.2 (G)

<sup>16</sup> See CfD: Condition 47.1 (F)

See IC: Condition 45.2 (H) (as per DECC Amendment to the IC)

<sup>17</sup> Currently available through the Elexon Portal: [ELEXON Portal](#)

<sup>18</sup> See CfD: Definitions “The Actual TLM(D) Charge”; TLM(D) Charges Report; Condition 47.1(C)

See IC: Definitions “Actual TLM(D) Charge”; TLM(D) Charges Report; Condition 45.2(E) (also see *DECC Amendment to the IC*)

<sup>19</sup> See CfD: Definitions “Initial TLM(D) Charge”

See IC: Definitions “Initial TLM(D) Charge” (as per *DECC Amendment to the IC*)

# 17: TLM(D) Strike Price Adjustments, Illustrative Example

17.1 An illustrative example is presented below:

Where:

$SP^{base} = 80.48$	presented here is the Initial Strike Price, taken from Section 5 above;
$\Pi_t = 1.216$	presented here is the Inflation factor calculated in Section 5 above; <sup>20</sup>
$IBC = 1$	presented here is the Indexed Initial Balancing System Charge calculated in Section 12;
$ATLM = 0.015$	presented here is an Actual TLM(D) from 2021;
$ITLM = 0.008$	presented here is a hypothetical Initial TLM(D), from the CfD; and,
$TCD^{cy} = ((80.48 \times 1.216) - 1) \times \left(\frac{0.015 - 0.008}{1 - 0.015}\right) = 0.69$	0.69 is then the TLM(D) Charges Difference for the current year.

And where:

$TCD^{cy} = 0.69$	presented here is the TLM(D) Charges Difference for the current year, calculated above;
$TCD^{cy-1} = 0.35$	presented here is a hypothetical TLM(D) Charges Difference for the previous year; and,
$TLM(D)SPA^{cy} = TCD^{cy} - TCD^{cy-1} = 0.34$	0.34 is then the TLM(D) Price Adjustment for the current year.

And where:

$\Sigma TLM(D)SPA^{cy-1} = 0.41$	denotes the sum of all prior years' TLM(D) Price Adjustments;
$TLM(D)SPA^{cy} = 0.34$	denotes the TLM(D) Price Adjustment for the current year, calculated above; and
$\Sigma TLM(D)SPA = 0.41 + 0.34 = 0.75$	denotes the sum of both the $\Sigma TLM(D)SPA^{cy-1}$ , and the $TLM(D)SPA^{cy}$

<sup>20</sup> See CfD: Condition 47.1 (E); Definitions "Inflation Factor" See IC: Condition 45.2 (G); Definitions "Inflation Factor". It is noted that for the purposes of CPI<sub>t</sub>, the CPI for January in the TLM(D) Charges Report Year is used; and for the purposes of CPI<sub>base</sub>, the CPI for the penultimate month of the Initial Balancing System Charge Window is used. See CfD: Condition 47.1 (E); Condition 46.1 (D). See IC: Condition 45.2 (G); Condition 44.2 (F) (also see *DECC Amendment to the IC*)

## 18: Base Year Terms ( $\frac{CPI_{base}}{CPI_x}$ ) and Initial Balancing System Charge ( $I^{base}$ )

18.1 For CfDs from AR1, AR2 and Investment Contracts, the Balancing System Charge and TLM(D) Strike Price must be ‘deflated’ to Base Year terms. This is done as per the formula below:<sup>21</sup>

$$\frac{CPI_{base}}{CPI_x}$$

Where:

$CPI_{base}$  denotes a Base Year CPI defined in the CfD; and,

$CPI_x$  denotes the arithmetic mean of the monthly CPI over the year (x).<sup>22</sup>

18.2 For contracts with a Post BSUoS Removal Clause, there is a mathematical abbreviation included in their calculation, called  $I^{base}$ , which is a Base Year Initial Balancing System Charge. Calculated as per the formula below:

$$I^{base} = I \times \frac{CPI_{base}}{CPI_{IBSCW}}$$

Where:

$I$  denotes the Initial Balancing System Charge, defined in a CfD;

$CPI_{base}$  denotes a Base Year CPI, also defined in the CfD; and,

$CPI_{IBSCW}$  denotes the value of the CPI for the penultimate month of the Initial Balancing System Charge Window.<sup>23</sup>

<sup>21</sup> See CfD: Definitions “Base Year Terms” See IC: Definitions “Base Year Terms”

<sup>22</sup> Note that the monthly CPI, as published by the ONS, is used as an input into the above formula sourced from [inflation and price indices - Office for National Statistics \(ons.gov.uk\)](https://www.ons.gov.uk/inflation-and-price-indices)

<sup>23</sup> Note that the monthly CPI, as published by the ONS, is used as an input into the above formula sourced from [inflation and price indices - Office for National Statistics \(ons.gov.uk\)](https://www.ons.gov.uk/inflation-and-price-indices)

# 19: Base Year Terms ( $\frac{CPI_{base}}{CPI_x}$ ); Initial Balancing System Charge ( $I^{base}$ ); and Illustrative Examples

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19.1 An illustrative example is presented below for Base Year Terms re-basing:

Where:

$$CPI_{base} = 94.5$$

presented here as a hypothetical Base Year CPI defined in the CfD;

$$CPI_x = 111.6$$

presented here as an arithmetic mean of the monthly CPI, over the year 2021; and,

$$\frac{CPI_{base}}{CPI_x} = \frac{94.5}{111.6}$$

$\frac{94.5}{111.6}$  is then the re-basing calculation that forms part of the first formula in the above Figures.

19.2 An illustrative example is presented below for Initial Balancing System Charge ( $I^{base}$ ):

Where:

$$I = 1.68$$

presented here as a hypothetical Initial Balancing System Charge, defined in a CfD;

$$CPI_{base} = 94.5$$

presented here as a hypothetical Base Year CPI defined in the CfD;

$$CPI_{IBSCW} = 100$$

presented here as a hypothetical penultimate month's CPI in the Initial Balancing System Charge Window; and,

$$I^{base} = 1.68 \times \frac{94.5}{100} = 1.59$$

1.59 is then the Initial Balancing System Charge ( $I^{base}$ ) used in this example.

# 20: Final Populated Figure

20.1 The Figure 1.7 below shows how the mathematical abbreviations have all been populated with the various values detailed in previous sections of this document.

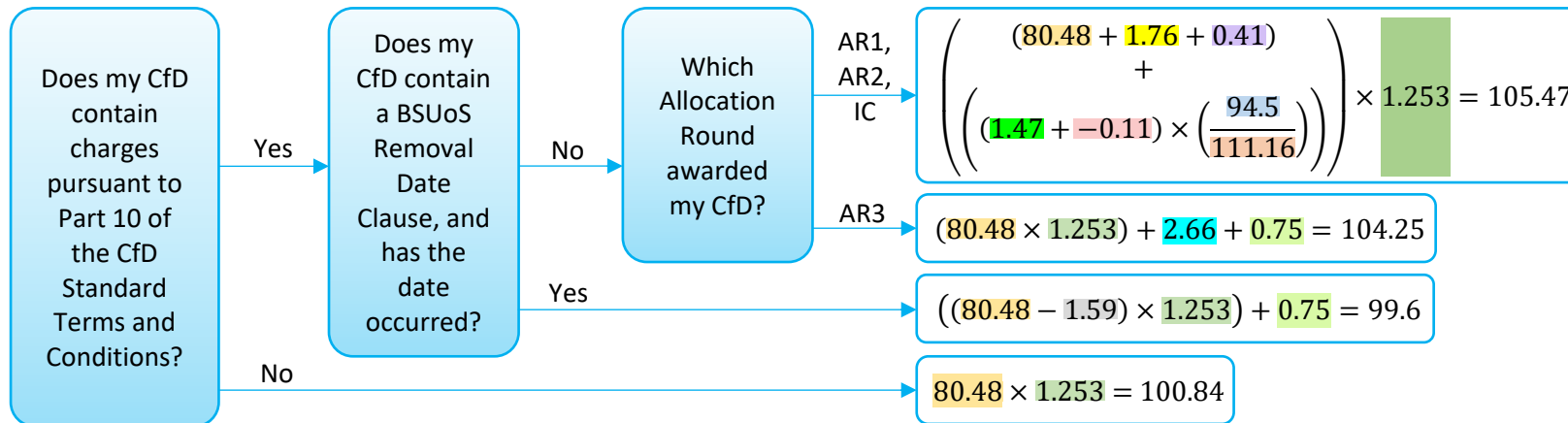


Figure 1.8: All Mathematical Abbreviations populated with their illustrative examples.

20.2 Note that the above formulas all now have their Strike Price Adjustments: 105.47, 104.25, 99.6, and 100.84 respectively.

20.3 The Figure 1.9 below shows the related mathematical abbreviations, colour coded to match those in previous sections, and Figure 1.8.

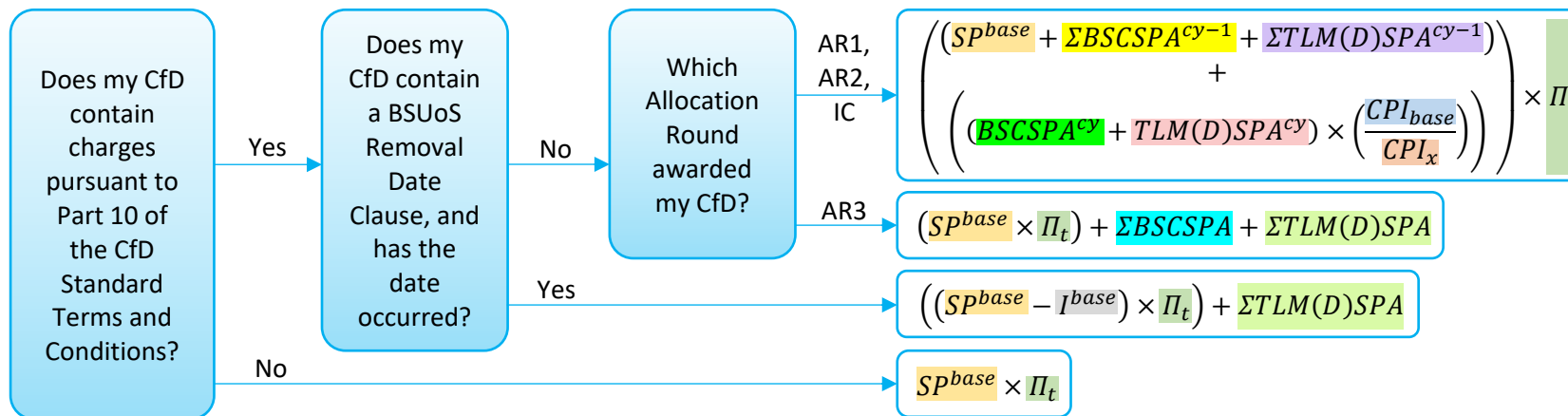


Figure 1.9: All Mathematical Abbreviations highlighted with the colours used throughout the previous section

# Appendix

## Generator Identification

The CFD requires that the Annual Balancing System Charge is calculated in respect of “Generators” only. To ensure this, the BSUoS, RCRC and Metered Volume must be evaluated at a BM Unit level for each Settlement Period; only the positive volume BM Units should be included in the final figures.

The CFD also requires that embedded “exemptible” (license-exempt) generators are excluded from the calculation of the Balancing System Charge. The license-exempt status for each BM Unit can be determined by combining the prefix of the BM Unit ID with its Exempt Export Flag; this is registered with the Central Registration Agency (CRA). The table below shows how BM Units are categorised and which categories are included in the Balancing System Charge calculation.

*Table 1: Generator Identification*

BM Unit ID Prefix	Category	Inclusion in Balancing System Charge?
T_	Transmission Connected	Included
E_	Distribution Connected	Included, where Exempt Export Flag = False
I_	Interconnector	Excluded
2_	Supplier	Excluded
C_	Supplier	Excluded
M_	Miscellaneous	Included

For clarity, the calculation of the Balancing System Charge should be based only on BM Units which have the following attributes:

- Positive metered volume
- a BM Unit ID prefix of T\_ or M\_, or a BM Unit ID prefix of E\_ with an Exempt Exempt Flag of F (false).
- This assessment must be done on a Settlement Period basis.

## RCRC Charge

BSC Section T 4.10 defines the calculation of RCRC. The method is similar to that of BSUoS, with charges/ payments allocated to BM Units depending on the net flow of the Trading Unit. An effective BM Unit breakdown of RCRC can be calculated using the formulas in BSC Section T 4.10.2. As such the same considerations with regards to Trading Unit net Metered Volume must be taken into account to determine the direction of the charge/payment.

## BSUoS Charge

The Connection and Use of System Code (CUSC) defines how BSUoS is calculated and charged. CUSC Section 14.30 defines the allocation of the total BSUoS charge. Charges are calculated at a Trading Unit level, but an effective BM Unit breakdown of the BSUoS charge can be calculated using the formulas provided in CUSC Section 14.30.2.



Charges are allocated based on a different formula depending on whether the Trading Unit is net off taking or net delivering. Therefore, to establish the BSUoS charge at a BM Unit level, the net status of the parent Trading Unit must be known. This can be deduced from the TLM or from the Trading Unit Metered Volume. Note that it is possible for a positive volume BM Unit to be within a net off taking Trading Unit. Under this situation the BM Unit acts to suppress the overall BSUoS charge for the Trading Unit; and effectively has a negative charge.

### Data Sources

The relevant settlement period data can be sourced from Elexon Report SAA-I014 (subflow 2), which is available from Elexon. Please contact the Elexon BSC Service Desk for details on accessing this data ([Contact Elexon Communications Team - Elexon BSC](#)).

Total BSUoS Charges are calculated as the BSUoS generator metered output (MWh) for each settlement period multiplied by the corresponding BSUoS Price. The half hourly BSUoS Price for each settlement period may be sourced from the BSUoS SF dataset from the National Grid website via the following link: [Balancing Services Use of System \(BSUoS\) charges | National Grid ESO](#)

Total net RCRC Credits are calculated as the sum of generator metered output (MWh) for each settlement period multiplied by the corresponding Residual Credit £/MWh rate for each settlement period. For each settlement period the Residual Credit £/MWh rate settlement run used should be consistent with that used for the total BSUoS generator metered output (MWh)

RCRC prices can be sourced from the Elexon web portal by searching for RCRC (a user account is required): [ELEXON Portal](#)

Note - RCRC data may vary based on the day of download due to settlement run updates which replace previously published information.

EMRS has published a copy of the relevant settlement period data: [EMR Settlement Limited - delivering settlement for CFD and CM](#)

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