

CMP232 (Fast Track) 'Demand Side Balancing Reserve and Supplemental Balancing Reserve Cost Recovery Restriction'

What stage is this document at?

01

Draft CUSC
Modification
Fast Track
Report

02

Approved CUSC
Modification
Fast Track
Report

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About this document

This CUSC Modification Fast Track Proposal was presented to the CUSC Panel on 27 June 2014.

Document Control

Version	Date	Author	Change Reference
0.1	19 June 2014	Code Administrator	Draft CUSC Modification Fast Track Proposal Report
0.2	30 June 2014	Code Administrator	Approved CUSC Modification Fast Track Proposal Report



Any Questions?

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1 Why Change

- 1.1 The Proposer believes that CMP232 meets the Fast Track Criteria. This proposal seeks to apply a factual change within the Transmission Licence.
- 1.2 The statement of the Balancing Services Use of System (BSUoS) Charging Methodology (CUSC Section 14) contains references to the National Grid Electricity Transmission (NGET) Transmission Licence which set out how BSUoS charges are calculated.
- 1.3 On 11 April 2014 the Gas and Electricity Markets Authority (GEMA) authorised amendments to Special Conditions 1A.5, 4B, 4C and the insertion of Special Condition 4K (Demand Side Balancing Reserve and Supplemental Balancing Reserve Revenue Restriction on External Costs) of NGET's Transmission licence to restrict the recovery of the costs incurred by NGET through the use of Demand Side Balancing Reserve (DSBR) and Supplemental Balancing Reserve (SBR).¹ These changes will take effect and apply from 6 June 2014.
- 1.4 CMP232 proposes to update the CUSC to reflect the recent changes within the Transmission Licence. The changes required to bring the CUSC up to date with the Transmission Licence have no material impact on any existing or new customers as BSUoS charges must be calculated in compliance with the amended terms of NGET's Transmission Licence.

2 Solution

- 2.1 It is proposed that a number of changes are made to CUSC Section 14. The proposed changes to the legal text can be found in Annex 1.
- 2.2 The following changes are being proposed to address the inconsistencies between CUSC and NGET's Transmission Licence.
- 2.3 One new definition has been added to the formula in the draft legal text for calculating the external BSUoS charge and is defined in CUSC Section 14.31.8.
 - i) LBS (Demand Side Balancing Reserve and Supplementary Balancing Reserve Costs) (defined in Special Condition 4C.1 of the NGET Transmission Licence).
- 2.4 These two new terms have been added to the following paragraphs and equations of the draft legal text:
 - i) 14.30.6 External BSUoS Charge For Each Settlement Period: Equation updated in accordance with Special Condition 4C.1 of the Transmission Licence.
 - ii) 14.32 Examples of Balancing Services Use of System (BSUoS) Daily charge Calculations: Equations and calculations updated in

¹ <https://www.ofgem.gov.uk/ofgem-publications/87223/decisiononfundingarrangementsfornewbalancingservices.pdf>

accordance with Special Conditions 1A.5, 4B, 4C and 4K of the Transmission Licence.

2.5 Four of the defined terms for use within the formulae have been amended in the draft legal text and are defined in CUSC Section 14.31.8.

- i) BSCCA_d: The definition has been amended to ensure this term does not take into account any costs incurred relating to DSBR and SBR.
- ii) BSCC_j: The definition has been amended to ensure this term does not take into account any costs incurred relating to DSBR and SBR.
- iii) BSCCV_{j,d}: The definition has been amended to ensure this term does not take into account any costs incurred relating to DSBR and SBR.
- iv) CSOBM_j: The definition has been amended to ensure this term does not take into account any costs incurred relating to DSBR and SBR.
- v) ET_d: The reference to Part 2 of Condition AA5A of the Transmission Licence has been replaced with a reference to Part B of Special Condition 4C of the Transmission Licence.

3 Proposed Legal Text

3.1 The draft legal text for CMP232 is contained within Annex 1 of this document.

4 CUSC Panel Determination

4.1 On 27 June 2014 the CUSC Modifications Panel considered CMP232 and confirmed unanimously that CMP232 meets the Fast Track Criteria and unanimously determined that the CUSC Modification should be implemented. The CUSC Modification Fast Track Proposal meets the Self Governance Criteria and the Fast Track Criteria as detailed below:

Self Governance Criteria

(a) is unlikely to have a material effect on:

(i) existing or future electricity consumers; and

(ii) competition in the generation, distribution, or supply of electricity or any commercial activities connected with the generation, distribution or supply of electricity; and

(iii) the operation of the **National Electricity Transmission System**; and

(iv) matters relating to sustainable development, safety or security of supply, or the management of market or network emergencies; and

(v) the **CUSC**'s governance procedures or the **CUSC**'s modification procedures, and

(b) is unlikely to discriminate between different classes of **CUSC Parties**.

Fast Track criteria

(c) is properly a housekeeping modification required as a result of some error or factual change; including but not limited to:

- i) updating names or addresses listed in the **CUSC**;
- ii) correcting minor typographical errors;
- iii) correcting formatting and consistency errors, such as paragraph numbering or
- iv) updating out of date references to other documents or paragraphs.

5 Proposed Implementation

- 5.1 It is proposed that CMP232 CUSC Modification Fast Track Proposal is implemented no sooner than the 16th business day after publication of the approved CUSC Modification Fast Track Report providing no objections have been raised see Section 6.
- 5.2 The proposed implementation date is **22 July 2014**.

6 Objections

- 6.1 If you wish to raise an objection please email the CUSC Panel Secretary at CUSC.Team@nationalgrid.com, with an explanation as to why you believe the CUSC Modification Fast Track Proposal does not meet the Fast Track Criteria by **5:00pm** on **21 July 2014**.
- 6.2 The Approved CUSC Modification Fast Track Proposal will not be implemented if an objection is received.
- 6.3 The CUSC Panel Secretary will notify the CUSC Panel, the Authority and CUSC Parties if an objection is received.
- 6.4 The CUSC Panel Secretary shall notify the proposer that additional information is required if the proposer wishes the CUSC Fast Track Modification to continue as a CUSC Modification Proposal.

CUSC v1.7
5 June 2014

CUSC Section 14
Charging Methodologies

Section 2 – The Statement of the Balancing Services
Use of System Charging Methodology

14.29 Principles

- 14.29.1 The Transmission Licence allows The Company to derive revenue in respect of the Balancing Services Activity through the Balancing Services Use of System (BSUoS) charges. This statement explains the methodology used in order to calculate the BSUoS charges.
- 14.29.2 The Balancing Services Activity is defined in the Transmission Licence as the activity undertaken by The Company as part of the Transmission Business including the operation of the transmission system and the procuring and using of Balancing Services for the purpose of balancing the transmission system.
- 14.29.3 The Company in its role as System Operator keeps the electricity system in balance (energy balancing) and maintains the quality and security of supply (system balancing). The Company is incentivised on the procurement and utilisation of services to maintain the energy and system balance and other costs associated with operating the system. Users pay for the cost of these services and any incentivised payment/receipts through the BSUoS charge.
- 14.29.4 All CUSC Parties acting as Generators and Suppliers (for the avoidance of doubt excluding all BMUs and Trading Units associated with Interconnectors) are liable for Balancing Services Use of System charges based on their energy taken from or supplied to the National Grid system in each half-hour Settlement Period.
- 14.29.5 BSUoS charges comprise the following costs:
- (i) The Total Costs of the Balancing Mechanism
 - (ii) Total Balancing Services Contract costs
 - (iii) Payments/Receipts from National Grid incentive schemes
 - (iv) Internal costs of operating the System
 - (v) Costs associated with contracting for and developing Balancing Services
 - (vi) Adjustments
 - (vii) Costs invoiced to The Company associated with Manifest Errors and Special Provisions.
 - (viii) BETTA implementation costs

14.30 Calculation of the Daily Balancing Services Use of System charge

Calculation of the Daily Balancing Services Use of System charge

14.30.1 The BSUoS charge payable by customer c, on Settlement Day d, will be calculated in accordance with the following formula:

$$BSUoS_{TOT}_{cd} = \sum_{i \in c} \sum_{j \in d} BSUoS_{TOT}_{ij}$$

Where:

- i - refers to the individual BM Unit
- j - refers to an individual Settlement Period
- $\sum_{i \in c} \sum_{j \in d}$ - refers to the sum over all BM units 'i', for which customer 'c' is the Lead Party* summed over all Settlement Periods 'j' on a Settlement Day 'd'

14.30.2 A customer's charge is based on their proportion of BM Unit Metered Volume for each Settlement Period relative to the total BM Unit Metered Volume for each Settlement Period, adjusted for transmission losses by the application of the relevant Transmission Losses Multiplier.

For all liable importing and exporting BM Units in delivering Trading Units in a Settlement Period:

$$BSUoS_{TOT}_{ij} = \frac{BSUoS_{TOT}_j * QMBSUoS_{ij} * TLM_{ij}}{\left\{ \sum^+ (QMBSUoS_{ij} * TLM_{ij}) + \left| \sum^- (QMBSUoS_{ij} * TLM_{ij}) \right| \right\}}$$

For all liable importing and exporting BM Units in offtaking Trading Units in a Settlement Period:

$$BSUoS_{TOT}_{ij} = \frac{-1 * BSUoS_{TOT}_j * QMBSUoS_{ij} * TLM_{ij}}{\left\{ \sum^+ (QMBSUoS_{ij} * TLM_{ij}) + \left| \sum^- (QMBSUoS_{ij} * TLM_{ij}) \right| \right\}}$$

Where:

- BSUoS_{TOTj} Total BSUoS Charge applicable for Settlement Period j
- QMBSUoS_{ij} BM Unit Metered Volume (QM_{ij})** for BSUoS Liable BM Units
- TLM_{ij} Transmission Loss Multiplier **

- \sum^+ - refers to the sum over all BM Units that are in delivering Trading Units in Settlement Period 'j'

* or CUSC party associated with the BMUnits (listed in Appendix C of the BEGA) who is exempt from also being a BSC Party

** Detailed definition in Balancing and Settlement Code Annex X2 – Technical Glossary

\sum^- - refers to the sum over all BM Units that are in offtaking Trading Units in Settlement Period 'j' 'delivering' and 'offtaking' in relation to Trading Units have the meaning set out in the Balancing and Settlement Code (excluding all Interconnector BMUs and Trading Units)

14.30.3 For the avoidance of doubt, BM Units that are registered in Trading Units will be charged on a net Trading Unit basis i.e. if a BM Unit is exporting to the system and is within a Trading Unit that is offtaking from the system then the BM Unit in essence would be paid the BSUoS charge. Conversely, if a BM Unit is importing from the system in a delivering Trading Unit then the BM Unit in essence would pay the BSUoS charge.

Interconnector BM Units

14.30.4 BM Unit and Trading Units associated with Interconnectors, including those associated with the Interconnector Error Administrator, are not liable for BSUoS charges.

Total BSUoS Charge (Internal + External) for each Settlement Period (BSUoS_{TOT}_{jd})

14.30.5 The Total BSUoS charges for each Settlement Period (BSUoS_{TOT}_{jd}) for a particular day are calculated by summing the external BSUoS charge (BSUoS_{EXT}_{jd}) and internal BSUoS charge (BSUoS_{SINT}_{jd}) for each Settlement Period.

$$BSUoS_{TOT}_{jd} = BSUoS_{EXT}_{jd} + BSUoS_{SINT}_{jd}$$

External BSUoS Charge for each Settlement Period (BSUoS_{EXT}_{jd})

14.30.6 The External BSUoS Charges for each Settlement Period (BSUoS_{EXT}_{jd}) are calculated by taking each Settlement Period System Operator BM Cash Flow (CSOBM_j) and Balancing Service Variable Contract Cost (BSCCV_j) and allocating the daily elements on a MWh basis across each Settlement Period in a day.

$$BSUoS_{EXT}_{jd} = CSOBM_{jd} + BSCCV_{jd} + [(IncpayEXT_d + BSCCA_d + ET_d - OM_d + RFHR_d + ROV_d + BSFS_d + NC_d + IONT_d + LBS_d) * \{ \left| \sum^+ (QMBSUoS_{ijd} * TLM_{ijd}) \right| + \left| \sum^- (QMBSUoS_{ijd} * TLM_{ijd}) \right| \} / \sum_{j \in d} \{ \left| \sum^+ (QMBSUoS_{ij} * TLM_{ij}) \right| + \left| \sum^- (QMBSUoS_{ij} * TLM_{ij}) \right| \}]$$

Calculation of the daily External Incentive Payment (IncpayEXT_d)

14.30.7 In respect of each Settlement Day d, IncpayEXT_d is calculated as the difference between the new total incentive payment (FKIncpayEXT_d) and the incentive payment that has been made to date for the previous days from the commencement of the scheme ($\xi k=1 \equiv d-1$ IncpayEXT_k):

$$IncpayEXT_d = FKIncpayEXT_d - \sum_{k=0}^{d-1} IncpayEXT_k$$

Comment [TS1]: Changes:
1. Line break added following 'BSCCV_{jd}'
2. '+LBS_d' added to the top line of the formula following IONT_d.

14.30.8 The forecast incentive payment made to date (from the commencement of the scheme) ($FKIncpayEXT_d$) is calculated as the ratio of total forecast external incentive payment across the duration of the scheme: the number of days in the scheme, multiplied by the sum of the profiling factors to date.

$$FKIncpayEXT_d = \frac{FYIncpayEXT_d}{NDS} * \sum_{k=1}^d PFT_k$$

Inclusion of Profiling Factors

14.30.9 Profiling factors have been included to give an effective mechanism for calculating a representative level of the incentive payments to/from The Company according to the time of year. All PFT_d are assumed to be one for the duration of the current external incentive scheme.

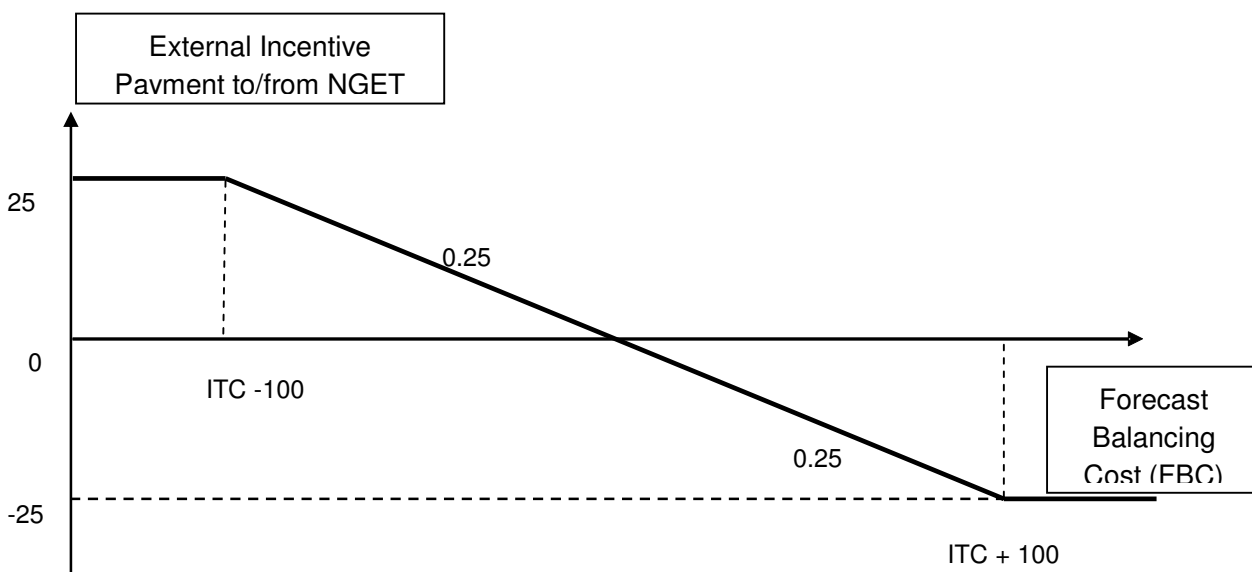
14.30.10 The forecast External incentive payment for the duration of the External incentive scheme ($FYIncpayEXT_d$) is calculated as the difference between the External Scheme target (M_t) and the forecast Balancing cost (FBC) subject to sharing factors (SF_t) and a cap/collar (CB_t).

$$FYIncpayEXT_d = SF_t * (M_t - FBC_d) + CB_t$$

14.30.11 The relevant value of the External incentive payment ($BSUoSEXT$) can then be calculated by reference to Table 9.1 and the selection and application of the appropriate sharing factors and offset dependent upon the value of the forecast Balancing Services cost (FBC).

Table 9.1

Forecast Balancing Cost (FBC)	M _t £m	SF _t	CB _t £m
FBC < (Incentive Target Cost – 100)	0	0	25
(Incentive Target Cost -100) <= FBC < (Incentive Target Cost)	Incentive Target Cost	25%	0
Incentive Target Cost = FBC	FBC	0	0
(Incentive Target Cost) < FBC <= (Incentive Target Cost + 100)	Incentive Target Cost	25%	0
(Incentive Target Cost + 100)	0	0	-25



14.30.12 In respect of each Settlement Day *d*, the forecast incentivised Balancing Cost (FBC_{*d*}) will be calculated as follows:

$$FBC_d = \frac{\sum_{k=1}^d IBC_k}{\sum_{k=1}^d PFT_k} * NDS$$

Where:

NDS = Number of days in Scheme.

14.30.13 Daily Incentivised Balancing Cost (IBC_{*d*}) is calculated as follows:

$$IBC_d = \sum_{j \in d} (CSOBM_{jd} + BSCCV_{jd}) + BSCCA_d - OM_d - RT_d - BSFS_d$$

Internal BSUoS Charge for each Settlement Period (BSUoSINT_{jd})

14.30.14 The Internal BSUoS Charges (BSUoSINT_{jd}) for each Settlement Period j for a particular day are calculated by taking the incentivised and non-incentivised SO Internal Costs for each Settlement Day allocated on a MWh basis across each Settlement Period in a day.

$$BSUoSINT_{jd} = [(SOPU_d + SOMOD_d + SOTRU_d) * RPIF_t] \\ * \left\{ \left| \sum^+ (QMBSUoS_{ijd} * TLM_{ijd}) \right| + \left| \sum^- (QMBSUoS_{ijd} * TLM_{ijd}) \right| \right\} \\ / \sum_{j \in d} \left\{ \left| \sum^+ (QMBSUoS_{ij} * TLM_{ij}) \right| + \left| \sum^- (QMBSUoS_{ij} * TLM_{ij}) \right| \right\}$$

Inclusion of Profiling Factors

14.30.15 Profiling factors have been included to give an effective mechanism for calculating a representative level of the incentive payments to/from The Company according to the time of year. All PFT_k are assumed to be one for the duration of the current external incentive scheme

14.31 Settlement of BSUoS

Settlement and Reconciliation of BSUoS charges

14.31.1 There are two stages of the reconciliation of BSUoS charges described below:

- Initial Settlement (SF)
- Final Reconciliation (RF)

Initial Settlement of BSUoS

14.31.2 The Company will calculate initial settlement (SF) BSUoS charges in accordance with the methodology set out in section 14.30 above, using the latest available data, including data from the Initial Settlement Run and the Initial Volume Allocation Run.

Reconciliation of BSUoS Charges

14.31.3 Final Reconciliation will result in the calculation of a reconciled charge for each settlement day in the scheme year. The Company will calculate Final Reconciliation (RF) BSUoS charges (with the inclusion of interest as defined in the CUSC) in accordance with the methodology set out in section 14.30 above, using the latest available data, including data from the Final Reconciliation Settlement Run and the Final Reconciliation Volume Allocation Run.

Unavailability of Data

14.31.4 If any of the elements required to calculate the BSUoS charges in respect of any Settlement Day have not been notified to The Company in time for it to do the calculations then The Company will use data for the corresponding Settlement Day in the previous week. If no such values for the previous week are available to The Company then The Company will substitute such variables as it shall, at its reasonable discretion, think fit and calculate Balancing Services Use of System charges on the basis of these values. When the actual data becomes available a reconciliation run will be undertaken.

Disputes

14.31.5 If The Company or any customer identifies any error which would affect the total Balancing Services Use of System charge on a Settlement Day then The Company will recalculate the charges following resolution of the error. Revised invoices and/or credit notes will be issued for the change in charges, plus interest as set out in the CUSC. The charge recalculation and issuing of revised invoices and/or credit notes will not take place for any day where the total change in the Balancing Services charge is less than £2000.

Relationship between the Statement of the Use of System Charging Methodology and the Transmission Licence

- 14.31.6 BSUoS charges are made on a daily basis and as such of this Statement sets out the details of the calculation of such charges on a daily basis. Customers may, when verifying charges for Balancing Services Use of System refer to the Transmission Licence which sets out the maximum allowed revenue that The Company may recover in respect of the Balancing Services Activity.
- 14.31.7 The Company has, where possible and appropriate, attempted to ensure that acronyms allocated to variables within the Balancing Services charging software, and associated reporting, match with the acronyms given to those variables used within this statement.

For the avoidance of doubt “as defined in the BSC” relates to the Balancing and Settlement Code as published from time to time.

EXPRESSION	ACRONYM	Unit	Definition
BETTA Preparation Costs	BI	£	As defined in the Transmission Licence
Balancing Mechanism Unit	BM Unit or BMU		As defined in the BSC
Balancing service contract costs – non-Settlement Period specific	BSCCA _d	£	Non Settlement Period specific Balancing Contract Costs for settlement day d less any costs incurred within these values relating to Supplemental Balancing Reserve and Demand Side Balancing Reserve
Balancing Service Contract Cost	BSCC _j	£	Balancing Service Contract Cost from purchasing Ancillary services applicable to a Settlement Period j less any costs incurred within these values relating to Supplemental Balancing Reserve and Demand Side Balancing Reserve
Balancing service contract costs – Settlement Period specific	BSCCV _{jd}	£	Settlement Period j specific Balancing Contract Costs for settlement day d less any costs incurred within these values relating to Supplemental Balancing Reserve and Demand Side Balancing Reserve
Black Start Feasibility Costs	BSFS	£	As defined in the Transmission Licence
External Balancing Services Use of System charge	BSUoSEXT _{jd}	£	External System Operator (SO) Balancing Services Use of System charge applicable to Settlement Period j for settlement day d
Internal Balancing Services Use of System charge	BSUoSINT _{jd}	£	Internal System Operator (SO) Balancing Services Use of System charge applicable to Settlement Period j for settlement day d
Total Balancing Services Use of System charge	BSUoSTOT _{cd}	£	The sum determined for each customer, c, in accordance with this Statement and payable by that customer in respect of each Settlement Day d, in accordance with the terms of the Supplemental Agreement
Total Balancing Services Use of System charge	BSUoSTOT _j	£	Total Balancing Services Use of System Charge applicable for Settlement Period j
System Operator BM Cash Flow	CSOBM _j	£	As defined in the Balancing and Settlement Code in force immediately prior to 1 April 2001 less any costs incurred within these values relating to Supplemental Balancing Reserve and Demand Side Balancing Reserve

EXPRESSION	ACRONYM	Unit	Definition
Daily balancing services adjustment	ET_d	£	Is the contribution on Settlement Day, d, to the value of ET_t where ET_t is determined pursuant to part 2 of Condition AA5A part B of Special Condition 4C of the Transmission Licence
Forecast incentivised Balancing Cost	FBC_d	£	Forecast incentivised Balancing Cost for duration of the Incentive Scheme as at settlement day d
External Incentive payment to date	$FKIncpayEXT_d$	£	Total External Incentive Payment to date up to and including settlement day d
Total Forecast External incentive payment	$FYIncpayEXT_d$	£	Total forecast External incentive payment for the entire duration of the incentive scheme as at settlement day d
Allowed Income Adjustment relating to the SO-TO Code	IAT	£	As defined in the Transmission Licence
Daily Incentivised Balancing Cost	IBC_d	£	Is equal to that value calculated in accordance with paragraph 14.30.13 of Part 2 of this Statement
Daily External incentive payment	$IncpayEXT_d$	£	External Incentive payment for Settlement Day d
Outage Cost Adjustment	IONT	£	As defined in the Transmission Licence
Demand Side Balancing Reserve and Supplementary Balancing Reserve costs	LBS	£	As defined in the Transmission Licence
Non-Incentivised Costs	NC	£	As defined in the Transmission Licence
Cost associated with the Provision of Balancing Services to others	OM_d	£	Is the contribution on Settlement Day, d, to the value of OM_t where OM_t is determined pursuant to part 2 of Condition AA5A of the Transmission Licence
Outage change allowance amount	ON	£	As defined in the Transmission Licence
Incentivised Balancing Cost daily profiling factor	PFT_d		The daily profiling factor used in the determination of forecast Incentivised Balancing Cost for settlement day d
BM Unit Metered Volume	QM_{ij}	MWh	As defined in the BSC
BSUoS Liable BM Unit Metered Volume	$QMBSUoS_{ij}$	MWh	QM_{ij} for all BM Units liable for BSUoS

EXPRESSION	ACRONYM	Unit	Definition
Wind Forecast Incentive Cost	RFIIR		As defined in the Transmission Licence
System Operator Innovation Roll-Out Value	ROV		As defined in the Transmission Licence
Retail Price Index Adjustment Factor	RPIF		As defined in the Transmission Licence
Balancing services deemed costs	RT_d	£	Is the contribution on Settlement Day, d, to the value of RT_t where RT_t is determined pursuant to part 2 of Condition AA5A of the Transmission Licence
Incremental change from SO Opening Base Revenue Allowance	SOMOD		As defined in the Transmission Licence
SO Opening Base Revenue Allowance	SOPU		As defined in the Transmission Licence
Revenue Adjustment with respect to actual and assumed RPI values	SOTRU		As defined in the Transmission Licence
Tax Allowance	T	£	As defined in the Transmission Licence
Transmission Loss Multiplier	TLM_{ij}		As defined in the BSC
Total System Energy Imbalance Volume	$TQEI_j$	MWh	As defined in the Balancing and Settlement Code in force immediately prior to 1 April 2001
Final Reconciliation Settlement Run			As defined in the BSC
Final Reconciliation Volume Allocation Run			As defined in the BSC
Initial Settlement Run			As defined in the BSC
Initial Volume Allocation Run			As defined in the BSC
Lead Party			As defined in the BSC

14.32 Examples of Balancing Services Use of System (BSUoS) Daily Charge Calculations

This example illustrates the operation of the Balancing Services Use of System Daily charge formula. The parameters used are for illustrative purposes only and have been chosen for ease of calculation. They do not relate to the agreed scheme for any particular year. The actual scheme parameters are shown in the main text.

The example is divided into the calculation of the External System Operator cost and Internal System Operator cost elements. All daily profiling factors (PFT_d) have been assumed to be one for this example.

Day 1

Calculation of the Daily External SO Incentive Scheme Payment

The first step is to calculate the Daily Incentivised Balancing Cost (IBC_1 for day one) for that day using the following formula. These are the daily incentivised cost elements used to calculate the external SO incentive payment.

$$\begin{aligned} IBC_1 &= CSOBM_1 + BSCCA_1 + BSCCV_1 - OM_1 - RT_1 - BSFS_1 \\ &= \text{£}800,000 + \text{£}500,000 + \text{£}250,000 - \text{£}0 - \text{£}0 - \text{£}0 \\ &= \text{£}1,550,000 \end{aligned}$$

Assuming that	CSOBM ₁	=	£800,000
	BSCCA ₁	=	£500,000
	BSCCV ₁	=	£250,000
	OM ₁	=	£0
	RT ₁	=	£0
	BSFS ₁	=	£0

Now that we know IBC_1 , it is possible to calculate Forecast Balancing Services Cost (FBC_1) from that day's outturn as follows:

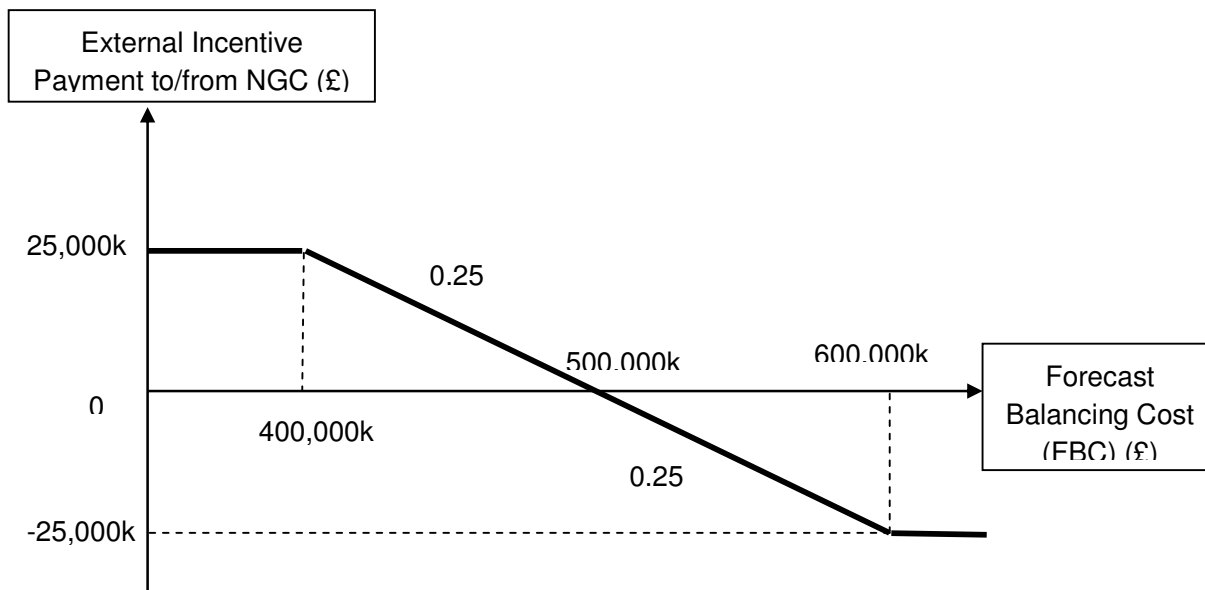
$$\begin{aligned}
 FBC_1 &= \frac{\sum_{k=1}^{d=1} IBC_k}{\sum_{k=1}^{d=1} PFT_k} * NDS \\
 &= \frac{\pounds 1,550,000}{1} * 365 \\
 &= \pounds 565,750,000
 \end{aligned}$$

The values of SF_t and CB_t can now be read off table BS1 below. **(These values are used purely for illustrative purposes based on an incentive target of £500,000,000).** As FBC_1 is £565,750,000, SF_t is 0.25, CB_t is £0 and M_t is £500,000,000.

Table BS1

Forecast Balancing Cost (FBC_d)	M_t	SF_t	CB_t
$\pounds 400,000,000 < FBC$	£0	0	£25,000,000
$\pounds 400,000,000 \leq FBC < \pounds 500,000,000$	£500,000,000	0.25	£0
$FBC = \pounds 500,000,000$	£500,000,000	0	£0
$\pounds 500,000,000 < FBC \leq \pounds 600,000,000$	£500,000,000	0.25	£0
$FBC > \pounds 600,000,000$	£0	0	-£25,000,000

The table describes the external incentive scheme, which can also be illustrated by the graph below.



Using the values set out in the table above, the external SO incentive payment for the duration of the scheme (FYIncpayEXT) can be calculated as follows:

$$\begin{aligned} FYIncpayEXT_1 &= SF_t * (M_t - FBC_1) + CB_t \\ &= 0.25 * (£500,000,000 - £565,750,000) + £0 \\ &= -£16,437,500 \end{aligned}$$

In this case the incentive payment is negative (-£16,437,500) i.e. a payment from The Company.

The external SO incentive payment for the entire duration of the incentive scheme (FYIncpayEXT) is then used to calculate the total incentive payment to date (FKIncpayEXT), shown as follows:

$$\begin{aligned} FKIncpayEXT_1 &= \frac{FYIncpayEXT_1}{NDS} * \sum_{k=1}^{d=1} PFT_k \\ &= \frac{-£16,437,500}{365} * 1 \\ &= -£45,034 \end{aligned}$$

Where:

NDS = Number of days in the external incentive scheme

The final step is to calculate today's external incentive payment (IncpayEXT₁ for day one), shown as follows:

$$\begin{aligned} IncpayEXT_1 &= FKIncpayEXT_1 - \sum_{k=0}^{d-1=0} IncpayEXT_k \\ &= -£45,034 - £0 \\ &= -£45,034 \end{aligned}$$

Calculating the External Balancing Services Use of System (BSUoS) charge for a Settlement Period j

The External Balancing Services Use of System (BSUoS) charge for Settlement Period 1 on this Settlement Day 1 can now be calculated using the following formula:

$$\begin{aligned} BSUoS_{EXT_{11}} &= CSO_{BM_{11}} + BSCCV_{11} \\ &+ [(IncpayEXT_1 + BSCCA_1 + ET_1 - OM_1 + RFIIR_1 + ROV_1 + BSFS_1 + NC_1 + IONT_1 + LBS_1) \\ &* \{ \left| \sum^+ (QM_{i1,1} * TLM_{i1,1}) \right| + \left| \sum^- (QM_{i1,1} * TLM_{i1,1}) \right| \} / \sum_{j \in 1} \{ \left| \sum^+ (QM_{ij} * TLM_{ij}) \right| + \left| \sum^- (QM_{ij} * TLM_{ij}) \right| \} \end{aligned}$$

Comment [TS2]: Changes:
1. Line break added to first line of formula
2. LBS₁ inserted into first line of the formula to account for DSB/EMR costs.

For simplicity, the BSUoS applicable BM Unit Metered Volume (QMBSUoS_{ij} * TLM_{ij}) is assumed to be the same in all half hour Settlement Periods in a Settlement Day. Therefore the daily BSUoS charge will be evenly allocated to each Settlement Period (1/48) i.e. the multiplier at the end of the equation.

The illustration below shows the external BSUoS charge (BSUoS_{EXT,11}) for Settlement Period one of Settlement Day 1.

The costs of the external SO Settlement Period variables are as follows (these are the daily values included in the IBC₁ equation divided by 48 Settlement Periods).

$$CSOBM = \text{£}16,667$$

$$BSCCV = \text{£}5,208$$

RFIIR₁, ROV₁, BSFS₁, NC₁, ~~and~~ IONT₁ and LBS₁ are all zero.

The costs of the external SO Settlement Day variables are as follows:

$$\text{IncpayEXT} = \text{£}-45,034$$

$$BSCCA = \text{£}500,000$$

$$ET = \text{£}0$$

$$OM = \text{£}0$$

$$\begin{aligned} BSUoS_{EXT_{11}} &= \text{£}16,667 + \text{£}5,208 + [(-\text{£}45,034 + \text{£}500,000 + \text{£}0 - \text{£}0 + \text{£}0 + \text{£}0 + \text{£}0 + \text{£}0 + \text{£}0 + \text{£}0) \\ &= \text{£}16,667 + \text{£}5,208 + \text{£}9,478 \\ &= \text{£}31,353 \end{aligned}$$

Comment [TS3]: Changes: '£0' added to the top line of the formula to reflect costs for DSB and SBR.

Calculating the Internal Balancing Services Use of System (BSUoS) charge for a Settlement Period j

Table BS2 below shows the annual Internal SO costs assumed for this example:

Table BS2

Internal SO Cost Variable	Annual Cost (£m)
SOPU _t	75,873,280
SOMOD _t	18,250,000
SOTRU _t	18,250,000

$$RPIF_t = 1$$

The Internal Balancing Services Use of System (BSUoS) charge for a Settlement Period 1 of Settlement Day 1 can be calculated using the following formula:

$$\begin{aligned} BSUoS_{SINT_{11}} &= \left[\left((SOPU_1 + SOMOD_1 + SOTRU_1) / NDS \right) * RPIF_1 \right] \\ &* \left\{ \left| \sum^+ (QM_{i,1} * TLM_{i,1}) \right| + \left| \sum^- (QM_{i,1} * TLM_{i,1}) \right| \right\} / \sum_{j \in 1} \left\{ \left| \sum^+ (QM_{ij} * TLM_{ij}) \right| + \left| \sum^- (QM_{ij} * TLM_{ij}) \right| \right\} \end{aligned}$$

As with the external BSUoS charge, for simplicity, the BSUoS applicable BM Unit Metered Volume (QMBSUoS_{ij} * TLM_{ij}) is assumed to be the same in all half hour Settlement Periods in a Settlement Day. Therefore the daily BSUoS charge will be evenly allocated to each Settlement Period (1/48).

$$BSUoSINT_{11} = [(75,873,280 + 18,250,000 + 18,250,000) / 365] * 1 / 48$$

$$= \text{£}6414$$

Calculating the Total Balancing Services Use of System (BSUoS) charge for a Settlement Period 1

The final step is to calculate the Total Balancing Services Use of System (BSUoSTOT₁₁) for a Settlement Period 1 on Settlement Day 1.

$$BSUoSTOT_{11} = BSUoSXT_{11} + BSUoSINT_{11}$$

$$= \text{£}31,353 + \text{£}6,414$$

$$= \text{£}37,767$$

Day 2

Calculation of the Daily External SO Incentive Scheme Payment

Again, the first step is to calculate the Daily Incentivised Balancing Cost for day 2 (IBC_2) using the following formula:

$$\begin{aligned}
 IBC_2 &= CSOBM_2 + BSCCA_2 + BSCCV_2 - OM_2 - RT_2 - BSFS_2 \\
 &= \text{£}600,000 + \text{£}150,000 + \text{£}100,000 - \text{£}0 - \text{£}0 - \text{£}0 \\
 &= \text{£}850,000
 \end{aligned}$$

Assuming that	$CSOBM_2$	=	£600,000
	$BSCCA_2$	=	£150,000
	$BSCCV_2$	=	£100,000
	OM_2	=	£0
	RT_2	=	£0
	$BSFS_2$	=	£0

With IBC_d known for day one, it is possible to calculate Forecast Balancing Services Cost (FBC_2) from the outturn to date as follows:

$$\begin{aligned}
 FBC_2 &= \frac{\sum_{k=1}^{d=2} IBC_k}{\sum_{k=1}^{d=2} PFT_k} * NDS \\
 &= \frac{(\text{£}1,550,000 + \text{£}850,000)}{2} * 365 \\
 &= \text{£}438,000,000
 \end{aligned}$$

The values of SF_t , M_t and CB_t can now be read off table BS1 given previously. As FBC_2 is £438,000,000, SF_t is now 0.25, M_t is £500,000,000 and CB_t is 0, calculated as follows:

$$\begin{aligned}
 FYIncpayEXT_2 &= SF_t * (M_t - FBC_2) + CB_t \\
 &= 0.25 * (\text{£}500,000,000 - \text{£}438,000,000) + \text{£}0 \\
 &= \text{£}15,500,000
 \end{aligned}$$

The external SO incentive payment for the entire duration of the incentive scheme ($FYIncpayEXT_2$) is then used to calculate the total incentive payment to date ($FKIncpayEXT_2$), shown as follows:

$$\begin{aligned}
 FKIncpayEXT_2 &= \frac{FYIncpayEXT_2}{NDS} * \sum_{k=1}^{d=2} PFT_k \\
 &= \frac{\text{£}15,500,000}{365} * 2 \\
 &= \text{£}84,932
 \end{aligned}$$

Where:

NDS = Number of days in the incentive scheme

In this case the incentive payment forecast for the year is £84,932.

Again, the final step is to calculate today's external incentive payment (IncpayEXT_2 for day two), shown as follows:

$$\begin{aligned} \text{IncpayEXT}_2 &= \text{FKIncpayEXT}_2 - \sum_{k=0}^{d-1=1} \text{IncpayEXT}_k \\ &= £84,932 - -£45,034 \\ &= £129,966 \end{aligned}$$

The costs of the external SO Settlement Period variables are as follows:

CSOBM = £12,500
BSCCV = £2,083

RFIR₂, ROV₂, BSFS₂, NC₂, and IONT₂ and LBS₂ are all zero.

The costs of the external SO Settlement Day variables are as follows:

IncpayEXT = £129,966
BSCCA = £150,000
ET = £0
OM = £0

$$\begin{aligned} \text{BSUoSEXT}_{12} &= £12,500 + £2,083 \\ &+ [(£129,966 + £150,000 + £0 - £0k + £0 + £0 + £0 + £0 + £0 + £0) / 48] \\ &= £12,500 + £2,083 + £5,833 \\ &= £20,416 \end{aligned}$$

Comment [TS4]: Changes:
1. Line break added after '+£2,083'.
2. '£0' added to the second line of the formula to account for DSBR and SBR costs.

Annual internal SO costs assumed for this example have been listed in table BS2 above.

RPIF_t = 1

$$\begin{aligned} \text{BSUoSINT}_{12} &= [(75,873,280 + 18,250,000 + 18,250,000) / 365] * 1 / 48 \\ &= £6,414 \end{aligned}$$

Calculating the Total Balancing Services Use of System (BSUoS) charge for a Settlement Period j

The final step is to calculate the Total Balancing Services Use of System (BSUoSTOT₁₂) for Settlement Period 1 on Settlement Day 2.

$$\begin{aligned} \text{BSUoSTOT}_{12} &= \text{BSUoSEXT}_{12} + \text{BSUoSINT}_{12} \\ &= £20,416 + £6,414 \\ &= £26,830 \end{aligned}$$

Day 365

If we now move to the end of the year, then once again the first step is to calculate the Daily Incentivised Balancing Cost for the final day (IBC_{365}) using the formula below:

Calculation of the Daily External SO Incentive Scheme Payment

$$\begin{aligned}
 IBC_{365} &= CSOBM_{365} + BSCCA_{365} + BSCCV_{365} - OM_{365} - RT_{365} - BSFS_{365} \\
 &= \text{£}700,000 + \text{£}200,000 + \text{£}150,000 + \text{£}200,000 - \text{£}0 - \text{£}0 - \text{£}0 \\
 &= \text{£}1,050,000
 \end{aligned}$$

Assuming that	$CSOBM_{365}$	=	£700,000
	$BSCCA_{365}$	=	£200,000
	$BSCCV_{365}$	=	£150,000
	OM_{365}	=	£0
	RT_{365}	=	£0
	$BSFS_{365}$	=	£0

With $\sum_{364} IBC_d$ assumed to be £432,000,000 for the previous 364 days, it is possible to calculate Forecast Balancing Services Cost (FBC_{365}) from the outturn to date as follows:

$$\begin{aligned}
 FBC_{365} &= \frac{\sum_{k=1}^{d=365} IBC_k}{\sum_{k=1}^{d=365} PFT_k} * NDS \\
 &= \frac{\text{£}432,000,000 + \text{£}1,050,000}{365} * 365 \\
 &= \text{£}433,050,000
 \end{aligned}$$

The values of SF_t , M_t and CB_t can now be read off table BS1. As FBC_{365} is £433,050,000, SF_t is now 0.25, M_t is £500,000,000 and CB_t is 0. Therefore $FYIncpayEXT_{365}$ is calculated as follows:

$$\begin{aligned}
 FYIncpayEXT_{365} &= SF_t * (M_t - FBC_{365}) + CB_t \\
 &= 0.25 * (\text{£}500,000,000 - \text{£}433,050,000) + \text{£}0 \\
 &= \text{£}16,737,500
 \end{aligned}$$

The external SO incentive payment for the entire duration of the incentive scheme ($FYIncpayEXT$) is then used to calculate the total incentive payment to date ($FKIncpayEXT$), shown as follows:

$$\begin{aligned}
 FKIncpayEXT_{365} &= \frac{FYIncpayEXT_{365}}{NDS} * \sum_{k=1}^{d=365} PFT_k \\
 &= \frac{\text{£}16,737,500}{365} * 365 \\
 &= \text{£}16,737,500
 \end{aligned}$$

Where:

NDS = Number of days in the incentive scheme

In this case the incentive payment is positive (£16,737,500) i.e. a payment to The Company. As this is the last day of the scheme this represents the overall incentive payment due to The Company i.e. with reference to the graph with Table BS1 25% of the difference between £500,000,000 and £433,050,000.

Again, the final step is to calculate today's external incentive payment ($IncpayEXT_{365}$ for day 365), shown as follows:

It has been assumed that the total incentive payments for the previous 364 days ($\sum_{k=0}^{d-1=364} IncpayEXT_k$) is £16,461,800.

$$\begin{aligned} IncpayEXT_{365} &= FKIncpayEXT_{365} - \sum_{k=0}^{d-1=364} IncpayEXT_k \\ &= £16,737,500 - £16,461,800 \\ &= £275,700 \end{aligned}$$

The costs of the external SO Settlement Period variables are as follows:

CSOBM = £14,583

BSCCV = £3,125

RFIIR₃₆₅, ROV₃₆₅, BSFS₃₆₅, NC₃₆₅, ~~and~~ IONT₃₆₅ and LBS₃₆₅ are all zero.

The costs of the external SO Settlement Day variables are as follows:

IncpayEXT = £275,700

BSCCA = £200,000

ET = £0

OM = £0

$$\begin{aligned} BSUoSEXT_{365} &= £14,583 + £3,125 \\ &+ (£275,700 + £200,000 + £0k - £0k + £0k + £0k + £0k + £0k + £0k + £0k) / 48 \\ &= £14,583 + £3,125 + £9,910 \\ &= £27,618 \end{aligned}$$

Comment [TS5]: Changes:
1. Line Break to separate first line of formula into two separate lines.
2. '£0k' added at the end of the second line to account for DSBR and SBR costs.

Annual internal SO costs assumed for this example have been listed in Table BS2 above.

RPIF_t = 1

$$\begin{aligned} BSUoSINT_{1,365} &= [(£75,873,280 + £18,250,000 + £18,250,000) / 365] * 1 / 48 \\ &= £6,414 \end{aligned}$$

Calculating the Total Balancing Services Use of System (BSUoS) charge for a Settlement Period j

The final step is to calculate the Total Balancing Services Use of System (BSUoSTOT₁₃₆₅) for Settlement Period 1 on Settlement Day 365

$$\begin{aligned}BSUoSTOT_{1,365} &= BSUoSEXT_{1,365} + BSUoSINT_{1,365} \\ &= \pounds 27,618 + \pounds 6,414 \\ &= \pounds 34,032\end{aligned}$$

Amendment of existing definition of “Balancing Services Activity Revenue Restriction” in Special Condition 1A.5:

Balancing Services Activity Revenue Restriction means Special Conditions 4A (Restriction of System Operator Internal Revenue) and 4C (Balancing Services Activity Revenue Restriction on External Costs), together with such parts of Special Conditions 4B (Balancing Services Activity Conditions: Interpretation) and Special Conditions 4D (Restriction on Contracting with BSC Parties) to 4K (Demand Side Balancing Reserve and Supplemental Balancing Reserve Revenue Restriction on External Costs) ~~The System Operator Innovation Roll-out Mechanism~~ inclusive as are ancillary thereto.

Amendment of existing definition of Relevant Year t in Special Condition 1A.5:

Relevant Year t for the purposes of the Special Conditions in Chapters 5, 6, and 7, means the Relevant Year in which the values for the terms MOD and SOMOD, calculated through a particular Annual Iteration Process, are used in the formulae set out in Special Condition 3A (Restriction of Transmission Network Revenue) and Special Condition 4A (Restriction on System Operator Internal Revenue) respectively and references to Relevant Year t-1 and Relevant Year t-2 are to be construed accordingly. For the purposes of Special Conditions 4C (Balancing Services Activity Revenue Restriction on External Costs) to 4K (Demand Side Balancing Reserve and Supplemental Balancing Reserve Revenue Restriction on External Costs) ~~(The System Operator Innovation Roll-out Mechanism)~~ inclusive Relevant Year t means that Relevant Year for the

purposes of which any calculation falls to be made and references to Relevant Year t-1 and t-2 are to be construed accordingly.

Amendment of existing Special Condition 4B

4B.1 In this Special Condition and in Special Conditions 4C (Balancing Services Activity Revenue Restriction on External Costs) to 4K (Demand Side Balancing Reserve and Supplemental Balancing Reserve Revenue Restriction on External Costs) inclusive, all revenue shall be measured on an accruals basis, after deduction of value added tax (if any) and any other taxes based directly on the amounts so derived.

4B.2 Any term used in the formulae appearing in Special Conditions 4C to 4K inclusive and defined for the purposes of those formulae shall have the same meaning if used in any other formulae in those Special Conditions.

4B.3 In this Special Condition and in Special Conditions 4C to 4K, any cost, charge, payment or amount may either be positive or negative.

Amendment of Special Condition 4C

Part A: Balancing services activity revenue restriction on external costs

4C.1 The licensee shall use its best endeavours to ensure that in respect of Relevant Year t the revenue derived from and associated with procuring and using balancing services (being the external costs of the Balancing Services Activity) shall not exceed an amount calculated in accordance with the following formula:

$$\begin{aligned}
 BSUoS_{EXT}_{jd} &= CSOBM_{jd} + BSCCV_{jd} \\
 &+ [(IncpayEXT_d + BSCCA_d + ET_d - OM_d + RFIIR_d + ROV_d + BSFS_d + NC_d + IONT_d + LBS_d) \\
 &* \{ \left| \sum^+ (QMBSUoS_{ijd} * TLM_{ijd}) \right| + \left| \sum^- (QMBSUoS_{ijd} * TLM_{ijd}) \right| \} / \\
 &\sum_{j \in d} \{ \left| \sum^+ (QMBSUoS_{ij} * TLM_{ij}) \right| + \left| \sum^- (QMBSUoS_{ij} * TLM_{ij}) \right| \}]
 \end{aligned}$$

where:

$BXext_t$	<i>represents the maximum allowed revenue derived in Relevant Year t from and associated with procuring and using balancing services;</i>
$CSOBM_t$	<i>which represents the cost to the licensee of bids and offers in the Balancing Mechanism (excluding those relating to Supplemental Balancing Reserve and Demand Side Balancing Reserve) accepted by the licensee in Relevant Year t less the total non-delivery charge for that Relevant Year, is the sum across Relevant Year t of the values of $CSOBM_j$ (being the daily System Operator BM cashflow for each settlement period j as defined in Table X-2 of Section X of the BSC in force immediately prior to 1 April 2001) less any costs incurred within these values of $CSOBM_j$ relating to Supplemental Balancing Reserve and Demand Side Balancing Reserve;</i>
$BSCC_t$	<i>means the costs to the licensee of contracts for the availability or use of balancing services during the Relevant Year t, excluding costs within $CSOBM_t$ and LBS_t but including charges made by the licensee for the provision of balancing services to itself in the Relevant Year t;</i>
ET_t	<i>means the amount of any adjustment to be made during the Relevant Year t in respect of any Relevant Year prior to Relevant Year t as provided in paragraph 4C.2;</i>
OM_t	<i>means an amount representing the revenue from the provision of balancing services to others during the Relevant Year t, calculated in accordance with paragraph 4C.3;</i>
$IncPayExt_t$	<i>means an incentive payment for Relevant Year t calculated in accordance with paragraph 4C.4;</i>
NC_t	<i>means the Outage Change cost allowance in each Relevant Year t in accordance with 4C.22;</i>
$IONT_t$	<i>means the amount of any allowed outage cost adjustments in each Relevant Year t in accordance with paragraph 4C.32;</i>

<i>BSFS_t</i>	<i>means the amount which the licensee may recover in respect of the costs of Feasibility Studies for the provision of Black Start services in accordance with paragraph 4G.5 of Special Condition 4G (Black Start Cost Incentive);</i>
<i>RFIIR_t</i>	<i>means the incentive payment which the licensee may derive from the Wind Generation Forecasting Incentive in Relevant Year t in accordance with Special Condition 4H (Wind Generation Forecasting Incentive);</i>
<i>ROV_t</i>	<i>means the Roll-out Value which the licensee may derive from the System Operator Innovation Roll-out Mechanism in Relevant Year t in accordance with Special Condition 4J (System Operator Innovation Roll-out Mechanism); and</i>
<i>LBS_t</i>	<i>means the allowed revenue derived in Relevant Year t from and associated with procuring and using Demand Side Balancing Reserve and Supplemental Balancing Reserve services in accordance with Special Condition 4K (Demand Side Balancing Reserve and Supplemental Balancing Reserve Revenue Restriction on External Costs).</i>
<i>j</i>	<i>shall mean a settlement period (being half an hour) as defined in the BSC.</i>

Part B: Balancing Services Activity adjustments

4C.2 For the purposes of 4C.1, the term ET_t which relates to prior period adjustments in respect of the Relevant Year t shall mean:

(a) the costs, whether positive or negative, to the licensee of:

(i) bids and offers in the Balancing Mechanism (excluding those relating to Supplemental Balancing Reserve and Demand Side Balancing Reserve) accepted by the licensee in any period before Relevant Year t less the total non-delivery charge for that period; and

(ii) contracts for the availability or use of balancing services during any period before Relevant Year t, excluding costs within $CSOBM_t$ and LBS_t for that period, but including charges made by the licensee for the provision of balancing services to itself in that period;

in each case after deducting such costs to the extent that they have been taken into account in any Relevant Year in computing the terms $CSOBM_t$ or $BSCC_t$; and

Insertion of new Special Condition 4K

Special Condition 4K: Demand Side Balancing Reserve and Supplemental Balancing Reserve Revenue Restriction on External Costs

4K.1. The objective of this condition is to establish arrangements to determine the allowed revenue derived from procuring and using Demand Side Balancing Reserve (“DSBR”) and Supplemental Balancing Reserve (“SBR”) for the purposes of the Balancing Services Activity (being the external costs of those balancing services for the purposes of the Balancing Services Activity), that the licensee may recover in each Relevant Year t through the term LBS_t in paragraph 4C.1 of Special Condition 4C (Balancing Services Activity Revenue Restriction on External Costs).

4K.2. The term LBS_t shall take the value zero, except for Relevant Years 2014/15 and 2015/16 and any other such Relevant Years as directed by the Authority in accordance with paragraph 4K.3, in respect of which it shall be calculated in accordance with the following formula:

where:

LBS_t	means the allowed revenue derived in Relevant Year t from and associated with procuring and using DSBR and SBR;
$DSBR_t$	means the costs to the licensee of DSBR Set Up Payments, DSBR Administration Payments, DSBR Testing Payments and DSBR Utilisation Payments in the Relevant Year t determined in accordance with this condition;
SBR_t	means the costs to the licensee of SBR Capability Payments, SBR Availability Payments, SBR Testing Payments and SBR Utilisation Payments during the Relevant Year t determined in accordance with this condition;
$DSBRS_t$	means the costs to the licensee in respect of DSBR Set Up Payments in the Relevant Year t incurred in accordance with this condition;
$DSBRSA_t$	means the amount of any adjustments to $DSBRS_t$, directed by the Authority in accordance with paragraph 4K.32;
$DSBRAd_t$	means the costs to the licensee in respect of DSBR Administration Payments incurred in the Relevant Year t in accordance with this condition;
$DSBRAdA_t$	means the amount of any adjustments to $DSBRAd_t$, directed by the Authority in accordance with paragraph 4K.32;
$DSBRT_t$	means the costs to the licensee in respect of DSBR Testing Payments in the Relevant Year t incurred in accordance with this condition;
$DSBRTA_t$	means the amount of any adjustments to $DSBRT_t$, directed by the Authority in accordance with paragraph 4K. 32;
$DSBRU_t$	means the costs the Authority directs under paragraph 4K.25 that the licensee may recover in respect of DSBR Utilisation Payments in Relevant Year t , following a determination of the

Authority in accordance with paragraph 4K.24 of this condition. If no such determination has been made in respect of Relevant Year t, it shall take the value zero;

SBRC _t	means the costs to the licensee in respect of SBR Capability Payments in the Relevant Year t incurred in accordance with this condition;
SBRCA _t	means the amount of any adjustments to SBRC _t , directed by the Authority in accordance with paragraph 4K.32;
SBRT _t	means the costs to the licensee in respect of SBR Testing Payments in the Relevant Year t incurred in accordance with this condition;
SBRTA _t	means the amount of any adjustments to SBRT _t directed by the Authority in accordance with paragraph 4K.32;
SBRA _t	means the costs the Authority directs under paragraph 4K.25 that the licensee may recover in respect of SBR Availability Payments in Relevant Year t following a determination by the Authority in accordance with paragraph 4K.24. If no such determination has been made in respect of Relevant Year t, it shall take the value zero; and
SBRU _t	means the costs the Authority directs under paragraph 4K.25 that the licensee may recover in respect of SBR Utilisation Payments in Relevant Year t following a determination by the Authority in accordance with paragraph 4K.24. If no such determination has been made in respect of Relevant Year t, it shall take the value of zero.

4K.3. The Authority may direct any changes to the Relevant Years to which the provisions of this condition apply, which shall be deemed to be reflected in paragraphs 4K.2 and 4K.4 – 8 by virtue of that direction.

Part A: Volume Requirement Methodology

4K.4. The licensee must, by the next working day following this condition coming into effect (unless otherwise directed by the Authority), submit to the Authority for approval, a methodology (the “Volume Requirement Methodology”) which is to be applied in the Relevant Years 2014/15 and 2015/16, (or such other Relevant Year as directed by the Authority in accordance with paragraph 4K.3), for determining the aggregate required volume of DSBR and SBR that the licensee will seek to procure (the “Volume Requirement”). The Volume Requirement Methodology must include, but need not be limited to:

- (a) the methodology for determining the Volume Cap for Relevant Year t; and
- (b) the methodology for determining the minimum aggregate volume of DSBR and SBR that would be necessary to meet the Reliability Standard in Relevant Year t, subject to the Volume Cap.

Part B: DSBR Procurement Methodology

4K.5. The licensee must, by the next working day following this condition coming into effect (unless otherwise directed by the Authority), submit to the Authority for approval, a methodology (the “DSBR Procurement Methodology”) which is to be applied in the Relevant Years 2014/15 and 2015/16 (or such other Relevant Year as directed by the Authority in accordance with paragraph 4K.3) for the purposes of determining that any procurement of DSBR is economic and efficient, including that it provides value for money for electricity consumers in Great Britain. The DSBR Procurement Methodology must include, but need not be limited to:

- (a) the methodology for determining the DSBR Cost Threshold;
- (b) the process by which tenders submitted to the licensee for the provision of DSBR (“DSBR Tenders”), will be assessed by the licensee to determine that:
 - (i) the Volume Requirement will be met in respect of each Relevant Year t (subject to the Volume Cap and DSBR Cost Threshold) at least cost; and
 - (ii) any DSBR Tenders that are accepted by the licensee are demonstrably economic and efficient, including by providing value for money for electricity consumers in Great Britain;
- (c) the processes set out at (b) must take account of:
 - (i) DSBR Set Up Payments;
 - (ii) DSBR Testing Payments;
 - (iii) DSBR Administration Payments; and
 - (iv) DSBR Utilisation Payments;
- (d) the process by which the licensee will determine the optimal balance between the procurement of SBR and DSBR for the purpose of delivering value for money for electricity consumers in Great Britain; and
- (e) the steps the licensee will take with the aim of ensuring that the DSBR procurement process is economic, efficient and competitive.

Part C: DSBR Operational Methodology

4K.6. The licensee must, by the next working day following this condition coming into effect (unless otherwise directed by the Authority), submit to the Authority for approval, a methodology (the “DSBR Operational Methodology”), which is to be applied in the Relevant Years 2014/15 and 2015/16 (or such other Relevant Year as directed by the Authority in accordance with paragraph 4K.3), for the purposes of determining that DSBR Testing and utilisation of DSBR is economic and efficient, including that it provides value for money for electricity consumers in Great Britain. The DSBR Operational Methodology must include, but need not be limited to:

- (a) the process by which the licensee will identify whether utilisation of DSBR is:
- (i) required;
 - (ii) economic and efficient, including whether it provides value for money for electricity consumers in Great Britain; and
 - (iii) compliant with the principles and considerations relating to the use of DSBR set out in the document prepared by the licensee pursuant to paragraph 5 of Standard Condition C16 (Procurement and use of balancing services)
- (b) the principles regarding the order in which DSBR shall be utilised by the licensee;
- (c) the process by which the licensee will identify how to utilise DSBR, including the order in which DSBR pursuant to individual contracts for the provision of DSBR will be utilised, in an efficient and economic manner, including providing value for money for electricity consumers;
- (d) the criteria for determining:
- (i) whether DSBR Testing is required; and
 - (ii) the level of DSBR Testing that will promote the reliability of DSBR in an economic and efficient manner, including providing value for money for electricity consumers in Great Britain; and
- (e) the steps the licensee will take to minimise any distortion of the electricity market in Great Britain as a result of its utilisation of DSBR and DSBR Testing.

Part D: SBR Procurement Methodology

4K.7. The licensee must, by the next working day following this condition coming into effect (unless otherwise directed by the Authority), submit to the Authority for approval, a methodology (the “SBR Procurement Methodology”) which is to be applied in the Relevant Years 2014/15 and 2015/16 (or such other Relevant Year as directed by the Authority in accordance with paragraph 4K.3), for the purposes of determining that any procurement of SBR is economic and efficient, including that it provides value for money for electricity consumers in Great Britain. The SBR Procurement Methodology must include, but need not be limited to:

- (a) the methodology for determining the SBR Cost Threshold;
- (b) the process by which tenders submitted to the licensee for the provision of SBR (“SBR Tenders”), will be assessed by the licensee to determine that:
- (i) the Volume Requirement is met in respect of each Relevant Year t (subject to the Volume Cap and SBR Cost Threshold) at least cost; and

(ii) any SBR Tenders that are accepted by the licensee are demonstrably economic and efficient, including by providing value for money for electricity consumers in Great Britain,

(c) The process set out at (b) must take account of:

(i) SBR Capability Payments;

(ii) SBR Testing Payments;

(iii) SBR Availability Payments; and

(iv) SBR Utilisation Payments;

(d) the process by which the licensee will determine the optimal balance between the procurement of SBR and DSBR for the purpose of providing value for money for electricity consumers in Great Britain; and

(e) the steps the licensee will take with the aim of ensuring that the SBR procurement process is economic, efficient and competitive.

Part E: SBR Operational Methodology

4K.8. The licensee must, by the next working day following this condition coming into effect (unless otherwise directed by the Authority), submit to the Authority for approval, a methodology (the “SBR Operational Methodology”) which is to be applied in Relevant Years 2014/15 and 2015/16 (or such other Relevant Year as directed by the Authority in accordance with paragraph 4K.3), for the purposes of determining that SBR Testing, instructing SBR Availability and utilisation of SBR is economic and efficient, including that it provides value for money for electricity consumers in Great Britain. The SBR Operational Methodology must include but need not be limited to:

(a) the process by which the licensee will identify whether utilisation of SBR is:

(i) required;

(ii) economic and efficient, including whether it provides value for money for electricity consumers in Great Britain; and

(iii) compliant with the principles and considerations relating to the use of SBR set out in the document prepared by the licensee pursuant to paragraph 5 of Standard Condition C16;

(b) the principles regarding the order in which SBR shall be used by the licensee;

(c) the process by which the licensee will identify how to utilise SBR, including the order in which SBR pursuant to individual contracts for the provision of SBR will be

utilised, in an efficient and economic way, including providing value for money for electricity consumers;

(d) the process by which the licensee will identify whether instructing SBR Availability is:

(i) required;

(ii) economic and efficient, including whether it provides value for money for electricity consumers in Great Britain;

(e) the criteria for determining:

(i) whether SBR Testing is required; and

(ii) the level of SBR Testing that will promote the reliability of SBR in an economic and efficient manner, including providing value for money for electricity consumers in Great Britain; and

(f) the steps that the licensee will take to minimise any distortion of the electricity market in Great Britain as a result of SBR Testing, instructing SBR Availability or utilisation of the SBR service.

Part F: Authority Approval of Methodologies

4K.9. The Authority shall determine, following receipt of any of the methodologies referred to in Parts A to E above (“the Methodologies”) whether to approve or reject those Methodologies.

4K.10. If the Authority rejects any of the Methodologies in accordance with paragraph 4K.9 it may direct the licensee to resubmit a revised Methodology to the Authority for approval, within the time specified in that direction.

4K.11. If the Authority approves any of the Methodologies in accordance with paragraph 4K.9, the licensee must publish the approved Methodologies (the “Approved Methodologies”) on its website as soon as practicable following approval, unless in the licensee’s view it would not be appropriate to do so.

Part G: Revision to Methodologies

4K.12. The licensee may by, no later than 31 March of Relevant Year t, submit to the Authority for approval proposals for the revision of any of the relevant Approved Methodologies, except for the Volume Cap specified in the Volume Requirement Methodology, for implementation at the commencement of the next following Relevant Year t. Where the licensee submits revisions for approval the licensee must send a copy of the proposed revisions to the Authority and, unless in the licensee’s view it would not be appropriate to do so, to any person who requests a copy.

4K.13. Following receipt of a notification under paragraph 4K.12 the Authority may direct the licensee to revise the relevant Approved Methodology to reflect the proposed revision, where the Authority is satisfied that the revisions are economic and efficient and will provide value for money for electricity consumers in Great Britain. Unless the Authority, within 3 months of their submission under paragraph 4K.12, issues such a direction, the proposed revisions shall be deemed not to be approved.

4K.14. If the Authority directs changes to any of the relevant Approved Methodologies in accordance with paragraph 4K.13, the licensee must revise the relevant Approved Methodologies. The licensee must also publish them on its website within 7 days of receipt of that direction unless in the licensee's view it would not be appropriate to do so.

4K.15. If the licensee considers that an exceptional change in circumstances arises that materially affects the basis upon which the relevant Approved Methodologies were approved by the Authority in a significant way (other than in relation to the Volume Cap as set out in the Volume Requirement Methodology), the licensee must promptly notify the Authority of the change in circumstances and its materiality and significance.

4K.16. Following receipt of a notification under paragraph 4K.15 the Authority may direct the licensee to revise the relevant Approved Methodology to reflect the change in circumstances notified by the licensee where the Authority is satisfied that the revisions are economic and efficient and will provide value for money for electricity consumers in Great Britain. Unless the Authority, within 3 months of their a submission under paragraph 4K.14, issues such a direction, the proposed revisions shall be deemed not to be approved.

4K.17. If the Authority directs changes to the relevant Approved Methodologies in accordance with paragraph 4K.16, the licensee must revise the relevant Approved Methodologies. The licensee must also publish them on its website within 7 days of receipt of the relevant direction unless in the licensee's view it would not be appropriate to do so.

Part H: Authority Determinations

Part H1: Notice of SBR Availability Payments, SBR Utilisation Payments and DSBR Utilisation Payments

4K.18. Where the licensee considers, and can provide supporting evidence that, in respect of Relevant Year t, it has incurred DSBR Utilisation Payments, SBR Utilisation Payments or SBR Availability Payments for the first time following this condition coming into effect, it may provide notice of these payments to the Authority within the period up to and including 31 March of the Relevant Year t.

4K.19. Thereafter, where the licensee considers, and can provide supporting evidence that, in respect of Relevant Year t, it has incurred in aggregate DSBR Utilisation Payments, SBR Utilisation Payments and SBR Availability Payments in excess of £2.5 million, or such lower amount as the Authority may direct, it may

provide notice of those payments to the Authority within the period up to and including 31 March of the Relevant Year t.

4K.20. Notwithstanding the above, the licensee must provide a notice setting out all other DSBR Utilisation Payments, SBR Utilisation Payments and SBR Availability Payments it considers, and can provide supporting evidence that, it has incurred in respect of Relevant Year t, to the Authority by 31 March of the Relevant Year t.

4K.21. A notice provided to the Authority under paragraphs 4K.18, 4K.19 or 4K.20 must give particulars of:

- (a) the events to which the notice relates;
- (b) the amount of any payments that have been made as a result of those events, and how the amount of those payments has been calculated;
- (c) how the payments are in accordance with the relevant Approved Methodologies; and
- (d) any other analysis or information which the licensee considers to be relevant to enable the Authority to fully assess the event to which the notice relates.

4K.22. If the Authority considers that the analysis or information provided in accordance with paragraph 4K.21 is insufficient to enable it to assess whether it should direct the recovery of the relevant costs, the Authority may direct that it be provided within a reasonable period with such additional information as it considers appropriate in order to enable it to make such an assessment. Where the licensee fails to comply with such a direction in accordance with the time scale set out in such direction, the Authority may extend the deadline for determination provided for in paragraph 4K.25.

4K.23. If the Authority considers that, taking account of:

- (a) the nature and extent of the information and analysis provided to it by the licensee in accordance with paragraph 4K.21,
- (b) the nature and extent of any further information and analysis provided to it in response to a direction under paragraph 4K.22,
- (c) the materiality of the costs incurred,

it requires further time to reach a determination, it may by way of a direction extend the deadline for determination provided for in paragraph 4K.25.

Part H2: The Authority's Determination – SBR Availability Payments, SBR Utilisation Payments and DSBR Utilisation Payments

4K.24. The Authority shall determine following receipt of a notice in accordance with paragraph 4K.21 whether DSBR Utilisation Payments, SBR Availability

Payments or SBR Utilisation Payments were incurred in accordance with the relevant Approved Methodologies.

4K.25. Unless the Authority, within 28 days of receipt of a notice in accordance with paragraph 4K.21, determines that the DSBR Utilisation Payments, SBR Availability Payments or SBR Utilisation Payments were incurred in accordance with the relevant Approved Methodologies, and directs that these costs may be recovered, the terms $SBRA_t$, $SBRU_t$, $DSBRU_t$, shall take the value zero.

Part H3: DSBR Set Up Payments, SBR Capability Payments, DSBR Administration Payments, SBR Testing Payments and DSBR Testing Payments Report

4K.26. Where the licensee considers, and can provide supporting evidence that, in respect of Relevant Year t , it has incurred in aggregate DSBR Set Up Payments, SBR Capability Payments, DSBR Administration Payments, SBR Testing Payments and DSBR Testing Payments in excess of £2.5 million, or such lower amount as the Authority may direct, it may provide notice of those payments to the Authority within the period up to and including 31 March of the Relevant Year t .

4K.27. Notwithstanding the above, the licensee must provide a notice setting out all other DSBR Set Up Payments, SBR Capability Payments, DSBR Administration Payments, SBR Testing Payments and DSBR Testing Payments it considers, and can provide supporting evidence that, it has incurred in respect of Relevant Year t , to the Authority by 31 March of the Relevant Year t .

4K.28. A notice provided to the Authority under paragraphs 4K.26 or 4K.27 must give particulars of:

(a) the amount of any DSBR Set Up Payments, DSBR Administration Payments, DSBR Testing Payments, SBR Capability Payments and SBR Testing Payments that have been made in Relevant Year t , and how the amount of those payments has been calculated;

(b) whether those payments have been made in accordance with the relevant Approved Methodologies; and

(c) any other analysis or information which the licensee considers relevant.

4K.29. If the Authority considers that the analysis or information provided in accordance with paragraph 4K.28 is insufficient to enable it to assess whether it should direct an adjustment to the recovery of the relevant costs, the Authority may direct that it be provided within a reasonable period with such additional information as it considers appropriate in order to enable it to make such an assessment. Where the licensee fails to comply with such a direction in accordance with the time scale set out in such direction the Authority may extend the deadline for determination provided for in paragraph 4K.32.

4K.30. If the Authority considers that, taking account of:

(a) the nature and extent of the information and analysis provided to it by the licensee in accordance with paragraph 4K.28,

(b) the nature and extent of any further information and analysis provided to it in response to a direction under paragraph 4K.29,

(c) the materiality of the costs incurred,

it requires further time to reach a determination, it may by way of a direction extend the deadline for determination provided for in paragraph 4K.32.

Part H4: The Authority's Determination – DSBR Set Up Payments, SBR Capability Payments, DSBR Administration Payments, SBR Testing Payments and DSBR Testing Payments

4K.31. The Authority shall determine following receipt of a notice in accordance with paragraph 4K.28 whether the DSBR Set Up Payments, SBR Capability Payments, DSBR Administration Payments, DSBR Testing Payments and SBR Testing Payments were incurred in accordance with the relevant Approved Methodologies.

4K.32. Where the Authority determines that the relevant payments were not made in accordance with the relevant Approved Methodologies, it shall, within 28 days of receipt of a notice in accordance with paragraph 4K.28, direct that the recovery of the relevant costs shall be adjusted accordingly.

4K.33. In this condition:

Demand Side Balancing Reserve (or "DSBR")

means the balancing service of that name as described in the document the licensee is required to establish in accordance with paragraph 3 of Standard Condition C16;

DSBR Administration Payments

means payments made by the licensee pursuant to a contract for the provision of DSBR, to a person in respect of the provision by such person of DSBR by causing one or more other persons to provide DSBR;

DSBR Cost Threshold

means the mechanism set out in the DSBR Procurement Methodology for determining the maximum cost of a contract for DSBR that could be deemed to be economic and efficient and as providing value for money for electricity consumers in Great Britain;

DSBR Set Up Payments	means payments made by the licensee pursuant to a contract for the provision of DSBR, to a DSBR service provider in relation to costs incurred by such DSBR service provider in preparing to be able to provide the DSBR service;
DSBR Testing	means actions taken to verify that DSBR is capable of delivery in accordance with the terms of the relevant DSBR contract;
DSBR Testing Payments	means payments made by the licensee pursuant to a contract for the provision of DSBR, in respect of DSBR Testing;
DSBR Utilisation Payments	means payments made by the licensee pursuant to a contract for the provision of DSBR, in respect of delivery of DSBR in response to instructions received from the licensee instructing such delivery;
Reliability Standard	means the reliability standard as specified by the Secretary of State pursuant to powers in the Energy Act 2013, or prior to such specification coming in to force, the draft version of the same, as published by the Secretary of State in July 2013;
SBR Availability	means actions taken by the SBR provider to make SBR available for delivery within operational timescales, in response to instructions received from the licensee instructing the SBR provider to take those actions;
SBR Availability Payments	means payments made by the licensee pursuant to a contract for the provision of SBR, in respect of SBR Availability;
SBR Capability Payment	means payments made by the licensee pursuant to a contract for the provision of SBR, in respect of SBR being capable of delivery in accordance with

	the terms of the relevant SBR contract, in the event that the licensee issues instructions for delivery;
SBR Cost Threshold	means the mechanism set out in the SBR Procurement Methodology for determining the maximum cost of a contract for the SBR service that could be deemed to be economic and efficient and as providing value for money for electricity consumers in Great Britain;
SBR Testing	means actions taken to verify that the SBR service is capable of delivery in accordance with the terms of the relevant SBR contract;
SBR Testing Payments	means payments made by the licensee pursuant to a contract for the provision of SBR, in respect of SBR Testing;
SBR Utilisation Payments	means payments made by the licensee pursuant to a contract for the provision of SBR, in respect of delivery of the SBR service in response to instructions received from the licensee instructing such delivery;
Supplemental Balancing Reserve (or “SBR”)	means the balancing service of that name as described in the document the licensee is required to establish in accordance with paragraph 3 of Standard Condition C16;
Volume Cap	means the mechanism identified and determined in accordance with the Volume Requirement Methodology for determining the maximum aggregate volume of DSBR and SBR that the licensee could seek to procure.