# Applicable Balancing Services Volume Data Methodology Statement

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| 01.04.2026 | 21 | Revision following annual review |

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# ~~Part A:~~1 INTRODUCTION

## 1.1 Foreword

This Statement has been developed by the National Energy System Operator (NESO) in consultation with industry and approved by the Authority in accordance with our Electricity System Operator (ESO) Licence. The Statement may only be modified in accordance with the processes set out in Standard Condition C9 of the NESO's ESO Licence.

In this Statement, all references to NESO shall mean National Energy System Operator for Great Britain (GB), being the independent system planner and operator for GB's energy system, for the purposes of the Balancing and Settlement Code (BSC).

The Statement makes reference to a number of definitions contained in the Grid Code (GC), the Connection and Use of System Code (CUSC) and the BSC. In the event that any of the relevant provisions in GC, CUSC or BSC are amended it may become necessary for us to modify the Statement in order that it remains consistent with GC, CUSC or BSC.

In any event, where our statutory obligations or the provisions of GC, CUSC or BSC are considered inconsistent with any part of this Statement, then the relevant statutory obligation and/or GC, CUSC or BSC provision will take precedence.

Unless defined in this Statement, terms used herein shall have the same meanings given to them in the NESO ESO Licence, GC, CUSC and/or BSC as the case may be.

Where we buy, sell or acquire a Balancing Service of a kind or under a mechanism which potentially affects a Party's imbalance position, and it is not covered by this Statement then we shall promptly seek

to establish a revised Statement covering such Balancing Services and/or mechanisms in accordance with the relevant provisions of Standard Condition C9 of the NESO ESO Licence.

The latest version together with the previous versions of this document are available electronically from the NESO Website:

C9 statements and consultations | National Energy System Operator

Alternatively, a copy may be requested from the following address:

Director of Markets

National Energy System Operator

Faraday House

Warwick Technology Park

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~~This Statement has been developed in consultation with the industry and the Authority. The Statement may only be modified in accordance with the processes set out in Standard Condition C9 of the Electricity System Operator Licence.~~

~~The latest version of this document is available, together with the relevant change marked version (if any), electronically from the National Energy System Operator Website:~~

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# ~~PART A: INTRODUCTION~~

## 1.2 Purpose of Document

~~1. Purpose of Document~~

This document sets out the Applicable Balancing Services Volume Data Methodology that the National Energy System Operator Limited (NESO) is required to establish in accordance with Standard Condition C9 of the ~~Electricity System Operator Licence~~NESO ESO License. ~~The purpose of this Statement is to set out the information on Applicable Balancing Services that will be taken into account under the Balancing and Settlement Code for the purposes of determining Imbalance Volumes.~~

The purpose of this Statement is to outline the process NESO takes to determine and provide the volumes of Applicable Balancing Services which are to be taken into account in determining Applicable Balancing Services Volume Data under the BSC.

Balancing Services are defined in the NESO ESO Licence and described in more detail in the Procurement Guidelines, which the National Energy System Operator is required to establish in accordance with Standard Condition C9 of the NESO ESO Licence.

In general, Balancing Services, deemed to be applicable will be those services required by NESO for efficient and economic operation of the transmission system, that result in the service provider being exposed to imbalance charges whilst assisting in system balancing.

For the avoidance of doubt:

1. NESO is responsible for aggregating Applicable Balancing Services Volumes per Settlement Period (SP) and submitting those volumes to Elexon.

2. Elexon is responsible in accordance with BSC section T, part 4 of using Quantitative Ancillary Services (QAS) data (along with Bid-Offer acceptance (BOA), Transmission Loss Multipliers, Contracted Positions) to determine Balancing Mechanism (BM) imbalance volumes, and imbalance settlement.

3. Elexon is responsible in accordance with BSC, Annex S-2 to correct Balancing Responsible Party (BRP) imbalance positions.

~~This Statement has been developed in consultation with the industry and the Authority. The Statement may only be modified in accordance with the processes set out in Standard Condition C9 of the Electricity System Operator Licence. Where we buy, sell or acquire a Balancing Service of a kind or under a mechanism which potentially affects a Party's imbalance position, and it is not covered by this Statement then we shall promptly seek to establish a revised Statement covering such Balancing Services and/or mechanisms in accordance with the relevant provisions of Standard Condition C9 of the Electricity System Operator Licence.~~

~~The Statement makes reference to a number of definitions contained in the Grid Code, the Connection and Use of System Code and the Balancing and Settlement Code. In the event that any of the relevant provisions in the Grid Code, the Connection and Use of System Code or the Balancing and Settlement Code~~

~~are amended it may become necessary for us to modify the Statement in order that it remains consistent with the Grid Code, the Connection and Use of System Code and the Balancing and Settlement Code.~~

~~In any event, where our statutory obligations or the provisions of the Grid Code are considered inconsistent with any part of this Statement, then the relevant statutory obligation and/or Grid Code provision will take precedence.~~

~~Unless defined in this Statement, terms used herein shall have the same meanings given to them in the Transmission Licence, the Grid Code, the Connection and Use of System Code and/or the Balancing and Settlement Code as the case may be. In this Statement, all references to 'NESO shall mean National Energy System Operator, being the National Electricity Transmission System Operator for the purposes of the Balancing and Settlement Code.~~

~~For the purposes of this methodology only:~~
~~"Non-BM Provider" is taken to mean a party where the Supplier is responsible for the imbalance volumes associated with the Applicable Balancing Services contract in their Base BMUs.~~

~~The latest version of this document is available electronically from the National Energy System Operator NESO Website:~~

~~C9 statements and consultations | National Energy System Operator~~

~~Alternatively, a copy may be requested from the following address:~~

~~Director of Markets~~
~~National Energy System Operator~~
~~Faraday House~~
~~Warwick Technology Park~~
~~Gallows Hill~~
~~Warwick CV34 6DA~~
~~Email address: BalancingServices@@neso.energy~~

## ~~PART B:~~2. APPLICABLE BALANCING SERVICES VOLUME DATA 'ABSVD' FOR BM PARTICIPANTS

## ~~1.Basis of Calculation~~ 2.1 Definition of BM Unit

BM Units are used as units of trade within the BM. Any energy produced or consumed by the contents of a BM Unit is accredited to that BM Unit.

BM Units can be classed as either a Primary BM Unit or a Secondary BM Unit. The definition of Primary BM Unit and Secondary BM Unit shall have the same meaning given to them by Elexon in the documents related to the BM Units (e.g. BM-Units-v16.0.docx ).

~~1.~~ The BM Units are visible in Balancing Mechanism data by BMU view | Insights Solution

## ~~1.1 Variables included in the ABSVD~~ 2.2 Basis of Calculation for BM ABSVD

The ABSVD is specified in Section Q, Paragraph 6.4 of the Balancing and Settlement Code and consists of QASij, being the Applicable Balancing Services Volume Data in respect of BM Unit i, in Settlement Period j, determined in accordance with this Statement.

The following Applicable Balancing Services will be included in the calculation of the ABSVD:

The Applicable Balancing Services Volume Data is used in the calculation of Period BM Unit Balancing Services Volume, $QBS_{ij}$. $QBS_{ij}$ is the volume of all energy associated with balancing services used in the determination of imbalance. It consists of the volume of Bid Offer Acceptances plus the Applicable Balancing Services Volume Data. The determination of $QBS_{ij}$ is specified in Section T, Paragraph 4.3.2 of the Balancing and Settlement Code:

$$QBS_{ij} = \boxtimes^{n}(QAO^{n}_{ij} + QAB^{n}_{ij}) + QAS_{ij}$$

where $\boxtimes^{n}$ represents the sum over all Bid-Offer Pair numbers for the BM Unit.

$QBS_{ij}$ is the volume of Balancing Services per BM Unit. For determination of the account's imbalance volume, it is necessary to determine the Balancing Services volume delivered across the account, $QABS_{\alpha j}$ (the Account Period Balancing Services Volume). This is determined as the sum across the energy account of the Balancing Services volume for each BM unit, multiplied by the applicable loss factor, as specified in Section T, paragraph 4.6.2 of the Balancing and Settlement Code.

~~$QABS_{aj} = \sum_i QBS_{ij} \times TLM_{ij}$~~

~~Where $\sum_i$ represents the sum over all BM Units for which such Energy Account is the corresponding Energy Account of the Lead Party.~~

~~The Account Energy Imbalance Volume, $QAEI_{aj}$, is the difference between the energy credited to the account, less the contract position and the Account Period Balancing Services Volume, as specified in accordance with section T, paragraph 4.6.3 of the Balancing and Settlement Code.~~

~~$QAEI_{aj} = QACE_{aj} - QABS_{aj} - QABC_{aj}$~~

~~The Account Energy Imbalance Volume is then multiplied by System Sell Price for positive imbalance volume and System Buy Price for negative imbalance volume to give the Energy Imbalance Cashflows as specified in Section T, Paragraph 4.7 of the Balancing and Settlement Code.~~

## ~~1.2 Balancing Services for inclusion in the ABSVD~~

~~Balancing Services are defined in the Transmission Licence and described in more detail in the Procurement Guidelines, which the National Energy System Operator is required to establish in accordance with Standard Condition C9of the Electricity System Operator Licence. The purpose of the Procurement Guidelines is to set out the kinds of Balancing Services which we may be interested in purchasing, together with the mechanisms by which we envisage purchasing such Balancing Services. ABSVD covers a subset of the Balancing Services that we intend to procure.~~

~~Reference in this section to a non-BM provider is a reference to a provider dispatched by NESO outside the Balancing Mechanism. The reporting mechanism describes a non-BM provider without its own individual BMU, if NESO dispatches a provider outside the BM (for non-BM STOR, non-BM Fast Reserve, non-BM MW Dispatch service, non-BM Local Constraint Market (LCM) and non-BM Demand Flexibility Service (DFS)) who has its own BMU then the ABSVD energy will be allocated to the BMU.~~

~~In general, Balancing Services, deemed to be Applicable will be those~~

~~services required by the System Operator for economic operation of the transmission system, that result in the service provider being exposed to imbalance charges whilst assisting in system balancing. For the avoidance of doubt a consultation will be carried out prior to~~

~~any further Balancing Services being included in the calculation of ABSVD.~~

~~The following Applicable Balancing Services contracts will be included in the calculation of the ABSVD:~~

**Table 1 BM ABSVD Volumes Supplied to Elexon**

| Balancing Service | Data Volume Source |
|---|---|
| Frequency Response Services (Dynamic Containment (DC) High/Low, Dynamic Moderation (DM) High/Low and Dynamic Regulation (DR) High/Low) ~~Frequency Response Service~~ | Response Energy Volumes computed in accordance with clause 4.1.3.9A of the CUSC – SECTION 4.~~CUSC~~ |
| Commercial Intertrips | Volume Computed in accordance with the Commercial Services Agreement |
| System to Generator Operational Intertripping | Export Restricted Volume computed ~~to~~ from the time of the trip to end of the Balancing Mechanism Window |
| Maximum Generation Service | Service Volume computed ~~as Min (Qmaxij, X *CEC/2)~~ in accordance with clause 4.2.5 of the CUSC - SECTION 4~~CUSC~~. |
| Demand Flexibility Service (DFS)* | Delivered Volume (See Note 4) |

*DFS - Non-Balancing Mechanism (Non-BM) Half Hourly (HH) settled Domestic consumers whose Metering System Identifier (MSID) is signed up to provide DFS with the supplier that has an ELEXON BM Unit Identifier (ID).

In reference to the DFS BM ABSVD volumes supplied to Elexon, the reporting mechanism describes the volumes delivered by a Non-BM provider, without its own individual BM Unit dispatched by NESO outside the BM. If NESO dispatches a provider outside the BM who has its own BM Unit, then the ABSVD volumes will be submitted via the BM ABSVD applied process and allocated to the relevant BM Unit.

For the avoidance of doubt, NESO submit BOA instructions to Elexon via a process separate to the ABSVD process.

~~For the avoidance of doubt, the following services are automatically **included in the imbalance volume via the Bid/Offer Acceptance process** and thus no ABSVD is required for them.~~

**Table 2 – BOA Instruction Data Supplied to Elexon**

| **Balancing Service** | **Data Volume Source** |
|---|---|
| Short Term Operating Reserve (STOR) | BOA ~~Volume~~Instruction |
| ~~Balancing Reserve (BR)~~ | ~~BOA Instruction~~~~Volume~~ |
| Negative Balancing Reserve (NBR) | BOA Instruction |
| Positive Balancing Reserve (PBR) | BOA Instruction |
| Negative Quick Reserve (NQR) | BOA Instruction~~Volume~~ |
| Positive Quick Reserve (PQR) | BOA Instruction~~Volume~~ |
| Negative Slow Reserve (NSR) | BOA Instruction~~Volume~~ |
| Positive Slow Reserve (PSR) | BOA Instruction~~Volume~~ |

## ~~1.3 ABSVD Provision~~

## 2.3 ABSVD Provision for Applicable Balancing Services from BM Providers

~~ABSVD will be submitted in accordance with section Q, Paragraph 6.4 of the Balancing and Settlement Code. In outline this entails the~~

~~submission of ABSVD within two Business Days following the relevant Settlement Day.~~

ABSVD will be submitted in accordance with BSC, Section Q, Paragraph 6.4. This entails the submission of ABSVD within two Business Days following the relevant Settlement Day.

The ABSVD data is sent to Elexon to be used in their imbalance calculation process as specified in Section T, Paragraph 4.3 of the BSC and is displayed under Balancing Services Volume on Balancing Mechanism data by BMU view | Insights Solution .

## 2.4 Re-submission of ABSVD for Applicable Balancing Services from BM Providers

~~**1.5 Re-submission of ABSVD**~~

~~In the event that an error is identified in the ABSVD, the data will be re-submitted, as soon as reasonably practicable, once the corrected data is available.~~ In the event that an error or incompleteness is identified in the submitted ABSVD, the data will be investigated, re-calculated and re-submitted to Elexon, as soon as reasonably practicable, once the corrected data is available.

Any queries related to the calculation and submission of ABSVD should be addressed to settlement.queries@neso.energy.

## 2.5 Disputes for BM ABSVD

~~**Disputes**~~

A dispute arises where the Lead Party of the relevant BM Unit disagrees with the value of QASij notified by NESO. Where such a dispute arises, a representative of NESO and each BSC Party concerned who has authority to resolve the dispute shall meet (~~including by agreement by telephone~~either in person or virtually) within 10 Business Days of a request by either party (or within such longer period as may be agreed, acting reasonably) and seek to resolve it. If the parties to the dispute are unable to resolve it within 10 Business Days of the meeting (or within such longer period as they may agree within that initial 10 Business Day period, both parties acting reasonably as to the length of the period), then the parties' obligations under this paragraph to undertake such discussions shall no longer apply in relation to that dispute. Either party may then refer the dispute to arbitration pursuant to the rules of the London Court of Arbitration in force from time to time.

The laws of England shall be the proper law of reference to arbitration under this paragraph and in particular (but not so as to derogate from the generality of the foregoing) the provisions of the Arbitration Act 1996 shall apply to any such arbitration wherever it or any part of it shall be conducted.

Any arbitrator or panel of arbitrators appointed under this Paragraph 3 shall determine such issues as are referred to him or them consistently with any determination by the Authority, whether or not relating to the same or different facts.

For the avoidance of doubt, a party may only raise a dispute in respect of QASij where they are Lead Party of the relevant BM Unit.

~~PART C: APPLICABLE BALANCING SERVICES VOLUME DATA 'ABSVD' FOR NON-BM PROVIDERS~~

# ~~PART C:~~3 APPLICABLE BALANCING SERVICES VOLUME DATA (ABSVD) FOR NON-BM PROVIDERS

## ~~1.~~ 3.1 Definition of Non- BM Provider ~~**Balancing Services for inclusion in the ABSVD**~~

~~Balancing Services are defined in the Transmission Licence and described in more detail in the Procurement Guidelines, which NESO is required to establish in accordance with Standard Condition C9 of the Electricity System Operator Licence. The purpose of the Procurement Guidelines is to set out the kinds of Balancing Services which we may be interested in purchasing, together with the mechanisms by which we envisage purchasing such Balancing Services. ABSVD covers a subset of the Balancing Services that we intend to procure.~~

Non-BM Provider refers to a provider that is dispatched by NESO outside the Balancing Mechanism (BM). If a company supplies a balancing service to NESO but its units are not registered as BMUs, these are considered as Non-BM units for the purposes of ABSVD calculation and submission to Elexon.

## 3.2 Basis of calculation for Non-BM providers

The following Applicable Balancing Services will be included in the calculation of the ABSVD:

~~The following Applicable Balancing Services contracts with Non-BM Providers will be included in the calculation of the ABSVD:~~

**Table 3 - Non-BM ABSVD Volumes Supplied to Elexon**

**~~Non-BM ABSVD Applied~~**

| Unit Type | Balancing Service | Data Volume Source |
|---|---|---|
| Non-BM | Short Term Operating Reserve (STOR) | Delivered Volume restricted to Instructed Volume (see Note 1) |
| Non-BM | Fast Reserve (FR) | Delivered Volume restricted to Instructed Volume (see Note 1) |
| Non-BM | Negative Quick Reserve (NQR) | Delivered Volume restricted to Instructed Volume (see Note 1) |
| Non-BM | Positive Quick Reserve (PQR) | Delivered Volume restricted to Instructed Volume (see Note 1) |
| Non-BM | Negative Slow Reserve (NSR) | Delivered Volume restricted to Instructed Volume (see Note 1) |
| Non-BM | Positive Slow Reserve (PSR) | Delivered Volume restricted to Instructed Volume (see Note 1) |
| Non-BM | MW Dispatch (MWD) | Delivered Volume restricted to Instructed Volume (see Note 1) |
| Non-BM Assets HH settled* | Local Constraint Market (LCM) | Delivered Volume restricted to Instructed Volume (see Note 1) |

| | | |
|---|---|---|
| Non-BM Industrial and Commercial consumers (except for Industrial and Commercial Consumers in Profile Class 3 and 4)<br><br>Non-BM HH settled Domestic consumers whose MPAN is signed up to provide DFS with the supplier that has an ELEXON BMU ID | Demand Flexibility Service (DFS) | Delivered Volume |
| Non-BM | Frequency Response Services (Dynamic Containment (DC) High/Low, Dynamic Moderation (DM) High/Low and Dynamic Regulation (DR) High/Low)~~Frequency Response Service *DC,DM,DR)~~ | Expected Volume |

Note 1: If additional energy is shown as a positive Value then Min(Delivered MWh, Instructed MWh), if a Reduction in energy to the system is shown as a negative value then Max(Delivered Volume MWh, Instructed MWh)

Note 2: Providing the necessary data to meet the NESO ABSVD process requirements, will be part of the contract terms for each Applicable Balancing Service.

Note 3: NBM Providers can see the monthly volumes submitted for ABSVD in the utilisation files for the appropriate service in the

Ancillary Services Backing Reports Guide in the following location: Settlements | National Energy System Operator

Note 4: ABSVD volumes calculated as follows:

- For Frequency response (DC/DM/DR), ABSVD expected volumes are calculated using an initial 1MW calculation to determine difference between Actual and Target Frequency. This is then multiplied by the tendered MW value to give the expected volume.
- For DFS the volumes reported are the actual delivered metered volumes.
- For all other services in the table, volumes reported are actual metered but capped by instruction. Therefore, always reporting the minimum of expected and delivered.

*LCM - ~~NG~~NESO submit ABSVD ~~applicable Balancing Services Volume Data~~ to Elexon with respects to eligible non-BM providers delivered HH-settled volumes, where it is feasible to do so. With the optionality to opt out of ABSVD for eligible Non-BM providers and calculation in accordance with the relevant CSA.

~~Utilisation volumes will be determined in the accordance with the characteristics of the service. With the optionality to opt out~~

~~of ABSVD for eligible non-BM providers and calculation in accordance with the relevant Commercial Services Agreement.~~

~~For the avoidance of doubt a consultation will be carried out prior to~~
~~any further Balancing Services with Non-BM Providers being included in the calculation of ABSVD.~~

## 2. ABSVD Calculation for Non-BM Providers for Applicable Reserve Balancing Services.

The imbalances associated with an Applicable Reserve Balancing Service provided by a Non-BM Provider (the Balancing Service Provider (BSP) are attributed to the relevant Supplier (the Balancing Responsible Party (BRP)). An adjustment will be made to the BRP's imbalance account to ensure this takes into account the volumes provided to NESO under an Applicable Reserve Balancing Services contract with a Non-BM Provider. ELEXON will calculate Non BM Unit ABSVD for each impacted BRP in accordance with the BSC, which will be used to correct BRP imbalance positions.

The Non-BM ABSVD volumes will take the form of delivered volumes of Applicable Reserve Balancing Services, collared at the instructed amount,. The requirement to provide the necessary data to meet these requirements will be part of the contract terms for each Applicable Reserve Balancing Service. For STOR, Quick Reserve and Slow Reserve these collared delivered volumes are calculated based on metered volumes and the applicable volumes are reported in "backing data" sent by NESO to the provider..

~~When NESO receives this data, they will validate the volumes by confirming that they do not exceed the total instructed volume. These will then be passed to Elexon who will then neutralise them against the relevant Supplier Energy Account – Any volumes outside those relating to the Applicable Reserve Balancing Service (i.e., over-delivery) will not be part of this data pass-through and therefore these volumes will not be applied to the relevant Supplier's account for imbalance neutralisation.~~

## 3.3 Registration of Metering System Identifier (MSID) pairs

As a condition of Elexon's acceptance of the ABSVD volumes (calculated and submitted by NESO), NESO is required to notify Elexon of all MSID Pairs that may be used for the provision of Non-BM Unit ABSVD, before it sends MSID Pair Delivered Volumes. In accordance with Section Q, 6.4.8 of BSC, the high-level requirements of registration of MSID pairs with Elexon are:

- The Non-BM Providers submit via the relevant customer registration system for each service the information about MSID pairs for every unit that provides a Non-BM Service
- NESO submit to Elexon the data received from the Non-BM providers
- Elexon confirm to NESO the eligibility and registration of MSID pairs

Note: A failure to register MSID pairs may result in a unit being disqualified from providing a service.

## ~~3.~~ 3.4 ABSVD provision for Applicable Balancing Services for Non-BM Providers~~ABSVD provision for Applicable Reserve Balancing Services from Non-BM Providers~~

For the purpose of calculation and submission of ABSVD volumes to Elexon, the following steps are required to be undertaken:

- NESO calculate energy volumes per Non-BM units as specified in the Non-BM ABSVD Volumes Supplied to Elexon table
- Providers allocate the energy volume to four decimal places for each MSID pair via the relevant customer registration system for each service
- The volume allocation against registered MSID pairs is validated via the relevant customer registration system for each service
- The ABSVD allocated volumes, in respect of any MSID pair and Settlement Period within a Settlement Day expressed in MWh, will be submitted by NESO to Elexon

Note: If an energy allocation is not given by the registered service provider, a default allocation will be conducted, dividing the energy volume equally between MSIDs registered to the unit providing the service.

In accordance with BSC, Section Q, 6.4 MSID Pair Delivered Volume shall be sent to the SVAA by the fifteenth day after such Settlement Day to the extent such data has been received by the NESO, and in any event by the forty fifth day after such Settlement Day, as stated in 6.4.7, b.

~~For Applicable Reserve Balancing Services delivered by Non-BM Providers, ABSVD data in the form of collared delivered volumes by MSID pairs will be submitted by NESO to Elexon following the receipt~~

~~of the data from the provider in accordance with Section Q of the BSC 6.4.~~

~~Section Q of BSC 6.4 states the associated MSID Pair Delivered Volume in accordance with paragraph 6.4.9, and such MSID Pair Delivered Volume shall be sent to the SVAA by the fifteenth day after such Settlement Day to the extent such data has been received by the NETSO, and in any event by the forty fifth day after such Settlement Day.~~

~~**4. ABSVD Calculation and Submission for Non-BM Providers for Applicable Response Balancing Services**~~

~~ABSVD will be calculated for Frequency Response services (DC, DM, DR) with Non-BM Providers under this methodology using expected volumes.~~

## 3.5 Re-submission of ABSVD for Applicable Balancing Services from Non-BM Providers

~~**5. Re-submission of ABSVD**~~

~~In the event that an error is identified in this data, the data will be re-submitted and corrected, as soon as reasonably practicable, but not later than the Final Reconciliation Run, once the corrected data is available.~~ In the event that an error or incompleteness is identified in the submitted ABSVD, the data will be investigated, re-calculated and

re-submitted to Elexon, as soon as reasonably practicable, once the corrected data is available but not later than the Final Reconciliation Run.

Any queries related to the calculation and submission of ABSVD should be addressed to settlement.queries@neso.energy.

## 3.6 Disputes for Non-BM ABSVD

~~**Disputes**~~

### 3.6.1 Disputes relating to Non-BM Provider volumes passed to Elexon.

A dispute may arise relating to Non-BM Provider volumes passed to Elexon. Where such a dispute arises, a representative of NESO and the BSP concerned who has authority to resolve the dispute shall meet (~~including by agreement by telephone~~either in person or virtually) within 10 Business Days of a request by either party (or within such longer period as may be agreed, acting reasonably) and seek to resolve it. If the parties to the dispute are unable to resolve it within 10 Business Days of the meeting (or within such longer period as they may agree within that initial 10 Business Day period, both parties acting reasonably as to the length of the period), then the parties' obligations under this paragraph to undertake such discussions shall no longer apply in relation to that dispute. Either party may then refer

the dispute to arbitration pursuant to the rules of the London Court of Arbitration in force from time to time.

The laws of England shall be the proper law of reference to arbitration under this paragraph and in particular (but not so as to derogate from the generality of the foregoing) the provisions of the Arbitration Act 1996 shall apply to any such arbitration wherever it or any part of it shall be conducted.

Any arbitrator or panel of arbitrators appointed under this Paragraph 3 shall determine such issues as are referred to him or them consistently with any determination by the Authority, whether or not relating to the same or different facts.

For the avoidance of doubt, a party may only raise a dispute in respect of non-BM ABSVD where they are the contracted BSP for the service.

In the event that an error is identified in the ABSVD, the data will be re-submitted and corrected, as soon as reasonably practicable, but not later than the Final Reconciliation Run, once the corrected data is available.

### 3.6.2 Disputes relating to ABSVD volumes applied to Supplier Energy Accounts

~~Disputes relating to ABSVD volumes applied to Supplier Energy Accounts~~

These will be dealt with via Elexon through BSC Trading Disputes processes (BSCP11). Where the dispute requires investigation into the source data provided to Elexon, NESO will seek to provide supporting information to resolve this matter.

In the event that an error is identified in the ABSVD, the data will be re-submitted and corrected, as soon as reasonably practicable, but usually not later than the Final Reconciliation Run, once the corrected data is available.

If a Trading Dispute relating to ABSVD is upheld, NESO may be required to resubmit ABSVD after Reconciliation Final (up to DF at D+28 months, or potentially up to D+40 months for an Extra Settlement Determination).

# PART D: ABSVD METHODOLOGY FOR BM PARTICIPANTS

## 1. Principles

$QAS_{ij}$ will be determined in accordance with the following formula:

$$QAS_{ij} = \sum_{s \in i} \left( SE_{sj} \times SF_{sm} \right)$$

where:

| | |
|---|---|
| $\sum_{s \in i}$ | is the summation across all Ancillary Service and Other Service provision (as referred to in the definition of Balancing Services within the Transmission Licence and described more fully in Parts B and C of the Procurement Guidelines), s, that contribute to the production or consumption of BM Unit i. |
| m | is the relevant calendar month |
| s | is the number of a discreet Ancillary Service or Other Service provision. |
| $SE_{sj}$ | Is the expected energy delivered by Ancillary Service or Other Service, s, in Settlement Period j as indicated below. |

$SF_{sm}$ is the Service Flag for Service s in calendar month m. It takes a value of 0 or 1.

Determination of $SF_{sm}$

NESO will allocate values as follows:

i. In the case of Category 1 System to Generator Operational Intertripping, $SF_{sm}$ will always = 0. This is in line with the requirements set out under the CUSC.

ii. In all other cases, $SF_{sm}$ will always =1

Determination of $SE_{sj}$

Where service s is a Frequency Response service:

$$SE_{sj} = \int_0^{SPD} FR_{ij}(t)dt$$

where

$FR_{ij}(t)$ is defined in accordance with section 4, sub section 1, paragraph 4.1.3.9A of CUSC, except that:

i. Reference to i should be construed as referring to the relevant service, s;

ii. Reference to the Mandatory Service Agreement should be construed as the relevant service agreement; and

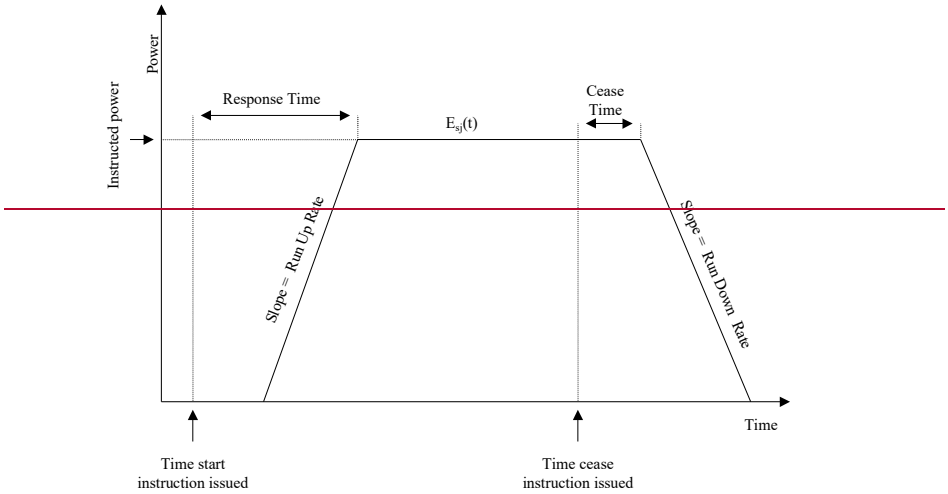
iii. Reference to Mode A Frequency Response should be construed as the relevant frequency response.

Where service s is fast reserve, STOR, or occasional (non-dynamic) response (and a bid offer acceptance is not issued in respect of the service call off):

$$SE_{sj} = \int_0^{SPD} E_{sj}(t)dt$$

Where

$E_{sj}(t)$ is the required energy from service s, time t from the start of settlement period j. The required energy is determined with reference to Figure 1 below.




**~~Figure 1 Graph showing determination of $E_{sj}(t)$~~**

~~where~~

| | |
|---|---|
| ~~Time start instruction issued~~ | ~~Is the time that NESO issues an instruction to the service provider to start delivering the service, and the instruction is not subsequently rejected as being incorrectly issued. For the avoidance of doubt, instruction includes a signal from a relay (or other equipment) owned by NESO to initiate the delivery of an occasional (non-dynamic) response service.~~ |

| | |
|---|---|
| ~~Time cease instruction issued~~ | ~~Is the time that NESO issues an instruction to the service provider to cease delivering the service.~~ |
| ~~Response time~~ | ~~Is the time agreed between the provider and NESO that it will take for the service to be fully delivered from the time the start instruction is issued. In the event that no time has been agreed, it will take the value 0 seconds.~~ |
| ~~Cease time~~ | ~~Is the time agreed between the provider and NESO that it will take between a cease instruction been issued and the provider starting to cease delivery. In the event that no time has been agreed, it will take the value 0 seconds.~~ |
| ~~Run Up Rate~~ | ~~Is the rate agreed between the provider and NESO that the provider will change load at, in response to a start instruction. In the event that no value has been agreed, it will be deemed to be infinite.~~ |
| ~~Run Down Rate~~ | ~~Is the rate agreed between the provider and NESO that the provider will change load at, in response to a cease instruction. In the event that no value has been agreed it will be deemed to be infinite.~~ |

| | |
|---|---|
| ~~Instructed Power~~ | ~~Is the change in power production or consumption instructed by NESO in accordance with the agreement between the provider and NESO.~~ |

~~Where service s is the Maximum Generation Service,~~

~~$SE_{sj} = Min\ (Qmax_{ij}, X * CEC/2)$~~

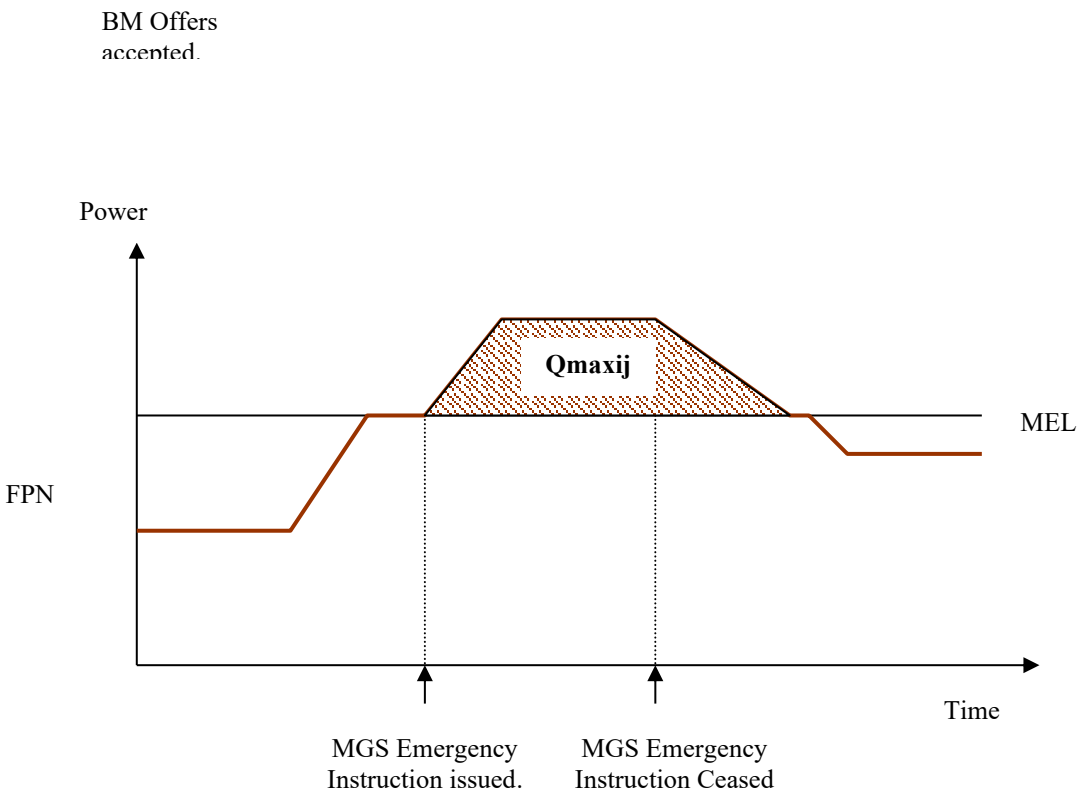
| | |
|---|---|
| ~~$Qmax_{ij}$~~ | ~~Is the calculated Maximum Generation Service volume as defined by~~<br>~~$Max\ (QM_{ij} - (FPN_{ij} + \boxtimes(QAB^{n}_{ij} + QAO^{n}_{ij})), 0)$~~ |
| ~~X~~ | ~~is 0.03 or such figure as may be either:~~<br>~~(i) set out in the Maximum Generation Service Agreement for the available BM Unit or~~<br>~~(ii) agreed or determined in accordance with Paragraphs 4.2.5.3 to 4.2.5.5 (inclusive) of the CUSC.~~ |

| | |
|---|---|
| ~~CEC~~ | ~~Connection Entry Capacity for the Available BM Unit as defined in the CUSC~~ |
| ~~$QM_{ij}$, $QAB^{n}_{ij}$, $QAO^{n}_{ij}$, $FPN_{ij}(t)$~~ | ~~Have the meanings ascribed to them in the Balancing and Settlement Code~~ |
| ~~MEL~~ | ~~Maximum Export Limit as defined in the Grid Code~~ |

~~For the avoidance of doubt, any Maximum Generation Service volume delivered in excess of X multiplied by CEC will be subject to the dispute provision set out in Paragraph 4.2.5 of CUSC. Any volume in excess of X multiplied by CEC will not be classed as an Applicable Balancing Services volume unless otherwise agreed or directed in accordance with the dispute provision set out in Paragraph 4.2.5 of CUSC.~~

~~The above calculation will be applied from the start of the settlement period during which the Maximum Generation Service Emergency Instruction has been issued until the end of the settlement period for which the Maximum Generation Service Emergency Instruction is ceased.~~

~~The volume identified as Maximum Generation Service (assuming that a settlement period does not end following the issue of a 'cease' instruction, but prior to the return of output to MEL) using the above calculation is demonstrated in Fig 2 below.~~




~~Figure 2 – Graph showing calculation of $Qmax_{ij}$~~

~~Where Service s is System to Generator Operational Intertripping Scheme, Commercial Intertripping Scheme or Fast De-Load Service, $SE_{sj}$ will be equal to the reduction in output calculated from the time of the intertrip firing or the fast de-load instruction until the end of the~~

~~Balancing Mechanism Window Period. The volume output reduction (in MWh) over this period is equal to the integral of spot (MW) Final Physical Notification (FPN), plus the sum of all accepted Bid and Offer spot (MW) values covered by the period. Where an intertrip or fast de-load occurs on a modular BMU and does not affect all generating units that make up that BMU, the output of the remaining generating units will be taken off the total volume such that $SE_{sj}$ reflects the volume (MWh) associated with the intertrip or fast de-load. This is shown algebraically below:~~

$$\int_{t_0}^{t_1}\left(FPN_{ij}(t)+\sum^{k}\left(qABO^{kn}{}_{ij}(t)\right)-QM_{ij}(t)\right)d(t)$$

**~~Where~~**

~~$t_0$ = time of intertrip firing or fast de-load instruction~~

~~$t_1$ = time at end of Balancing Mechanism Window Period~~

~~$FPN_{ij}(t)$ = Final Physical Notification as defined within the BSC~~

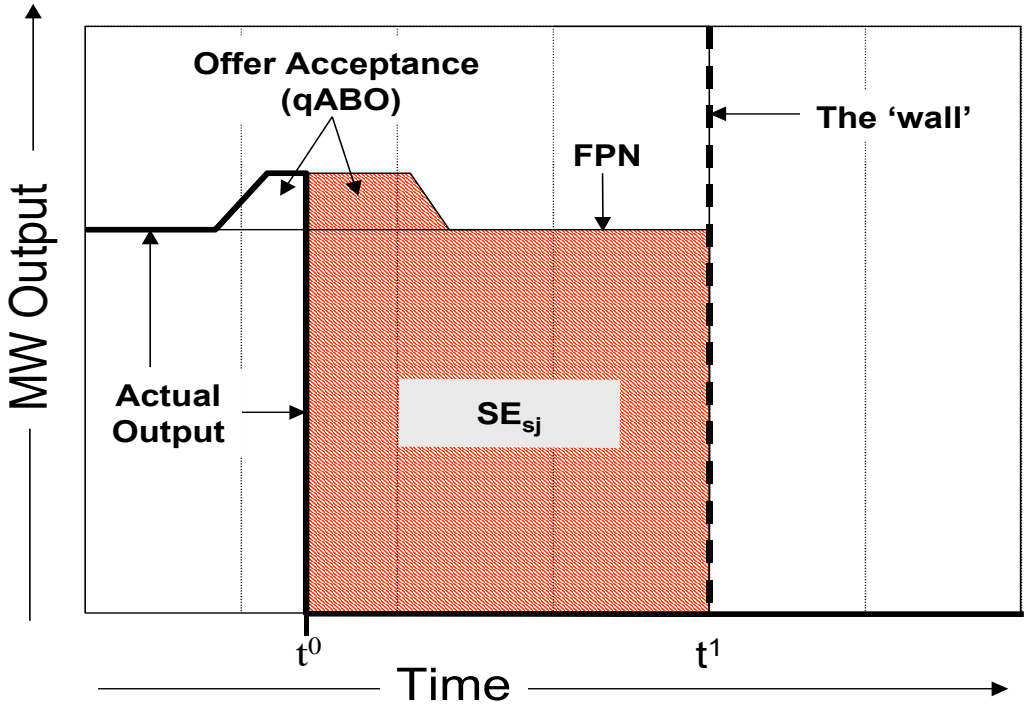
~~$qABO^{kn}_{ij}(t)$ = Accepted Bid-Offer Volume as defined within the BSC~~

~~$\Sigma^{k}$ = Sum over each separate Bid Offer Acceptance~~

~~$QM_{ij}(t)$ = Metered output of BM Unit i in settlement period j for spot time t, where Active Energy volumes are estimated from~~

~~operational metering data held by the Transmission Company~~

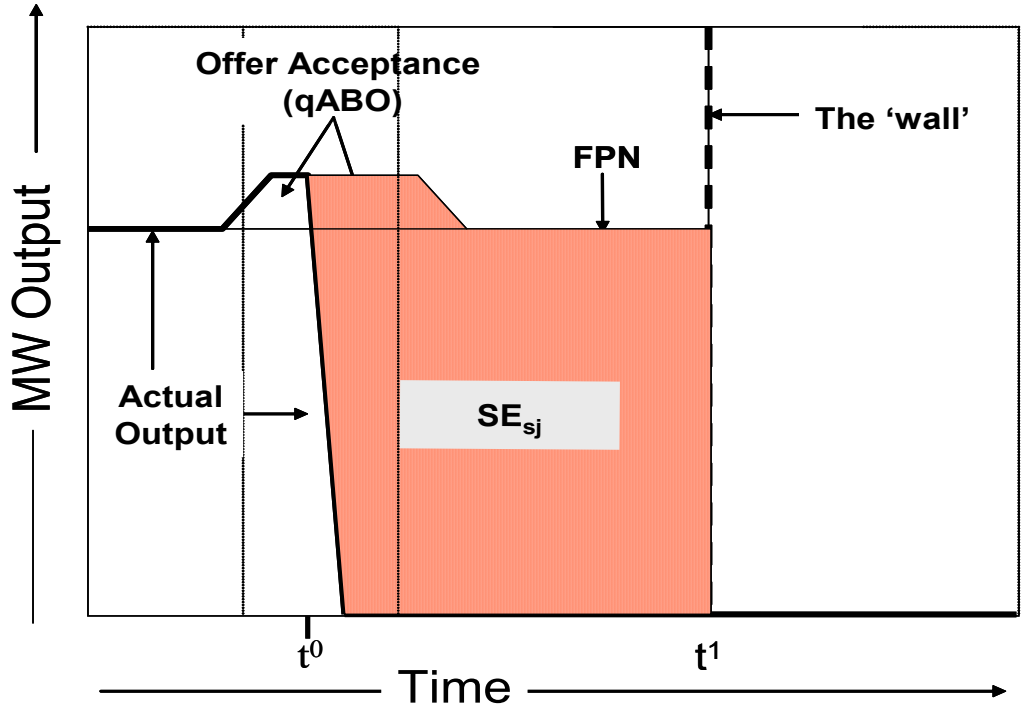
~~An example of the volume calculated for a given set of circumstances, using the above calculation is demonstrated in Fig 3 below. For the avoidance of doubt, the 'wall' is the end of the Balancing Mechanism Window.~~




~~**Fig 3 – Graph showing example of $SE_{sj}$ for System to Generator Operational intertripping Scheme or a Commercial Intertripping Scheme (instantaneous trip)**~~

~~**Fig 3a – Graph showing example of SEsj for System to Generator Operational Intertripping Scheme or a Commercial**~~

~~**Intertripping Scheme (time delayed) or a Fast De-load Service**~~




~~For all other services:~~

~~$SE_{sj} = 0$~~

## ~~2. Disputes~~

~~A dispute arises where the Lead Party of the relevant BM Unit disagrees with the value of $QAS_{ij}$ notified by NESO. Where such a dispute arises, a representative of NESO and each BSC Party~~

~~concerned who has authority to resolve the dispute shall meet (including by agreement by telephone) within 10 Business Days of a request by either party (or within such longer period as may be agreed, acting reasonably) and seek to resolve it. If the parties to the dispute are unable to resolve it within 10 Business Days of the meeting (or within such longer period as they may agree within that initial 10 Business Day period, both parties acting reasonably as to the length of the period), then the parties' obligations under this paragraph to undertake such discussions shall no longer apply in relation to that dispute. Either party may then refer the dispute to arbitration pursuant to the rules of the London Court of Arbitration in force from time to time.~~

~~The laws of England shall be the proper law of reference to arbitration under this paragraph and in particular (but not so as to derogate from the generality of the foregoing) the provisions of the Arbitration Act 1996 shall apply to any such arbitration wherever it or any part of it shall be conducted.~~

~~Any arbitrator or panel of arbitrators appointed under this Paragraph 3 shall determine such issues as are referred to him or them consistently with any determination by the Authority, whether or not relating to the same or different facts.~~

For the avoidance of doubt, a party may only raise a dispute in respect of $QAS_{ij}$ where they are Lead Party of the relevant BM Unit.

## 3. Worked Examples

### 3.1 Provision of Mode A Frequency Response

Note that this example would apply equally to other commercial frequency response services.

A generator delivers response as illustrated in Figure 2.

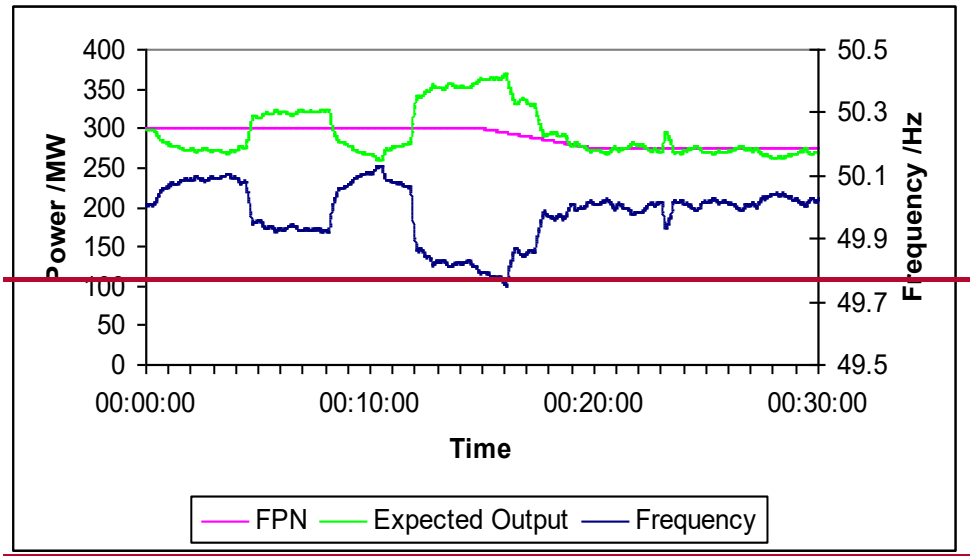



**Figure 2 Example of Response Delivery**

In accordance with this methodology and the provisions in section 4, sub section 1, paragraph 4.1.3.9A described in CUSC,

~~$QAS_{ij}$ is determined to be 2.5 MWh (meaning that in the relevant half-hour, as a result of providing response, an additional 2.5 MWh of energy was required to be produced).~~

~~If this party operated a single BM Unit with the following parameters for this settlement period, the impact on central settlement would be as follows:~~

| | |
|---|---|
| ~~Contracted Position ($QABC_{aj}$)~~ | ~~137 MWh~~ |
| ~~Final Physical Notification ($FPN_{ij}$)~~ | ~~145 MWh~~ |
| ~~Metered Production ($QM_{ij}$)~~ | ~~147.5 MWh~~ |
| ~~Applicable Balancing Services Volume ($QAS_{ij}$)~~ | ~~2.5 MWh~~ |
| ~~Transmission Loss Multiplier ($TLM_{ij}$)~~ | ~~0.95~~ |
| ~~Bid Offer Acceptances~~ | ~~0 MWh~~ |

~~The credited energy volume $QCE_{aij}$ is determined in accordance with the Balancing and Settlement Code, section T, paragraph 4.5.1(b):~~

~~$QCE_{iajj} = QM_{ij} \times TLM_{ij} - \sum_a QCE_{iajj}$~~

~~$= 147.5\ MWh \times 0.95 - 0\ MWh$~~

~~$= 140.13\ MWh$~~

~~(where ⊠$_{a}$ is the sum over Energy Accounts of Subsidiary Parties – in this example it is assumed that all energy is credited to the lead party.)~~

~~The account credited energy volume $QACE_{aj}$, would be calculated in accordance with the Balancing and Settlement Code, section T, paragraph 4.6.1:~~

~~$QACE_{aj} = ⊠_{i}QCE_{iaj}$~~

~~= 140.13 MWh~~

~~The Balancing Services Volume is determined in accordance with the Balancing and Settlement Code, section T, paragraph 4.3.2:~~

~~$QBS_{ij} = ⊠^{n}(QAO^{n}_{ij} + QAB^{n}_{ij}) + QAS_{ij}$~~

~~= 0 + 2.5 MWh~~

~~The Account Period Balancing Services volume is determined in accordance with the Balancing and Settlement Code, section T, paragraph 4.6.2:~~

~~$QABS_{aj} = ⊠_{i}QBS_{ij} ⊠ TLM_{ij}$~~

~~= 2.5 MWh ⊠ 0.95~~

~~= 2.38 MWh~~

~~The Account Energy Imbalance Volume ($QAEI_{aj}$) is determined in accordance with the Balancing and Settlement Code, section T, paragraph 4.6.3:~~

~~$QAEI_{aj} = QACE_{aj} - QABS_{aj} - QABC_{aj}$~~

~~$QAEI_{aj}$ = 140.13 MWh – 2.38 MWh – 137 MWh~~

~~= 0.75 MWh~~

~~In this example, the account would receive a payment for 0.75 MWh at System Sell Price, in accordance with the Balancing and Settlement code, section T, paragraph 4.7.1.~~

## ~~3.2 Provision of Short Term Operating Reserve (STOR)~~

~~Note that this example would apply equally to Fast Reserve or Occasional (non-dynamic) Response.~~

~~Consider a STOR provider with the following parameters:~~

| | |
|---|---|
| ~~Response Time~~ | ~~15 minutes~~ |
| ~~Run Up Rate~~ | ~~10 MW/minute~~ |
| ~~Run Down Rate~~ | ~~– 5 MW/minute~~ |
| ~~Cease Time~~ | ~~5 minutes~~ |

~~At 00:00 NESO instructs 50 MW of STOR from the provider.~~

At 01:00 NESO instructs the provider to cease delivery.

This leads to the delivery profile shown in figure 3:

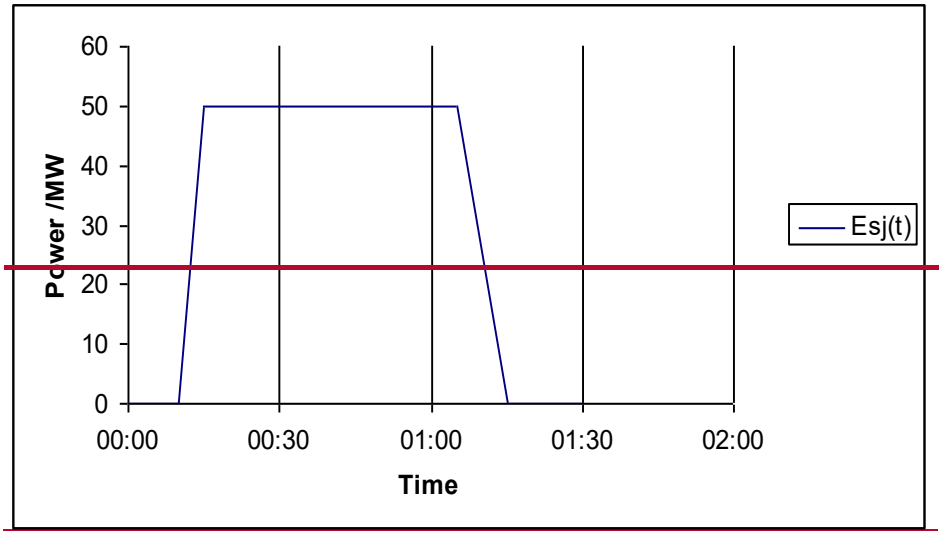



**Figure 2 Example STOR Delivery**

| Settlement Period (Start time) | 00:00 | 00:30 | 01:00 | 01:30 |
|---|---|---|---|---|
| $SE_{sj}$ /MWh | 14.58 | 25 | 8.33 | 0 |

If this were the only Applicable Balancing Service provision within the BM unit with the service flag set to 1, then $QAS_{tj}$ would take the same values.

If this party operated a single BM Unit with the following parameters for the settlement period starting 00:30, then the impact on central settlement would be as follows:

| | |
|---|---|
| Contracted Position ($QABC_{aij}$) | −200 MWh |
| Final Physical Notification ($FPN_{ij}$) | −190 MWh |
| Metered Consumption ($QM_{ij}$) | −165 MWh |
| Applicable Balancing Services Volume ($QAS_{ij}$) | 25 MWh |
| Transmission Loss Multiplier ($TLM_{ij}$) | 1.05 |
| Bid Offer Acceptances | 0 MWh |

The credited energy volume $QCE_{iaij}$ is determined in accordance with the Balancing and Settlement Code, section T, paragraph 4.5.1(b):

$QCE_{iaij} = QM_{ij} \times TLM_{ij} - \sum_a QCE_{iaij}$

$= -165 \text{ MWh} \times 1.05 - 0 \text{ MWh}$

$= -173.25 \text{ MWh}$

~~(where ☒$_a$ is the sum over Energy Accounts of Subsidiary Parties – in this example it is assumed that all energy is credited to the lead party.)~~

~~The account credited energy volume $QACE_{aij}$ would be calculated in accordance with the Balancing and Settlement Code, section T, paragraph 4.6.1:~~

~~$QACE_{aij} = ☒_i QCE_{iaij}$~~

~~$= -173.25$ MWh~~

~~The Balancing Services Volume is determined in accordance with the Balancing and Settlement Code, section T, paragraph 4.3.2:~~

~~$QBS_{ij} = ☒^n(QAO^n_{ij} + QAB^n_{ij}) + QAS_{ij}$~~

~~$= 0 + 25$ MWh~~

~~The Account Period Balancing Services volume is determined in accordance with the Balancing and Settlement Code, section T, paragraph 4.6.2:~~

~~$QABS_{aij} = ☒_t QBS_{ij} ☒ TLM_{ij}$~~

~~$= 25$ MWh ☒ 1.05~~

~~$= 26.25$ MWh~~

~~The Account Energy Imbalance Volume ($QAEI_{aj}$) is determined in accordance with the Balancing and Settlement Code, section T, paragraph 4.6.3:~~

~~$QAEI_{aj} = QACE_{aj} - QABS_{aj} - QABC_{aj}$~~

~~$QAEI_{aj} = -173.25\ MWh - 26.25\ MWh - (-200\ MWh)$~~

~~$= 0.5\ MWh$~~

~~In this example, the account would receive a payment for 0.5 MWh at System Sell Price, in accordance with the Balancing and Settlement code, section T, paragraph 4.7.1.~~

# ~~PART E: ABSVD METHODOLOGY FOR NON-BM PROVIDERS~~

## ~~1. Principles~~

~~ABSVD for Non-BM Providers is not calculated by NESO. ABSVD for Non-BM Providers, as per Part B of this document, is based on the pass through of collared delivered volumes by MSID pair to Elexon.~~

~~ELEXON will calculate Non-BM Unit ABSVD for each impacted BRP in accordance with the BSC, which will be used to correct BRP imbalance positions.~~

## ~~2. Disputes~~

### ~~2.1. Disputes relating to Non-BM Provider volumes passed to Elexon.~~

~~A dispute may arise relating to Non-BM Provider volumes passed to Elexon. Where such a dispute arises, a representative of NESO and the BSP concerned who has authority to resolve the dispute shall meet (including by agreement by telephone) within 10 Business Days of a request by either party (or within such longer period as may be agreed, acting reasonably) and~~

~~seek to resolve it. If the parties to the dispute are unable to resolve it within 10 Business Days of the meeting (or within such longer period as they may agree within that initial 10 Business Day period, both parties acting reasonably as to the length of the period), then the parties' obligations under this paragraph to undertake such discussions shall no longer apply in relation to that dispute. Either party may then refer the dispute to arbitration pursuant to the rules of the London Court of Arbitration in force from time to time.~~

~~The laws of England shall be the proper law of reference to arbitration under this paragraph and in particular (but not so as to derogate from the generality of the foregoing) the provisions of the Arbitration Act 1996 shall apply to any such arbitration wherever it or any part of it shall be conducted.~~

~~Any arbitrator or panel of arbitrators appointed under this Paragraph 3 shall determine such issues as are referred to him or them consistently with any determination by the Authority, whether or not relating to the same or different facts.~~

~~For the avoidance of doubt, a party may only raise a dispute in respect of non-BM ABSVD where they are the contracted BSP for the service.~~

In the event that an error is identified in the ABSVD, the data will be re-submitted and corrected, as soon as reasonably practicable, but not later than the Final Reconciliation Run, once the corrected data is available.

## 2.2. Disputes relating to ABSVD volumes applied to Supplier Energy Accounts

These will be dealt with via Elexon through BSC Trading Disputes processes ( BSCP11). Where the dispute requires investigation into the source data provided to Elexon, NESO will seek to provide supporting information to resolve this matter.

In the event that an error is identified in the ABSVD, the data will be re-submitted and corrected, as soon as reasonably practicable, but usually not later than the Final Reconciliation Run, once the corrected data is available.

If a Trading Dispute relating to ABSVD is upheld, NESO may be required to resubmit ABSVD after Reconciliation Final (up to DF at D+28 months, or potentially up to D+40 months for an Extra Settlement Determination).

# 3. Calculation of ABSVD

The calculations for the Determination of Non-BM Unit ABSVD are laid out in the Balancing and Settlement Code Annex S-2:

~~Supplier Volume Allocation Rules, Section 7 "Half Hourly Metering System Consumption", paragraph 7.3.~~