

PUBLIC

P354 'Use of ABSVD for non-BM Balancing Services at the metered (MPAN) level'

Business Requirements

16 November 2017

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Approvals

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1. INTRODUCTION

1.1 Purpose of document

This document contains the Business Requirements (BR) for Balancing and Settlement Code (BSC) Modification P354¹.

This document specifies the BRs for P354, and will form the basis on which ELEXON:

- i) procures high-level Impact Assessments, with approximate costs and timescales, from its Service Providers;
- ii) identifies the impact on its processes;
- iii) initiates the industry Consultation;
- iv) captures any changes to the BRs; and
- v) develops more detailed Solution Requirements, which will be used to procure a Detailed Level Impact Assessment from its Service Providers. This will have firm costs and timescales, and will be the basis for the design of the P354 solution.

A Glossary of Terms is included as an Appendix A to this document.

1.2 Background

P354 seeks to correct a defect identified in the current BSC arrangements for notifying Applicable Balancing Services Volume Data (ABSVD). The BSC currently provides a mechanism that the Transmission Company (TC) can use to provide ABSVD values (calculated in accordance with an Ofgem-approved [ABSVD Methodology](#)) to the Settlement Administration Agent (SAA) for a Balancing Mechanism (BM) Unit. The SAA will then include these values in the Settlement calculation as an adjustment to the imbalance position for the BM Unit's Lead Party, in order to ensure that the affected BSC Parties' imbalance positions are calculated correctly.

The requirement for the Transmission Company to allocate any ABSVD value to a BM Unit (before providing it to SAA) is not an issue, where the Balancing Services Provider (BSP) is also a BSC Party, and has registered a BM Unit for the unit(s) providing the service (a "**BM BSP**"). However, it is potentially more problematic where the BSP is providing the service using unit(s) that do not have their own BM Unit, and for which the metering has been registered in the Supplier Meter Registration Service (SMRS) by an electricity Supplier who is not the BSP (a "**non-BM BSP**").

The Transmission Company's ABSVD Methodology does allow ABSVD to be calculated for non-BM [Fast Reserve](#); but not for other non-BM services, such as non-BM Short Term Operating Reserve ([STOR](#)). For these services it is not practical for the Transmission Company to allocate ABSVD volumes to a BM Unit (because doing so would require information about the metered volumes at the site and who is supplying them which the Transmission Company does not have). In these cases it is not currently possible to reflect the balancing services delivered in ABSVD, which results in the Suppliers, whose customers provide the balancing service, receiving an additional imbalance payment that is not available to BM BSPs. The Proposer of P354 believes that this is distorting competition in the STOR market, and potentially increasing the balancing costs faced by consumers.

P354 seeks to address this defect by:

- i) identifying and implementing a mechanism to identify the Suppliers responsible for the Metering Systems that contribute to the Applicable Balancing Services; and
- ii) allocating the appropriate energy volumes to their accounts which will then be included in the Settlement calculation, resulting in the affected BSC Parties' imbalance positions being calculated correctly.

¹ 'Use of ABSVD for non-BM Balancing Services at the metered (MSID) level'.

1.3 Scope of the P354 solution

As a result of discussions at the second P354 Workgroup, the BRs specified in Section 2 of this document are significantly different to the BRs discussed at the first Workgroup in February, and which are captured in version 1.0 of this document.

The P354 solution proposed in the P354 Modification Proposal ("Original Scope") was modified as a result of discussions at the P354 Workgroups ("Revised Scope") and then simplified as a result of discussions at the TC's C16 ABSVD Workgroups ("Final Scope").

High level requirements for the original scope and revised scope are set out in Appendix C to this document for reference.

1.3.1 Final Scope the P354 solution

At its second meeting on 26 September 2017, the C16 ABSVD Workgroup agreed that the TC should send "collared² delivered volumes" for each Metering System ID (MSID) Pair involved in the provision of Balancing Services (other than where the TC could assign ABSVD directly to a BM Unit).

As a result, there are no longer requirements for:

- the TC to send Allocation Rules to the Supplier Volume Allocation Agent (SVAA) system; and
- the SVAA to load, store and apply Allocation Rules.

For the resultant "Final Scope" of the P354 solution, the high level requirements are:

- TC to provide a list of all MSIDs for Metering Systems that are eligible to provide non-BM Balancing Services ("**Eligible Metering Systems**"), specified in "**MSID Pairs**", and specifying whether the non-BM Balancing Services Provider has consented to the Supplier receiving **MSID ABSVD**, to the SVAA [10] WDs before the P354 Implementation Date;
- TC to provide any new Eligible Metering Systems specified in "MSID Pairs" to the SVAA within [5] WDs of receiving notification of such from non-BM Balancing Services providers;
- TC to send, when available and no later than 45 days after the relevant Settlement Date³, the net delivered volumes for Balancing Services provided for each MSID Pair in respect of all non-BM Balancing Services ("**MSID Pair Delivered Volumes**") for each Settlement Period to the SVAA.
- SVAA to obtain details of Supplier, Half Hourly Data Aggregator (HHDA) and Grid Supply Point (GSP) Group for each Eligible Metering System from the Electricity Central Online Enquiry Service (ECOES)⁴, or other source agreed by the Panel, and to populate SVAA with this data before the P354 Implementation Date, for the purposes of establishing the "**SVA Metering System Balancing Services Register**";
- SVAA operator to obtain details of Supplier, HHDA and GSP Group for each new Eligible Metering System notified by the TC (after the P354 implementation date) from ECOES⁴, or other source approved by the Panel, for the purposes of maintaining the SVA Metering System Balancing Services Register;
- SVAA to identify the HHDA responsible for each Eligible Metering System and to request disaggregated metered data for each Settlement Period from each HHDA for the Eligible Metering Systems for which they are responsible;
- Each HHDA to provide disaggregated metered data to SVAA for each Eligible Metering System requested by the SVAA for each Settlement Period. HHDA to provide this data for each Volume Allocation Run, and include (for each Metering System and Settlement Period) the metered data (not adjusted for line losses),

² Where "collared" means "capped positive values for Export volumes and capped negative values for Import volumes".

³ To allow ABSVD to be calculated for the First Reconciliation Run.

⁴ Subject to agreement by MRASCo.

the applicable Line Loss Factor Class (LLFC) value and the Supplier Id to which the Metering System is registered;

- HHDAs will be required not to disclose details of the requested MSIDs to Suppliers.
- SVAA to allocate MSID Pair Delivered Volumes to the constituent MSID(s) in the MSID Pair using the metered data provided by HHDAs, creating "**MSID ABSVD**" (see examples in Appendix B);
- SVAA to apply the Line Loss Factor (LLF) associated with the relevant LLFC for a MSID to MSID ABSVD, creating "**LLF adjusted MSID ABSVD**";
- SVAA to provide MSID ABSVD and LLF adjusted MSID ABSVD to Suppliers for those Eligible Metering Systems where the non-BM Balancing Services Provider has given consent;
- SVAA to aggregate LLF adjusted MSID ABSVD to GSP Group level for each Supplier Id, creating "**GSP Group ABSVD**";

The P354 Workgroup agreed that SVAA is not required to apply GSP Group Correction to the ABSVD data. Doing so would introduce additional uncertainty into the ABSVD volumes entering settlement, and would require SVAA to receive consumption data broken down by Consumption Component Class (in order to apply the appropriate GSP Group Correction Scaling Weights).

- SVAA to send **GSP Group ABSVD** for each Supplier Id to SAA for each Settlement Period;
- SAA to apply the correct Transmission Loss Multiplier (TLM) to GSP Group ABSVD for each Supplier, creating "**TLM adjusted GSP Group ABSVD**";
- SAA to aggregate TLM adjusted GSP Group ABSVD for each GSP Group for a Supplier ID and then for each Supplier ID in an Energy Account, creating "**Account Period ABSVD**";
- SAA to include **Account Period ABSVD** in the Settlement calculation, as an adjustment to the Consumption Account of each Supplier;
- SAA to include **Account Period ABSVD** in the SAA-I014 Settlement Reports; and
- Balancing Mechanism Reporting Agent (BMRA) to publish **Account Period ABSVD**.
- The TC may resubmit revised MSID Pair Delivered Volumes for a Settlement Period up to RF.
- The SVAA and SAA shall process any revised delivered volumes for a Settlement Period received from the TC in the next available Reconciliation Run.

1.4 References

Date	Version	Author	Title
15/05/2017	v27.0	ELEXON	BSC Section Q: 'Balancing Mechanism Activities' https://www.elexon.co.uk/bsc-related-documents/balancing-settlement-code/bsc-sections/



3. BUSINESS REQUIREMENTS

The following parties, documentation, processes and systems will be impacted by the P354 requirements:

- The Transmission Company (TC);
- Non-BM Balancing Services Providers;
- Suppliers;
- Half Hourly Data Aggregators (HHDA's);
- SVAA and SAA system and processes;
- Balancing Mechanism Reporting Service (BMRS);
- ABSVD Methodology; and
- Data Transfer Catalogue (DTC) changes.

The Workgroup agreed that the TC should provide details of all Eligible Metering Systems to the BSC Systems as and when they become available and should send MSID Pair Delivered Volumes to the BSC Systems for all Eligible Metering Systems. The Workgroup also agreed that it would be more appropriate for the SVAA to receive and process data relating to the Supplier-MSID relationships than the SAA, which was specified in the original Modification Proposal. This is because the new solution requires the BSC Agent holding the Supplier-MSID relationship to receive metered data from HHDA's, and SVAA (unlike SAA) already receives data from HHDA's over the Data Transfer Service (DTS). This approach is also consistent with the solutions proposed for Modification Proposals P344 '[Project TERRE Implementation into GB market arrangements](#)' and the Alternatives to [P348 'Provision of gross BM Unit data for TNUoS charging](#)' and [P349 'Facilitating Embedded Generation Triad Avoidance Standstill'](#).

BR1 – The Transmission Company shall provide SVAA with a list of MSID Pairs containing Eligible Metering Systems before the P354 implementation date and update it as appropriate after the P354 implementation date

A new process for the TC to provide SVAA with a list of MSID Pairs prior to the P354 Implementation Date.

1.1	<p>The TC shall send to SVAA a list of MSID Pairs [10] business days prior to the P354 Implementation Date. The information shall include:</p> <ul style="list-style-type: none">• MSID of the Import Metering System• MSID of the associated Export Metering System (where applicable)• the date from which the Transmission Company is or may be required to provide ABSVD in relation to this MSID Pair; and• whether the Transmission Company has been notified (by or on behalf of the relevant SVA Customer or SVA Generator) that MSID ABSVD should not be provided to the Supplier. <p><i>Eligible Metering Systems are any Import or Export Metering System that may be included in a MSID Pair.</i></p>
1.2	<p>The TC shall send to SVAA any new or amended MSID Pairs within [5] business days of becoming aware of them.</p>

BR2 – SVAA to receive, load and store MSID Pairs received from the TC

The SVAA System must receive, load and store the MSID Pairs received from the TC from time to time.

2.1	Before the P354 Implementation Date, the SVAA must be able to: <ul style="list-style-type: none">• receive the full list of MSID Pairs set out in BR1.1; and• load the full list of MSID Pairs via a bulk upload⁵ and store in time to allow BR3.1 to be completed in time for use from the P354 Implementation Date.
2.2	After the P354 Implementation Date, , the SVAA must be able to <ul style="list-style-type: none">• receive ad hoc updates to the list of MSID Pairs, as specified in Requirement 1.2; and• manually load updates to the list of MSID Pairs and store within [2] full business days of receipt.
2.3	The SVAA operator must be able to create, view and edit data relating to MSID Pairs.

The Workgroup considered whether the TC, the BSC Central Systems or customers could allocate the delivered volume to the Import and Export MSIDs. The TC has access to Operational Metered data, but does not have access to the Settlement Data, so cannot specify delivered volumes for individual Import and Export MSIDs, only the delivered volumes for the MSID Pair at each Boundary Point. Customers (usually aggregators) are not BSC Parties and so cannot be mandated to provide such information to the BSC Central Systems.

Therefore, the Workgroup agreed that the SVAA should receive the delivered net volume for each MSID Pair from the TC and use HH Metered Data for the relevant MSIDs to calculate MSID ABSVD. HHDA's would be required to supply the Metered Data and Line Loss Factor Class (LLFC) for each MSID.

BR3 – SVAA to obtain and store details of Supplier, HHDA and GSP Group for each Eligible Metering System notified by the Transmission Company in MSID Pairs

A new process will be required for SVAA to obtain and store details of the Supplier, HHDA and GSP Group for each Eligible Metering System notified via MSID Pairs in the **"SVA Metering System Balancing Services Register"**

3.1	When the TC first notifies the SVAA of the list of MSID Pairs for P354 implementation, SVAA must consult ECOES, or other source approved by the Panel, to obtain details of the Supplier, HHDA and GSP Group for each Eligible Metering System included in those MSID Pairs and load these in time for use from the P354 Implementation Date. <i>Note that implementation of this process will depend on ELEXON (who is party to the MRA in the role of BSC Agent) obtaining consent from MEC (in accordance with MAP15) for SVAA (ELEXON's BSC Agent) to access ECOES for the purpose of correctly allocating ABSVD to MSIDs.</i>
3.2	The SVAA system must be able to store the standing data for Eligible Metering Systems. The details to be stored include: <ul style="list-style-type: none">• MSID number• GSP Group Id• Supplier Id• Supplier_MSID Effective From Date• Supplier_MSID Effective to Date (optional)

⁵ The TC estimated that there are currently around 1250 MSID Pairs.

	<ul style="list-style-type: none"> • HHDA Id • HHDA_Supplier Effective From Date • HHDA_Supplier Effective To Date (optional).
3.3	<p>SVAA must refresh the MSID Standing Data (using data obtained from ECOES, or other source approved by the Panel), within [2] business days of being notified of new MSID Pairs, or when it becomes aware that the MSID Standing Data is (or may be) incorrect or incomplete. Specific events that would trigger this obligation include:</p> <ul style="list-style-type: none"> • Mismatches between MSID Standing Data and the disaggregated metered data received from HHDA's (see requirement BR4.3); and • A Supplier raising a Trading Dispute about how ABSVD has been allocated (see requirement BR9.1).

BR4 – SVAA to request and HHDA's to provide Metered Data for MSID's

<p>A new process will be required for HHDA's to provide SVAA with HH disaggregated metered data for Eligible Metering Systems.</p>	
4.1	<p>Each time the MSID Standing Data is updated to include new Eligible Metering System(s) in new MSID Pair(s), or amend the MSID Standing Data for an existing Eligible Metering System, SVAA should immediately send an automated request to the HHDA for disaggregated metered data relating to that MSID for each Settlement Period. The request will be sent via a new Data Transfer Catalogue (DTC) dataflow, and will contain the following data items:</p> <ul style="list-style-type: none"> • The MSID (known in the DTC as the MPAN Core, data item J003); and • The Effective From Settlement Date from which data is required.
4.2	<p>HHDA's must be able to accept or reject the request from SVAA in BR4.1 via a new DTC dataflow. <i>For the avoidance of doubt, a HHDA could only reject the request if they had been erroneously identified as responsible for a MSID, and so were unable to provide the data for that MSID.</i></p>
4.3	<p>As part of each Volume Allocation Run, HHDA's should send SVAA a report of disaggregated metered data for any MSID's for which (on the Settlement Day in question) the HHDA is registered in SMRS, and the SVAA has requested data. This data will be sent using a new data flow, which will contain the following data items (for each such MSID and each Settlement Period) starting on the Effective From Settlement Date from which data is required specified in BR4.1:</p> <ul style="list-style-type: none"> • The HH metered data (without losses applied). For the avoidance of doubt, this must be the a sub-set of the energy values that was reported to SVAA for the related Supplier, i.e. it must represent that MSID's contribution to the Aggregated Supplier Consumption (J0185) reported on the D0040, or the Aggregated BM Unit Energy (J1629) reported on the D0298; • The Line Loss Factor Class (LLFC) applicable to that MSID and Settlement Day; and • The Supplier Id to which the MSID is registered on that Settlement Day. <p><i>For the avoidance of doubt, HHDA's should continue to send the HH metered data relating to all MSID's included in this process to SVAA as part of the relevant D0040 or D0298 data flow. In other words, for the Metering Systems to which this Modification applies the HHDA must provide both aggregated data (in the D0040 or D0298) and disaggregated data (in the new data flow).</i></p>
4.4	<p>HHDA's must not disclose to the Supplier which MSID's they have been requested to provide disaggregated metered data for (but may disclose the number of such MSID's).</p>

4.5	<p>Where the SVAA does not receive a file of disaggregated metered data from an HHDA for a Volume Allocation Run for a requested MSID, SVAA shall contact the HHDA to request the missing data. If data has still not been received by the time SVAA performs its Volume Allocation Run, SVAA shall escalate to ELEXON.</p> <p><i>For the avoidance of doubt, SVAA must not use default data to replace missing data; the process to calculate MSID ABSVD for a MSID should only be run where disaggregated metered data has been received from the HHDA for that MSID.</i></p>
4.6	<p>SVAA must be able to load, validate and store the disaggregated metered data received from HHDA. Validation checks shall include the following:</p> <ul style="list-style-type: none"> SVAA shall validate that the MSIDs included in the file are as expected (according to the MSID Standing Data). Where no disaggregated Meter data has been received in respect of an MSID when expected, this may indicate that a Change of Supplier (CoS) and/or Change of HHDA has occurred, and SVAA must refresh the MSID Standing Data (see BR3.3); and SVAA shall seek to validate that the Supplier Id reported by the Supplier for each MSID (in ECOES, or other source approved by the Panel) matches that in the MSID Standing Data. If they do not match this may indicate that a CoS has occurred, and SVAA must obtain the new Supplier and HHDA for the MSID from ECOES, or other source approved by the Panel, and refresh the MSID Standing Data.

The Workgroup agreed a flexible solution where the TC will endeavour to send the MSID Pair Delivered Volume for each Settlement Period to SVAA in time for the First Reconciliation Volume Allocation Run.

The P354 Proposer suggested that ABSVD values should relate to the volume of Balancing Services that was successfully delivered (rather than the instructed volumes). The Workgroup noted that this question is one for an amended ABSVD Methodology (which will specify how the TC calculates ABSVD values), rather than the BSC.

BR5 – The TC shall send MSID Pair Delivered Volumes to the SVAA

TC shall send the MSID Pair Delivered Volumes to the SVAA for each Settlement Period by the 45th day after the date that the non-BM Balancing Service was provided, to allow the calculation of non-BM Unit ABSVD by the SVAA in the First Reconciliation Volume Allocation Run.

5.1	<p>A new flow will be required in order for the TC to send MSID Pair Delivered Volumes to SVAA. The data must include:</p> <ul style="list-style-type: none"> Settlement Day Settlement Period Import MSID (mandatory) Export MSID (optional) MSID Pair Delivered Volume (MWh). <p>MSID Pair Delivered Volumes represent an aggregate net volume of Active Energy for the whole Settlement Period for each MSID Pair and follow the sign conventions set out in paragraph 2.4 of Annex X-2.</p>
5.2	<p>The TC may send, or resend, MSID Pair Delivered Volumes to SVAA at any time until the Final Reconciliation Volume Allocation Run.</p>

The Workgroup agreed that the SVAA will allocate non-BM ABSVD to the Import MSID and/or Export MSID in each MSID Pair as appropriate and, ultimately, aggregate it to GSP Group level for each Supplier ID. The reason that the allocation must be done by SVAA (rather than the TC as originally proposed) is that it requires access to Settlement metered data, which the TC does not have. Appendix B contains examples of this process.

Having allocated the MSID Pair Delivered Volumes to MSIDs to create MSID ABSVD and having applied the appropriate LLF to this to create the LLF adjusted MSID ABSVD, SVAA shall send MSID ABSVD and LLF adjusted MSID ABSVD to Suppliers for each Eligible MSID for which the relevant non-BM Balancing Service provider has given their consent.

SVAA must apply the relevant Line Loss Factor to the MSID ABSVD, and aggregate it to GSP Group level for each Supplier ID before sending it to the SAA. The reason for only aggregating ABSVD to GSP Group level at this stage is to allow the SAA to apply Transmission Loss Multipliers (TLM), which must be done at GSP Group level because TLMs will vary by GSP Group following implementation of Approved Modification [P350, 'Introduction of a seasonal Zonal Transmission Losses scheme'](#) on 1 April 2018.

BR6 – The SVAA must allocate the MSID Pair Delivered Volumes to the Eligible Metering Systems in the relevant MSID Pair

A new process will be required for SVAA (using the data from BR4 and BR5 above) to allocate MSID Pair Delivered Volumes to the Eligible Metering Systems in the relevant MSID Pair to create MSID ABSVD.

6.1	The SVAA must be able to load and store the MSID Pair Delivered Volumes received from the TC, and any subsequent updates, for a Settlement Period. The data will include: <ul style="list-style-type: none"> • MSID Pair Delivered Volume; • MSID of the Import Metering System; and • MSID of the associated Export Metering System (where applicable)
6.2	The SVAA must validate that the MSID Pair specified in a MSID Pair Delivered Volume is valid by checking that: <ul style="list-style-type: none"> • The MSID Pair has been notified by the TC; and • The Eligible Metering System(s) in the MSID Pair is as has been notified by the TC.
6.3	The SVAA must validate each Eligible Metering System in a MSID Pair Delivered Volume against the Eligible Metering Systems in the SVA Metering System Balancing Services Register. Where a corresponding Eligible Metering System is not found, the SVAA system should raise a warning message to the SVAA Operator stating that the MSID is not an Eligible Metering System.
6.4	Where the SVAA Operator sees the warning message in 6.4, they should contact the TC to check whether the relevant MSID is an Eligible Metering System and request formal notification from the TC that the relevant MSID is an Eligible Metering System (and then SVAA should follow the process in R1.2).
6.5	SVAA must use the disaggregated metered data provided by HHDAs to allocate the MSID Pair Delivered Volume to the component MSIDs in that MSID Pair for each Settlement Period, creating MSID ABSVD The steps of this process are as follows: <ol style="list-style-type: none"> 1. For each MSID Pair, start by allocating the MSID Pair Delivered Volume to the Export MSID for a positive value (or to the Import MSID for a negative value), subject to the constraint that the magnitude of the MSID Pair Delivered Volume that can be allocated is capped by the magnitude of the half hourly metered data.

	<p>For example, if the MSID Pair Delivered Volume is -1.3 MWh, and the Import MSID has a HH metered consumption of 800 kWh, the volume allocated to the Import MSID will be -0.8 MWh.</p> <ol style="list-style-type: none"> 2. Allocate any remaining MSID Pair Delivered Volume to the other MSID in the MSID Pair (i.e. the Import MSID for a positive value, or the Export MSID for a negative value). In the example above, the remaining -0.5 MWh of MSID Pair Delivered Volume would be allocated to the Export MSID (recognising that the MSID Pair Delivered Volume must have reduced the site Export). 3. As a result the MSID ABSVD will be -0.8MWh for the Import MSID and -0.5MWh for the Export MSID. <p>In the special case of an MSID Pair that does not include an Export MSID this process, all of the MSID Pair Delivered Volume will be allocated to the Import MSID.</p> <p>If a MSID Pair Delivered Volume cannot be allocated in full to the component MSIDs using this process, the SVAA system will report an exception. The SVAA operator will then report this exception to BSCCo and the TC, as an exception indicates that the MSID Delivered Volume is inconsistent with the Settlement metered data, suggesting that the MSID Delivered Volume has been reported incorrectly).</p> <p>If the TC review identifies that the exception was caused by the MSID Delivered Volume being incorrect, the TC will submit a corrected MSID Delivered Volume to the SVAA⁶.</p>
6.6	SVAA must store MSID ABSVD by MSID, GSP Group and Supplier ID.
6.7	SVAA must apply LLFs to MSID ABSVD based on the LLFC supplied by the HHDA and store the LLF adjusted MSID ABSVD.
6.8	SVAA must provide MSID ABSVD and LLF adjusted MSID ABSVD to the Supplier responsible for an Eligible Metering System where non-BM Balancing Service Provider has given their consent. This would be a new Supplier Report from each SSR Run which will require a new DTC dataflow.
6.9	SVAA must aggregate LLF adjusted MSID ABSVD to GSP Group level for each Supplier Id, creating GSP Group ABSVD for each Supplier ID.
6.10	SVAA must send GSP Group ABSVD for each Supplier ID to SAA.

The SAA must apply Transmission Loss Multipliers (TLMs) to the GSP Group ABSVD received from SVAA and aggregate to Supplier Account level and include in the Settlement calculation.

BR7 – SAA stores and processes GSP Group Level ABSVD for each Supplier [Consumption Energy Account](#)

A new process will be required for SAA to apply TLMs to the GSP Group ABSVD and allocate the adjusted values to the relevant Supplier [Consumption Energy Account](#).

7.1	SAA must store GSP Group ABSVD for each Supplier ID received from SVAA.
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⁶ As this is a manual process the expectation is that this will be over a number of Working Days.

7.2	For each Supplier's Consumption Energy Account, SAA shall calculate Account Period ABSVD ($QASABSVD_{aj}$) as the sum (across all GSP Groups, and all Supplier Ids owned by the Supplier) of the product of: <ul style="list-style-type: none"> • The GSP Group aggregate ABSVD value (see BR7.1); and • The Transmission Loss Multiplier (TLM_{ij}) applicable to the Base Trading Unit in that GSP Group in that Settlement Period.
7.3	SAA shall include Account Period ABSVD ($QASABSVD_{aj}$) in the calculation of Account Period Balancing Services Volume ($QABS_{aj}$).
7.4	SAA must include Account Period ABSVD in the Settlement reports (all three sub-flows).

The BMRA will publish the Supplier Account Period ABSVD received from the SAA.

BR8 - BMRA publishes the Account Period ABSVD

The Balancing Mechanism Reporting Agent (BMRA) should report the Account Period ABSVD for each Supplier Account.	
8.1	The BMRA shall be required to receive and load the Account Period ABSVD. This could be achieved by sending the SAA-I014 sub-flow 2 or otherwise as advised by the Service Provider.
8.2	The BMRA will publish the Account Period ABSVD through the same channels as for current BMRS data.

The Trading Disputes process will be amended to include ABSVD.

BR9 – Amend the Trading Disputes Process to include ABSVD

BSCP11 Trading Disputes should include ABSVD	
9.1	BSCP11 Trading Disputes shall be amended to add a section to allow BSC Parties to raise Trading Disputes relating to ABSVD.

4. APPENDIX A - GLOSSARY OF TERMS

Term	Description
BM Unit Applicable Balancing Services Volume Data (ABSVD)	<p>BSC Section Q: in relation to each Settlement Period in a Settlement Day and each BM Unit, the Transmission Company shall send the Applicable Balancing Services Volume Data to: (a) the SAA; and (b) the BMRA no later than the second Business Day after such Settlement Day.</p> <p>The ABSVD is used in the calculation of Period BM Unit Balancing Services Volume, which 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 ABSVD.</p> <p>ABSVD is not provided for all Balancing Services, because not all of them are covered in the ABSVD methodology, and the BSC currently allows Parties to opt out.</p>
ABSVD methodology	National Grid Electricity Transmission plc (NGET) is required to establish the Applicable Balancing Services Volume Data Methodology in accordance with Standard Condition C16 of the Transmission Licence.
Balancing & Settlement Code (BSC)	An industry code that various types of company involved in the generation, distribution or consumption of electricity must be a signatory to and abide as required by their Licence, which specifically concerns the Balancing and Settlement activity in Great Britain.
Balancing Mechanism (BM)	One of the tools National Grid uses to balance electricity supply and demand close to real time. Where National Grid predicts that there will be a discrepancy between the amount of electricity produced and that which will be in demand during a certain time period, they may accept a 'bid' or 'offer' to either increase or decrease generation (or consumption). The balancing mechanism is used to balance supply and demand in each half hour trading period of every day.
Balancing Mechanism Reporting Agent (BMRA)	BSC Section X-1: means the BSC Agent for Balancing Mechanism Reporting in accordance with Section E.
Balancing Mechanism Reporting Service (BMRS)	BSC Section X-1: means the service provided by the BMRA for Balancing Mechanism Reporting as described in Section V.
Balancing Mechanism Unit (BM Unit)	BSC Section X-1: means a unit established and registered (or to be established and registered) by a Party in accordance with Section K3 or, where the context so requires, the Plant and/or Apparatus treated as comprised in or assigned to such unit for the purposes of the Code.
Base Trading Unit	BSC Section K, 4.7: a Trading Unit (a "Base Trading Unit") is established in respect of each GSP Group. Subject to paragraph 4.7.3: each Supplier BM Unit shall automatically belong to the Base Trading Unit for the relevant GSP Group and each Exempt Export BM Unit in a GSP Group shall automatically belong to the Base Trading Unit for that GSP Group.
BSC Agent	BSC Section X-1: means the person or persons for the time being appointed for

Term	Description
	the purposes of providing the services specified (or as may be specified) in a BSC Service Description and as otherwise described in Section E.
BSC Company (BSCCo)	BSC Section X-1: means ELEXON Limited (or any successor to that company acting in the capacity as BSCCo).
Consumption Energy Account	Consumption Energy Account means an Energy Account designated by the CRA as a 'Consumption' Energy Account.
Delivery Site	A 'delivery site' is the actual physical locations delivering Short Term Operating Reserve.
Electricity Central Online Enquiry Service (ECOES)	ECOES is a central online database that holds information about each MSID in the GB electricity market.
Grid Supply Point Group (GSP Group)	BSC Section X-1: means a distinct electrical system, consisting of: (i) the Distribution System(s) which are connected to the Transmission System at (and only at) Grid Supply Point(s) which fall within one Group of GSPs, and (ii) any Distribution System which: (1) is connected to a Distribution System in paragraph (i), or to any other Distribution System under this paragraph (ii), and (2) is not connected to the Transmission System at any Grid Supply Point and the total supply into which is determined by metering for each half hour.
Half Hourly (HH)	Relates to Half Hourly Metering Equipment, which is defined in BSC Section X-1 as Metering Equipment which provides measurements on a half hourly basis for Settlement purposes.
Half Hourly Data Aggregator (HHDA)	BSC Section X-1: means a Data Aggregator which carries out the aggregation of metering data received from Half Hourly Data Collectors.
Master Registration Agreement (MRA) Development Board (MDB)	The MDB is a sub-committee of MRA Executive Committee (MEC) established in accordance with clauses 6.53 and 6.54 of the MRA.
Metering System Identifier (MSID)	BSC Section X-1: means a unique number relating to a Metering Point and which consists of the following: (i) a 2 digit number determined by reference to the Licensed Distribution System Operator; (ii) a 10 digit reference number provided by the relevant Licensed Distribution System Operator; (iii) a 1 digit check number provided by the relevant Licensed Distribution System Operator.
Party	BSC Section X-1: means a person who is for the time being bound by the Code by virtue of being a party to the Framework Agreement.
AABSVD _{aj}	The AABSVD _{aj} is the sum (across all GSP Groups, and all Supplier Ids owned by the Supplier) of the product of the aggregate ABSVD value and the Transmission Loss Multiplier (TLM _{ij}) applicable to the Base Trading Unit in that GSP Group in

Term	Description
	that Settlement Period.
Settlement Administration Agent (SAA)	BSC Section X-1: means the BSC Agent for Settlement Administration in accordance with Section E.
Settlement Period	BSC Section X-2: a period of 30 minutes beginning on the hour or the half-hour and in accordance with paragraph 4.3 of Annex X-2.
Settlement Run	BSC Section X-1: means a determination (in accordance with Section T), in relation to a Settlement Day, of amounts giving rise, on the part of Trading Parties and the Transmission Company, to a liability to pay to or a right to be paid by the BSC Clearer amounts in respect of Trading Charges in each Settlement Period in that Settlement Day, and of the net credit or debit in respect of such amounts; and where the context requires a reference to a Settlement Run includes the data and information produced by the SAA following such a determination and delivered to the FAA in accordance with Section N.
Short Term Operating Reserve (STOR)	Short Term Operating Reserve (STOR) is a service for the provision of additional active power from generation and/or demand reduction.
Supplier	BSC Section X-1: means a Party which holds a Supply Licence and is responsible for Exports and/or Imports for which such Party is required, by virtue of Section K, to register one or more SVA Metering Systems.
Supplier Volume Allocation Agent (SVAA)	BSC Section X-1: means the BSC Agent for Supplier Volume Allocation in accordance with Section E.
Supplier Volume Allocation (SVA) Metering System	Section K: means a Metering System which is or is to be registered in the Supplier Meter Registration Service.
Volume Allocation Run	Volume Allocation Run means a determination (for the purposes of Settlement), in relation to a Settlement Day, by way of Central Volume Allocation and/or Supplier Volume Allocation, of quantities of Active Energy Exported or Imported (or to be treated as Exported or Imported) by Parties in each Settlement Period in that Settlement Day; and where the context requires a reference to a Volume Allocation Run includes the data and information produced by the CDCA and/or SVAA following such a determination and delivered to the SAA in accordance with BSC Section R or S.

5. APPENDIX B – EXAMPLES OF HOW METERED DATA WILL BE USED TO ALLOCATE MSID PAIR DELIVERED VOLUMES TO THE CONSTITUENT MSIDS

This Appendix provides additional examples to illustrate the logic that will be used by SVAA to allocate ABSVD to the constituent MSIDs using MSID Pair Delivered Volumes and MSID-level HH metered data.

1) Signing convention for MSID delivered volumes:

A) Increased energy on the Transmission System

If the MSID Delivered Volume increased the energy on the **Transmission System**, the value submitted by the TC should be signed positive (“+ve”). This indicates that the delivery site increased generation or reduced demand, leading to an increase in Export and/or a reduction in Import at the Settlement Meter. BR6.2 requires that SVAA allocate this to the Export MSID in the first instance (in recognition that some of the Export recorded on the Export MSID was a Balancing Service instructed by the TC, for which the Export Supplier should not be held responsible). However, it does not make sense to allocate a MSID Delivered Volume that is larger (in magnitude) than the HH metered data, so any remaining ABSVD will be allocated to the Import MSID.

Example 1 – where all of the MSID Delivered Volume can be allocated to the “preferred” MSID

MSID Pair Delivered Volume = +4 MWh

Export MSID metered volume \geq 4 MWh

Import MSID metered volume immaterial

As the Export MSID metered volume is at least as big as the MSID Delivered Volume, all of the MSID Delivered Volume should be allocated to the Export MSID in the MSID Pair

SVAA will allocate +4 MWh ABSVD to the Export MSID (i.e. increasing the magnitude)

SVAA will allocate 0 MWh ABSVD to the Import MSID

Example 2 – where only part of the MSID Delivered Volume can be allocated to the “preferred” MSID

MSID Pair Delivered Volume = +4 MWh

Export MSID metered volume = 3 MWh

Import MSID metered volume = immaterial

As the Export MSID metered volume is less than the MSID Delivered Volume, only the value of the metered volume can be allocated to the Export MSID in the MSID Pair and the remainder allocated to the Import MSID in the MSID Pair (noting that this will reduce Demand)

SVAA will allocate +3 MWh ABSVD to the Export MSID (i.e. increasing the magnitude)

SVAA will allocate +1 MWh ABSVD to the Import MSID (i.e. decreasing the magnitude)

Example 3 – where none of the MSID Delivered Volume can be allocated to the “preferred” MSID

MSID Pair Delivered Volume = +4 MWh

Export MSID metered volume = 0 MWh

Import MSID metered volume = immaterial

As the Export MSID metered volume is zero (and therefore less than the MSID Delivered Volume), none of the metered volume can be allocated to the Export MSID in the MSID Pair and so the total amount should be allocated to the Import MSID in the MSID Pair (noting that this will reduce Demand)

SVAA will allocate 0 MWh ABSVD to the Export MSID

SVAA will allocate -4 MWh ABSVD to the Import MSID (i.e. decreasing the magnitude)

B) Reduced energy on the Transmission System

If the MSID Pair Delivered Volume reduced the energy on the **Transmission System**, the value submitted by the TC should be signed negative ("-ve"). This indicates that the Balancing Service provided had reduced generation or increased demand, leading to an increase in Import and/or a reduction in Export at the Settlement Meter. BR6.2 requires that SVAA allocate this to the Import MSID in the MSID Pair in the first instance (in recognition that some of the Import recorded on the Import MSID was a Balancing Service instructed by the TC, for which the Import Supplier should not be held responsible). However, it does not make sense to allocate a MSID Delivered Volume that is larger (in magnitude) than the HH metered data for the relevant component MSID, so any remaining volume will be allocated to the Export MSID.

Please note that this example does not apply to STOR because STOR volumes are always positive. But other Balancing Services such as Demand Turn Up may have negative volumes.

Example 4 – where all of the MSID Delivered Volume can be allocated to the "preferred" MSID

MSID Pair Delivered Volume = -4 MWh

Import MSID metered volume \leq -4 MWh

Export MSID metered volume immaterial

As the magnitude of the Import MSID metered volume is at least as big as the magnitude of the MSID Delivered Volume, all of the MSID Delivered Volume should be allocated to the Import MSID in the MSID Pair

SVAA will allocate -4 MWh ABSVD to the Import MSID (i.e. increasing the magnitude)

SVAA will allocate 0 MWh ABSVD to the Export MSID

Example 5 – where only part of the MSID Delivered Volume can be allocated to the "preferred" MSID

MSID Pair Delivered Volume = -4 MWh

Import MSID metered volume = -3 MWh (i.e. increasing the magnitude)

Export MSID metered volume = immaterial

As the magnitude of the Import MSID metered volume is less than the magnitude of the MSID Delivered Volume, only the value of the metered volume can be allocated to the Import MSID in the MSID Pair and the remainder allocated to the Export MSID in the MSID Pair (with a change of sign to indicate that Generation has been increased)

SVAA will allocate -3 MWh ABSVD to the Import MSID (i.e. increasing the magnitude)

SVAA will allocate +1 MWh ABSVD to the Export MSID (i.e. decreasing the magnitude)

Example 6 – where none of the MSID Delivered Volume can be allocated to the "preferred" MSID

MSID Pair Delivered Volume = -4 MWh

Import MSID metered volume = 0 MWh

Export MSID metered volume = immaterial

As the Import MSID metered volume is zero (and therefore less than the magnitude of the MSID Delivered Volume), none of the metered volume can be allocated to the Import MSID in the MSID Pair and so the total amount should be allocated to the Export MSID in the MSID Pair (with a change of sign to indicate that Demand has been reduced)

SVAA will allocate 0 MWh ABSVD to the Import MSID

SVAA will allocate +4 MWh ABSVD to the Export MSID (i.e. decreasing the magnitude)

6. APPENDIX C – DETAILS OF ORIGINAL AND REVISED SCOPE OF P354

Original Scope

Under the original solution set out in the P354 Modification Proposal and discussed at Workgroup 1 on 22 February 2017, the high level BRs were based on the TC allocating ABSVD to Metering Systems. This solution was found to be problematic at the second Workgroup for the reasons discussed below.

Revised Scope

At its second meeting on 26 April 2017, the Workgroup agreed to amend the original solution to address a number of issues:

- In some cases, Balancing Services will be provided through an Aggregator, with the TC currently having no access to disaggregated metered data for the individual delivery sites delivering the service. The Workgroup acknowledged that bringing such sites into the scope of P354 would require the TC to obtain disaggregated data which they do not currently have from Aggregators. This is primarily an issue for the TC and the ABSVD Methodology, rather than the BSC solution. The Workgroup intends to discuss this further in subsequent meetings.
- The Workgroup agreed that correctly allocating ABSVD to MSIDs requires HH metered data for each MSID, which the TC does not have. The Workgroup therefore agreed to change the solution so that the TC provides ABSVD at the delivery site level rather than the MSID level, and the SVAA allocates the data to MSIDs (using HH metered data provided by the HHDA). In order for SVAA to do this, the TC will provide details of the Import and Export MSID(s) at the site, and (where there is more than one Import or Export MSID) the proportion in which ABSVD should be allocated to them (an "**Allocation Rule**"⁷). For the avoidance of doubt, Allocation Rules will only be used to allocate volumes between the MSIDs in a single delivery site, not to allocate between delivery sites.
- The Workgroup noted that discussion is ongoing (at the [P344 'Project TERRE implementation into GB market arrangements'](#) Workgroup and elsewhere) about whether it was appropriate for BSC Systems to disclose to Suppliers which of their customers are providing Balancing Services. The Workgroup therefore agreed that the architecture of the P354 solution should not rely on the Supplier to notify Settlement when one of the customers providing balancing services changed their Supplier.

For the revised P354 solution agreed at P354 Workgroup 2, the high level requirements were:

- TC to provide Allocation Rules with Effective From Date for each non-BM Balancing Services provider delivery site (where required to do so by the ABSVD Methodology⁸) to the Supplier SVAA⁹;
- TC to send the net (i.e. not split into import and export) delivered volumes for Balancing Services provided at delivery site level to the SVAA, when available¹⁰. SVAA operator to obtain from ECOES¹¹ details of Supplier, HHDA and GSP Group for each MSID eligible for use in the provision of Balancing Services ("Eligible Metering System") received from the TC and populate SVAA with this data;
- SVAA to request disaggregated (i.e. MSID-level) metered data from HHDAs for each Eligible Metering System;

⁷ See Appendix B for examples of Allocation Rules

⁸ As amended by the TC as part of its C16 annual update in February 2018

⁹ Not to the SAA, which was the original intention of the Mod

¹⁰ This could be up to D+30 (30 Calendar days after the end of the month)

¹¹ Subject to MRASCo agreeing to grant a licence

- Each HHDA to provide disaggregated metered data to SVAA for all requested MSIDs for each Settlement Period. This data will be provided for each Volume Allocation Run, and will include (for each relevant Metering System and Settlement Period) the HH consumption data (not adjusted for line losses), the applicable Line Loss Factor Class (LLFC) value and the Supplier Id to which the Metering System is registered;
- SVAA to allocate delivery site level delivered volumes to the appropriate MSID(s) in accordance with the Allocation Rules, creating MSID-level ABSVD;
- SVAA to apply the Line Loss Factor (LLF) associated with the relevant LLFC to the MSID-level ABSVD;
- SVAA to aggregate MSID-level ABSVD to GSP Group level for each Supplier Id;

The P354 Workgroup agreed that SVAA is not required to apply GSP Group Correction to the ABSVD data. Doing so would introduce additional uncertainty into the ABSVD volumes entering Settlement, and would require SVAA to receive consumption data broken down by Consumption Component Class (in order to apply the appropriate GSP Group Correction Scaling Weights).

- SVAA to send GSP Group level ABSVD for each Supplier Id to SAA for each Settlement Period;
- SAA to receive from BSCCo and store TLFs for each GSP Group and BSC Season;
- SAA to apply Transmission Loss Multipliers to GSP Group level ABSVD for each Supplier Id ("TLM-adjusted GSP Group level ABSVD");
- SAA to aggregate TLM-adjusted GSP Group level ABSVD to Supplier Id level;
- SAA to include Supplier Id level ABSVD in the Settlement calculation, as an adjustment to the Consumption Account of each Supplier;
- SAA to include Supplier Id level ABSVD in the SAA-I014 Settlement Reports; and
- BMRA to publish Supplier Id level ABSVD.
- The TC may resubmit revised delivered volumes for a Settlement Period up to [RF].
- The SVAA and SAA shall process any revised delivered volumes for a Settlement Period received from the TC in the next available Reconciliation Run.