

Balancing and Settlement Code

BSC Procedure

BSC Central Services for MHHS Metering Systems

BSCP703

Version 0.92

Date: DD MM YYYY

BSCP703 relating to BSC Central Services for MHHS Metering Systems

1. Reference is made to the Balancing and Settlement Code and, in particular, to the definition of “BSC Procedure” in Section X, Annex X-1 thereof.
2. This is BSC Procedure 703, Version 0.92 relating to the BSC Central Services for MHHS Metering Systems.
3. This BSC Procedure is effective from DD MM YYYY.
4. This BSC Procedure has been approved by the BSC Panel or its relevant delegated Panel Committee(s).

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Amendment Record

Version	Date	Description of Change	Changes Included	Mods/Panel/Committee Refs.
0.1	02/03/2023	Initial Draft	Market-wide Half-Hourly Settlement	
0.2	27/04/2023	Internal Review	Market-wide Half-Hourly Settlement	
0.3	16/05/2023	Elexon Review	Market-wide Half-Hourly Settlement	
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0.6	27/10/2023	Mop up 1	Market-wide Half Hourly Settlement	
0.7	05/01/2024	Following Consultation	Market-wide Half Hourly Settlement	
0.8	29/01/2024	Mop up 2	Market-wide Half Hourly Settlement	
0.9	25/03/2024	Following Consultation	Market-wide Half Hourly Settlement	
0.91	29/04/2024	Following Assurance Review	Market-wide Half Hourly Settlement	
0.92	09/05/2024	Consistency Checks	Market-wide Half Hourly Settlement	

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1 Introduction

1.1 Scope and Purpose of the Procedure

This BSC Procedure (BSC) defines those activities for BSC Central Services for migrated Market-wide Half-Hourly Settlement (MHHS) Metering Systems to fulfil its functions. These BSC Central Services shall be provided by the Supplier Volume Allocation Agent (SVAA). The SVAA provides the four following services:

- The Load Shaping Service (LSS)
- The Market-wide Data Service (MDS)
- The Volume Allocation Service (VAS)
- The Industry Standing Data Manager (ISDM)

The SVAA will also undertake other Settlement calculations:

- Calculate Secondary BM Unit Demand Volume
- Calculate Secondary BM Unit Supplier Delivered Volumes
- Calculate Supplier BM Unit Non BM Unit ABSVD

The main functions of the four BSC Central Services are:

1.1.1 Calculating Load Shapes

The LSS is responsible for calculating Load Shapes.

For each Settlement Day (SD), the LSS shall calculate Load Shapes for all Grid Supply Point (GSP) Groups. A Load Shape is an average of actual UTC Period Level Consumption data for a Load Shape Category (LSC) in kilo Watt hours (kWh). The set of LSC to be calculated is defined within the Industry Standing Data.

The LSS will provide the Load Shape Data to the MDS, Suppliers, Smart Data Services (SDSs), Advanced Data Services (ADSs) and Unmetered Supplies Data Services (UMSDSs).

1.1.2 Calculating Uncorrected Volumes

The MDS is responsible for calculating BM Unit Period Level Consumption volumes and BM Unit Period Level Consumption Losses for each Supplier Balancing Mechanism Unit (BM Unit) within the Supplier Volume Allocation (SVA) Arrangements.

The MDS is also responsible for calculating Storage Consumption (Non Losses) and Storage Consumption (Losses) and shall be provided to the VAS in accordance with the Master Settlement Timetable.

The MDS will also provide other BSC Systems the Settlement Period Consumption data and associated losses at MSID level, identified by Consumption Component Class Id (CCC id), for use in other Settlement calculations (e.g. Wider Access).

The MDS will provide all data calculated to the Supplier and the Volume Allocation Service (VAS) in accordance with the Master Settlement Timetable.

1.1.3 Volume Allocation Runs (VAR)

[MHHS-51-VAS]The VAS is responsible for calculating the energy volumes allocated to Suppliers on a Balancing Mechanism (BM) Unit and GSP Group basis. The energy volumes allocated will include all energy traded in the Supplier Volume Allocation (SVA) arrangements and will be passed to the Settlement Administration Agent (SAA) in MWh. To do this, the VAS will:

Calculate the Supplier Deemed Take by Balancing Mechanism Unit using the data provided by the MDS and aggregating by BM Unit within each GSP Group.

The GSP Group Take totals are passed by the Central Data Collection Agent (CDCA) to the VAS to allow for adjustment to be made. The VAS then carries out a GSP Group Correction by adjusting appropriate CCC Ids to ensure that the total consumption calculated equals the actual GSP Group Take provided by the CDCA.

For each Supplier and each Settlement Period in the trading day being processed, the VAS will calculate the Supplier Deemed Take by BM Unit and publish the data to Market Participants as defined in Section 3.6.22.

The VAS will perform an Interim Information Volume Allocation Run and an Initial Volume Allocation Run (for one, some or, for all GSP Groups) using the above inputs and also by retrieving standing data and Industry Standing Data (ISD). However, it will also perform a number of Timetabled Reconciliation Volume Allocation Runs (for one, some or, for all GSP Groups), as defined in the Master Settlement Timetable, when actual metered data replaces earlier actuals or estimated data. In the event of a dispute being raised there may be a need to perform adjustments between Reconciliation Volume Allocation Runs in accordance with [BSCP11](#).

Calculate the BM Unit SVA Gross Demand (for purposes of the CFD Arrangements)

In order to support the CFD Arrangements the VAS will, for each VAR, calculate and provide to the SAA the gross demand ('the BM Unit SVA Gross Demand') for each Supplier BM Unit and Settlement Period in the Settlement Day. The BM Unit SVA Gross Demand for a Supplier BM Unit is defined as the sum of the Corrected Component ($CORC_{iNj}$) for all Consumption Component Classes 'N' associated with Active Import. It follows from this definition that the BM Unit SVA Gross Demand will be adjusted for distribution losses and for GSP Group Correction (but will exclude any Active Export energy).

Calculate the BM Unit Allocated Demand Disconnection Volume

Where a Demand Disconnection occurs as part of a Demand Control Event, the VAS will calculate and provide to the SAA the energy volumes associated with such disconnection for each affected Supplier BM Unit and Settlement Period; the VAS will also adjust Suppliers' Allocated BM Unit to account for the disconnection. These calculations will take place after the Demand Control Event, as part of a timetabled Reconciliation Volume Allocation Run.

1.1.4 SVAA specific activities

SVA Metering System and Asset Metering System Register

The SVAA shall maintain a register of Half Hourly SVA Metering System Numbers (MSIDs) and Asset Metering System Numbers (AMSIDs) which may be submitted by:

- i) A Lead Party (VLP, AMVLP or Supplier) for the purposes of providing Balancing Services through SVA Metering Systems; when this is the case, each Metering System Number must be associated with a Primary BM Unit; or
- ii) An AMVLP¹ for the purposes of providing Balancing Services through Asset Metering Systems; when this is the case, each Asset Metering System Number must be associated with a Secondary BM Unit; ~~or~~
- iii) The NETSO for the purposes of notifying the volumes associated with Applicable Balancing Services provided to the NETSO outside of the BSC; when this is the case, each Metering System Number will not be associated with a Primary BM Unit; or
- iv) A Supplier for the purposes of declaring an EMR MSID Declaration or an EMR AMSID Declaration to allow SVAA to calculate the Supplier BM Unit Chargeable Demand for their BM Units.

This register will be known as the "SVA Metering System and Asset Metering System Register".

Lead Parties and the NETSO shall send MSIDs or MSID Pair Allocations to the SVAA and once validated the SVAA shall procure MSID Standing Data for each ~~composite-MSID within the MSID Pair~~ and record the relevant details in the SVA Metering System and Asset Metering System Register.

¹ VLPs that wish to register an Asset and its Asset Metering Systems and to allocate the related AMSID Pair to a Secondary BM Unit must complete the Asset Metering VLP Qualification process.

The MDS shall provide Settlement Period Consumption data for use as the Allocated Metering System Metered Consumption to the SVAA where requested on the ELEX-REP-030.

The Advanced Data Services shall send Allocated Asset Metering System Metered Consumption to the SVAA for all AMSIDs to which they have been appointed by the AMVLP or Supplier.

AMSID Pairs used for Asset Metering

An AMVLP that wishes to allocate an AMSID Pair to its Secondary BM Unit for the purposes of Asset Metering shall send an AMSID Pair Allocation to a Secondary BM Unit to the SVAA with the AMSID Pair Differencing Indicator set to "F" and the MSID Pair Indicator set to "A".

The AMVLP shall only be required to send AMSID Pair Delivered Volumes to the SVAA in respect of AMSID Pairs used for Asset Metering.

AMSID Pairs used for Asset Differencing

An AMVLP that wishes to allocate an AMSID Pair (or AMSID Pairs) to its Secondary BM Unit for the purposes of Asset Differencing shall send AMSID Pair Allocations to the SVAA with the AMSID Pair Differencing Indicator set to "T" and the MSID Pair Indicator set to "D".

The AMVLP shall only be required to send MSID Pair Delivered Volumes to the SVAA in respect of AMSID Pairs used for Asset Differencing.

Calculate Secondary BM Unit Demand Volume

- SVAA shall calculate Secondary Half Hourly Consumption (non Losses) and Secondary Half Hourly Consumption (Losses) in accordance with [Annex S-2 section 7](#), and send to the VLP(s) for the relevant Secondary BM Unit.

For each MSID where the SVAA has received Allocated Metering System Metered Consumption volumes for a Settlement Period and for each AMSID allocated to a Secondary BM Unit for the purposes of Asset Metering where the SVAA has received Asset Metering System Half Hourly Metered Data volumes for a Settlement Period, the SVAA shall aggregate volumes per Secondary BM Unit:

- SVAA shall calculate Secondary BM Unit Demand Volume, by summing Secondary BM Unit Demand Volumes (non Losses) and Secondary BM Unit Delivered Volumes (Losses) for a particular Secondary BM Unit, and send to the SAA.

Calculate Secondary BM Unit Supplier Delivered Volumes

Lead Parties shall, where appropriate, send MSID Pair Delivered Volumes to the SVAA for delivered Balancing Services for a settlement period.

- SVAA shall calculate Secondary Half Hourly Delivered (non Losses) and Secondary Half Hourly Delivered (Losses) in accordance with Annex S-2 section 7, and send to the Supplier(s) for the relevant (Primary) BM Unit(s)².

For each Secondary BM Unit where the SVAA has received MSID Pair Delivered Volumes and / or AMSID Pair Delivered Volumes for a Settlement Period, the SVAA shall aggregate volume per Supplier Primary BM Unit per Secondary BM Unit:

SVAA shall calculate Secondary BM Unit Supplier Delivered Volumes, by summing Secondary BM Unit Delivered Volumes (non Losses) and Secondary BM Unit Delivered Volumes (Losses) for each Supplier Primary BM Unit per Secondary BM Unit, and send to the SAA.

Calculate Supplier BM Unit Non BM Unit ABSVD

The NETSO shall send MSID Pair Delivered Volumes associated with Applicable Balancing Services provided to the NETSO to the SVAA for a settlement period

- SVAA shall calculate MSID Applicable Balancing Services Volume Data (non-losses) and MSID Applicable Balancing Services Volume Data (losses) in accordance with Annex S-2 section 7, and send to the Supplier(s) for the relevant (Primary) BM Unit(s);²
- SVAA shall calculate Supplier BM Unit Non BM ABSVD, by summing MSID Applicable Balancing Services Volume Data (non-losses) and MSID Applicable Balancing Services Volume Data (losses) for each Supplier Primary BM Unit, and send to the SAA.

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Calculate Supplier BM Unit Non-Chargeable Demand

- The SVAA shall calculate Supplier BM Unit Non-Chargeable Demand and send it to the SAA.

• ~~[Placeholder for P395 activities]~~

1.1.5 Industry Standing Data Management

ISD refers to those items of data, which are required to be passed from a central administrator i.e. the SVAA, referred to as the Industry Standing Data Manager

² Only if Customer consent has been granted.

(ISDM), to the relevant Market Participants. The ISD service will provide a single authoritative source of ISD.

The ISDM will receive up-dates to ISD from BSCCo in line with the ISD Change Timetable as defined in BSCP707. The ISDM will act as the administrator and distributor of ISD to relevant Market Participants), subject to any confidentiality agreements, where appropriate. To assist with distributing relevant parts of ISD, the ISDM will send notification of new ISD data to Market Participants using the IF/PUB 47 Notification of the Publication of a Downloadable Asset.

The ISDM will provide a snapshot of ISD for any Settlement Day on request by any authorised party, for audit and dispute purposes. The ISDM will also provide ISD on request to approved parties seeking Qualification.

The information provided to such non-BSC parties will be the set of data most recently distributed to the relevant Market Participants.

1.1.6 BSC Service Desk

The SVAA will manage the BSC Service Desk. The SVAA will report to the BSC Service Desk any significant known or suspected errors in the Supplier Volume Allocation process, any such report shall be confirmed in writing. Market Participants will raise queries with the SVAA via the BSC Service Desk.

This BSC Procedure is complementary to the activities of the overall VAR Process, which is incorporated in BSCP01. The activities of this procedure are used by BSCP01 to complete the VAR activities and this procedure will be triggered as a result of BSCP01.

1.2 Main Users of Procedure and their Responsibilities

This BSC Procedure should be used in the main by the SVAA.

However, the following organisations or services will also require input from or output to the SVAA Services:

	<u>Process / Application System</u>	<u>Organisations</u>
(i)	Load Shape Data	LSS
(ii)	UTC Settlement Period Level Data	Data Services (SDS, ADS, UMSDS)
(iii)	Supplier Meter Registration Services (SMRS)	SMRAs
(iv)	Data Aggregation	MDS
(v)	GSP Group Take	CDCA
(vi)	Supplier Reconciliation (including data for DUoS Billing)	Suppliers
(vii)	TUoS Billing	the National Electricity Transmission System Operator (NETSO) - Ancillary Services Provider (ASP) NETSO- TUoS
(ix)	DUoS Billing	LDSOs (including iDNOs)
(x)	ISD Management	ISDM
(xi)	Qualification information	Qualification Service Provider
(xii)	BSC Service Desk	SVAA
(xiii)	BM Unit Data	CRA
(xiv)	Supplier Take	SAA
(xv)	Provision of Metering System Half Hourly Metered Volumes	HHDCs
	Provision of Asset Metering System Half Hourly Metered Volumes	
(xvi)	Calculation of Secondary Half Hourly Delivered Volumes	SVAA

	<u>Process / Application System</u>	<u>Organisations</u>
(xvii)	Calculation of Secondary BM Unit Supplier Delivered Volumes	SVAA
(xviii)	Calculation of Secondary Half Hourly Consumption Volumes	SVAA
(xix)	Calculation of Secondary BM Unit Demand Volumes	SVAA
(xx)	Provision of MSID Pair Delivered Volumes	VLP, AMVLP, NETSO
(xxi)	Provision of AMSID Pair Delivered Volumes	AMVLP
(xxvi)	<u>Provision of Supplier BM Unit Non-Chargeable Demand</u>	<u>SAA</u>

The SVA System will apply version controls to all data received. All data received will have a date and version stamp attached to it.

1.3 Use of the Procedure

This procedure should be referred to by users trying to understand the role and responsibilities and role of the SVAA who will operate and maintain the SVA System and the ISD system.

Throughout this procedure, timetables reflect the following:

- i. Working Day (WD) or
- ii. Settlement Day (SD) and WD.

The Load Shaping Service shall calculate Load Shapes in kilo Watt hours (kWh), otherwise, SVAA processes all consumption data it receives from the Data Service in MWh.

This BSC Procedure does not cover the receipt of the various standing data related changes which are documented in BSCP507.

The remaining sections in this document are:

Section 2 - Responsibilities of the SVAA services.

Section 3 - Interface and Timetable Information: this section defines in detail the requirements of each business process.

Section 4 - Appendices: this section contains supporting information.

1.4 Balancing and Settlement Code Provision

This BSC Procedure has been produced in accordance with the provisions of the Balancing and Settlement Code (the Code). In the event of an inconsistency between the provisions of this BSC Procedure and the Code, the provisions of the Code shall prevail.

1.5 Associated BSC Procedures

BSCP01	Overview of Trading Arrangements.
BSCP11	Trading Disputes
BSCP128	Production, Submission, Audit and Approval of Line Loss Factors
BSCP507	Supplier Volume Allocation Standing Data Changes.
BSCP537	Qualification Process for SVA Parties, SVA Party Agents, VLPs, AMVLPs, AMVLP <u>Asset Metering</u> Agents and CVA MOAs.
BSCP602	SVA Metering System and Asset Metering System Register
BSCP603	Meter Operations and Data Collection for Asset Metering Systems
BSCP700	Unmetered Supplies Data Services
BSCP701	Data Retrieval and Processing for Smart Segment Metering Systems Registered in SMRS
BSCP702	Advanced Data Service
BSCP705	Licensed Distribution for MHHS Metering Systems
BSCP706	Supplier Meter Registration Service.
BSCP707	Changes to Industry Standing Data.

1.6 Acronyms and Definitions

1.6.1 Acronyms

The terms used in this BSC Procedure are defined as follows:

ABS	Applicable Balancing Service
ABSVD	Applicable Balancing Service Volume Data
ABMU	Additional Balancing Mechanism Unit
ADS	Advanced Data Service
AMSID	Asset Metering System Identifier
AMVLP	Asset Metering Virtual Lead Party
ASP	Ancillary Services Provider
BM	Balancing Mechanism
BMU	Balancing Mechanism Unit
BSC	Balancing and Settlement Code
BSCCo	Balancing and Settlement Code Company
BSCP	Balancing and Settlement Code Procedure
CCC	Consumption Component Class
CDCA	Central Data Collection Agent
CFD	Contract For Difference
CR	Change Request
CRA	Central Registration Agent
DDE	Demand Disconnection Event
DUoS	Distribution Use of System
FAA	Funds Administration Agent
GSP	Grid Supply Point
GSPGCF	Grid Supply Point Group Correction Factor
HH	Half Hourly
Id	Identifier
ISD	Industry Standing Data
ISDM	Industry Standing Data Manager
kWh	kilowatt-hour
LDSO	Licensed Distribution System Operator
LLF	Line Loss Factor
LRM	Transmission Loss Reconciliation Multiplier
LSS	Load Shaping Service
LSC	Load Shape Category
MDS	Market-wide Data Service

SVA MOA	SVA Meter Operator Agent
MSID	Metering System Identifier
NETSO	Electricity System Operator as the holder of the Transmission Licence and any reference to "NETSO", "National Grid Company" or "NGC" in the Code or any Subsidiary Document shall have the same meaning
Ref	Reference
SDS	Smart Data Service
SD(s)	Settlement Day(s)
SMRA	Supplier Meter Registration Agent
SMRS	Supplier Meter Registration Service
SVA	Supplier Volume Allocation
SVAA	Supplier Volume Allocation Agent
TUoS	Transmission Use of System
UMSDS	Unmetered Supplies Data Service
UTC	Coordinated Universal Time
VAR	Volume Allocation Run
VAS	Volume Allocation Service
VLP	Virtual Lead Party
WD	Working Day

1.6.2 Definitions

Full definitions of the above acronyms are, where appropriate, included in the Balancing and Settlement Code.

Host LDSO	An LDSO operating a distribution network that is directly connected to the Transmission System in their own distribution licence area.
Virtual Lead Party	Has the meaning given in Annex X-1 of the BSC
Secondary BM Unit	Has the meaning given in Annex X-1 of the BSC
MSID Pair	Has the meaning given in Annex X-1 of the BSC
AMSID Pair	Has the meaning given in Annex X-1 of the BSC
MSID Pair Delivered Volume	Has the meaning given in Annex X-1 of the BSC
AMSID Pair Delivered Volume	Has the meaning given in Annex X-1 of the BSC

Baselined BM Unit	A Baselined BM Unit consists of at least one MSID Pair or AMSID Pair that will have a baseline settlement volume calculated, which will also be used to calculate Delivered Volumes.
<u>Supplier BM Unit Non-Chargeable Demand</u>	<u>Supplier BM Unit Non-Chargeable Demand is the volume of electricity consumed by Generation or Storage plant operating in accordance with an electricity generation licence, as calculated by the SVAA, which is used (by the SAA) to establish Supplier BM Unit Chargeable Demand for the calculation of Final Consumption Levy Charges (by the EMR Settlement Company).</u>

2 Responsibilities of the SVAA services

2.1 SVAA activity

The requirements for the BSC Central Services provided by the SVAA can be found in the BSC Central Services Service Description.

The high level responsibilities of each of the Services are as follows:

2.1.1 The Load Shaping Service [MHHS-05_LSS-Method_Statement]

The LSS is responsible for:

- Identifying Load Shape Categories (LSC) using Industry Standing Data (ISD);
- Counting the MSID data associated with each LSC;
- Calculating the Load Shape associated with each LSC;
- Calculating the Load Shape Total for each LSC;
- Calculating the Off-peak total associated with each LSC;
- Calculating the Peak total associated with each LSC;
- Calculating the 7 day Rolling Total for each LSC;
- Calculating the 7 Day Rolling Off-peak Total For each LSC;
- Calculating the 7 Day Rolling Peak Total For each LSC;
- Calculating the default Load Shapes where the available data for an LSC is less than the configured De-minimis Data Count value defined in ISD;
- Calculating back-stop Load shapes where no data is available for LSCs in any GSP Group;
- LSS post calculation validation requirements; and
- Publishing the Load Shape data;

2.1.2 The Market-wide Data Service [MHHS-07_MDS_Method_Statement]

The MDS is responsible for:

- Selecting UTC Period Level Consumption data for an MDS Run;
- [IR2]Receiving Data from Suppliers for EMR Settlement Limited³;
- Identifying MSIDs that require a default calculation;
- Identifying BMU data using ABMU to MSID mapping;
- Applying the default data and reporting;
- Counting and Calculating BM Unit Period Level Consumption data;
- Accessing Line Loss Factors and calculating Line Losses for BM Unit Period Level Consumption ;
- Determination of aggregated Active Import Storage Volumes;
- Providing the calculated volume to VAS;
- Publishing the calculated volumes to Suppliers;

³ EMRS data is sent by Suppliers on the D0354 Metering System Reporting Notification

- Receive information from NETSO and impacted Licensed Distribution System Operators (LDSOs) for DDE;
- Receive information from BSCCo on the reference day as directed by the BSC Panel;
- Calculate Disconnection Volumes for Advanced Metering Systems;
- Calculate Disconnection Volumes for the Smart and UMS Consumption Component Classes; and
- Provide the Disconnection Volumes to VAS.

2.1.3 The Volume Allocation Service [MHHSP-06_VAS_Method_Statement]

The VAS is responsible for:

- [MHHSP-01-VAS] Accessing and maintaining the Master Settlement Timetable;
- Inputting configurable parameters, such as tolerances/thresholds for validation;
- Accessing Uncorrected BM Unit's Period Level Consumption within Consumption Component Class (CCC) 'N' data by Balancing Mechanism Unit (BMU) from the Market-wide Data Service (MDS);
- Accessing the of Uncorrected BM Unit's Period Level Consumption Losses within Consumption Component Class 'N' data by Balancing Mechanism Unit (BMU) from MDS;
- Accessing Industry Standing Data held by the VAS;
- Validating the MDS data and producing exception reports;
- Accessing GSP Group Take Data from the Central Data Collection Agent (CDCA);
- Validating the CDCA data and producing exception reports;
- Calculating the Suppliers Settlement Period Consumption (Non-losses) (C_{iNDj});
- Calculating the Suppliers Settlement Period Consumption (Losses) ($CLOSS_{iNDj}$);
- Determination of GSP Group Settlement Period Consumption (GCH_{NDj});
- Calculating the Grid Supply Point Group Correction Factors ($GSPGCF$);
- Determining the Corrected Component ($CORC_{iNDj}$) for each CCC;
- Validating the out-turn calculations;
- Supplier Deemed Take (SDT_{HZDj});
- Determination of BM Unit Allocated Demand Volume ($BMUADV_{iDj}$);
- Determination of Period BMU Gross Demand for SVA Storage Facilities ($SDBMU_{imDj}$);
- Receiving Disconnection volumes from MDS;
- Calculating the Total BM Disconnection Volumes; and
- Reporting the disconnection volumes to the SAA and Market Participants

The detail of the calculations undertaken by BSC Central Services can be found in BSC Section S Annex S3.

3. Interface and Timetable Information

3.1 Load Shape Production for Settlement Day

REF	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
3.1.1 [BP18 Step 35]	For the Settlement Day defined in the Master Settlement Timetable on Calendar Day +4	Access ISD Data and Initiate Load Shaping Run	LSS		Master Settlement Timetable and Load Shape Categories to be processed.	Internal Process
3.1.2 [BP18 Step 30]	Following 3.1.2	Select Data for Load Shape calculation	LSS		Actual UTC Period Level Consumption Data and associated Registration Data.	Internal Process
3.1.3 [BP18 Step 40]	Following 3.1.2	Calculate MSID Count per Load Shape Category	LSS			Internal Process
3.1.4 [BP18 Step 41]	Following 3.1.3	LSS identifies UTC periods where the de-minimus value set in ISD (minimum number of MSIDs) has not been met. The LSS must calculate the appropriate Default Load Shape and allocate this to each UTC Period for a Load Shape Category.	LSS		MSID Counts per Load Shape Category	Internal Process
3.1.5 [BP18 Step 42]	Following 3.1.4	LSS calculates Load Shape average values for each UTC Period for each LSC by averaging the actual consumption for MSIDs assigned to each LSC.			Actual UTC Period Level Consumption Data and MSID Counts per Load Shape Category	Internal Process

REF	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
3.1.6 [BP18 Step 43]	Following 3.1.5	LSS calculates a daily total for each Load Shape Category. Where defined LSS must also calculate a Peak and Off-Peak total for a LSC.	LSS		Calculated Load Shapes	Internal Process
3.1.7 [BP18 Step 45]	Following 3.1.6	LSS validates each UTC Period of Load Shape for any system errors and performs reasonableness check.	LSS		Calculated Load Shapes and Load Shape Totals	Internal Process
3.1.8 [BP18 Step 50]	Following 3.1.7 If validation fails	In the event of a Load Shape validation failure, the LSS must take steps to rectify the failure.	LSS			Internal Process
3.1.9 [BP18 Step 55]	Following 3.1.7 If validation is passed	LSS stores Load Shape data to be used to produce Load Shape data and 7 day totals	LSS		Calculated Load Shapes and Load Shape Totals	Internal Process
3.1.10 [BP18 Step 65]	Following 3.1.9	For each LSS Category, the LSS calculates the total (including Peak and Off-Peak) for the current UTC date plus the last 6 days for each UTC date. The LSS must calculate the Load Shape Rolling Annual Total for each UTC date.	LSS		Calculated Load Shapes and Load Shape Totals and stored Load Shape data.	Internal Process
3.1.11 [BP18 Step 60] [MHHS-32-LSS]	Following 3.1.10 and by 12:00 noon.	LSS Publishes Load Shape data	LSS	MDS, Subscribed Parties	IF/PUB-022 Load Shape Period Data IF/PUB-023 Load Shape Totals Data	DIP Interface

3.2 SVAA performs a MDS Run for a Settlement Day

REF	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
3.2.1 [BP19 Step 15]	At any time.	MDS receives UTC Settlement Period Data from Data Services	Data Services	MDS	IF/PUB-021 UTC Settlement Period Consumption Data	DIP Interface
3.2.2 [BP19 Step 16]	On receipt.	MDS validates UTC Period Level Consumption data following receipt.	MDS		See Appendix 4.1	Internal Process
3.2.3 [BP19 Step 17]	[IR5]Within 3 Hours following 3.2.2 if data is invalid.	MDS reports validation errors on UTC Period Level Consumption Data to Market Participants	MDS	Data Service	IF/PUB-014 Rejected - UTC Settlement Period Consumption Data	DIP Interface
3.2.4 [BP19 Step 25] [MHHS-06]	At any time.	MDS receives Registration data	SMRS	MDS	IF/PUB-001 Notification of Change of Supplier IF/PUB-008 SMRS Notification of Change of Energisation Status IF/PUB-009 Notification of LDSO Disconnection / CSS De-Registration De-Activation IF/PUB-018 Notification of Registration Data Item Changes IF/PUB-036 SSMRS Notification of Supplier Agent Appointment & Supporting Information IF/PUB-043 SMRS Notification of Change in Connection Type IF/PUB-044 SMRS Notification of Change in Market Segment	Internal Process
3.2.5 [BP19 Step 70]	Following a Load Shaping Run.	MDS receives Load shape data	LSS	MDS	Load Shape Period Data	Internal Process
3.2.6 [BP19 Step 50]		MDS access SVA Storage Facilities Register and SVA Metering Systems Register	SVAA	MDS		Internal Process

REF	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
3.2.7 [BP19 Step 40] [MHSP- 01-MDS]	For the Settlement Days and Run Types defined in the Master Settlement Timetable and in accordance with the timing set out in BSCP01 for each Run Type.	Access ISD Data and Initiate MDS Run	MDS		ISD data appropriate to Settlement Days being processed.	Internal Process
3.2.8 [BP19 Step 30]	Following 3.2.7	MDS accesses the UTC Settlement Period Level Data for the Settlement Day	MDS		UTCP Settlement Period Level Consumption	Internal Process
3.2.9 [BP19 Step 26]	Following 3.2.8	For each MSID with UTC Settlement Period Level Data access the associated Registration Data	MDS		Registration Data	Internal Process
3.2.10 [BP19 Step 31, 75 and 80]	Following 3.2.9	Identify MSIDs where no consumption data exists using registration data, apply defaulting rules and publish exception report. [IR5]Note. The sending of IF-013 will be restricted until the SF Settlement Run	MDS	Data Service, Supplier	IF/PUB-013 Notification of Defaulted UTC Settlement Period Consumption Data	DIP Interface
3.2.11 [BP19 Step 46]	Following 3.2.10	Allocate MSIDs to BMUs/ABMUs and CCCs (and identify MSIDs for BMU Storage)	MDS		Registration and UTCP Settlement Period Level Consumption Data	Internal Process

REF	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
3.2.12 [BP19 Step 90]	Following 3.2.11	Calculate losses by MSID	MDS		Registration, UTCP Settlement Period Level Consumption Data and ISD Data (including LLFs)	Internal Process
3.2.13 [BP19 Step 91]	Following 3.2.12	Calculate uncorrected consumption data by CCC and BMU for the MDS run (and Half Hourly Storage Consumption for Storage facilities MSIDs)	MDS		Registration, UTCP Settlement Period Level Consumption Data and ISD Data (including LLFs)	Internal Process
3.2.14 [BP19 Step 95]	Following 3.2.13	Undertake Validation in accordance with Section 4.1.3	MDS		Uncorrected consumption data by CCC and BMU	Internal Process
3.2.15 [BP19 Step 100]	Following 3.2.1.4 if Validation fails	Investigate cause of Validation failure	MDS		Uncorrected consumption data by CCC and BMU	Internal Process
3.2.16 [BP19 Step 101]	Following 3.2.1.5 if no issue identified	Override the validation and go to 3.2.19	MDS			Internal process
3.2.17	Following 3.2.1.5 if unresolved	Report Issue to BSCCo	MDS	BSCCo	Details of issue identified	As agreed with BSCCo
3.2.18 [MHHS-03] [BP19 Step 150]	Following 3.2.1.7 if re-run required	Carry out action requested by BSCCo and go to 3.2.7 else go to 3.2.19	MDS			Internal Process

REF	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
3.2.19 [BP19 Step 110]	Once data deemed valid	MDS provides the calculated data to VAS	MDS	VAS	ELEX-REP-090 Aggregated Uncorrected volumes by CCC to VAS	Internal Process
3.2.20	Following 3.2.19 if VAS raises exception report	MDS investigates issue raised by VAS	VAS	MDS	ELEX-REP-060 VAS Exception Report to MDS	As agreed with VAS
3.2.21	Following 3.2.20 if no issue with data	MDS instructs VAS to proceed with VAR Run	MDS	VAS	Instruction to proceed with VAR Run	As agreed with VAS
3.2.22	Following 3.2.20 if issue identified	Request course of action from BSCCo. If re-run required carry out action requested by BSCCo and go to 3.2.7 else go to 3.2.21	MDS	BSCCo	Details of issue identified	As agreed with BSCCo
3.2.23 [BP19 Step 110]	Following 3.2.19	Send MDS Reports to Market Participants.	MDS	LDSOs and Suppliers	[IR5]ELEX-REP-002 Supplier report for DUoS – aggregated data ELEX-REP-002A Embedded Network report for DUoS – aggregated data ELEX-REP-002B LDSO report for DUoS – aggregated data ELEX-REP-006 Aggregated Uncorrected volumes by CCC to Suppliers ELEX-REP-008 MDS Exception Report to LDSOs ELEX-REP-009 EMRS report for Suppliers	DIP Interface
3.2.24	Following 3.2.19	Provide Exception Report to BSCCo	MDS	BSCCo	ELEX-REP-001 MDS defaulting report	As agreed with BSCCo
3.2.25 [BP20 Step 120]	Following 3.2.19	MDS Produces Performance Assurance data	MDS	BSCCo	Data as defined for Performance Assurance	As agreed with BSCCo

REF	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
3.2.26 [BP19 Step 130]	Following 3.2.19	MDS Produces EMRS data	MDS	EMRS	ELEX-REP-020 MDS Data for EMRS	As agreed with EMRS
3.2.27 [BP19 Step 140]	Following 3.2.19	MDS Produces MSID data for Other BSC Systems	MDS	Other BSC Systems	ELEX-REP-030 MPAN data for Other BSC Systems	As agreed with BSCCo

3.3 VAS Initiates an Interim Information Volume Allocation Run for Settlement Day

REF	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
3.3.1	By Gate Closure.	Submit the MSID Pair or AMSID Pair Submitted Expected Volumes (relating to non-Baselined MSID Pairs and non-Baselined AMSID Pairs in a Baselined BM Unit).	VLP / AMVLP	SVAA	P0328 BM Unit Submitted Expected Volume Notification	Electronic or other method, as agreed.
3.3.2	By 1700hrs on the first working day after the provision of a Balancing Service	MSID Pair Delivered Volumes and / or AMSID Pair Delivered Volumes for procured balancing services	VLP / AMVLP AMVLP	SVAA	P0282 –Delivered Volume Notification	Electronic or other method, as agreed.
3.3.3	In accordance with the Master Settlement Timetable and BSCP01	Initiate the II Run. Go to Section 3.6 VAS performs a Volume Allocation Run	VAS		Master Settlement Timetable in ISD	Internal Process

3.4 VAS Initiates an Initial Volume Allocation Run for Settlement Day

REF	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
3.4.1	In accordance with the Master Settlement Timetable and BSCP01	MSID Pair Delivered Volumes for procured balancing services	VLP or AMVLP	SVAA	P0282 Delivered Volume Notification	Electronic or other method, as agreed.
3.4.2	In accordance with the Master Settlement Timetable and BSCP01	AMSID Pair Delivered Volumes for procured balancing services	AMVLP	SVAA	P0282 Delivered Volume Notification ⁴	Electronic or other method, as agreed.
3.4.3	In accordance with the Master Settlement Timetable and BSCP01	Send Asset Metering System Half Hourly Metered Volumes in clock time, in kWh, for Asset Metering System Numbers specified by the AMVLP ⁵ .	HHDC	SVAA.	D0390 Asset Metering System Half Hourly Metered Volumes	Electronic or other method as agreed.
3.4.4	In accordance with the Master Settlement	Initiate the SF Run. Go to Section 3.6 VAS performs a Volume Allocation Run	VAS		Master Settlement Timetable in ISD	Internal Process

⁴ Version 002 of the P0282 allows the provision of MSID Pair Delivered Volumes or AMSID Pair Delivered Volumes to the SVAA.

⁵ The Advanced Data Service may send the file before this date, if available, but must send the file by this date, using estimated data where no actual data is available. Once the Advanced Data Service has submitted actual data to the SVAA, there is no requirement for the Advanced Data Service to resubmit data for subsequent VARs.

	Timetable and BSCP01					
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3.5 VAS Initiates a Timetabled Reconciliation Volume Allocation Run(s) for a Settlement Day (post Initial Volume Allocation Run)

REF	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
3.5.1	By T-8 WD	If no D0390 file was submitted for an Asset Metering System Number registered in the SVA Metering System and Asset Metering System Register for the Initial Volume Allocation Run, or a D0390 file was submitted which contained Estimated data, and no D0390 file containing Actual data has subsequently been submitted, send a P0310 to the HHDC and AMVLP as a reminder.	SVAA	HHDC AMVLP	P0310 Missing Metering System Data.	Electronic or other method as agreed
3.5.2	By T-6 WD	For any Asset Metering System Numbers specified in a P0311 in 3.3.0, send Asset Metering System Half Hourly Metered Volumes in clock time, in kWh.	HHDC	SVAA	D0390 Asset Metering System Half Hourly Metered Volumes	Electronic or other method as agreed
	In accordance with the Master Settlement Timetable and BSCP01 or if notified of an upheld Trading Dispute by BSCCo.[IR2]	Initiate the Reconciliation Run. Go to Section 3.6 VAS performs a Volume Allocation Run	VAS		Master Settlement Timetable in ISD or Dispute Timetable.	Internal Process

3.6 VAS performs a Volume Allocation Run

REF	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
3.6.1 [BP 20 Step 45]	Following initiation of a VAR Run	VAS accesses ISD.	VAS		Industry Standing Data	Internal Process
3.6.2 [BP 20 Step 47]	Following 3.6.1	VAS uses Master Settlement Timetable to identify Run Date and Run Type.	VAS		Industry Standing Data	Internal Process
3.6.3 [BP 20 Step 46]	Following 3.6.1	VAS accesses Other BSC Systems data.	VAS	BSCCo	SVA Storage Facility Register/SVA Metering Systems Register	Internal Process
3.6.4	Following 3.6.1	VAS accesses MDS run data.	MDS	VAS	ELEX-REP-090 (BM Unit Period Level Consumption & Losses) ELEX-REP-090 (Storage Metering System Metered Consumption & Losses)	Electronic or other method as agreed.
3.6.5 [BP 20 Step 46]	Following 3.6.1	VAS selects and validates MDS Data for the VAR Run. For validation see Section 4.1.6.	VAS		ELEX-REP-090 (BM Unit Period Level Consumption & Losses) ELEX-REP-090 (Storage Metering System Metered Consumption & Losses)	Electronic or other method as agreed.
3.6.6 [BP 20 Step 85]	Following 3.6.1	VAS accesses and validates CDCA Data for Settlement Day. For validation see Section 4.1.6.	CDCA	VAS	P0012 GSP Group Take	Electronic or other method as agreed.
3.6.7	Following 3.6.6	Send acknowledgement confirming receipt of the GSP Group Take data.	VAS	CDCA	P0183 Stage 2 NETA Acknowledgement Message.	Electronic or other method as agreed.
3.6.8 [BP 20 Step 20]		a) If CDCA data missing, notify CDCA and await submission of data.	VAS	CDCA	P003 Missing Data.	Manual Process.

	Within 1 working hour of receipt of notification from SVAA.	Send CDCA data to VAS.	CDCA.	VAS	P0012 GSP Group Take	Electronic or other method as agreed.
		b) If CDCA data invalid, contact the Panel and carry out action as agreed with Panel.	VAS	Panel.		Manual Process.
3.6.9	By D-1 WD if SF Run where available to the NETSO or no later than the 45 th calendar day after the relevant Settlement Day ⁶	Send ABS MSID Pair Delivered Volume Notifications in MWh.	NETSO	SVAA	P0292 ABS MSID Pair Delivered Volume Notifications	Electronic or other method as agreed.
3.6.10	Immediately following 3.6.9 or 3.6.11	Validate ABS MSID Pair Delivered Volume Notification:	SVAA			Internal Process
		If valid, Confirmation of ABS MSID Pair Delivered Volume.	SVAA	NETSO	P294 Confirmation of ABS MSID Pair Delivered Volume	Electronic or other method as agreed.

⁶If not already provided for the SF Run

		If invalid, send Rejection of ABS MSID Pair Delivered Volume. Note that the entire file will be rejected if one ABS MSID Pair Delivered Volume fails validation.	SVAA	NETSO	P293 Rejection of ABS MSID Pair Delivered Volume	Electronic or other method as agreed.
		And send a ABS MSID Pair Delivered Volume Exception Report for each ABS MSID Pair Delivered Volume that failed validation	SVAA	NETSO	P295 ABS MSID Pair Delivered Volume Exception Report	Electronic or other method as agreed.
3.6.11	Within 1 WD of 3.6.10	Submit corrected ABS MSID Pair Delivered Volume Notification	NETSO	SVAA	P0292 ABS MSID Pair Delivered Volume Notifications	Electronic or other method as agreed
3.6.12 [BP 20 Step 20]	If MDS data unavailable.	Request course of action from BSCCo	VAS	BSCCo		Electronic or other method as agreed
3.6.13	Following 3.6.12	BSCCo notifies VAS on default data to be used.	BSCCo	VAS		Electronic or other method as agreed
3.6.14 [BP 20 Step 25]	Following 3.6.13	VAS applies default data as defined by BSCCo	VAS			Internal Process
3.6.15 [BP 20 Step 60]	Following 3.6.14	Invoke Settlement Run and calculate Suppliers Settlement Period Consumption (Non-Losses) and (Losses) and Calculate GSPGP HH Consumption	VAS			Internal Process
3.6.16 [BP 20 Step 61]	Following 3.6.15	Calculate GSPGCFs and Corrected Components	VAS			Internal Process

3.6.17 [BP 20 Step 62]	Following 3.6.16	Calculate Supplier Deemed Take, BMU Allocated Demand Volumes and Period BMU SVA Gross Demand	VAS			Internal Process
3.6.18 [BP 20 Step 63]	Following 3.6.17	Calculate Storage Corrected Components	VAS			Internal Process
3.6.19 [BP 20 Step 65]	Following 3.6.15 to 3.6.18	Validate all output from the VAR. For validation rules see Section 4.2	VAS			Internal Process
3.6.20 [BP 20 Step 70]	Following 3.6.19 if validation fails	Investigate. If non-issue go to 3.6.22 else go to 3.6.20	VAS			Internal Process
3.6.21		Notify BSCCo of validation issue and request course of action	VAS	BSCCo		Electronic or other method as agreed
3.6.22	Following 3.6.21	VAS act in accordance with course of action specified by BSCCo	BSCCO	VAS	Action to be taken by VAS	Electronic or other method as agreed
3.6.23 [BP 20 Step 75] [MHHS-55-VAS] [MHHS-56-VAS]	If data valid or non-issue after investigation	Issue VAS Reports to Market Participants	VAS	Market Participants	ELEX-REP-003 BM Unit Allocated Demand Volumes to Suppliers ELEX-REP-004 Supplier Deemed Take Report ELEX-REP-007 VAS exception report to Suppliers ELEX-REP-D0397 <u>MHHS</u> Supplier Half Hourly Demand Report	DIP Interface or Electronic or other method as agreed as appropriate

					ELEX-REP-D0398 <u>MHHS</u> Supplier Settlement Header Report ELEX-REP-D0399 <u>MHHS</u> GSP Group Consumption Totals Report ELEX-REP-D0400 D0296 - <u>MHHS</u> Supplier BM Unit Report	
3.6.24	If data valid or non-issue after investigation	Send GSP Group Correction Factors and ad-hoc reports to BSCCo	VAS	BSCCo	ELEX-REP-P0048 GSP Group Correction Factors REP-0036A Default Data (relating to Data Service defaults only) ELEX-REP-P0213 Energy Breakdown (Settlement Period and Supplier) ELEX-REP-P0214 P0214 Energy Breakdown (BM Unit)	
3.6.25	If data valid or non-issue after investigation	Send VAR output to SAA.	VAS	SAA	P0182 BM Unit Supplier Take Energy Volume Data P0236 BM Unit SVA Gross Demand Data P0237 flow BM Unit Disconnected Supplier Take Energy Volume Data	
3.6.26	Following 3.6.23	Send acknowledgement confirming receipt of the BM Unit Supplier Take Energy Volume Data File.	SAA	VAS	P0183 Stage 2 NETA Acknowledgement Message.	Electronic or other method as agreed.
3.6.27	Following 3.6.24 and if problem with file.	Send notification that problem with file.	SAA	VAS	P0187 SAA Data Exception Report.	Manual Process.
3.6.28	Following 3.6.23	Send relevant NETSO reports.	VAS	NETSO	P0210 TUoS Report	Electronic or other method as agreed.
Calculation of Secondary Delivered Volumes and Consumption						

3.6.29	Following 3.6.17	Calculate the Secondary Half Hourly Delivered Volumes where applicable ⁷ .	SVAA		Calculate Metering System Delivered Volume Calculate Secondary Half Hourly Delivered Volume (Losses) Calculate Secondary Half Hourly Delivered Volume (Non-Losses)	Internal process
3.6.30	Following 3.6.27	Calculate the Secondary Half Hourly Consumption Volumes where applicable.	SVAA		Calculate Metering System Metered Consumption Calculate Secondary Half Hourly Consumption Volume (Losses) Calculate Secondary Half Hourly Consumption Volume (Non-Losses)	Internal process
3.6.31	Following 3.6.28	Send the Secondary Half Hourly Delivered Volume (No Losses) and the Secondary Half Hourly Delivered Volume (Losses) to the Supplier(s) responsible for the Metering System Number(s)	SVAA	Supplier	P0287 - Secondary Half Hourly Delivered Volumes	Electronic or other method as agreed.
3.6.32	Following 3.6.28	Send the Secondary Half Hourly Consumption Volume (Non Losses) and the Secondary Half Hourly Consumption Volume (Losses) to the VLP(s) responsible for the Metering System Number(s)	SVAA	VLP	P0288 - Secondary Half Hourly Consumption Volumes	Electronic or other method as agreed.
3.6.33	After 3.6.29	Calculate the Secondary BM Unit Supplier Delivered Volumes where applicable⁸.	SVAA			Internal Process
3.6.34	After 3.6.30	Calculate the Secondary BM Unit Demand Volumes.	SVAA			Internal Process

⁷ If a MSID Pair delivered volume has been received

⁸ If a MSID Pair delivered volume has been received.

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3.6. 3335	Following 3.6.30	Send the Secondary BM Unit Supplier Delivered Volumes to the SAA	SVAA	SAA	P0289 - Secondary BM Unit Supplier Delivered Volumes	Electronic or other method as agreed.
3.6. 3436	Following 3.6.30	Send the Secondary BM Unit Demand Volumes to the SAA	SVAA	SAA	P0290 - Secondary BM Unit Demand Volumes	Electronic or other method as agreed.
Calculation of ABSVD (following receipt of P0292 data from the NETSO)						
3.6. 3537	Following 3.6.23	Calculate the Supplier BM Unit Non BM ABSVD where applicable ⁹	SVAA		Calculate MPAN Applicable Balancing Services Volume Data (non-losses) Calculate MPAN Applicable Balancing Services Volume Data (non-losses) Calculate the Supplier BM Unit Non BM ABSVD	Internal process
3.6. 3638	Following 3.6.17	Calculate Baselined Volumes where applicable ⁹ .	SVAA		Calculate Baselined Volume	Internal process
3.6. 3739	Following 3.6. 3638	Send calculated Baselines report to Lead Parties	SVAA	Lead Party	P0333 Baselining Expected Volume Report	
3.6. 3840	Following 3.6. 3537	Send the Supplier BM Unit Non BM ABSVD to the SAA.	SNAA	SAA	P0296 Supplier BM Unit Non BM ABSVD	Electronic or other method as agreed.
3.6. 3941	Following 3.6.17	Send the BM Unit Settlement Expected Volumes to the SAA	SVAA	SAA	P0332 – BM Unit Settlement Expected Volumes	Electronic or other method as agreed.
<u>3.6.42</u>	<u>After 3.6.34</u>	<u>Calculate the Supplier BM Unit Non-Chargeable Demand</u>	<u>SVAA</u>			<u>Internal Process</u>

⁹ If historic data has been received for MSID Pairs or AMSID Pairs registered with SVAA for Baselining

<u>3.6.43</u>	<u>After 3.6.42</u>	<u>Send the Supplier BM Unit Non-Chargeable Demand</u>	<u>SVAA</u>	<u>SAA</u>	<u>P0338 - Supplier BM Unit Non-Chargeable Demand</u>	<u>Electronic or other method as agreed.</u>
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3.7 Implementation of ISD Changes

REF	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
3.7.1	Following approval of ISD change(s).	Notify ISDM that ISD Change Request has been approved.	BSCCo	ISDM	As per BSCP707.	Following approval of ISD change(s).
3.7.2	Following 3.7.1.	Liaise with BSCCo to establish in which ISD Catalogue version the Change Request be published.	ISDM	BSCCo		Following 3.7.1.
3.7.3	Within 5 WD of implementing agreed ISD updates into database.	Confirm changes have been successfully incorporated into a revised ISD.	ISDM	BSCCo	As per BSCP707.	Within 5 WD of implementing agreed ISD updates into database.
3.7.4 [BP 21 Step 45]	Following 3.7.2	Revised ISD data to be sent to the DIP.	ISDM	DIP ISD Processor	Revised ISD.	DIP Interface
3.7.5 [BP 21 Step 66]	In accordance with timescales published in ISD CMC.	Publish ISD to ISD Data Store.	ISDM		Release Full Set of Revised ISD	Internal Process
3.7.6	Following 3.7.5	Confirmation from the ISD Data Store is received before the ISD service can notify ISD consumers via the DIP that ISD has changed.	ISD Data Store	ISDM	ISD Data store confirmation	Internal Process

[BP 21 Step 59]						
3.7.7	In accordance with timescales published in ISD CMC.	Notify Market Participants of ISD Publish and URL.	ISDM	Market Participants	IF/PUB-047 Notification of the Publication of a Downloadable Asset	DIP Interface

3.8 Receipt of Balancing Mechanism Unit(s)

REF	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
3.8.1	Prior to effective date of BM Unit(s).	Send BM Unit(s) data (Base and / or Additional).	CRA.	ISDM.	P0181 BM Unit Registration Data File ¹⁰ .	Electronic or other method as agreed.
3.8.2	Within the same WD where possible otherwise by the close of the next WD.	Send acknowledgement confirming receipt of the BM Unit(s) data.	ISDM.	CRA. CCC.	P0183 Stage 2 NETA Acknowledgement Message. P0024 Acknowledgement. Proceed to Business Event 3.7 – Implementation of ISD Changes.	Electronic or other method as agreed.

¹⁰ The BM Unit data will be received directly by ISDM however the ISDM will not publish this ISD until a request is received from the CCC via Business Event 3.7.

3.9 Update of Line Loss Factors

REF	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
3.9.1	As Required.	Send LLFs.	BSCCo.	SVAA/MDS	ELEX-REP-005 Line Loss Factor Data File.	E-mail.
3.9.2	Within a timescale agreed between SVAA and BSCCo.	Implement into systems and validate.	SVAA/MDS			Internal Process (Appendix 4.1.2).
3.9.3	Within 1 WD of 3.9.2.	Notify BSCCo of successful ELEX-REP-005 load.	SVAA/MDS	BSCCo.		E-mail.

3.10 Request for file re-send from SVAA

REF	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
3.10.1	As Required.	Request re-send of file(s) where positive acknowledgement received by SVAA for original send.	BSC Party / Party Agent.	BSC Service Desk.	Party/Party Agent contact details. Name(s) of file(s) requested.	Phone/E-mail.
3.10.2	Within 1 WD following 3.10.1, where number of files requested is not more than 3.	Refer call and authorise SVAA to re-send file(s).	BSCCo.	BSC Service Desk.	As 3.10.1.	E-mail.
3.10.3	Within 5 WD following 3.9.2.	Re-send file(s).	SVAA.	Requesting Party/Party Agent.	As 3.10.1.	Electronic or other method as agreed.
3.10.4	Within 1 WD following 3.10.2, where number of files requested is greater than 3.	Obtain further details and advise that BSCCo will seek to recover the cost to the SVAA of re-sending the files.	BSCCo.	Requesting BSC Party/Party Agent.	If not provided in 3.10.1, request: <ul style="list-style-type: none"> • Contact forename and surname; • Customer site; • Contact telephone number; • Contact e-mail address. 	Phone/E-mail.
3.10.5	Immediately following 3.10.4.	Refer call, and request quote for re-send.	BSCCo.	SVAA.	As 3.10.4.	E-mail.

REF	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
3.10.6	Within 1 WD following 3.10.5.	Request further details.	SVAA.	Requesting Party/Party Agent.	If not provided in 3.10.1 or 3.10.4, request: <ul style="list-style-type: none"> • Market Participant ID for requested file(s); • Supplier Y/N; • Distributor Y/N; • Party Agent Y/N; • File type (DPP); • Flow ID; • Run type; • Settlement date. 	Fax/E-mail.
3.10.7	Following 3.10.6.	Return requested details.	Requesting Party /Party Agent.	SVAA.	Completed template in 3.10.6.	Fax/E-mail.
3.10.8	Within 3 WD following 3.10.7.	Provide quotation for re-send.	SVAA.	BSCCo.	Quotation for file re-send.	E-mail.
3.10.9	Within 1 WD following 3.10.8.	Advise quotation price and request agreement to meet cost.	BSCCo.	Requesting Party/Party Agent.	Quotation in 3.10.8.	E-mail.
3.10.10	Following 3.10.9.	Agree to meet quoted cost.	Requesting Party/Party Agent.	BSCCo.	Written confirmation of agreement to meet costs of re-send.	E-mail.
3.10.11	Within 1 WD, following receipt of confirmation in 3.10.10.	Advise SVAA of agreement and authorise SVAA to re-send files.	BSCCo.	SVAA.	Confirmation in 3.10.10.	E-mail.

REF	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
3.10.12	Within 10 WD of 3.10.11.	Re-send files.	SVAA.	Requesting Party/Party Agent.	Details in 3.10.6.	Electronic or other method as agreed.
3.10.13	Following 3.10.12.	Advise of re-send.	SVAA.	BSCCo.		Phone/Fax/E-mail.
3.10.14	Following 3.10.13.	Invoice for cost of re-send.	BSCCo.	Requesting Party/Party Agent.	Quotation in 3.10.8.	Post.

3.11 Timetabled Reconciliation Run for Settlement Dates impacted by Demand Disconnection Events

Where a Settlement Date is impacted by a Demand Disconnection Event (i.e. it contains Demand Control Impacted Settlement Periods), the SVAA shall receive and process adjusted energy volumes as part of a timetabled Reconciliation Run.

REF	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
3.11.1	Within the period of 1WD commencing on the Business Day after the BMRA receives the data from the NETSO specified in Section Q6.9.5	Notice of the DCE sent to all Category A Authorised Persons, to establish the appropriate operational contact. The Category A Authorised Persons will be used as the contact unless another contact is provided	BSCCo	Category A Authorised Persons from BSC Parties and Party Agents	Notice of the DCE	Email or other method, as agreed.
3.11.2	Within the period of 1WD commencing on the Business Day after the BMRA receives the data from the NETSO specified in Section Q6.9.5	BSCCo will assess the costs and value of the DCE in accordance with the Demand Disconnection Event Threshold Rules and notify BSC Parties, Party Agents and BSC Panel Members of the outcome of its assessment	BSCCo	BSC Parties, Party Agents and BSC Panel	Notice of the outcome of BSCCo assessment	Email, Circular, BSC Website
3.11.3	Following 3.11.2 if	BSC Panel Identifies the Reference Day for the DDE	BSC Panel	MDS	Reference Day for MDS Calculations	E-mail

[BP13 Step 20]	action required					
3.11.4 [BP13 Step 15] [MHSP-02-DDE]	Within 5WD of 3.11.2	Send notification of Demand Disconnection Event and all affected MSIDs	LDSO	MDS	P0238 MSIDs affected by Demand Control Event	Email
3.11.5 [BP13 Step 10]	Within 25WD of 3.11.2	Send notification of any MSIDs subject to demand side Non-BM STOR instruction along with estimated volumes of reduction	NETSO	MDS	P0241 Disconnected MSIDs and Estimated Half Hourly Demand Disconnection Volumes	Electronic or other method as agreed
3.11.6	Following initiation of the MDS Run	MDS accesses ISD Data	MDS			Internal Process
3.11.7 [BP13 Step 30]	Following 3.11.6	MDS identify the Settlement Day for the DDE run	MDS			Internal Process
3.11.8 [BP19 Step 15]	At any time.	MDS receives UTC Settlement Period Data from Data Services	Data Services	MDS	IF/PUB-021 UTC Settlement Period Consumption Data	
3.11.9 [BP19 Step 16]	On receipt.	MDS validates UTC Period Level Consumption data following receipt.	MDS		See Appendix 4.1	
3.11.10 [BP19 Step 17]	If following 3.11.9 data is invalid.	MDS reports validation errors on UTC Period Level Consumption Data to Market Participants	MDS	Data Service, LDSO.	IF/PUB-014 Rejected - UTC Settlement Period Consumption Data	
3.11.11	At any time.	MDS receives Registration data	SMRS	MDS	IF/PUB-001 Notification of Change of Supplier	

[BP19 Step 25]					IF/PUB-008 SMRS Notification of Change of Energisation Status IF/PUB-009 Notification of LDSO Disconnection / CSS De-Registration De-Activation IF/PUB-018 Notification of Registration Data Item Changes IF/PUB-036 SMRS Notification of Supplier Agent Appointment & Supporting Information IF/PUB-043 SMRS Notification of Change in Connection Type IF/PUB-044 SMRS Notification of Change in Market Segment
3.11.12 [BP19 Step 70]	Following a Load Shaping Run.	MDS receives Load shape data	LSS	MDS	IF/PUB-022 Load Shape Period Data
3.11.13 [BP19 Step 30]	Following 3.11.12	MDS accesses the UTC Settlement Period Level Data for the Settlement Day	MDS		UTCP Settlement Period Level Consumption
3.11.14 [BP19 Step 26]	Following 3.11.13	For each MSID with UTC Settlement Period Level Data access the associated Registration Data	MDS		Registration Data
3.11.15 [BP19 Step 31, 75 and 80]	Following 3.11.14	Identify MSIDs where no consumption data exists using registration data, apply defaulting rules and publish exception report	MDS	Data Service, Supplier	IF/PUB-013 Notification of Defaulted UTC Settlement Period Consumption Data
3.11.16	Following 3.11.15	Allocate MSIDs to BMUs/ABMUs	MDS		Registration and UTCP Settlement Period Level Consumption Data

[BP19 Step 46]						
3.11.17 [BP13 Step 35]	Following 3.11.16	Calculate losses by MSID for the DDE Run	MDS		Registration, UTCP Settlement Period Level Consumption Data and ISD Data (including LLFs)	
3.11.18 [BP13 Step 36]	Following 3.11.17	Calculate uncorrected consumption data by CCC and BMU for the MDS run for the DDE Run	MDS		Registration, UTCP Settlement Period Level Consumption Data and ISD Data (including LLFs)	
3.11.19	Following 3.11.18	Undertake Validation in accordance with Section 4.1.3	MDS		Uncorrected consumption data by CCC and BMU	
3.11.20 [BP19 Step 100]	Following 3.11.19 if Validation fails	Investigate cause of Validation failure	MDS		Uncorrected consumption data by CCC and BMU	Internal Process
3.11.21 [BP19 Step 101]	Following 3.11.19 if no issue identified	Override the validation and go to 3.11.24	MDS			Internal process
3.11.22	Following 3.11.20 if unresolved	Report Issue to BSCCo	MDS	BSCCo	Details of issue identified	As agreed with BSCCo
3.11.23 [BP19 Step 150]	Following 3.11.22 if re-run required	Carry out action requested by BSCCo and go to 3.11.6 else go to 3.11.24	MDS			Internal Process

3.11.24	Following 3.11.23	Send MDS Reports to Market Participants	MDS	LDSOs and Suppliers	[IR5]ELEX-REP-002 Supplier report for DUoS – aggregated data ELEX-REP-002A Embedded Network report for DUoS – aggregated data ELEX-REP-002B LDSO report for DUoS – aggregated data ELEX-REP-006 Aggregated Uncorrected volumes by CCC to Suppliers ELEX-REP-008 MDS Exception Report to LDSOs ELEX-REP-009 EMRS report for Suppliers	DIP Interface
3.11.25 [BP19 Step 110]	Once data deemed valid	MDS provides the calculated data to VAS	MDS	VAS	ELEX-REP-090 Aggregated Uncorrected volumes by CCC to VAS	Internal Process
3.11.26 [BP13 Step 45]	Following 3.11.25	VAS receives and validates DDE data for the VAR Run. For Validation see Section 4.1.5	VAS			Internal Process
3.11.27	Following 3.11.26	VAS calculates corrected BMU Volumes for DDE	VAS			Internal Process
3.11.28 [MHHS-12-DDE]	Following 3.11.27 and For receipt by 09:00hrs on T-4 WD.	Send BM Unit Supplier Take Energy Volume Data Files.	VAS	SAA	P0182 BM Unit Supplier Take Energy Volume Data File. P0237 BM Unit Disconnected Supplier Take Energy Volume Data File. P0236 BM Unit SVA Gross Demand Data File.	Electronic or other method as agreed.
3.11.29	After 3.11.28	Send acknowledgement confirming receipt of the BM Unit Supplier Take Energy Volume Data File.	SAA	VAS	P0183 Stage 2 NETA Acknowledgement Message.	Electronic or other method as agreed.
3.11.30	After 3.11.29	Send notification that problem with file.	SAA	VAS	P0187 SAA Data Exception Report.	Manual Process.

3.11.31	By 12:30hrs on T-4 WD.	Send relevant NETSO reports.	VAS	NETSO	P0210 TUoS Report	
3.11.32 [MHHS-09-DDE]	By T-3 WD.	Send remaining Timetabled Reconciliation Volume Allocation Run Reports to the LDSO and Suppliers.	VAS	LDSOs, Suppliers	<p>MHHS-REP-D0401 MHHS Aggregated Disconnected DUoS Report</p> <p>MHHS-REP-D0402 MHHS Supplier Half Hourly Demand Disconnection Report</p> <p>MHHS-REP-D0403 MHHS GSP Group Demand Disconnection Totals Report</p> <p>MHHS-REP-D0404 MHHS Supplier BM Unit Demand Disconnection Report</p> <p>ELEX-REP-003 BM Unit Allocated Demand Volumes to Suppliers</p> <p>ELEX-REP-004 Supplier Deemed Take Report</p> <p>ELEX-REP-007 VAS exception report to Suppliers</p> <p>ELEX-REP-D397 MHHS Supplier Half Hourly Demand Report</p> <p>ELEX-REP-D0398 MHHS Supplier Settlement Header Report</p> <p>ELEX-REP-D0399 MHHS GSP Group Consumption Totals Report</p> <p>ELEX-REP- D0400 MHHS Supplier BM Unit Report</p>	Electronic or other method as agreed.

The Disconnection related SVAA reports (i.e. D0401, D0402, D0403 and D0404) are designed to allow more than one Demand Control Event to be reported for a single Settlement Date. In practice the SVAA will aggregate all disconnection related volumes and report them against the first Demand Control Event of the Settlement Date.

3.12 Produce Supplier Market Share Summary Data

REF	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
3.12.1	Two months after end of each calendar quarter.	Generate and send Supplier Quarterly Volume Report containing sum of Supplier volumes and average number of Metering Systems for Settlement Days in the quarter, as determined at First Reconciliation.	SVAA.	BSCCo.	P0275 Supplier Quarterly Volume Report.	Email.
3.12.2	Following receipt of 3.12.1	Generate Supplier Market Share Data in accordance with Section V4.2.10 of the BSC	BSCCo.		P0275 Supplier Quarterly Volume Report. BM Unit Metered Volumes.	Internal process.
		Format and publish data	BSCCo.		Supplier Market Share Data.	BSC Website.

3.13 MDS Calculates Annual Consumption Data

REF	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
3.13.1 [MHHS- BR-AC- 001]	For Scheduled MSID	Select MSID data for Annual Consumption calculation	MDS		UTCP Period Level Consumption Data	
3.13.2 [MHHS- BR-AC- 002]	Following 3.13.1	MDS calculates the Annual Consumption and set the Annual Consumption Quality for an MPAN Statement	MDS		UTCP Period Level Consumption Data	Internal Process
3.13.3	Following 3.13.2	MDS sends calculated Annual Consumption to Market Participants. [IR5]Processing time is at the discretion of the recipient but must be within 24 hours	MDS	Market Participants	IF/PUB-040 Notification of [Calculated] Annual Consumption	DIP Interface

3.14 MDS Receives BMU Mapping Data[IR8]

<u>REF</u>	<u>WHEN</u>	<u>ACTION</u>	<u>FROM</u>	<u>TO</u>	<u>INFORMATION REQUIRED</u>	<u>METHOD</u>
3.14.1 [4]	At any time	Supplier provides Notification of BM Unit Allocation	Supplier	MDS	D0297 Notification of BM Unit Allocation	Electronic or other method as agreed.
3.14.2 4	Following 3.14.1	On receipt of a D0297, MDS must validate the BMU allocation as per the BSC Multiple BM Unit Instruction Processing Specification	MDS			Internal Process
3.14.3	Following 3.14.2 where valid	MDS must registers this mapping and sends a Confirmation of BM Unit Allocation to the Supplier	MDS	Supplier	D0294 Confirmation of BM Unit Allocation	Electronic or other method as agreed.
3.14.4	Following 3.14.2 where invalid	MDS must not register this mapping, and must send a Rejection of BM Unit Allocation to the Supplier on a D0295	MDS	Supplier	D0295 Rejection of BM Unit Allocation	Electronic or other method as agreed.

4. Appendices

4.1 Validation of Incoming Data

The SVAA shall validate all UTC Period Level Consumption data following receipt using the associated Registration Data for each MSID. The detailed validation requirements and Self Describing Error Response Codes are set out in the BSC Central Services Service Description. A high level view of the validation is as follows:

- The data is for the correct Data Service Appointed for the Settlement Date;
- The data has a Measurement Quantity must equal "AI" or "AE";
- The data received is not for a Settlement Date that has already been subject to a MDS Reconciliation Final (RF) Run;
- The data received is for a period greater than or equal to Connection Type Effective From Date;
- The Settlement Period Duration or Settlement Date is correct for the Settlement Date as defined in ISD;
- That the Settlement Period End Date/Time is not invalid for the defined Settlement Period Duration;
- That the Settlement Period End Date/Time is not duplicated with Settlement Period in same message;
- That the Settlement Period End Date/Time does not overlap with a Settlement Period in same message;
- If the Registration Data for the MSID is stated as 'De-Energised' for the Settlement Period the Settlement Period Quality Indicator should indicate it is for actual data retrieved from the Meter;
- If the Registration Data for the MSID indicates it is 'Disconnected' for Settlement Period End Date/Time;
- That the UTC Period Level Consumption must be zero if Estimation Reason Code does indicates zero data has been estimated; and
- That the UTC Period Level Consumption greater than the configurable limit defined for data ingestion.

All validation failures should be reported in a timely manner using the I/F-014/PUB/014 together with the Self Describing Error Code.

4.1.1 LSS post calculation validation [MHHSP-34-LSS] [MHHSP-35-LSS]

The LSS must validate that processing has completed correctly without error prior to the publishing of the LSS data and notifying to MDS. If validation fails an investigation into the cause of failure must be undertaken to correct the validation failure and the LSS calculations must be re-run. If no error is identified the data is assumed to be correct. For each UTC Period the LSS must validate that the Load Shape is within a configurable [x%] of the most recent Load Shape for the same Category and Day Type. If Validation fails it must default to the previous Day Type for that Load Shape category (default flag to be applied for each UTC Period). The defaulted UTC Periods shall be 'D' Flagged for each UTC Period (j).

4.1.2 MDS validate Line Loss Factor Data

This process performs data marshalling of LLFs received from BSCCo. The incoming data will be validated to ensure:

- i. Physical integrity
- ii. The files are received in the correct sequence
- iii. Any data for Settlement Days and times which are already within the system must be a later version than that in the system
- iv. The data has the correct number of Settlement Periods
- v. The data is for the correct LDSO(s)

4.1.3 MDS Flags defaulted data

Where there is an Energised 'E' MSID 'K' in the Registration Data and where 'C' is the Load Shape Category (LSC) associated with the Registration Data for the MPAN and where Settlement Period Consumption (SPC_{KDj}) has not been received from the appointed Data Service:

If Active Import (AI):

$$SPC_{KDj} = LSC_{Dj}$$

If the MPAN is in the Smart Segment the data must be allocated an 'E8' SPQI Flag

If the MPAN is in the Advanced Segment the data must be allocated an 'E12' SPQI Flag

If the MPAN is in the Unmetered Segment the data must be allocated an 'E' SPQI Flag

If Active Export (AE):

$$SPC_{KDj} = 0$$

If the MPAN is in the Smart Segment the data must be allocated an 'ZE1' SPQI Flag

If the MPAN is in the Advanced Segment the data must be allocated an 'EAE1' SPQI Flag

If the MPAN is in the Unmetered Segment the data must be allocated an 'E' SPQI Flag

4.1.4 MDS Sets Annual Consumption Quality Indicator

Where 365 UTC dates of Consumption data is available:

Where a full years' worth of actual UTCP Period Consumption data has been used to calculate the Annual Consumption, the Annual Consumption Quality Indicator should be set to "A".

[IR4]Where a years' worth of data, $\geq 75\%$ and $< 100\%$ of actual UTC Period Consumption data (where Settlement Period Quality Indicator = A, A1, A2, A3, AAE1, AAE2, AAE3, E2 or E6) has been used to calculate the Annual Consumption, the Annual Consumption Quality Indicator should be set to "1".

Where a year's worth of data, $< 75\%$ actual UTC Period Consumption data (where Settlement Period Quality Indicator = A, A1, A2, A3, AAE1, AAE2, AAE3, E2 or E6) has been used to calculate the Annual Consumption the Annual Consumption Quality Indicator should be set to "2".

Where only a year's worth of estimated data (where Settlement Period Quality Indicator \neq A, A1, A2, A3, AAE1, AAE2, AAE3, E2 or E6) has been used to calculate the Annual Consumption the Annual Consumption Quality Indicator should be set to "3".

Where fewer than 365 days of Consumption data is available:

[IR4]For each MPAN 'K' where fewer than 365 days and greater than or equal to 182 days of UTC Period Consumption data is available, the Market-wide Data Service (MDS) will derive the Annual Consumption (ANN_CON_Y) by summing the available consumption for each UTC Period and scale to 365 days the Annual Consumption the Annual Consumption Quality Indicator should be set to '4'.

For each MPAN 'K' where fewer than 182 days of UTC Period Consumption data is available (and where an initial Annual Consumption is to be calculated) the Market-wide Data Service (MDS) will derive the Annual Consumption (ANN_CON_Y) by summing the available consumption for each UTC Period and scale to 365 days the Annual Consumption the Annual Consumption Quality Indicator should be set to '5'.

Where no Consumption data is available or MSID is inactive

Where the Annual Consumption has been derived by using the $LS_ROLL_ANN_TOT_{YC}$, the Annual Consumption Quality Indicator will be set to "D".

[IR4]Where an MSID is no longer active under MHHS the Market-wide Data Service shall not calculate or submit an Annual Consumption on the IF/PUB-040.

4.1.5 MDS Post-calculation Validation Requirements

The MDS must convert the output to Mega Watt hours (MWh) and round to six decimal places.

For each Settlement Period the MDS must validate that processing has completed correctly without error prior to completing the MDS run.

If validation fails an investigation into the cause of failure must be undertaken to correct the validation failure and the MDS calculation must be re-run. If no error is identified the data is assumed to be correct.

4.1.6 MDS investigates data issues

Where the VAS notifies the MDS of data potentially containing an error. The MDS will investigate the data and confirm to the VAS whether the data is correct and can be used in the Volume Allocation Run or whether it is incorrect and should be rejected within 1 hour of the incident being notified.

4.1.7 VAS Validation of the MDS data and producing exception reports

Validation – Stage 1

The VAS must validate the aggregated data provided by the MDS. The incoming data will be validated to ensure:

- a) The data is not missing;
- b) The data has the correct number of Settlement Periods;
- c) The data is for a valid GSP Group(s);
- d) The data contains no duplicated Supplier/ BMU / GSP Group / Consumption Component Class combinations; and
- e) The MDS run data is not null for a GSP Group.

If any of the data fails Stage 1 Validation checks the VAS shall provide an exception report to the MDS.

Validation – Stage 2

The VAS will validate the BM Unit's Period Level Consumption as follows:

For data submitted for use in the II or SF Volume Allocation Run, the comparator data will be the most recently submitted data for the most recent SF Volume Allocation Run for the previous Settlement Day with the same Day Type as defined in ISD. For data submitted for use in the R1 Volume Allocation Run or later, the comparator data will be the data used for the same Settlement Day for the previous Volume Allocation Run.

The following validation checks will be made on the incoming data:

The total consumption volume will be aggregated across all Consumption Component Classes where the Consumption Component Indicator is 'C' across all Settlement Periods. This will be compared to the equivalent total from the comparator data and the difference calculated; and

The total MSID count will be aggregated across all Consumption Component Classes where the Consumption Component Indicator is 'C' across all entries for Settlement Period 1 only. This will be compared to the equivalent total from the comparator data and the difference calculated.

Where the difference between the incoming data and the comparator data for either check breaches a threshold determined by BSCCo, the incoming data will be identified by VAS. VAS will notify the MDS of data potentially containing an error. The MDS will be required to investigate the data and confirm to the VAS whether the data is correct and should be used in the Volume Allocation Run or whether it is incorrect and should be rejected.

If following the validation checks and exception report still no data available from MDS the VAS shall notify BSCCo. BSCCo shall identify the appropriate default data to be used in the calculation. Substituted data must be reported to Market Participants

4.1.8 VAS Validation of the CDCA data and producing exception reports

The VAS must validate the GSP Group Take (GSPGT_{HDj}) accessed from CDCA as follows:

GSP Group Take Data Validation [MHHS-25-VAS]

Validation – Stage 1

The VAS must ensure incoming GSP Group Take data is validated. Therefore, the validation check on the incoming GSP Group Take data should include the following:

- a) The data is from the correct source, i.e. CDCA;
- b) The data has the correct number of Settlement Periods; and
- c) The data is for the correct GSP Group(s).

Validation – Stage 2

For data submitted for use in the II or SF Volume Allocation Run, the comparator data will be the most recently submitted data for the most recent SF Volume Allocation Run for the previous Settlement Day with the same Day Type as defined in ISD. For data submitted for use in the R1 Volume Allocation Run or later, the comparator data will be the data used for the same Settlement Day for the previous Volume Allocation Run.

The following validation checks will be made on the incoming data:

The GSP Group Take for each GSP Group will be compared to the equivalent total from the comparator data and the difference calculated.

If the difference between the incoming data and the comparator data breaches a threshold determined by BSCCo, the incoming data will be identified by VAS. The VAS will notify the CDCA of data potentially containing an error. The CDCA will be required to investigate the data and confirm to the VAS whether the data is correct and should be used in the Volume Allocation Run or whether it is incorrect and should be rejected. The BSC Panel will be asked to direct the appropriate action by either the CDCA or the VAS. Substituted data must be reported to Market Participants.

4.2 VAS Validates Volume Allocation Run Data [MHHS-26-VAS]

[MHHSP-23-VAS] For each Settlement Period the VAS must validate that processing has completed correctly without error prior to the publishing of the VAS data. The VAS will further validate the data calculated in the Volume Allocation Runs during the Volume Allocation Run, as follows:

Validation Stage 1 – GSP Group Correction Factors

The VAS shall validate that the calculated GSP Group Correction Factors (GCF_{IHDj} and GCF_{EHDj}) lie within an acceptable range determined by BSCCo. If any value lies outside this range, the Volume Allocation Run will be aborted and the cause of the breach investigated. If unresolved, VAS will send BSCCo appropriate data for analysis before confirming with BSCCo if the VAR can be completed.

Validation Stage 2 – Validate GSP Group Take and GSP Group Consumption Volumes

The VAS shall validate the aggregated total consumption volume per GSP Group per Settlement Period.

[MHHSP-27-VAS]

The VAS will calculate the difference between the GSP Group Take and the Uncorrected Volume (UV_{HDj}) calculated as the sum of the uncorrected Consumption Component Classes for all BM Units within the GSP Group. If the differences lie outside an acceptable range determined by BSCCo the Volume Allocation Run will be aborted and the cause of the breach investigated. If unresolved the VAS will send BSCCo appropriate data for analysis and the VAR will be completed. BSCCo will analyse any unresolved issues and attempt to get any data issues resolved by the next available Settlement Volume Allocation Run or refer the issue as a Trading Dispute.

4.3 Validate Volume Allocation Run Data

4.3.1 Validate Stage 1 – Half Hourly Metered Volumes for MSIDs and AMSIDs

The SVAA will use the software to validate that:

- the Metering System Half Hourly Metered Data received from the MDS in respect of a Metering System Number:
 - Is for a Metering System Number registered in the SVA Metering System and Asset Metering System Register; and
 - Includes the Supplier appointed to that Metering System Number in SMRS
- the Asset Metering System Half Hourly Metered Data received from a HHDC in respect of an Asset Metering System Number:
 - Is for an Asset Metering System Number registered in the SVA Metering System and Asset Metering System Register; and
 - Was sent by the HHDC appointed to that Asset Metering System Number in the SVA Metering System and Asset Metering System Register.

4.3.2 Validate Stage 2 - Half Hourly MSID and AMSID Data

The SVAA will use the software to validate the disaggregated Half Hourly MSID data from MDS and Half Hourly MSID data from HHDCs. The received data must be split by Supplier and by Consumption Component Class Identifier and by Line Loss Factor Identifier. The incoming data will be validated to ensure:

- i. Physical integrity.
- ii. Any data for Settlement Days and times which are already within the system must be a later version than that in the system.
- iii. The data has the correct number of Settlement Periods.
- iv. The data is for the correct GSP Group(s).
- v. The data is from an expected Advanced Data Service, as recorded in the standing data i.e. a Data Collector who has an appointment to the AMSID(s) notified by the AMVLP.

If not received from an expected HHDC, an error exception entry will be written and the file rejected (until the standing data is amended by the SVAA).

- vi. The file only contains data for the expected Metering System Number(s) or Asset Metering System Number(s), as recorded in the standing data - i.e. only Metering System Numbers for which the SVAA has requested Half Hourly MSID data or Asset Metering System Number(s) to which the HHDC has been registered by the AMVLP. If not then an error exception entry will be written and the file rejected (until the standing data is amended by the SVAA).
- vii. The MDS data contains the full set of expected Metering System Number(s), as recorded in the standing data - i.e. only Metering System Numbers for which the SVAA has requested Half Hourly MSID data.
- viii. The HHDC data only contains data for Asset Metering System Number(s) to which the Advanced Data Service has been appointed and contains data for every Settlement Period in each Settlement Date included in the submission. If not then an error exception entry will be written and the file rejected.
- ix. The file is not a null file.

4.3.3 Validate Delivered Volumes for MSID Pairs and AMSID Pairs

- The SVAA will use the software to validate that a Delivered Volumes file¹¹ received from a VLP or AMVLP: Is from a VLP or AMVLP registered in the SVA Metering System and Asset Metering System Register;

¹¹ A P0282 version 002 'Delivered Volumes' file may contain MSID Pair Delivered Volumes and / or AMSID Pair Delivered Volumes

- Is for MSID Pair(s) and / or AMSID Pair(s) registered in the SVA Metering System and Asset Metering System Register;
- Contains MSID Pair Delivered Volumes for:
 - MSID Pairs not associated with AMSID Pairs; or
 - MSID Pairs associated with AMSID Pairs used for Asset Differencing
- Contains AMSID Pair Delivered Volumes for:
 - MSID Pairs associated with AMSID Pairs used for Asset Metering.