BSC Procedure 702 relating to the Advanced Data Service

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 702, Version 2.0 relating to the Advanced Data Service.

3. This BSC Procedure is effective from 06 November 2025.

4. This BSC Procedure has been approved by the BSC Panel or its relevant delegated Panel Committee(s).

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1. Introduction

1.1 Purpose and Scope of the Procedure

This BSC Procedure defines the processes that the Advanced Data Service (ADS) shall use to carry out the work for data collection (including data retrieval, estimation and data processing) for SVA Metering Systems with Advanced Metering Equipment (referred to in the rest of this document as "Advanced Metering Systems") operating within the Supplier Volume Allocation (SVA) arrangements.

It describes the key interfaces and timetables for sending appropriate Advanced Metering System (MS) data values to BSC Central Systems on behalf of the relevant Supplier registered in Supplier Meter Registration Service (SMRS).

HH Meter readings shall be derived from HH MS with each MS being assigned a unique Metering System Identifier (MSID).

The purpose of this BSC Procedure is to ensure that the data retrieval, estimation and processing work of the ADS is carried out in an orderly and timely manner.

This BSC Procedure focuses on the interfaces between the Supplier, ADS and other agencies seen from the perspective of the ADS.

This BSC Procedure should also be used in conjunction with BSCP68 for the Transfer of Registration of Metering Systems between SMRS and CMRS and vice versa.

This BSC Procedure contains guidance on the completion of a 'Complex Site Supplementary Information Form' for the D0268 'Half Hourly Meter Technical Details' data flow where the HH MS is deemed to be at a Complex Site.

1.2 Main Users of Procedure and their Responsibilities

This BSC Procedure should be used by Suppliers and their agent(s) (including SVA Meter Operator Agents (SVA MOAs) and ADSs) and by each Licensed Distribution System Operator (LDSO). For SVA MOA obligations this BSC Procedure should be used in conjunction with the Retail Energy Code (REC) Metering Operations Schedule.

The ADS shall use Qualified systems and processes so approved in accordance with BSCP537 in carrying out the collection of data from Advanced Metering Systems.

The ADS shall ensure that it is Qualified as a Party Agent in accordance with BSCP537 for the purposes of collecting data for each Meter type for which it is responsible.

The ADS's system shall be set in accordance with Co-ordinated Universal Time (UTC) at least once every day.

On a change of ADS to a new ADS, the old ADS shall retain responsibility for data collected for all Settlement Days that it was appointed by the Supplier in SMRS.

The ADS shall send UTC Period Consumption data to Settlements via IF/PUB-021 in kWh to Wh precision and in UTC.

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Where a new ADS has not received data in sufficient time to enable it to fulfil its obligations, it shall alert the registered Supplier or appointed SVA MOA that the data that has not been received and request that it is supplied forthwith.

The ADS shall prepare and maintain plans that will enable the Supplier's obligations under the Code to continue to be met notwithstanding the expiry or termination of the ADS's appointment as the ADS. The plans, which the ADS undertakes to implement on any such expiry or termination, will include the transfer of data and other information to an incoming ADS appointed by the Supplier in accordance with sections 3.2.1 and 3.2.2 of this BSCP.

On expiry or termination of the ADS's appointment as ADS in respect of a SVA MS the outgoing ADS shall continue to retain data and support the Trading Disputes process for all Settlement Days that it was appointed by the Associated Supplier in SMRS.

The ADS shall maintain and use records (as updated from time to time) of the Meter Technical Details (MTD), including energisation status received from the SVA MOA and SMRS for each SVA MS and communication system for which it is responsible, together with access and site location details in respect of all such MSs.

The ADS shall have the capability to collect and record Meter Period Value data for Reactive Power (with associated alarms), cumulative readings and maximum demand readings by Meter register that are required for the LDSO, and shall use this capability to collect (and report to the Supplier and LDSO) Meter Period Value data for Reactive Power for those Current Transformer SVA MS for which it is responsible and for which the MTDs indicate that the Meter is configured to record such data.

The ADS's system shall be capable of receiving, processing and transmitting all required data accurately and within the timescales agreed by the Panel, Suppliers and LDSOs, and shall be capable of supporting metered data (processed and unprocessed) and associated standing data for all SVA MSIDs for which the ADS is appointed (with allowance for growth) for the retention periods specified.

The ADS must only provide Suppliers with data relating to Advanced MSs for which it has contracted with that Supplier, and must ensure that LDSOs are not provided with data relating to Advanced MSs registered on the distribution networks of other LDSOs.

Where a common Outstation is used for Import and/or Export Active Energy for more than one MSID, the Supplier(s) shall ensure that the same ADS is appointed for all MSIDs involved. These obligations shall be fulfilled by mutual agreement between the Suppliers involved, except in the case of an Import Supplier and an Export Supplier where the obligation rests with the Export Supplier to appoint the same agent(s) as the Import Supplier.

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1.3 Use of the Procedure

The remaining sections in this document are:

Section 2 - Requirements and Responsibilities: This section sets out the core requirements for the Advanced Data Service.

Section 3 - Interface and Timetable Information: this section defines in more detail the requirements of each business process. Within it, there may be references to 'IF', 'PUB' (Data Integration Platform) 'D' (Energy Market Data Specification) and 'P' (BSC SVA Data Catalogue) data flows in the 'Information Required' column.

Section 4 - Appendices: this section contains supporting information.

1.4 Balancing and Settlement Code Provision

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

The BSC requirements of the ADS are set out in BSC Section J 'Party Agents & Qualification Under the Code' and Section S 'Supplier Volume Allocation'. An overview of these requirements is as follows:

The functions of the ADS are defined in BSC Section J as follows: to retrieve, validate and process metered consumption data from Advanced Metering Systems in accordance with the provisions of Section S.

ADSs are subject to the Qualification Requirements of Section J.

The principal functions of the ADS are defined Section S2.3A.1 as:

(a) to collect metered data;

(b) to validate data and provide reports;

(c) to maintain relevant standing data;

(d) to undertake Meter Advance Reconciliation to reconcile UTC Period Consumption values with meter advances;

(e) to received Load Shapes from the Load Shaping Service and estimate UTC Period Level Consumption for Metering Systems where this data is deemed to be erroneous, missing or unavailable from the Metering System;

(f) to provide validated half hourly data for each SVA Metering System to BSC Central Systems; and

(g) to provide validated UTC Period Level Consumption and SVA Metering System reports to the relevant Supplier and Licensed Distribution System Operator.

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1.5 Associated BSC Procedures

BSCP01	Overview of Trading Arrangements
BSCP11	Trading Disputes
BSCP32	Metering Dispensations
BSCP68	Transfer of Registration of Metering Systems between CMRS and SMRS
BSCP537	Qualification Process for SVA Parties, SVA Party Agents and CVA MOAs
BSCP550	Shared SVA Metering Arrangement of Half Hourly Import and Export Active Energy
BSCP703	BSC Central Services for MHHS Metering Systems
BSCP705	Licensed Distribution for MHHS Metering Systems
BSCP706	Supplier Meter Registration Service for MHHS Metering Systems
BSCP707	Changes to Industry Standing Data
BSCP709	Supplier Requirements for MHHS Metering Systems

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1.6 Acronyms and Definitions

1.6.1 Acronyms

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

ADS	Advanced Data Service
BSC	Balancing and Settlement Code
BSCP	BSC Procedure
CMRS	Central Meter Registration Service
CoSeg	Change of Segment
Complex Site	See Appendix 4.8
CoP	Code of Practice
CoS	Change of Supplier
CT	Current Transformer
DS	Data Service
DCE	Demand Control Event
DIP	Data Integration Platform
DTN	Data Transfer Network
EMDS	Energy Market Data Specification
HH	Half Hourly
HHU	Hand Held Unit
Id	Identifier
ISD	Industry Standing Data
kVArh	Kilovoltamperes reactive hour
kWh	Kilowatt hour
LDSO	Licensed Distribution System Operator
LLF	Line Loss Factor
MAR	Meter Advance Reconciliation
MDS	Market-wide Data Service
MS	Metering System
MSID	Metering System Identifier
MTD	Meter Technical Details
NETSO	National Electricity Transmission System Operator as the holder of the Transmission Licence and any reference to "NETSO", "NGESO", "National Grid Company" or "NGC" in the Code or any Subsidiary Document shall have the same meaning.
PSR	Priority Services Register
REC	Retail Energy Code
Ref	Reference

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SFIC	Systems Fault Information Centre
SMRS	Supplier Meter Registration System
SSD	Supply Start Date
SVAA	Supplier Volume Allocation Agent
SVA MOA	SVA Meter Operator Agent
UTC	Co-ordinated Universal Time
VT	Voltage Transformer
WD	Working Day
Wh	Watt hour

1.6.2 Definitions

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

'Active Power MSID' is an MSID with a Measurement Quantity ID equal to Active Import (AI) or Active Export (AE).

'Manually Intervened (with regard to proving tests)' is defined under Appendix 4.6 'Proving of Advanced Metering Systems'.

'Complex Site' is defined under Appendix 4.9 'Guide to Complex Sites'.

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2 Requirements and Responsibilities

2.1 General requirements

The ADS must be Qualified to operate as a Data Service in line with the Qualification Process and this and associated BSCPs.

The ADS must, where providing a Shared SVA Metering scheme service, perform the ADS role as outlined in BSCP 550 for allocating the relevant proportion of active energy for the Shared SVA Metering System.

The ADS must obtain Industry Standing Data (ISD) update notifications via the IF/PUB-047 and if required take necessary steps to obtain refreshed ISD data, maintain their records accordingly and reference/utilise ISD as appropriate as part of the service delivery.

The ADS must process data and share outputs with other parties in line with the timescales set out in Section 3 of this BSCP.

The ADS must undergo Onboarding to realise operational access to the DIP.

The ADS, when transacting via the DIP, must implement monitoring to identify where expected responses are not received within standard DIP SLAs, so that the appropriate investigative/resolution activity can be undertaken.

The ADS must have familiarity with and actively monitor any DIP tools for tracking messages, so that the necessary investigative action can be taken when required.

The ADS must provide and receive reports in line with agreed reporting requirements.

The ADS, where required, must be able to identify (using the IF/PUB-036 and IF/PUB-020) and appropriately manage Related MSIDs in accordance with in the relevant BSCP.

The ADS must notify the SVA MOA of any faulty equipment identified via the D0001 as set out in this BSCP.

The ADS must manage proving test processes in line with Section 3.5.

The ADS must comply with the protocol approval process outlined in BSCP601.

For processes that involve messages sent over the DTN, the ADS shall ensure that it has the means to transmit and receive those messages.

The ADS must ensure that its systems and processes operate in such a way as to support the most up to date and accurate data being available to Settlements in advance of the deadline for each formal settlement run as outlined in BSCP703.

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The ADS should implement data validation steps and techniques that they feel are appropriate to ensure the most accurate and efficient delivery of the service.

The ADS must receive Notification of Customer Details from the Supplier via the D0302 and maintain records accordingly.

The ADS must, on receipt of updated customer details, delete the previously held customer details.

Where required, the ADS must obtain Priority Service Details from the Supplier via D0225 and maintain internal records accordingly. The ADS, on receipt of a de-appointment notification becoming effective, must delete any previously held PSR and/or customer details.

The ADS can choose to take advantage of the Electricity Enquiry Service (EES) to obtain the current data associated with an MSID in cases where a query arises around the accuracy of data held.

2.2 Requirements related to Appointments

Where required, the ADS must obtain Notification of Service Appointment & Supporting Info updates, confirming an SVA MOA appointment and providing MSID details via the IF/PUB-036 and maintain records accordingly.

The ADS must receive MTDs via the D0268 on DTN, maintain records and investigate discrepancies with data received from SMRS (PUB-036 via the DIP). These details could be received from a prospective incoming SVA MOA that was not the MOA appointed when the ADS appointment commences. The ADS may wish to consider how to process these MTDs, i.e. they provide early view of MTDs at site; however further revised MTDs could be received from a second subsequent SVA MOA.

The ADS must investigate with the SVA MOA where D0268s are not received for Advanced Meters in expected timescales, or where they appear to be incorrect.

The ADS must obtain SMRS Request for Service Appointment via the IF/PUB-033 on the DIP.

The ADS must confirm that it is certified to service the connection type and able to contractually deliver the required service based on the information contained in the proposed appointment request and publish a response (acceptance or rejection) via the IF/PUB-034 DIP interface. Where the ADS rejects an appointment request, a rejection reason should be provided in the response. The ADS should be aware that following the initial acceptance the appointment remains "prospective" and there is a possibility that it may need to be lapsed.

The ADS must, for any proposed appointments it rejects, delete any metering details received relating to that appointment, as soon as practicable following the rejection.

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The ADS must, where required, make arrangements for notifying any third parties (e.g. Meter Reading Service) via the agreed mechanism.

The ADS must be able to process requests to vary the conditions of an existing appointment received via the IF/PUB-033, e.g. change of contract code. These should be validated and an outcome returned using the IF/PUB-034. In the case of rejection, a rejection reason should be provided in the response and the existing appointment will continue unamended.

The ADS must obtain Appointment Status Notification updates, acknowledging the Prospective ADS accepted/rejected appointments, via the IF/PUB-035 on the DIP and maintain records accordingly.

The ADS must obtain Appointment Status Notifications, with Data Service lapsed appointments, via the IF/PUB-035 and update records accordingly to ensure that the appointment does not become effective. The ADS must delete MTDs received for all lapsed appointments as soon as operationally practicable following receipt of the lapsed notification.

The ADS must obtain Notification of Appointment & Supporting Info updates, confirming a Data Service appointment, via the IF/PUB-036 and update records with MSID and MTDs. For the avoidance of doubt this is the message that indicates that an appointment will/has taken effect.

The ADS must obtain Notifications of Service De-Appointment via the IF/PUB-037 on the DIP and maintain records accordingly.

The ADS must, where required, make arrangements for terminating any third parties (e.g. Meter Reading Service) via the agreed mechanism.

The ADS, on de-appointment, shall make all reasonable attempts to obtain actual consumption history up to the point of de-appointment for Advanced Meters, for submission to Settlements.

The ADS must obtain Export MSID appointments via the IF-PUB-036 and update records with registration and metering details. The ADS should note this message will be triggered automatically when a change of Data Service is completed successfully for the Associated Import MSID (i.e. acceptance of the Export MSID is implicit in accepting the appointment to the Import MSID).

The ADS must obtain Export MSID de-appointments via the IF/PUB-037 on the DIP and maintain records accordingly. ADS should note this message will be automatically triggered when a change of ADS has successfully completed for the Associated Import MSID.

The ADS must obtain Related MSID appointments via the IF/PUB-036 on the DIP and update records with registration and metering details. ADS should note this message will be automatically triggered when a change of Data Service has successfully completed for the Primary Related MSID.

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The ADS must obtain Related MSID de-appointments via the IF/PUB-037 on the DIP and maintain records accordingly. The ADS should note that this message will be automatically triggered when a change of Data Service has successfully completed for the Primary Related MSID.

2.3 Requirements for the transfer of UTC Period Level Data

The incoming ADS must publish a Consumption History Replay request to the DIP via the IF/PUB-015.

The incoming ADS must obtain a replay of consumption history via the IF/PUB-016 on the DIP and maintain records of the latest UTC period data available, utilising the provided Sender timestamps as required.
The ADS must, following successful appointment, attempt to collect opening UTC period level data remotely from an Advanced Meter.

The ADS, where remote access is not possible, must arrange for on-site download of the opening UTC period level data from an Advanced Meter.

The ADS must, following notification of de-appointment, attempt to collect closing UTC Period Consumption data remotely from an Advanced Meter and use for final data processing.

The ADS must, where remote or local access is not possible, estimate UTC Period Consumption for Advanced Meters in line with Appendix 4.

2.4 Requirements for maintaining the Customer Direct Contract Advisory

The ADS must publish a Customer Direct Contract Advisory via IF/PUB-038 for each MSID that forms part of that contract, including the contract end date, where it is appointed to that Metering System.

At any time while the ADS is appointed to a Metering System, the ADS must register Customer Direct Contract with the SMRS (if applicable) via IF/PUB-038 within 2 working days of the Direct Contract being agreed (for evergreen contracts the flag and end date should be updated at least every three years). Customer Direct Contract data is then published to ADS and Supplier via IF/PUB-039 within 1 hour.

The ADS must, for accepted responses, maintain records to show which MSIDs have been flagged as a customer direct contract.

The ADS must continue to manually coordinate the appointment of MSIDs within the contract with other industry participants.

The ADS must have the ability to cancel or change the end date of a customer direct contract using the IF/PUB-038 on the DIP.

The ADS must investigate any rejections of customer direct contracts and re-submit as appropriate.

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The ADS must, in the case of rejection for an existing contract, liaise with their customer and other participants to determine why it appears overlapping contracts might exist.

2.5 Requirements for Collection of UTC Period Level Consumption

The ADS must collect settlement period data from an Advanced Meter, in line with the notified Consent Granularity, either remotely or on site for all appointed MSIDs (It is possible that consumption data is recorded either against local or UTC time. This should be taken into account when preparing data for submission to Settlement, in case any time adjustment is required).

The ADS must, where available, capture and store active and reactive power data for Register readings, Period Level Consumption Data and Cumulative data, alongside any other measurements, flags or alerts from the meter, and utilise for data processing as required.

The ADS must process and publish all data in line with timescales set out in this BSCP.

The ADS must have the capability to schedule and manage site visits to Advanced Meter sites to obtain an on-site read.

The ADS must be able to receive and process Supplier provided register read(s) for Traditional and Advanced Meters (where appropriate), however sourced, via the D0010.

The ADS must be able to receive and process a Supplier provided cumulative read, however sourced, via the IF/PUB-041.

The ADS must provide a notification to the Supplier of a failure to obtain a meter reading arising from a site visit via the D0004.

The ADS must obtain Supplier Advisory Notifications on to Data Service messages from the Supplier via the IF/PUB-024.

The ADS must update their systems with any details from the Supplier notification of vacant sites, no communications, remote disconnection and remote reconnection.

The ADS shall expire a notification (and the effect of that notification) in line with the data contained within the original notification or any revised expiry date received following the original message via the IF/PUB-024.

The ADS must prepare, validate and estimate UTC Period Consumption Data in line with Appendix 4.

2.6 Requirements for Processing of UTC Period Consumption

ADS must store and use historic data to enable validation of period reads in line with the Validation & Estimation Methods set out in Appendix 4.

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ADS must obtain Load Shape Data and utilise data as described in Appendix 4. Load shaping data will be available via the IF/PUB-022 and IF/PUB-023 on the DIP or as static data published to a publicly accessible URI.

ADS must, in circumstances when a new Load Shape is available, reprocess previously submitted data in accordance with Appendix 4.

The ADS must, where required for estimating, identify the load shapes associated with each MSID from the Load Shape Category table in ISD. Data Service should maintain a record of any load shapes used.

The ADS must validate UTC Period Consumption Data and estimate any missing/ invalid periods using Appendix 4.

The ADS must re-estimate consumption for previously estimated UTC Periods in line with Appendix 4 where further data becomes available to support a more accurate estimate being submitted.

ADS must validate the full set of UTC Period Level Consumption Data for each submission, including estimates, in line with Appendix 4.

The ADS must publish/republish validated UTC Period Level Consumption Data (kWh to 3 decimal places) using the IF/PUB-021 DIP interface for appointed MSIDs for each day of their appointment.

ADS must publish/republish validated UTC Period Level Reactive Data (kVArh to 3 decimal places) on the DIP using the IF/PUB-021, alongside UTC Period Level Consumption Data, for all appointed MSIDs.

The ADS must republish updated validated UTC Period Level Consumption Data (kWh to 3 decimal places) as actual data, improved estimates or revised input data become available. ADS must re-estimate if new consumption data, meter reads or, as appropriate when Meter Technical Details are received.

The ADS must be able to obtain UTC Settlement Period Consumption Data Rejections from the MDS via the IF/PUB-014, investigate the validation failures and resubmit as appropriate.

The ADS must be able to obtain Notification of Defaulted UTC Settlement Period Consumption Data from the MDS via the IF/PUB-013, and maintain records accordingly. The ADS can choose to use the characteristics data to derive and validate the Load Shape used for the default consumption values. In the case of ADS it should be noted that the GSP Group ID will not be required to determine the load shape.

The ADS must support investigations and resolution of issues highlighted by the MDS and feedback from other participants.

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The ADS must validate meter readings received from site visits or Customer Own Reads provided by the Supplier in line with Appendix 4.

The ADS must publish, where available for Advanced Meters, cumulative meter reads to the Supplier and LDSO via the IF/PUB-041 interface.

The ADS must send register meter readings to the Supplier and LDSO via the D0010. Where the readings, pass validation and are used by the Data Service they should have the Meter Reading Flag (J0045) set to 'T' or where they fail validation set to 'F' in the D0010 flow.

The ADS must, as a result of a Change of Supplier de-appointment, split UTC Period Consumption data on the day of their de-appointment during British Summer Time into two separate IF/PUB-021 messages. The UTC Period Consumption Data for the settlement periods prior to the de-appointment DateTime should be shared with the Outgoing Supplier. Consumption Data between the de-appointment date/time and the end of the UTC Settlement day should be shared with the Incoming Supplier as notified within the IF/PUB-037 de-appointment message.

The ADS must, as a result of a Change of Supplier de-appointment, split Reactive Data on the Day of their de-appointment during British Summer Time into two separate IF/PUB-021 messages. The Reactive Data for the settlement periods prior to the de-appointment DateTime should be shared with the Outgoing Supplier. Reactive Data between the de-appointment date/time and the end of the UTC Settlement day should be shared with the Incoming Supplier as notified within the IF/PUB-037 de-appointment message.

2.7 Requirements for De-appointments and Registration Deactivation

The ADS must obtain and process Notification of Service De-Appointment, with a De-appointment reason of 'dereg', via the IF/PUB-037 and maintain records accordingly.

The ADS must cease submission to settlement for any settlement dates after the effective date of its de-appointment. For clarity, the Data Service retains responsibility for submitting data for the dates that they were appointed for, even after they have been de-appointed.

2.8 Requirements for Change of Energisation Status

The ADS must obtain Notification of Change of Energisation Status updates via the IF/PUB-036 and maintain records accordingly.

The ADS must escalate to the Supplier where it is identified that consumption is occurring on a MSID that is de-energised. However, this should not prevent its submission into Settlements.

The ADS must, where valid register reads are received from the SVA MOA via the IF/PUB-041, store the reads for use in estimation process where better data is not available. Where no reading(s) are provided alongside a change in Energisation

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Status, the ADS should, after 5 working days, generate estimated reading(s) for the Date of the Change of Energisation Status (reflecting the nature of the Energisation Change) using the appropriate method in Appendix 4.

The ADS must send change of energisation register meter readings to the Supplier and LDSO, via the D0010.

The ADS must utilise change of energisation read(s) for settlement, only where a complete set of validated data is not available from the meter.

The ADS must re-process any UTC Period Level Consumption Data previously submitted to Settlements, where advised of an energisation status change and no actual consumption has been recorded, particularly where this is back-dated.

2.9 Requirements for Changes to Metering Equipment

The ADS must obtain and process updates to meters and meter technical details via the IF/PUB-036 on the DIP or the DTN flow D0268.

The ADS must obtain and process cumulative meter reads received via the IF/PUB-041 and store for use in estimation processes where no better data is available.

The ADS must, where Meter Technical Details are received from the Advanced MOA via the D0268, maintain records accordingly and investigate any discrepancies with data received from the SMRS.

In the case where Related or Associated Import/Export Metering Systems exist, the ADS should expect to receive Meter Technical Details for all the MSIDs in the Related MSID or Import/Export group.

The ADS must, where register reads are received via the IF/PUB-041, store the reads for use in the estimation processes where no better data is available. Where no reading(s) are provided alongside the change in metering, the ADS should, after 5 working days, generate an estimated reading(s) for the Date of the Removal of the previous meter(s) using the appropriate method in Appendix 4. Any newly installed meter should be assumed to have been installed with an index position of zero.

The ADS must utilise change of metering read(s) data for settlement, only where a complete set of validated data is not available from the meter.

The ADS must evaluate if re-estimation is required for UTC Period Level Consumption previously submitted to Settlements, where advised of any change of metering and no actual consumption has been recorded, particularly where this is backdated.

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2.10 Requirements for Changes to Registration (SMRS) Data

The ADS must receive notifications, for changes to Registration Data Items including Meter Point Location, Domestic Premises Indicator, Energy Direction, Metered Status, DCC enrolment status, via IF/PUB-018 and process accordingly.

The ADS must obtain Domestic Premises Indicator updates via the IF/PUB-018, maintain records accordingly and consider impacts to service delivery as required.

The ADS must obtain Consent Granularity Indicator updates via the IF/PUB-026, maintain records accordingly and assess if a change in recovery pattern is required.

The ADS must commence collection of settlement period consumption data (import) in line with the updated customer consent, from the date that the Consent Granularity Indicator update notification is received, even if the date the change in consent was captured is in the past. There is no requirement to alter data that has been previously captured using the previously consented recovery pattern.

The ADS must be able to obtain Related MSID updates via the IF/PUB-036 and maintain records accordingly.

The ADS must be able to obtain Connection Type updates via the IF/PUB-043 and maintain records accordingly.

The ADS must be able to obtain Import/Export Association updates via the IF/PUB-020 and maintain records accordingly.

2.11 Requirements for Change of Connection Type or Change of Market Segment

The ADS must be able to obtain a Change of Segment Meter Exchange confirmation with MTDs and readings via the IF/PUB-006, even when from a 3rd party SVA MOA (i.e. not the currently appointed SVA MOA.

The ADS must be able to obtain Change of Connection Type notifications via the IF/PUB-043 and maintain records accordingly.

The ADS must obtain Invalid Market Segment Advisory notifications, sent from SMRS over the DIP, via the IF/PUB-045.

2.12 Requirements for processing a Consumption Amendment

The ADS must obtain Override Reads, sent by the Supplier on the DIP, via the IF/PUB-041 and maintain records accordingly.

The ADS must, under all circumstances, use Override Reads to recalculate any pre-RF consumption and re-issue consumption data as required.

The ADS must obtain Consumption Amendment Requests, sent by the Supplier on the DIP and maintain records accordingly

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The ADS must validate that they were responsible for the Metering System for the period of Consumption Amendment requested

The ADS must calculate the consumption and reactive data, where required, for each UTC Period impacted by the Consumption Amendment Request using the relevant Method Statement.

The ADS must validate the UTC period Consumption Amendment data in line with the relevant Method Statement

The ADS must publish a Consumption Amendment rejection on the DIP where any validation is failed, with the appropriate rejection reason.

The ADS must publish validated UTC Period Level Consumption and Reactive Data (if applicable) for the Consumption Amendment on the DIP

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3 Interface and Timetable Information

3.1 Industry Standing Data Activities

3.1.1 ADS accesses Industry Standing Data

REF	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
3.1.1.1	On the scheduled ISD Publish Date	ADS Receives notification of ISD Update on Publish or Re-publish	ISD	ADS	IF/PUB-047 Notification of the Publication of a Downloadable Asset	DIP Interface
3.1.1.2	Following 3.1.1.1	ADS Accesses ISD data using Distribution Delivery URI	ADS	ISD	Industry Standing Data	Distribution Delivery URI
3.1.1.3	Following 3.1.1.2	ADS Validates and Stores ISD Data	ADS		Internal Process	
3.1.1.4	If data not readable and/or incomplete	Send notification and await receipt of ISD data flows.	ADS	ISDM	P0035 Invalid Data	Electronic or other method, as agreed
3.1.1.5	Following 3.1.1.3	Ensure all ISD affecting the accuracy of Settlement is accurately captured	ADS			Internal Process
3.1.1.6	After re-publish of ISD if invalid	ADS Receives notification of ISD Update – return to step 3.1.1.1	ISD	ADS	IF/PUB-047 Notification of the Publication of a Downloadable Asset	DIP Interface

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3.2 Registration Activities

3.2.1 Change of Appointed ADS (with and without associated Change of Supplier)

REF.	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
3.2.1.1	Following receipt and validation of Initial Appointment Request	ADS receives initial Appointment Request	SMRS	New ADS	IF/PUB-033 SMRS Request for Supplier Agent Appointment	DIP Interface
3.2.1.2	Within 1 hour following receipt of Initial Appointment Request	Provide Response to Appointment Request. If accepted, proceed to 3.2.1.4. Otherwise proceed to 3.2.1.3.	New ADS	SMRS	IF/PUB-034 Supplier Agent Appointment Request Response to SMRS	DIP Interface
3.2.1.3	Within 1 hour of receipt of the notification in 3.2.1.2 where Appointment is rejected	Reject Appointment	New ADS	SMRS	IF/PUB-034 Supplier Agent Appointment Request Response to SMRS	DIP Interface
3.2.1.4	Within 1 hour of receipt of the notification in 3.2.1.2 where Appointment is accepted	Accept Appointment	New ADS	SMRS	IF/PUB-034 Supplier Agent Appointment Request Response to SMRS	DIP Interface
3.2.1.5	Following 3.2.1.4	Manage Proposed Appointment Outcome Response. If outcome is lapsed, delete associated data	SMRS	New ADS Supplier SVA MOA	IF/PUB-035 SMRS Appointment Status Notification	DIP Interface

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REF.	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
3.2.1.6	For the prospective Appointment	ADS Notified Pending Appointment as Effective	SMRS	New ADS Supplier LDSO SVA MOA	IF/PUB-036 SMRS Notification of Supplier Agent Appointment & Supporting Info	DIP Interface
3.2.1.7	Following 3.2.1.6	Old ADS Receives De-appointment from old Supplier	SMRS	Old ADS	IF/PUB-037SMRS Notification of Supplier Agent De-Appointment	DIP Interface
3.2.1.8	If Associated Export MSID or Secondary Related MSID	Old ADS receives Associated Export or Secondary Related MSID de-appointments and maintain records accordingly. This message will be automatically triggered when a change of Data Service has successfully completed for the Associated Import MSID.	SMRS SMRS	Old ADS New ADS Supplier LDSO SVA MOA	IF/PUB-037 SMRS Notification of Supplier Agent De-Appointment IF/PUB-036 SMRS Notification of Supplier Agent Appointment & Supporting Info	DIP Interface
3.2.1.9	Following 3.2.1.5 in accordance with the REC	Send Meter Technical Details	SVA MOA	New ADS	D0268 Advanced Meter Technical Details If site is complex, send Complex Site Supplementary Information Form. Refer to Appendix 4.9 Guide to Complex Sites.	Electronic or other agreed method
3.2.1.10		Transfer ‘backstop’ estimated reading information as required	Old ADS	New ADS	As agreed	Electronic or other agreed method
3.2.1.11	Following 3.2.1.10	Initiate Data Collection Processes (as set out in 3.4)	New ADS			

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3.2.2 New SVA Metering System with appointment of ADS

REF.	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
3.2.2.1	Following validation by SMRS of Initial Appointment Request from Supplier	ADS receives initial Appointment Request	SMRS	New ADS	IF/PUB-033 SMRS Request for Supplier Agent Appointment	DIP Interface
3.2.2.2	Within 1 hour following receipt of Initial Appointment Request	Provide Response to Appointment Request. If accepted, proceed to 3.2.2.4. Otherwise proceed to 3.2.2.3.	New ADS	SMRS	IF/PUB-034 Supplier Agent Appointment Request Response to SMRS	DIP Interface
3.2.2.3	Within 1 hour of receipt of the notification in 3.2.2.2 where Appointment is rejected	Reject Appointment	New ADS	SMRS	IF/PUB-034 Supplier Agent Appointment Request Response to SMRS	DIP Interface
3.2.2.4	Within 1 hour of receipt of the notification in 3.2.2.2 where Appointment is accepted	Accept Appointment	New ADS	SMRS	IF/PUB-034 Supplier Agent Appointment Request Response to SMRS	DIP Interface

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REF.	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
3.2.2.5	Following 3.2.2.4	Manage ADS Proposed Appointment Outcome Response. If outcome is lapsed cancel associated appointment.	SMRS	New ADS Supplier SVA MOA	IF/PUB-035 SMRS Appointment Status Notification	DIP Interface
3.2.2.6	For a prospective Appointment	New ADS Notified Pending Appointment as Effective	SMRS	New ADS Supplier LDSO SVA MOA	IF/PUB-036 SMRS Notification of Supplier Agent Appointment & Supporting Info	DIP Interface
3.2.2.7	Following 3.2.2.6 in accordance with the REC	Send Meter Technical Details	SVA MOA	New ADS	D0268 Advanced Meter Technical Details If site is complex, send Complex Site Supplementary Information Form. Refer to Appendix 4.9 Guide to Complex Sites.	Electronic or other agreed method
3.2.2.8	Following 3.2.2.7	Initiate Data Collection Processes (as set out in 3.4)	New ADS			

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3.2.3 Notification to ADS following a Change of SVA MOA

REF	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
3.2.3.1	Following receipt and validation of Initial Appointment Request	Notify ADS of Change of SVA MOA and Id of new SVA MOA	SMRS	New ADS Supplier LDSO SVA MOA	IF/PUB-036 SMRS Notification of Supplier Agent Appointment & Supporting Info	DIP Interface
3.2.3.2	Following 3.2.3.1 in accordance with the REC	Send MTD to ADS	New SVA MOA	New ADS	D0268 Half Hourly Meter Technical Details. If site is complex, send Complex Site Supplementary Information Form. Refer to Appendix 4.9 Guide to Complex Sites.	Electronic or other method, as agreed
3.2.3.3	In accordance with timescales in Appendix 4.6	Prove MS in accordance with the rules defined in Appendix 4.6	New SVA MOA	New ADS	Refer to Appendix 4.6	Electronic or other method, as agreed

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3.2.4 De-appointment of ADS following Disconnection and Registration Deactivation of a SVA Metering System

REF.	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
3.2.4.1		ADS receives de-appointment associated with Disconnection of an MSID.	SMRS	ADS	IF/PUB-037SMRS Notification of Supplier Agent De-Appointment	DIP Interface
3.2.4.2	If Associated Export MSID or Secondary Related MSID	ADS receives Associated Export MSID or Secondary Related MSID de-appointments associated with Disconnection of an MSID and maintains records accordingly. This message will be automatically triggered when a change of Data Service has successfully completed for the Associated Import or Primary Related MSID.	SMRS	ADS (where appointed to the Associated Export MSID or Secondary Related MSID)	IF/PUB-037 SMRS Notification of Supplier Agent De-Appointment	DIP Interface

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3.3 Metering Activities

3.3.1 Notification of Change of Energisation Status for an SVA Metering System

REF.	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
3.3.1.1		ADS receives notification of Change of Energisation Status	SMRS	ADS	IF/PUB-008 SMRS Notification of Change of Energisation Status	DIP Interface
3.3.1.2	If energised	Start Data Collection Activities see 3.4	ADS			Internal Process.
3.3.1.3	If de-energised	ADS applies the relevant checks for zero consumption, estimates accordingly where actual UTC Period Consumption data cannot be obtained, and submits as per 3.4.	ADS		Internal process in accordance with Appendix 4	Electronic or other agreed method

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3.3.2 Notification of Reconfigured or Replaced SVA Metering System

REF	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
3.3.2.1	Following replacement / reconfiguration of a MS in accordance with the REC	Send initial Meter register reading for replacement MS / new configuration Send MTD	SVA MOA	Supplier ADS LDSO ADS	D0010 Meter Readings D0268 Half Hourly Meter Technical Details If site is complex, send Complex Site Supplementary Information Form. Refer to Appendix 4.9 Guide to Complex Sites.	Electronic or other method, as agreed
3.3.2.2	After planned date for replacement / reconfiguration of MS	Collect HH Metered Data for replacement MS / new configuration	ADS		Refer to Section 3.4.1	Internal Process
3.3.2.3	In accordance with timescales in Appendix 4.6	Prove MS	SVA MOA	ADS	Refer to Appendix 4.6	Electronic or other method, as agreed

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3.3.3 Notification following Change of Feeder Status – Energise Feeder

REF	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
3.3.3.1	Following change of Feeder Status in accordance with the REC	If requested, send Meter register reading	SVA MOA	ADS Supplier LDSO	D0010 Meter Readings	Electronic or other method, as agreed
		Send MTD		ADS	D0268 Half Hourly Meter Technical Details. If site is Complex, send Complex Site Supplementary Information Form. Refer to Appendix 4.9 Guide to Complex Sites.	
3.3.3.2	In accordance with timescales in Appendix 4.6	Prove MS if feeder has been energised for the first time	SVA MOA	ADS	Refer to Appendix 4.6	Electronic or other method, as agreed

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3.3.4 Notification following Change of Feeder Status – De-energise Feeder

REF	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
3.3.4.1	Within 3 WD of request to de-energise feeder and before data collection date or as the SVA MOA sees necessary.	Arrange with ADS to collect HH Metered Data	SVA MOA	ADS	D0005 Instruction on Action	Electronic or other method, as agreed
3.3.4.2	On the date and time agreed in 3.3.4.1	Collect HH Metered Data	ADS			Internal Process
3.3.4.3	Immediately following 3.3.4.2	Confirm HH Metered Data collection	ADS	SVA MOA	The SVA MOA will telephone the ADS when the SVA MOA is on site. Following the ADS collecting the data, the ADS will provide confirmation to the SVA MOA.	Telephone
3.3.4.4	Immediately following 3.3.4.3	Note Meter register reading, if available. If HH Metered Data was not uploaded by the ADS, download HH Metered Data, if available. CHANGE FEEDER STATUS.	SVA MOA			Internal Process
3.3.4.5	Following change of Feeder Status in accordance with the REC	If requested, send Meter register reading or notification that Meter register reading not obtainable. Send MTD	SVA MOA	ADS Supplier LDSO ADS	D0010 Meter Readings D0268 Half Hourly Meter Technical Details. If site is Complex, send Complex Supplementary Information Form. Refer to Appendix 4.9 Guide to Complex Sites.	Electronic or other method, as agreed

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3.4 Collection Activities

3.4.1 ADS collects, validates and sends consumption data for SVA Metering Systems

REF	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
3.4.1.1	As appropriate	Collect and validate HH Metered Data and check items at site.	ADS		Refer to Appendix 4.1, Appendix 4.2, Appendix 4.3, and where relevant Appendix 4.8.	Internal Process
3.4.1.2	Not less than once every calendar month	In respect of de-energised SVA MSs where communications equipment is available on site, attempt remote data collection.	ADS			Internal Process
3.4.1.3	Annually	In respect of de-energised SVA MSs which do not include communications equipment or for which the communications equipment is not functioning correctly, make a site visit to attempt data collection.	ADS			Internal Process
3.4.1.4		Produce, validate, estimate or recalculate UTC Period Consumption data for each MSID for each UTC Day.	ADS			Internal Process
3.4.1.5	If consumption is invalid	ADS Receives Load Shape Data From LSS ADS should reprocess previously submitted data, for appropriate Metering Systems, where a more accurate load shape is made available.	LSS	ADS	IF/PUB-022 Load Shape Period Data IF/PUB-023 Load Shape Totals Data	DIP Interface

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REF	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
3.4.1.6	Following 3.4.1.4	If no data available use appropriate Default Load Shape Data to estimate consumption	ADS			Internal Process
3.4.1.7	Following 3.4.1.6	Submit UTC Settlement Period Level Consumption Data and manage any message failures	ADS	BSC Central Systems Supplier LDSO BSC Central Systems	IF/PUB-021 UTC Settlement Period Consumption Data	DIP Interface
3.4.1.8	If MDS Exception Report is published	ADS receives Notification of Rejection of UTC Period Consumption data from MDS	MDS	ADS	IF/PUB-014 Rejected - UTC Settlement Period Consumption Data	DIP Interface
3.4.1.9	Following 3.4.1.7	ADS resolves issues with rejected data based or Self Describing Error Code	ADS		Internal Process	
3.4.1.10	Following 3.4.1.8	ADS re-submits UTC Settlement Period Consumption Data and manages any Message failures	ADS	BSC Central Systems Supplier LDSO	IF/PUB-021 UTC Settlement Period Consumption Data	DIP Interface
3.4.1.11	Following an MDS Run	ADS receives details of Defaulted Data	MDS	ADS	IF/PUB-013 Notification of Defaulted UTC Settlement Period Consumption Data	DIP Interface

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REF	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
3.4.1.12	When data is invalid or cannot be retrieved or if requested by Supplier to estimate consumption or if energy exceeds that allowed by more than the limit set out in Appendix 4	Estimate consumption data. Send estimated consumption data report.	ADS	Supplier LDSO	IF/PUB-021 UTC Settlement Period Consumption Data	DIP Interface
3.4.1.13		Send valid consumption data for DUoS billing purposes.	ADS	LDSO	IF/PUB-021 UTC Settlement Period Consumption Data OR D0380 Validated Half Hourly Advances for DUoS Billing	DIP Interface Electronic or other method, as agreed

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3.4.2 ADS investigates inconsistencies

REF	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
3.4.2.1	As required	Send notification of inconsistencies and request investigation Go to 3.4.2.3	Supplier	ADS	D0001 Request Metering System Investigation	Electronic or other method, as agreed
3.4.2.2	If required, following data aggregation exception	Send notification of inconsistencies and request investigation	MDS	ADS Supplier	IF/PUB-014 Rejected - UTC Settlement Period Consumption Data	DIP Interface
3.4.2.3	Within 5 WD of 3.4.2.1 or 3.4.2.2 as appropriate	Investigate inconsistencies Take corrective action if possible Go to 3.4.2.4 if a MS investigation is required, 3.4.2.5 if inconsistencies have been resolved and a MS investigation was not required, or 3.4.2.9 if inconsistencies remain unresolved and a MS investigation was not required.	ADS			Internal Process
3.4.2.4	Following 3.4.2.3 if a MS investigation is required	Initiate process 3.4.3	ADS			
3.4.2.5	Within 5 WD of resolution of inconsistencies, if a MS investigation was not required	Report resolution of inconsistencies	ADS	Supplier	D0002 Fault Resolution Report or Request for Decision on Further Action	Electronic or other method, as agreed
3.4.2.6	If appropriate, within 5 WD of 3.4.2.5	Report resolution of inconsistencies	Supplier	ADS	As appropriate: D0002 Fault Resolution Report or Request for Decision on Further Action Details of resolution	Electronic or other method, as agreed

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REF	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
3.4.2.7	If appropriate, within 5WD following 3.4.2.6	If a problem has caused incorrect consumption to be recorded, estimate / correct consumption data	ADS		Refer to Appendix 4.2 if appropriate	Internal Process
3.4.2.8	As soon as possible following 3.4.2.7	Send corrected consumption data	ADS	BSC Central Systems Supplier	IF/PUB-021 UTC Settlement Period Consumption Data	DIP Interface
		Send valid consumption data for DUoS billing purposes.	ADS	LDSO	IF/PUB-021 UTC Settlement Period Consumption Data OR D0380 Validated Half Hourly Advances for DUoS Billing.	Electronic or other method, as agreed
3.4.2.9	As soon as possible if inconsistencies remain unresolved but a MS investigation was not required	Report action required	ADS	Supplier	D0002 Fault Resolution Report or Request for Decision on Further Action Details of action required	Electronic or other method, as agreed

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3.4.3 Advanced Metering System investigation process

REF	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
3.4.3.1	As appropriate	Send request to investigate MS	Supplier or ADS	SVA MOA	D0001 Request Metering System Investigation See Appendix 4.4 for list of example circumstances where this request may be made.	Electronic or other method, as agreed
3.4.3.2	If fault resolved within 5 WD of receipt of D0001.	Go to 3.4.3.10.				
3.4.3.3	If fault remains unresolved 5 WD after receipt of D0001	Send notification that the fault cannot be resolved within 5WD, and send a corresponding fault resolution plan (if required) detailing the actions that need to be taken to resolve the fault and the proposed timescales or update on proposed next steps. Request decision on further action if appropriate.	SVA MOA	Supplier or ADS	D0005 Instruction on Action, or equivalent information to Supplier	Electronic or other method, as agreed
					Fault resolution plan (if required)	Fax, Email or other method, as agreed
3.4.3.4	As soon as possible after 3.4.3.3, if appropriate	Send decision on further action	Supplier ADS	SVA MOA	D0005 Instruction on Action	Electronic or other method, as agreed
3.4.3.5	If fault resolved within 15 WD of receipt of D0001	Go to 3.4.3.10.				
3.4.3.6	If fault remains unresolved 15 WD after receipt of D0001	Notify that the fault remains unresolved.	SVA MOA	Supplier or ADS	D0005 Instruction on Action or equivalent information to Supplier.	Electronic or other method, as agreed
3.4.3.7	As soon as possible after 3.4.3.6	Send update on investigation	Supplier or ADS	Supplier or ADS	Details of update	Electronic or other method, as agreed

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REF	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
3.4.3.8	Following 3.4.3.6, if and when appropriate	Consult and / or update ADS regarding investigation on a regular basis (as agreed) until fault resolved.	SVA MOA	ADS	D0005 Instruction on Action	Electronic or other method, as agreed
3.4.3.9	As soon as possible after 3.4.3.8	Send update on investigation.	ADS	Supplier	Details of update	Electronic or other method, as agreed
3.4.3.10	Within 5 WD of resolving fault	Send fault resolution report and undertake any steps in process 3.3.6 which may be appropriate	SVA MOA	ADS Supplier	D0002 Fault Resolution Report or Request for Decision on Further Action	Electronic or other method, as agreed
3.4.3.11	If appropriate, at the same time as 3.4.3.10	Send MTD, if changed or corrected	SVA MOA	Supplier ADS LDSO	D0268 Half Hourly Meter Technical Details If site is Complex refer to Appendix 4.9	Electronic or other method, as agreed
3.4.3.12	In accordance with timescales in Appendix 4.6	If MTD manually intervened or there has been a key field change, prove MS	SVA MOA	ADS	Refer to Appendix 4.6 and process 3.5	Electronic or other method, as agreed
3.4.3.13	If appropriate, following 3.4.3.10	Where an investigation indicates that a fault has caused incorrect consumption to be recorded, estimate / correct consumption data.	ADS		Refer to Appendix 4.2 if appropriate.	Internal Process
3.4.3.14	As soon as possible following 3.4.3.13	Send corrected data	ADS	BSC Central Systems Supplier LDSO	IF/PUB-021 UTC Settlement Period Consumption Data Refer to Section 3.4.1	DIP Interface

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3.4.4 Consumption Amendment/Override Reads

REF.	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
3.4.4.1	Where Supplier identifies a pre-RF Consumption Amendment and the Consumption Amendment meets an Agreed Minimum threshold, or for override reads	Issue Revised Settlement Period Level Consumption Or Issue Override Reads	Supplier	ADS	IF/PUB-027 Supplier Consumption Amendment Request IF/PUB-041 Smart/Advanced Readings	DIP interface
3.4.4.2	Following 3.4.4.1	ADS validates whether they were responsible for the MSID for the period of the consumption amendment/override read	ADS			Internal process
3.4.4.3	On successful MSID responsibility validation	Determine revised Settlement Period Level Consumption	ADS			Internal process
3.4.4.4	If MSID ownership validation fails	Issue Consumption Amendment rejection	ADS	Supplier	IF/PUB-028 Supplier Consumption Amendment Request Response	DIP interface
3.4.4.5	On receipt of Consumption Amendment rejection	Issue revised Consumption Amendment request (Go to 3.4.4.1) OR Start BSC Disputes Process (BSCP11)	Supplier	ADS BSCCo	IF/PUB-027 Supplier Consumption Amendment Request	DIP interface
3.4.4.6	If Validated Consumption Amendments are rejected	Issue rejection notification	BSC Central Systems	Supplier ADS LDSO	IF/PUB-014 Rejected – UTC Settlement Period Consumption Data	DIP interface

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3.5 Proving a Metering System

Complex Sites are subject to Complex Site Validation Test as set out in 3.5.6, and as referenced in Appendix 4.9 Guide to Complex Sites

For Outstations with integral Meters which can only have a pulse multiplier of 1 as identified on the Elexon website (compliance and protocol approval list), a proving test is not required. All other Advanced Metering Systems are subject to a proving test.

3.5.1 Proving of a Metering System by Method 1

REF	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
3.5.1.1	Following installation / reconfiguration, commissioning and once HH Metered Data retrieved or if previous proving test attempt failed.	Send request for proving test (indicating which Settlement Periods to be collected) or alternatively request re-test following failure of immediately preceding proving test and provide MTD.	SVA MOA	ADS	D0005 Instruction on Action D0268 Half Hourly Meter Technical Details. If site is complex, send Complex Site Supplementary Information Form. Refer to Appendix 4.9 Guide to Complex Sites.	Electronic or other method, as agreed
3.5.1.2		Obtain the same HH Settlement Period Meter reading as requested by the SVA MOA using either a Hand Held Unit or via remote interrogation as appropriate (ensuring that data collected for the Settlement Period does not contain a zero value).	ADS		As a minimum the ADS shall obtain the data required by the SVA MOA, but may also obtain and send more data than requested.	Internal Process
3.5.1.3		Send raw HH Metered Data or notification that Metered Data cannot be collected for the Settlement Periods requested. If unable to collect metering data for Settlement Period requested, send alternative Settlement Period HH Metered Data.	ADS	SVA MOA	D0001 Request Metering System Investigation D0003 Half Hourly Advances	Electronic or other method, as agreed

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3.5.2 Proving of a Metering System by Method 2

REF	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
3.5.2.1	Following installation / reconfiguration, commissioning and once HH Metered Data retrieved or if previous proving test attempt failed.	Agree date and time for proving test with ADS or alternatively request re-test following failure of immediately preceding proving test and provide MTD.	SVA MOA	ADS	D0005 Instruction on Action D0268 Half Hourly Meter Technical Details	Electronic or other method, as agreed
3.5.2.2		Obtain the same HH Settlement Period Meter reading as agreed with the SVA MOA using the either a Hand Held Unit or via remote interrogation as appropriate (ensuring that data for the Settlement Period collected does not contain a zero value).	ADS		As a minimum the ADS shall obtain the data required by the SVA MOA, but may also obtain and send more data than requested.	Internal Process
3.5.2.3		Send raw HH Metered Data or notification that Metered Data cannot be collected. If unable to collect HH Metered Data for agreed Settlement Period, send alternative Settlement Period HH Metered Data.	ADS	SVA MOA	D0001 Request Metering System Investigation D0003 Half Hourly Advances	Electronic or other method, as agreed

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3.5.3 Proving of a Metering System by Method 3

REF	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
3.5.3.1	Following installation, commissioning and once HH Metered Data retrieved	Send request for proving test or alternatively request a re-test following failure of immediately preceding proving test and provide MTD.	SVA MOA	ADS	D0005 Instruction on Action D0268 Half Hourly Meter Technical Details	Electronic or other method, as agreed
3.5.3.2		Obtain for Settlement Period Meter reading of own choosing either a Hand Held Unit or via remote interrogation as appropriate (ensuring that data for the Settlement Period collected does not contain a zero value).	ADS			Internal Process
3.5.3.3		Send raw HH Metered Data or notification that Metered Data cannot be collected.	ADS	SVA MOA	D0001 Request Metering System Investigation D0003 Half Hourly Advances	Electronic or other method, as agreed

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3.5.4 Proving of a Metering System by Method 4

REF	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
3.5.4.1	Following installation / reconfiguration, commissioning and once HH Metered Data retrieved.	Send request for proving test or alternatively request a re-test following failure of immediately preceding proving test and provide MTD.	SVA MOA	ADS	D0005 Instruction on Action D0268 Half Hourly Meter Technical Details	Electronic or other method, as agreed
3.5.4.2		Obtain for Settlement Period Meter reading of own choosing either a Hand Held Unit or via remote interrogation as appropriate (ensuring that data for the Settlement Period collected does not contain a zero value).	ADS			Internal Process
3.5.4.3		Send raw HH Metered Data or notification that Metered Data cannot be collected.	ADS	SVA MOA	D0001 Request Metering System Investigation D0003 Half Hourly Advances	Electronic or other method, as agreed

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3.5.5 Issuing Results of Proving Test (All Methods of Proving)

REF	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
3.5.5.1	In accordance with timescales in Appendix 4.6	Send notification of successful proving test / re-test Proceed to process 3.4	SVA MOA	ADS Supplier LDSO	D0214 Confirmation of Proving Tests	Electronic or other method, as agreed
3.5.5.2	In accordance with timescales in Appendix 4.6	Send notification that proving test / re-test failed	SVA MOA	ADS	D0002 Fault Resolution Report or Request for Decision on Further Action	Electronic or other method, as agreed

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3.5.6 Complex Site Validation Test

REF	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
3.5.6.1	As appropriate	Receive request to validate Complex Site data	SVA MOA	ADS	D0005 Instruction on Action	Electronic or other method, as agreed
3.5.6.2	Within 5WD of 3.5.6.1	Collect Metered Data and aggregate in accordance with the Complex Site rules. Send Metered Volumes from each Meter in the Complex Site Rule Send Aggregated Output of Complex Site Rule	ADS	SVA MOA	D0003 Half Hourly Advances Email with aggregated consumption data for the day requested in 3.5.6.1	Electronic or other method, as agreed
3.5.6.3	Within 2WD of 3.5.6.2	Validate Metered Volumes and Aggregate Output of Complex Site Rule	SVA MOA			Internal Process
3.5.6.4	Within 2 WD of 3.5.6.3 if data is validated	Send notification confirmation of both metered volumes and aggregated output of Complex Site validation rule.	SVA MOA	ADS Supplier	D0214 Conformation of Proving Tests	Electronic or other method, as agreed
3.5.6.5	Within 2 WD of 3.5.6.3 if data is not validated	Send notification of failure of confirmation of either metered volumes or aggregated output of Complex Site Rule	SVA MOA	ADS Supplier	D0002 Fault Investigation	Electronic or other method, as agreed
3.5.6.6	At the same time as 3.5.6.5	Investigate discrepancy with ADS and resolve. Proceed to 3.5.6.1	SVA MOA	ADS	D0002 Fault Resolution Report or Request for Decision on Further Action.	Electronic or other method, as agreed.
3.5.6.7	Within 5 WD of 3.5.6.6 if data remains not validated	Proceed to the Metering System Investigation Process (3.4.3)	ADS			Internal Process

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4. Appendix - Validation and Estimation Methods

This section sets out the requirements for the validation of consumption data and register reads, and the estimation processes required where data is invalid or missing. It sets out the additional estimation process for Metering Systems where the customer has the right under the Data Access and Privacy Framework to opt out of provision of UTC Period Consumption data for Settlement.

This section sets out the methodology by which Meter Advances are calculated using Register Readings for Advanced Meters. It also describes how such Meter Advances are used in calculations within the estimation processes.

The following methods and techniques are covered in this section:

- Validation of Advanced Meter data at UTC Period Level
- Validation of Advanced Meter Register Readings
- Identifying Load Shape Categories using Registration data
- Calculating Meter Advances, Daily Advances, and Daily Advance Estimates

This section sets out how to identify Load Shape Categories for each Metering Point and the estimation methodologies used for each type of advance that is available.

UTC Period Consumption refers to consumption or export data that is of UTC Period granularity. The ADS must have flexibility to amend the duration of a UTC Period.

UTC Period duration will not change within a UTC Settlement Date and there will not be different UTC Period durations within a Load Shape Category. All services should, where possible, build in the ability to configure the settlement period duration during their solution design, in order to support any future move to a UTC Period duration other than a Half Hour.

4.1 Data Estimation for Advanced Metering Systems

Data will be estimated for Import and Export Advanced Metering Systems using one of the following data estimation methods in the order of precedence specified below. Data will be flagged appropriately as indicated below. Alternatively, the Revenue Protection Service may advise on required adjustments. Missing Reactive Power data will also be estimated in accordance with 4.2.3 below.

When the ADS receives information from the SVA MOA, Revenue Protection Service, site reports or other sources concerning metered data which has been or will be collected and processed, the UTC Period Consumption data shall be estimated in accordance with this BSCP where the ADS believes the data to be in error. The ADS shall inform the Supplier where an error might affect a different Supplier or data affects the Final Reconciliation Volume Allocation Run.

Details of all data estimations and the rationale behind using the chosen method must be recorded for Audit purposes. The ADS will notify the relevant Supplier and (where appropriate) the LDSO of the data estimation method in accordance with 4.2.4 below.

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Data estimation shall, wherever possible, be constructed using previous actual Metered Data and not previously estimated data. Having estimated data using one of the methods below, a report is to be produced in accordance with 4.2.4 below.

The ADS should take particular care when carrying out data estimation using, or during, holiday periods where abnormal consumption patterns may be experienced. Profiles from similar periods in previous years may be used where applicable.

The ADS should consider local information, where available, when carrying out estimations and use appropriate **actual** historical data if this is considered to give a more accurate estimation, e.g. when estimating consumption of energy for a building known to be a school during the month of August, the estimate could be based on actual data for the same day of week and Settlement Periods from the previous year.

4.2 Where UTC Period Consumption is consented for use in Settlement

4.2.1 Advanced Meters with UTC Period Consumption

Where UTC Period Consumption is available from the meter for import or export, this consumption data shall be treated as actual data and used for Settlement provided it is deemed valid according the requirements set out below. Where deemed invalid by the ADS, it should not be used for Settlement.

4.2.2 General validation requirements

Unless the ADS is informed by the MSA that the retrieved data is incorrect, the ADS shall accept UTC Period Consumption data collected from the Meter for validation processing. The ADS shall record all occurrences where data entering Settlement has been changed following instruction from the Supplier.

The ADS shall retain the original values along with any alarms recorded in the Meter, the reason for failure where the value is invalid and the reason for accepting data previously flagged as suspect.

The data retrieval process shall include the following checks; however, in the case where data is received from the Outstation automatically, the step ‘Outstation Time Check’ shall be performed at least every 20 calendar days by interrogation only.

ADS shall perform a validation check of Reactive Power UTC Period Consumption values in addition to the Active Power UTC Period Consumption values within step ‘Cumulative/Total Consumption Comparison’ and ‘Main/Check Comparison’.

4.2.3 Outstation Id (Device Id)

When the Outstation is interrogated, or when data is received from the Outstation automatically the ‘electronic serial number’ of the Outstation is compared with that expected. If they differ then no data should be processed or submitted and the failure should be investigated.

4.2.4 Outstation Number of Channels

When the Outstation is interrogated, or when data is received from the Outstation automatically, the number of channels of the Outstation is compared with that expected. If the number differs then no data should be processed or submitted and the failure should be investigated.

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4.2.5 Outstation Time Check

When the Outstation is interrogated, the time of the Outstation is compared with that expected. If they differ by more than 20 seconds and less than 15 minutes then the outstation time is corrected by the data collection system. If the time differs by more than 15 minutes then the problem should be investigated.

4.2.6 Alarms

When the Outstation is interrogated, or data is received from the Outstation automatically and a persistent alarm flag is detected, this shall be investigated prior to processing any retrieved UTC Period Consumption as required by the relevant Code of Practice (CoP). Some Meters may not have all the alarm flags specified in the relevant CoP, in which case a Dispensation under BSCP32 is required.

4.2.7A Cumulative/Total Consumption Comparison for Meters with integral Outstations which provide an electronic cumulative reading

When the Outstation is interrogated, or when data is received from the Outstation automatically, and where the Outstation provides an electronic cumulative reading of the prime register equivalent to the total consumption of the Meter at that point in time, the following checks will be performed using these readings at least every seven days (i.e. on a daily or weekly basis or as agreed by the Supplier and ADS).The difference between the cumulative readings shall be calculated to ensure that the UTC Period Consumption used in Settlements sums to the Meter advance for the same interval (described as performing a mini-MAR), i.e. that the difference between cumulative readings and the sum of the Metered Period Data for the same date(s) and time(s) is within a suitable tolerance. It is recommended that the level of the tolerance should be set to take into account the period over which the check was performed. The recommended maximum levels are ±0.7% where the check is carried out on a weekly basis and ±5% where the check is carried out on a daily basis.

Specifically:

∑(pulses * pulse multiplier) for all UTC Periods in the time interval = (Meter advance * Meter multiplier) for the time interval.

The calculation below outlines how the discrepancy should be calculated when performing tolerance checks.

Discrepancy = ((∑UTC Period Consumption-MA)/ MA)*100%

Where:

∑UTC Period Consumption is the sum of UTC Period Level Energy volumes in kWh and/or kVArh; and MA is

the corresponding Meter Advance, i.e.

MA = M2 – M1

Where:

M2 is the cumulative reading (in kWh or kvarh) returned from the last time that the

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Meter was interrogated; and M1 is the cumulative reading (in kWh or kvarh) returned from the previous time that the Meter was interrogated, or data was received automatically over the same time period as the sum of UTC Period Consumption.

Where a main and check Meter is fitted, the main and check Meter advances should be compared for any discrepancy between the two values in excess of 1.5 times the class accuracy requirements for the individual Meters at full load, as defined in the relevant CoP, making allowances for low load were appropriate. If the discrepancy is unacceptable it shall be investigated.

If after making allowance for the readings not being taken at the end of the preceding UTC Period (and other factors such as estimates made during the period of the MAR calculation) the above checks fail, then the failure shall be investigated.

4.2.7B Meter Advance Reconciliation Check

A Meter Advance Reconciliation (MAR) is the reconciliation of the advance on the Total Cumulative Meter register between two specific date(s) and time(s) compared with the summation of the relevant UTC Period Consumption used in Settlement over the same date(s) and time(s).

Care should be exercised where the Total Cumulative Meter register reading does not align with the end of a UTC Period, and this should be taken into consideration in the reconciliation.

Meters with separate or integral Outstations that do not, or fail to, provide an electronic cumulative reading, or where a mini-MAR cannot be carried out.

For these Meters, the ADS shall perform a MAR:

(a) at least once every three months for CoP 1,2,3 & 5 Meters; or

(b) at least once every twelve months for Meters below CoP 10 Meters.

Where a change of ADS has occurred, the new ADS shall perform a MAR within the first six months of the appointment for Meters below CoP 10 using the last physical Meter register reading taken on site provided by the old ADS.

Meter readings recorded from the physical Meter register during a site visit may be used for the purpose of the MAR under a) or b) above.

Using the Meter register readings taken during any site visit, the following checks shall be performed:

i) Ensure that the UTC Period Consumption data between two different date(s) and time(s), as used in Settlement, sums to the Meter advance from site readings of the prime Meter registers for the same date(s) and time(s), i.e. that the difference between successive cumulative Meter register readings and the total of the UTC Period Consumption for the same time interval, is within a tolerance of ±0.1%.

Specifically:

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∑ (pulses * pulse multiplier) for all UTC Periods in the time interval = (Meter advance * Meter multiplier) for the time interval.

The calculation below outlines how the discrepancy should be calculated when performing tolerance checks.
Discrepancy = ((∑UTC Period Consumption-MA)/ MA)*100%

Where:

∑UTC Period Consumption is the sum of UTC Period Level Energy volumes in kWh and/or kVArh; and MA is the corresponding Meter Advance, i.e.

MA = M2 – M1

Where:

M2 is the cumulative reading (in kWh or kVArh) returned from the last time that the Meter was interrogated; and M1 is the cumulative reading (in kWh or kVArh) returned from the previous time that the Meter was interrogated (or retrieved automatically) spanning the same time period as the UTC Period Consumption.

ii) Where a main and check Meter is fitted, the main and check Meter advances are compared for any discrepancy between the two values in excess of 1.5 times the class accuracy requirements for the individual Meters at full load, as defined in the relevant CoP.

If after making allowance for the readings not being taken at the end of the preceding UTC Period (and other factors such as estimates made during the period of the MAR calculation) the above checks fail, then the failure shall be investigated.

The ADS may choose to produce the D0008 ‘Meter Advance Reconciliation Report’ for the Supplier (and LDSO if requested) on a monthly basis. This will include:

- MAR confirmation;
- MAR failure; and
- MAR overdue,

for all MS for which a MAR has been, or should have been, carried out during the preceding month.

If the discrepancy is outside the prescribed tolerances, it shall be investigated. Data failing the MAR check will be deemed invalid. However, allowances can be made, e.g. at low loads where this falls outside the meter’s accuracy range, in which case the ADS can apply discretion in determining validity.

Where data has been deemed invalid the ADS shall investigate. If the UTC Period Consumption is deemed valid following investigation then the data can be published, otherwise the ADS shall estimate UTC Period Consumption data for all UTC dates within the period of the MAR.

Meters with integral Outstations that provide an electronic cumulative reading

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For Meters with integral Outstations which provide an electronic cumulative reading of the prime Meter register equivalent to the total consumption of the Meter as part of its normal function, a MAR is not obligatory providing that the Cumulative / Total Consumption Comparison can be carried out.

Where this validation cannot be carried out, but the ADS deems that the UTC Period data is correct, this shall be published, else the ADS shall estimate UTC Period Consumption using the most appropriate Estimation Method.

The ADS shall use a level of tolerance set to take into account the period over which the check was performed. The maximum levels are ±0.7% where the check is carried out at least on a weekly basis for monthly data or ±5% where the check is carried out on a daily basis using daily data. Data failing the Meter Advance Reconciliation check will be deemed invalid.

Where consumption or register read data has been deemed invalid, the ADS shall seek to resolve the cause of the discrepancy. Appropriate action should be taken if the cause of the discrepancy can be identified. If the UTC Period Consumption is deemed valid following investigation then the data can be published. Otherwise, the ADS shall estimate all UTC Periods within the period of the MAR.

De-energised Meters

A routine MAR is not required for de-energised Meters, on the basis that there is no advance to reconcile.

4.2.8 Main/Check Comparison

Where main and check Meters are installed in accordance with the relevant CoP, ensure that the Metered Data recorded by each Meter is compared for each circuit. Any discrepancy between the two values in excess of 1.5 times the accuracy requirements of that prescribed for the individual Meters at full load, as defined in the relevant CoP, shall be investigated.

Where data is received externally, ADS checks data is from expected source

The ADS shall validate that the data has been received from one of the expected source(s) e.g. from the MSA or Supplier associated with the MSID or the previously appointed ADS.

Where UTC Period Consumption has been retrieved from additional on-site metering other than the main or check meter, this can be used in Settlement and should be estimated using Standard Method e(vi).

4.2.9 Storing validated data

The ADS must store all data for the appropriate amount of time according to the non-functional requirements set out in the BSC for validation, estimation, error resolution and audit purposes.

4.2.10 Validating that UTC Period Consumption is not negative

The ADS shall validate that every period of UTC Period Consumption data is greater than or equal to zero.

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4.2.11 ADS validates UTC Period Consumption against permissible maximum energy

During validation where the energy recorded for one or more UTC Periods exceeds the Max kWh for the relevant Metering Code of Practice (CoP), the ADS will notify the Supplier.

CoP	Max. kW	Max kWh / Half Hour	Permissible Allowed: kWh per Half Hour
1	675,000	337,500	400,000
2	100,000	50,000	50,000
3	10,000	5,000	5,000
5	1000	500	600
6 & 7	76	38	50
10	76	38	50

Following instruction from the Supplier, the ADS will enter the actual data into Settlement or will replace the actual data with estimated data and enter this into Settlement.

Where the Supplier does not provide instructions to the ADS, the ADS will apply the following rules, either:

- use actual consumption data if the energy exceeds the Max kWh / UTC Period but not the Permissible Allowed; or
- use estimated, rather than the actual, consumption data if the energy has exceeds the Permissible Allowed.

Note that:

CoPs 1, 2 and 3 are circuit capacity based and it is assumed that the Maximum Demand will not exceed the maximum kWh / Half Hour value.

CoP 5 is demand based and may occasionally exceed the maximum kWh / HH value.

CoPs 6 & 7 are whole current Meters and the values are based on maximum voltage and current values of 3 phases x 253 Volts x 100 Amps. For these MSs, the fact that they are fused at 100 Amps limits the energy passed. Therefore, any recorded energy greatly higher than the maximum in the above table can be assumed to be erroneous.

Where the ADS has reliable evidence that the CoP is set incorrectly, it may accept excess consumption as actual

If valid, the ADS shall enter the actual data into Settlement. Where this is subsequently found to be invalid, the ADS shall replace the actual data with estimated data and enter this into Settlement.

4.2.11(a) Identifying missing or corrupted data

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If UTC Period Consumption is missing, uncollected or corrupted or if for any other reason the data is deemed to be invalid then the data shall be estimated using the data estimation processes for Advanced Meters set out in below.

4.2.11(b) ADS treatment of a Site where Supply is de-energised

In the absence of Actual data recovered from the Meter or a Meter Reading received from the Supplier, no submission to settlements is required in these circumstance (i.e. there is no need to submit zero consumption for de-energised Metering Systems.

4.2.12 Estimating UTC Period Consumption

The ADS shall ensure that UTC Period Consumption data will be estimated for any periods of missing or invalid data (except where access to UTC Period Consumption is not consented) using a hierarchy of Estimation Methods. The lowest numbered (earliest in the precedence order) Estimation Method must always be used. Estimated UTC Period Consumption will be labelled with the Estimation Reason Code used.

Estimation must be recalculated if newer data becomes available.

4.2.13 Amending consumption data following detection of theft from RPU service or other consumption adjustments

The ADS must enter abstracted units of electricity into settlement, or for any other adjustment, in the appropriate time period when notified by the Supplier according to the rules set out in the BSC or its subsidiary documents. Where this is not provided at UTC Period Consumption level, the ADS shall apply the most applicable estimation method and set the Estimation Reason Code accordingly.

4.2.14 Estimating UTC Period Consumption where a Meter Advance is not available

The ADS must be able to estimate the consumption for UTC Dates where a Meter Advance is not available according to the Estimation Rules and method and flag each estimation according to its method.

4.2.15 Validation of estimated data

When UTC Period Consumption has been estimated, this shall be validated against the maximum permissible kWh limit prior to being used in subsequent processing. Any data that fails validation following estimation should be flagged appropriately and investigated. If deemed to be correct it shall be passed as valid. Otherwise, it should be recalculated using an alternative method before being allowed to be used.

4.2.16 Receiving actual UTC Period data when data has previously been estimated

If the ADS receives new data, and this new data from an expected source is successfully validated, it shall be published in accordance with the relevant SLAs.

4.2.17 Receiving new data when data has previously been estimated

If the ADS receives new data which is not UTC Period Consumption data but allows a better estimate to be calculated the ADS must recalculate the estimate and update the estimate type flag if required.

4.2.18 Estimation for export Metering Systems

Export may be estimated for Advanced Meters with communication issues or Meters with an Export register installed at current transformer (CT) connections, provided

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that there is a valid Meter Advance that spans the UTC Date.

Otherwise, the ADS shall estimate zero consumption for any export Metering Systems where UTC Period Consumption or Register Reading data is unavailable.

If UTC Period Consumption is subsequently retrieved (and validated) the estimated data shall be replaced. Similarly, if a previously unavailable Meter Advance is subsequently retrieved then the zero estimate should be replaced by a better estimate.

4.2.19 Estimation Methods for import MSIDs where actual UTC Period Consumption is unavailable

The ADS shall use the following precedence order when estimating UTC Period Consumption. The ADS shall apply the Data flags to the data as defined below and record the reason.

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4.2.20 Use of data where Main Meter data available but check Meter data missing.

Standard Method a.

Data from main meter available but data from check meter is missing. Data from main Meter should be used providing that data has passed validation.

Data Flag ‘A1’

ADS estimates data where Main Meter data missing and check Meter data available

Standard Method b.

Data copied from the check Meter providing that data has passed validation.

Data Flag ‘A2’

Note that a. and b. do not apply where main and check data is collected, but the data fails the main / check validation

4.2.21 Estimation where one UTC Period missing or incorrect where a Total Cumulative Meter register reading can be taken

Standard Method c.

Missing or incorrect UTC Period data calculated from the Total Cumulative Meter register advance and other actual UTC Period Consumption data recorded for the specific period of the calculation. Note that the Total Cumulative Meter register advance may not correlate to UTC Periods if the advance span multiple days.

Data Flag ‘A3’

4.2.22 Estimation where two or three UTC Periods missing or incorrect for Total Cumulative Meter register or one UTC Period missing or incorrect where a Total Cumulative Meter register reading cannot be taken

Standard Method d.

Values may be entered which ensure a match with real data trends.

Data Flag ‘EA1’

4.2.23 Estimation where Meter advance available using data from Interrogation Unit

Standard Method e(i) MSA.

Data automatically retrieved by the MSA via an Interrogation Unit. Information to be supplied by the Supplier to the ADS in a format agreed by both parties.

Data Flag ‘A’

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4.2.24 Estimation where Meter advance available using actual data from previous or following month

Standard Method e(ii).

UTC Period Consumption data constructed by using the average profile based on actual Metered Data for the same day of week and UTC Periods over the previous or following month taking into account weekends and public holidays.

Data Flag ‘EA2’

4.2.25 Estimation where Meter advance available using actual data from previous or following 2-3 weeks

Standard Method e(iii).

UTC Period Consumption data constructed by using the average profile based on actual Metered Data for the same day of week and UTC Periods over the previous or following 2-3 weeks taking into account weekends and public holidays.

Data Flag ‘EA3’

4.2.26 Estimation where Meter advance available using actual data from previous or following week

Standard Method e(iv).

UTC Period Consumption data constructed by using the average profile based on actual Metered Data for the same day of week and UTC Periods over the previous or following week taking into account weekends and public holidays.

Data Flag ‘EA4'

4.2.27 Estimation where Meter advance available using actual data from an alternative 4 week period

Standard Method e(v).

Where actual Metered Data is not available to satisfy the criteria for e(i), e(ii) or e(iii) above, the UTC Period Consumption data shall be constructed using the average profile based on actual data for the same day of week and UTC Periods over the nearest 4 week period to that for which data estimation is required.

Data Flag ‘EA5’

4.2.28 Estimation where Meter advance available using operational data or additional information

Standard Method e(vi).

Operational data or additional information will be used to construct the profile supplied from another source (e.g. MSA, Supplier or additional on-site metering) to the ADS in a format agreed by both parties.

Data Flag ‘EA6’

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4.2.29 Estimation where Meter advance unavailable using actual data from previous or following month

Standard Method f(i).

UTC Period Consumption will be constructed based on average actual Metered Data for the same day of the week and UTC Periods in the previous or following month, taking into account weekends and public holidays.

Data Flag ‘EA7’

4.2.30 Estimation where Meter advance unavailable using actual data from previous or following 2-3 weeks

Standard Method f(ii).

The average energy values and profile will be constructed based on actual Metered Data for the same day of week and UTC Periods over the previous or following 2-3 weeks taking into account weekends and public holidays.

Data Flag ‘EA8’

4.2.31 Estimation where Meter advance unavailable using actual data from previous or following week

Standard Method f(iii).

The average energy values and profile will be constructed based on actual Metered Data for the same day of week and UTC Periods over the previous or following week taking into account weekends and public holidays.

Data Flag ‘EA9’

4.2.32 Estimation where Meter advance unavailable using actual data from an alternative 4 week period

Standard Method f(iv).

Where actual data is not available to satisfy the criteria for f(i), f(ii) or f(iii) above, the average energy values and profile will be constructed based on actual Metered Data for the same day of week and corresponding UTC Periods over the nearest 4 week period to that for which a data estimation is required.

Data Flag ‘EA10’

4.2.33 Estimation where Meter advance unavailable using operational data or additional information

Standard Method f(v).

Operational data or additional information will be used to construct the profile supplied from another source (e.g. SVA MOA, Supplier) to the ADS in a format agreed by both parties. In some cases this data may be of higher quality than other Standard Methods within f, in which case it can take precedence over f(i) to f(iv).

Data Flag ‘EA11’

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4.2.34 Estimation where No Meter advance, historical data, operational data or additional information available

Standard Method g.

The ADS will use the Annual Consumption or Supplier Nominated Annual consumption together with the Advanced Load Shape associated with the MSID Registration data to perform the estimation of consumption.

Where a year of Load Shape Totals (LS_TOT_Y) is available then the calculation for UTC Period j on UTC Date D is:

$UTCP_{Dj} = (LSPV_{Dj} / (LS_TOT_Y) * AC_Y$

Where less than a year of Advanced Load Shape Totals are available, the ADS shall use the Annual Consumption (AC_Y) to calculate a DAE for the Settlement Date D:

$DAE_D = AC_Y/365$

Then the calculation for UTC Period j on UTC Date D is:

$UTCP_{Dj} = LSPV_{Dj} / LS_ROLL_TOT_D * (DAE_D * 7)$

Data Flag 'EA12'

4.2.35 Estimation where no Annual Consumption or Supplier Nominated Annual Consumption available

Standard Method h.

Where the Supplier has not provided the data specified in standard method 'g', the ADS will use the Advanced Load Shape associated with the MSID Registration data to derive the UTC Period Consumption estimates for the missing UTC Periods.

Data Flag 'EA13'

4.2.36 Standard Estimation Methods for Export Metering Systems

The Estimation Methods in b. to g. below (i.e. excluding Standard Method a) may be used only where the MSID has a specific channel for gross Export and no netting of Import and Export occurs at the site.

4.2.37 Export Measurement Quantity with missing values where netting occurs at site.

Export Standard Method a.

Export Measurement Quantity with missing values where netting occurs at site. The UTC Period Consumption values for the period of missing data shall initially be set to zero, until such time that evidence of Export energy transfer is provided.

Data Flag 'EAE1'

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4.2.38 Estimation where Main Meter data available but check Meter data missing

Export Standard Method b.

Main Meter data available but check Meter data missing. Data from main Meter should be used providing that data has passed validation.

Data Flag ‘AAE1’

4.2.39 Estimation where Main Meter data missing and check Meter installed. Data copied from the check Meter providing that data has passed validation

Export Standard Method c.

Main Meter data missing and check Meter installed. Data copied from the check Meter providing that data has passed validation. Note that b. and c. do not apply where main and check data is collected but the data fails the main / check validation.

Data Flag ‘AAE2’

4.2.40 Estimation where one UTC Period missing or incorrect where Total Cumulative Meter register reading can be taken

Export Standard Method d.

One UTC Period missing or incorrect where a Total Cumulative Meter register reading can be taken. Missing or incorrect UTC Period data calculated from the Total Cumulative Meter register advance and other actual UTC Period data recorded for the specific period of the calculation. Note that the Total Cumulative Meter register advance may not correlate to UTC Periods if the periods span multiple days.

Data Flag ‘AAE3’

4.2.41 Estimation where Main and check Meter data missing or incorrect

Export Standard Method e.

Main and check Meter data missing or incorrect. The HH metered values for the period of missing or invalid data shall be initially set to zero until generation can be calculated using f. or g. below.

Data Flag ‘EAE2’

4.2.42 Estimation where Meter advance available - Operational or additional information used to construct the profile supplied from another source

Export Standard Method f.

Meter advance available Operational data or additional information is used to construct the profile supplied from another source (e.g. SVA MOA or Supplier). Information to be supplied by the Supplier to the ADS in a bilaterally agreed format. Additional information may include UTC Period Consumption retrieved from additional on-site metering other than the main or check meter, or from the customer.

Data Flag ‘EAE3’

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- except where data is automatically retrieved by the SVA MOA via an Interrogation Unit, in which case it will have an 'AAE1' flag as it is equivalent in quality to Export Standard Method b.

4.2.43 Estimation where Meter advance unavailable - Operational or additional information used to construct the profile supplied from another source

Export Standard Method g.

Meter advance unavailable. Operational data or additional information will be used to construct the profile supplied from another source (e.g. SVA MOA or (Supplier).

Information to be supplied to the ADS in a format agreed by both parties. This information may include consumption that has been retrieved from additional on-site metering other than the main or check meter, or from the customer.

Data Flag 'EAE3'

4.2.44 Standard Estimation Methods for Reactive Power

Standard methods (b) through to (f) for Active Import are also applicable to Reactive Import and Reactive Export, and the ADS shall use these methods to provide estimates of missing Reactive Power data.

These estimation requirements will only apply where the Meter Technical Details indicate that the Meter has been configured to Record period values, but has not been possible to read these values from the Meter for one or more UTC Periods. ADSs are not required to (and should not) estimate Reactive Power data for Metering Systems that do not have Reactive Power channels defined in the Meter Technical Details.

The ADS may adapt the standard methods to use available Active Import or Active Export Power data in estimating Reactive Import and/or Reactive Export Power data.

Where it is not possible to use the above methods to provide estimates of missing Reactive Power data, the ADS shall not submit estimated data. Zero estimates shall be provided only where these represent genuine estimates of missing Reactive Power data, not as a method of signalling that estimates could not be provided.

4.2.45 Advanced Load Shape Categories

The ADS shall identify the correct Advanced Load Shape using SMRS data. Advanced Load Shapes should be used for all consented Advanced Metering Systems for Estimation Methods g and h. The Data Items are set out in the headers of the table below:

Market Segment	Measurement Quantity	Connection Type	De-minimis Data Count
A	AI	W	50
A	AE	W	50
A	AI	L	50
A	AE	L	50
A	AI	H	50
A	AE	H	50
A	AI	E	50
A	AE	E	50

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4.3 Where UTC Period Consumption is not consented for use in Settlement

The methods set out below are based on those in BSCP701 and only apply where consent to access UTC Period Consumption data for an import MSID is not granted due to a customer opt-out under the Data Access and Privacy Framework, as identified by the Consent Granularity in Metering System Registration data.

4.3.1 Identifying Load Shape Categories using SMRS data

The ADS shall use the Registration data held in SMRS for each MSID to identify the appropriate Advanced Load Shape Category as defined in ISD.

Data Item	Definition	Comment
Market Segment	An enumeration of Smart, Advanced or Unmetered.	Must be 'A' for ADS processing.
GSP Group ID	The electricity distribution region of the country where a Metering System is located.	Not used for Advanced Segment Load Shapes
Domestic Premises Indicator	A flag used to identify a domestic premise.	True or False Indicator
Measurement Quantity ID	Identifies UTC Period if the data is Active Import or Active Export.	The Measurement Quantity table in ISD maps Measurement Quantity ID to the Direction of Flow Indicator which matches the Registration data item.
Connection Type	A code to indicate the type of connection	Whole Current (W), Low Voltage Current Transformer (L), High Voltage Current Transformer (H) or Extra High Voltage Current Transformer (E).

For opted-out Non-Domestic Metering Systems Micro Businesses as defined in the Supply License or opted-out Domestic CT Metering Systems, the ADS shall use the Advanced Load Shapes set out in section 4.2.44. The Data Items and associated de-minimis count thresholds are set out in BSCP703.

For Domestic Whole Current Opt-out Advanced Metering Systems, the domestic Load Shapes for the Smart Segment set out in BSCP703 shall be used by matching the opted-out MSID to the relevant GSP Group.

4.3.2 Load Shape Data Items

The relevant Load Shape data items can be found in:

IF-022 - Consumption Central Settlement LSS Period to Data Service

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4.3.3 Load Shape Totals definition using ISD for Advanced Metering Systems

The following Load Shape totals will be provided for each LSC:

Load Shape Total	Description
Load shape total	The sum of all Period Values for the UTC Date.
Load shape 7 day rolling total	The sum of the Load Shape Total above and the Load Shape Total for the past 6 UTC Dates.

4.3.4 Meter Advances, Actual Daily Advances and Daily Advance Estimates

The estimation methods will use different types of advances according to the estimation Method deployed:

Advance Type	Definition
Period Meter Advance (PMA)	A Meter Advance is defined as an Advance Calculated over two or more UTC Dates
Daily Advance (DA)	An advance calculated between two midnight reads for the Total Cumulative Register of an Advanced Meter
Daily Advance Estimate (DAE)	An estimated advance to be used for a UTC Date until an actual Daily Advance is available.
Annual Consumption	An estimate of annual consumption in kWh calculated by BSC Central Systems or provided by the Supplier

4.3.5 Validation of DA Values

The DA values must be validated against previous DA values for the same day type within the nearest four week period, and any DA values exceeding twice the previous data should be investigated.

4.3.6 Daily Advance Estimate Calculations

The Daily Advance Estimate will depend on the type of Advance that is available for an MSID and in the following hierarchy (a to c):

(a) For a Period Meter Advance (PMA) the DAE is calculated by dividing the PMA by the duration of the Meter Advance and scaling to 24 hours where it spans part days);

(b) For Daily Advance Estimate (DAE) the calculation is an average of the previous 7 consecutive DAs; or

(c) where Daily Advance records are available either in the past or future and less than 3 months different from the settlement day requiring a daily meter advance - use the mean actual meter advance from the closest 4 weeks for the

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same day of the week.

(d) Where DAEs are required to be calculated the ADS shall use the data closest to the Settlement Day.

4.3.7 Readings Used for Calculating Meter Advances

The Total Cumulative Register Readings are required for two purposes. Firstly, for use in Meter Advance Reconciliation processes and secondly for estimation where UTC Period Consumption is not available for use in settlement under the Data Access and Privacy Framework, as set out in Section 3.

The minimum validation rules apply equally for whether the reading to be validated lies after other valid Meter readings, before other valid Meter readings or between other valid Meter readings.

The ADS shall always use actual Register Reading data, where available, in favour of Supplier supplied reads. The exception to this rule, is where Supplier provides an "Agreed" or "Override" reading, in these cases the ADS must use this data in his estimation calculation(s) with the acceptance that the supplier will have taken greatest of care when deciding to submit these readings and that the resulting impact on settlement submissions is the suppliers responsibility to monitor and resolve.

The validation requirements described below are the minimum requirements that the ADS shall carry out for each Meter register that is being used for reconciliation purposes or in combination with Load Shapes:

- Check that where data is collected at site the Meter Serial Number (MSN) for the MSID to which the ADS is appointed is the same as the serial number held in SMRS for that MSID. Where the MSN of the meter at the site is not the same as the MSN in the Registration data for the MSID, the ADS shall notify the MSA to determine if the meter has been exchanged and update the Registration data.
- Check for zero consumption, where the zero consumption on the Meter register is not expected based on previous history for the MSID, and if so:

  (a) check for previous instances of zero consumption;

  (b) check the Site Visit Report where available;

  (c) check whether Metering System is being estimated as a Long Term Vacant site notified by the Supplier; and

  (d) check if the site is de-energised.

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If zero explained by historical consumption, Site Visit Reports, remote disablement or Metering System being settled correctly at zero consumption then valid, otherwise invalid.

- Check for negative consumption and if so:

  (a) check for Meter rollover

  (b) check if the previous Meter register reading is a deemed reading and that the reading prior to the deemed reading is an actual Meter register reading, and that the current Meter register reading advance creates a positive consumption with respect to the last actual Meter register reading, making allowance for any Meter register rollover. If so then reading valid, otherwise invalid.

4.3.8 Estimation where access to UTC Period Consumption is not consented

To determine whether a customer has the right under the Data Access and Privacy Framework to opt out of provision of UTC Period Consumption, this is identified by the Consent Granularity in the MSID Registration data for the relevant Date. This right is available to all domestic import customers and a limited number of qualifying 'micro-business[1]' non-domestic import customers.

Estimation for opted-out Whole Current domestic import Advanced Metering Systems will follow the Estimation Methods set out in BSCP701 where such Estimation Methods do not relate to missing UTC Period Consumption data where expected. The estimation Data Flags will align with those in BSCP701.

Where notified by a Supplier that a site is Long Term Vacant (LTV) the ADS shall use Method 11. Otherwise, the ADS shall use the following hierarchy when estimating UTC Period Consumption.

Where Load Shape data is used in the estimation Method it is assumed that the ADS has identified the correct Smart Load Shape C for the MSID based on the Registration data. The ADS shall apply estimation flags to the data as set out below and a reason for estimation should be recorded (e.g. Opt-out or no communications):

[1] As defined in standard condition 7A of the Electricity Supply Licence.

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4.3.9 Identifiers used in this Appendix

The following Identifiers are used in this section, which will form part of the BSC Technical Glossary (link below table):

Identifier	Data item
C	Load Shape Category
D	UTC Date
E	Previous UTC Date
J	UTC Period
K	MSID
M	Missing UTC Periods
N	Period Meter Advance duration
P	Valid available Periods
X	DA 7 Day Average DA Data
Y	Year

Method 0: ADS processes Supplier provided 'Agreed' or 'Override' Readings and Consumption Amendments

The Supplier can provide an Override or Agreed Readings (IF/PUB-041) or a Consumption Amendment (IF/PUB-027). The IF/PUB-041can be used for a number of scenarios including read on install, removal or change of energisation status.

Agreed or Override readings

This reading shall be used by the ADS even where actual valid reading data from the meter is available. Where the Supplier has provided an Agreed Read or and 'Override' Read then the ADS shall process the data as follows:

Calculate a Period Meter Advance (PMA) using the reading provided and another valid reading to determine the Meter Advance Period N (PMAN) where N is the period between the two readings.

Consumption Amendments

The Supplier will provide a gross volume, together with a 'Consumption Amendment Period Start Date' and a 'Consumption Amendment Period End Date'. This data shall be processed as though it is a PMA for the Meter Advance Period N (PMA_N) where N is the period between the 'Consumption Amendment Period Start Date' and 'Consumption Amendment Period End Date'

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The ADS should calculate UTC Period data using the PMA (spanning the UTC Period and scaling the Load Shape and daily totals data from the LSS, and store these records as "E0"

Calculation for UTC Period j on UTC Date D and Supplier provided Meter Advance Period N where LS_TOTN is the Load shape totals summed over Meter advance period N using PMAN:

$UTCP_{Dj} = LSPV_{Dj} / LS_TOT_N * PMA_N$

Methods A and 1: Not used as requires access to UTC Period Data

Method 2: ADS estimates data for Advances Meter where a DA available

Where the MPANs Consent Granularity = '*D*' and a DA is available, allocate the daily advance consumption to UTC Periods using the appropriate load shape obtained from the LSS. Flag the estimated data as "E2" flag.

Calculation for UTC Period j on UTC Date *D* and LS_TOT_D is the Load shape total for UTC Date *D*;

$UTCP_{Dj} = LSPV_{Dj} / LS_TOT_D * DA_D$

Method 3: ADS estimates for Advanced Meters using a non-daily Meter advances

In the absence of a DA consumption data to calculate daily Meter advances, the ADS should calculate UTC Period data for any period where valid actual UTC Period data in not present, from a valid PMA spanning the UTC Period and scaling the Load Shape and daily totals data from the LSS and store these records as "E3"

Calculation for UTC Period *j* on UTC Date *D* and Meter Advance Period N where LS_TOT_N is the Load shape totals summed over Meter advance period N:

$UTCP_{Dj} = (LSPV_{Dj} / LS_TOT_N * PMA_N$

Method 4: ADS estimates where Advanced Meter daily register reads are unavailable but daily register read history is present

For Settlement Periods where valid actual consumption data is available the data shall be used. For other Settlement Periods where DA values for the relevant UTC day are unavailable from the Advanced Meter but a DA is available [either in the past or future] and less than 3 months different from the UTC Date requiring a daily Meter advance - use the average actual Meter advance from the closest 4 weeks for the same Day Type (DAE). The average will then be applied to the appropriate Load Shape for the UTC Date. Record the estimated as "E4".

Calculation for UTC Period *j* on UTC Date *D* and using DAE_X (DA) based on the DA average data X and where and where LS_TOTD is the Load Shape total:

$UTCP_{Dj} = LSPV_{Dj} / LS_TOT_D * (DAE_X)$

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Method 5: ADS estimates for Advanced Meters where previous DAs are available

For Settlement Periods where valid actual consumption data is available the data shall be used. For other Settlement Periods Where DAs for the UTC date are unavailable and the most recent actual settlement data is 7 consecutive previous DAs prior to the UTC Date being processed, the ADS shall calculate the UTC Period data using the average daily consumption for the most recent 7 consecutive actual daily advances and the load shape and load shape rolling total from the LSS. This estimate shall be store as type "E5"

Calculation for UTC Period *j* on UTC Date *D* and using DAE (DA) for the period X is the most recent actual settlement data is 7 consecutive previous DAs and where $LS_ROLL_TOT_D$ is the Load Shape 7 day rolling total:

$UTCP_{Dj} = LSPV_{Dj} / LS_ROLL_TOT_D * (DAE_X * 7)$

Method 6: Not used as is for non-smart Meters only

Method 7: ADS estimates where no recent Meter data is available

For Settlement Periods where valid actual consumption data is available the data shall be used. For other Settlement Periods where daily DA values and register consumption data are unavailable and the most recent actual settlement data is a period covered by actual Meter register advances the ADS shall calculate the UTC Period data using the Daily Estimated Advance (DAE) defined above and the load shape and load shape rolling total from the LSS. This estimate shall be store as type ""E7""

Calculation for UTC Period *j* on UTC Date *D* and using DAE (PMA) for the most recent PMA period N and $LS_ROLL_TOT_D$ is the Load shape 7 day rolling total:

$UTCP_{Dj} = LSPV_{Dj} / LS_ROLL_TOT_D * (DAE_N * 7)$

Method 8: ADS estimates using an Annual Consumption (AC) or an Supplier Nominated Annual Consumption (SNAC)

Where only an Annual Consumption value, or Supplier Nominated Annual Consumption (AC_Y) provided on the I/F-024/ PUB-024 for a year Y is available then the ADS shall process the data as follows and store these records as “E8”:

Where a year of Load Shape Totals (LS_TOT_Y) are available then the calculation for UTC Period *j* on UTC Date *D* is as follows:

$UTCP_{Dj} = (LSPV_{Dj} / (LS_TOT_Y) * AC_Y$

OR

Where less than a year of Load Shape Totals are available then the ADS shall use the Annual Consumption (AC_Y) to calculate a DAE for the Settlement Date *D:*

$DAE_D = AC_Y/365$

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Then the calculation for UTC Period *j* on UTC Date *D* is as follows:

$UTCP_{Dj} = LSPV_{Dj} / LS_ROLL_TOT_D * (DAE_D * 7)$

Method 9: ADS estimates where no Meter data or Daily Advance Estimate (DAE) is available

Where there is no previous data is available the ADS shall use the appropriate load shape. This data will be recorded as "E9".

Calculation for UTC Period j on UTC Date *D*:

$UTCP_{Dj} = LSPV_{Dj}$

Method 10: Not used as is for export only

Method 11. Estimation for Long Term Vacant Sites

Where the Supplier has notified a Flag to identify that a Site is LTV and in cases where no access to consumption data is available, then in the presence of this flag the ADS will estimate zero and set a LTV estimation reason code. This data will be recorded as “ZE2” and the estimation reason code ‘LTV’ should identify as LTV.

$UTCP_{Dj} = 0$

Method 12 Estimation where a Site where Supply is disabled

Where the Supplier has notified a Flag to identify a Site where the supply is disabled and in cases where no access to consumption data is possible, then in the presence of this flag the ADS will estimate zero. This data will be recorded as “ZE3” and set estimation reason code ‘Disabled’ to supply disabled.

$UTCP_{Dj} = 0$

Method 13 Estimation for a Site where Supply is de-energised

In the absence of Actual data recovered from the Advanced Meter or an Advance Meter Reading received from the M Supplier, no submission to settlements is required in these circumstance (ie there is no need to submit zero consumption for de-energised MPAN’s).

4.3.10 Estimation of Readings on Change of Supplier

Estimating Reads on Change of Supplier (CoS) by outgoing ADS

Where there is a CoS and no CoS reading is available the out-going ADS shall estimate a deemed Meter Reading(s) by calculating a DAE and extrapolating from the last Meter Reading for the MSID until the CoS date using Method 7 above. The deemed reading shall be provided to the incoming ADS.

Estimating Reads on Change of Supplier (CoS) by incoming ADS

Where there is a CoS and no CoS reading is available from the out-going ADS, the

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incoming ADS shall estimate a deemed Meter Reading by calculating a DAE following the first Meter Advance calculated for the Site and extrapolating backwards from the first Meter Reading collected by the incoming ADS until the CoS date using Method 7 above.

4.3.11 Estimation of 'back-stop' Readings

The ADS shall estimate 'back-stop' readings where required:

Change of Metering Equipment:

As a 'back-stop' in situations where no reading(s) are provided alongside the change in metering, the ADS shall generate, after 5wd, an estimated reading(s) for the Date of Removal of the previous Meter(s) using the most appropriate method. A new meter should be assumed to have been installed with an index position of zero.

Change of Energisation Status:

As a 'back-stop' in situations where no reading(s) are provided alongside a change in Energisation Status, the ADS shall where required, by 5wd, generate estimated reading(s) for the Date of Change of Energisation Status (reflecting the nature of the Energisation Change) using the appropriate method.

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4.3.12 Estimation Reason Codes

The following are the initial set out Estimation Reason Codes:

Reason Code	Commentary
Opt Out	The customer has Opted Out of providing UTC Period Consumption data for Settlement
Missing	The data is missing
Invalid	The data failed validation
Comms Fault	There is a communications fault with the smart Meter
De-Energised	The MSID is de-energised
Disconnected	The MSID is disconnected
LTV	The Supplier has flagged the MSID as Long Term Vacant
Disabled	The Supplier has flagged the MSID as remotely disabled
Adjustment	The Supplier has provided adjusted Settlement data

4.3.13 Site Checks of Advanced Metering System - Site Visit Report

Where the ADS is required to visit a Site, the following checks shall be carried out:

1. Any evidence of suspected faults to the MS including phase/fuse failure.
2. Any evidence of damage to metering and associated equipment.
3. Any evidence of tampering of any sort with the MS or associated equipment, particularly seals.
4. Any evidence of supply being taken when the Meters are de-energised.

The Local Interrogation Unit (IU) or Hand Held Unit (HHU) should be set to ensure agreement with the UTC clock at least every week.

Sites with polyphase supplies should be visited at least annually and single phase supplies at least at two yearly intervals to perform the checks described above, although exemptions for whole current and domestic sites may apply.

Site visits made for other reasons may be used to carry out checks. Any problems identified should be investigated and a report issued. The ADS shall ensure that where a site visit was not possible, the reasons are explained sufficiently so that appropriate action can be taken to improve the chances of securing a successful site visit.

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4.4 Reasons for Requesting a Metering System Investigation

A D0001 Request Metering System Investigation is issued where the ADS or Supplier identifies or is made aware of a problem that requires a MS investigation by the SVA MOA to resolve. Possible reasons include but are not limited to:

- The ADS suspects invalid MTD on the D0268 Meter Technical Details;
- The ADS has reason to suspect data retrieved from a MS;
- Data retrieved from MS fails validation and/or Meter Advance Reconciliation;
- Consumption data is detected on a MS registered as de-energised;
- The ADS is unable to resolve an issue in retrieving data from a MS;
- Data required for a proving test cannot be obtained;
- Consumption data is flagged with an alarm; and/or
- At the request of the Supplier.

4.5 Key SVA Meter Technical Details

Subject to 3.5 and REC schedule 14, below is a list of key fields of Meter Technical Details (MTD) that will cause the MS to be proved if any or all of them are changed whilst the MS is energised:

- Outstation Id;
- Meter Id (serial number);
- Outstation number of channels;
- Measurement Quantity Id;
- Meter multiplier;
- Pulse multiplier;
- CT and / or VT Ratios; and
- Access to Metering Equipment at Password level 3.

Where any, or all of the above are changed whilst a MS is de-energised, a proving test shall be initiated as soon as that MS becomes energised and completed in the timescales set out in Appendix 4.6.5.

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4.6 Proving of Advanced Metering Systems

For Outstations which can only have a pulse multiplier of 1 as identified on the Elexon website (compliance and protocol approval list), a proving test is not required unless the Outstation is subject to a Complex Site arrangement or is separate from the Meter.

4.6.1 Reasons for a Proving Test

Subject to 3.5 a proving test shall be carried out on both main and check MS and shall be carried out in any of the following circumstances:

- As a result of new connection or Registration Transfers from CMRS to SMRS;
- Following a change of ADS but only in the event that the MTD was manually intervened;
- Following a change of SVA MOA appointment but only in the event that the MTD was manually intervened;
- Following a concurrent Change of Supplier and ADS but only in the event that the MTD was manually intervened;
- When a MS is reconfigured / replaced;
- When there is a Key field change (refer to Appendix 4.5);
- Where there has been a Key field change (refer to Appendix 4.5) whilst a site has been de-energised and the MS becomes energised;
- Where a feeder is energised for the first time; or
- Where a Complex Site is created, modified or removed, or where one of the above changes impacts on a MS which is part of a Complex Site.

‘Manually intervened (with regard to proving test)’ means that the MTD have been entered, re-entered or changed in a software system manually, i.e. the data has not been automatically entered into systems via receipt of a data flow.

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4.6.2 Methods of Proving

The SVA MOA shall decide from method 1 to 4 which method of proving test is appropriate in conjunction with the ADS. Complex Sites shall always be proved using the Complex Site Validation Test.

Method 1

The SVA MOA installs / reconfigures the MS and commissions the MS and records the HH Metered Data reading while on site. The SVA MOA then requests the ADS to collect HH Metered Data for the same Settlement Period as collected by the SVA MOA. The ADS then collects the HH Settlement Period requested and sends this raw HH Metered Data to the SVA MOA for comparison.

Method 2

The SVA MOA installs / reconfigures the MS and commissions the MS and records the HH Metered Data reading while on site. The SVA MOA then agrees with the ADS a date and time for the proving test. The SVA MOA visits the site a second time and collects and records the HH Metered Data reading for the specified HH Settlement Period requested of the ADS. The ADS collects for the same HH Settlement Period and sends this raw HH Metered Data to the SVA MOA for comparison.

Method 3

The SVA MOA installs / reconfigures the MS and commissions the MS and records the HH reading while on site. When at the office, the SVA MOA then uses its own data retrieval system to read the MS for the same HH Settlement Period as collected during the site visit. The SVA MOA then compares the HH Metered Data collected on site with the data retrieved at the office. The ADS collects for the HH Settlement Period of own choosing and sends this to the SVA MOA. The SVA MOA then uses its data retrieval system to read for the same HH Settlement Period as provided by the ADS.

Method 4

The SVA MOA installs / reconfigures the MS and commissions the MS and records the HH Metered Data reading while on site. The ADS collects for the HH Settlement Period of own choosing and sends this to the SVA MOA. The SVA MOA then uses either the manufacturer's software or software which has a relevant protocol approval in accordance with BSCP601 'Metering Protocol Approval and Compliance Testing' to read the Meter constants, pulse multiplier, serial number, etc., then collects Meter pulses or engineering data for the same HH Settlement Period as provided by the ADS and calculates the reading.

Complex Site Validation Tests

Complex Sites shall be proven in the same way as non-Complex Sites except the ADS shall provide the SVA MOA with aggregated data in accordance with the Complex Site Supplementary Information Form.

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4.6.3 Comparison of Data

After a proving test has been undertaken by any of the methods selected above, the SVA MOA then compares the data received from the ADS to determine a successful or a failed proving test.

4.6.4 Reporting

The SVA MOA shall report both successful and non-successful proving tests to relevant parties.

4.6.5 Proving Test / Re-Test Timescales.

Proving Test Timescales

A proving test may be undertaken prior to the appointment of the ADS and / or SVA MOA in the SMRS so long as there is agreement between the Supplier, SVA MOA, ADS and the customer.

The timescale for carrying out the proving test shall vary depending on the Code of Practice that the MS is assigned to.

It is not necessary that all the steps of the relevant processes are carried out on the same day; the requirement is that the proving test in its entirety is completed by the timescale specified below and subject to the exceptions listed below. The maximum timescale between the initiation of a proving test as a result of the circumstances in 4.6.1 and the successful completion of the proving test by the SVA MOA (by sending the D0214 Confirmation of Proving Tests) to the ADS is listed below for each CoP.

Re-Test Timescales

Where the proving test has failed, the SVA MOA shall initiate a re-test and the SVA MOA and ADS should ensure wherever possible that the timescale is the same as for the original proving test.

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Timescales

Code of Practice	WD to Complete Proving Test	WD to Complete Re-Test	Total
1	5	5	10
2	5	5	10
3	10	10	20
5	15	15	30
10	15	15	30

In the event that timescales are exceeded and the proving test is not completed, the process shall proceed to completion and an audit trail will be maintained by Supplier Agents in order to explain the delay.

4.6.6 Failed Proving Test

If a proving test has failed, then the Metered Data collected will be flagged as estimated i.e. 'E' flagged. This collected HH Metered Data will continue to be flagged as estimated until a successful proving test is completed.

The SVA MOA and ADS shall complete the re-test as soon as possible after failure of the original proving test. For a Code of Practice Three related MS, the timescale for completing the proving test may extend beyond the Initial Volume Allocation Run, in which case the rules for Code of Practice Five related MS's shall apply as far as data estimation is concerned.

4.6.7 Non-Completion of Proving Test

If a proving test is not completed so that proved data can enter Settlements by the due timescales, the actual retrieved HH Metered Data shall be used for Settlements and shall be 'A' flagged until a proving test has been completed. Once a proving test has been completed, the data will be flagged as either estimated or actual i.e. 'A' flagged depending on whether or not there was a successful proving test.

4.6.8 Proving Test Exemptions

If a proving test is not required as set out in section 3.5 then the actual retrieved HH Metered Data shall be used for Settlements and shall be 'A' flagged.

4.7 Inbound Data Comparison Check

Where data is to be sent automatically from the MS Outstation to the ADS instation for use in Settlement and following a successful Proving Test, the ADS shall perform a comparison check between one half hour of data received via the inbound method of communication and the equivalent half hour of data received by interrogating the Outstation. The results of the comparison test shall be recorded for audit purposes and any inconsistency shall be investigated in accordance with section 3.4.2. In the event

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of any inconsistency the ADS shall revert to interrogation of the Outstation. In addition, the ADS shall revert to interrogation of the Outstation, at any time, on request by the Registrant of the MS.

4.8 Guide to Complex Sites

A 'Complex Site' means; any site that requires a 'Complex Site Supplementary Information Form' to enable the ADS to interpret the standing and dynamic Metered Data relating to SVA MSs for Settlement purposes to be provided to the ADS in addition to the D0268 Half Hourly Meter Technical Details.

The primary electronic data flow between the SVA MOA and ADS for MTD is the D0268 data flow. In the case of Complex Sites, this data flow alone is insufficient to accurately describe to the ADS how to allocate the various channels of data that should be utilised in Settlements, therefore the D0268 data flow is supplemented with the 'Complex Site Supplementary Information Form' from the SVA MOA.

The SVA MOA will identify a Complex Site by providing a 'Complex Site Supplementary Information Form' in addition to the D0268 data flow to the ADS and Supplier and indicate in the D0268 data flow that the site is complex. This action shall alert the ADS to expect a 'Complex Site Supplementary Information Form' from the SVA MOA containing details of how to configure the data collection requirements and passing of information to BSC Central Systems and the Supplier. The 'Complex Site Supplementary Information Form' should be sent electronically or by any other method agreed. Where a Complex Site comprises multiple feeders an updated Complex Site Supplementary Information Form shall be sent following any change to the status of one or all feeders.

A Complex Site Validation Test in accordance with section 3.5.6 shall be carried out by the SVA MOA and ADS. The purpose of this test is to verify that the Complex Site Supplementary Information Form has been correctly interpreted by the ADS. The information to be provided by the ADS shall be the aggregated volumes of all the relevant Outstation channels associated with the Complex Site. The SVA MOA will confirm the data provided is consistent with the complex rule or otherwise. If the SVA MOA confirms the data is accurate then the data shall be 'A flagged' otherwise it shall be 'E flagged'.

It is the responsibility of Suppliers to manage and co-ordinate their Agents to achieve compliance and to intervene should any issues arise.

The Supplier should identify to the SVA MOA which MSIDs relate to the Import energy and which MSIDs relate to the Export energy.

Where the Complex Site is subject to Shared Meter Arrangements, one D0268 data flow and therefore one 'Complex Site Supplementary Information Form' is required. The D0268 'Complex Site Supplementary Information Form' shall be sent by the SVA MOA to the ADS and the Primary Supplier. The Primary Supplier shall decide whether this information shall be copied to the secondary Supplier(s) and provide this information if required.

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In many cases, a Complex Site shall meet the conditions required to apply for a Metering Dispensation as described in BSCP32 'Metering Dispensations'. Where Complex Sites use a MS which is not fully compliant with the relevant Codes of Practice, a Metering Dispensation should be applied for via BSCP32. Once a Dispensation has been granted, the information shall be available for all future Suppliers, so that they shall have the ability to understand the metering configuration at the Complex Site. As part of the dispensation application process, the Supplier shall need to submit a simplified schematic diagram of the Complex Site connection arrangements and the proposed metering points; as required in BSCP32.

This Appendix 4.9.1 to 4.9.8 provides a non-exhaustive list of Examples of Complex Sites and non-Complex Sites. These examples illustrate the need to create rules that accurately describe the aggregation necessary to derive the total energy for a customer. The aggregation rule contains terms that define each metered quantity at each Meter Point and form part of the total energy. The SVA MOA is required to define the terms in the aggregation rule relative to the data.

The ADS is required to establish gross energy for the site for each Settlement Period. This is achieved by applying the aggregation rule to the metered data values. If the resultant value applied to the rule is positive, the site is Exporting, and the Import value is zero. Conversely, if the result is negative, then the site is Importing, and the Export value is zero. Where the resultant is zero, the site is neither importing nor exporting and both values shall be zero.

When the SVA MOA indicates Complex Site on the D0268 data flow, the SVA MOA is required to provide all the information necessary, via the 'Complex Site Supplementary Information Form', for the ADS to aggregate correctly. As part of the supplementary information, the SVA MOA is required to provide a single line diagram related to the MS. The single line diagram is mandatory and should be provided with each initial Complex Site Supplementary Information Form and each update to the Complex Site Supplementary Information Form following any change to the status of one or all feeders. The single line diagram could be sent either as an additional tab on the Complex Site Supplementary Information Form itself or as a separate document.

The 'Complex Site Supplementary Information Form' of the REC Metering Operations Schedule provides a means for the SVA MOA to convey the information necessary for correct aggregation.

Where Meter channel data is missing, incomplete or incorrect, the ADS should attempt to use the associated check data indicated on the REC Complex Site Supplementary Information Form.

Where duplicated Outstations are provided, two sets of the REC Complex Site Supplementary Information Form shall be provided each clearly indicating primary and secondary Outstations.

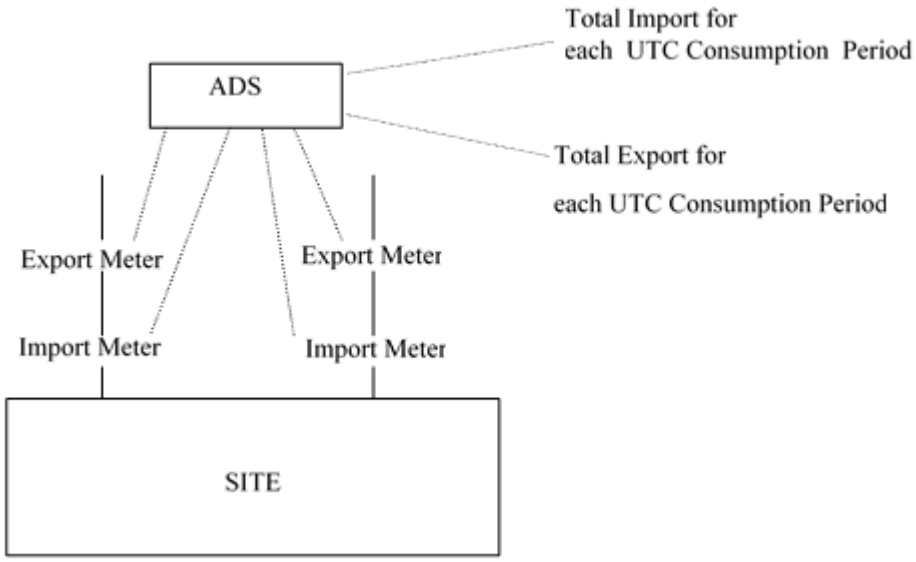
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4.8.1 Off-Site Totalisation

This is an example of a non-complex site, where multiple feeders exist. Each feeder is normally equipped with Code of Practice compliant Meter(s). HH data is collected and summated off-site by the ADS and submitted for Settlement as a single set of HH data.

Where both import and export meters are present, the export meter shall be totalled in the same way as import metering so that both calculations are gross.

For this reason, the netting of Export energy from Import energy should not be carried out. The BSC also states that there must be only one SVA MOA for a MS that measures both Export and Import active energy.



No. of Import MSIDs = 1

No. of Export MSIDs = 1

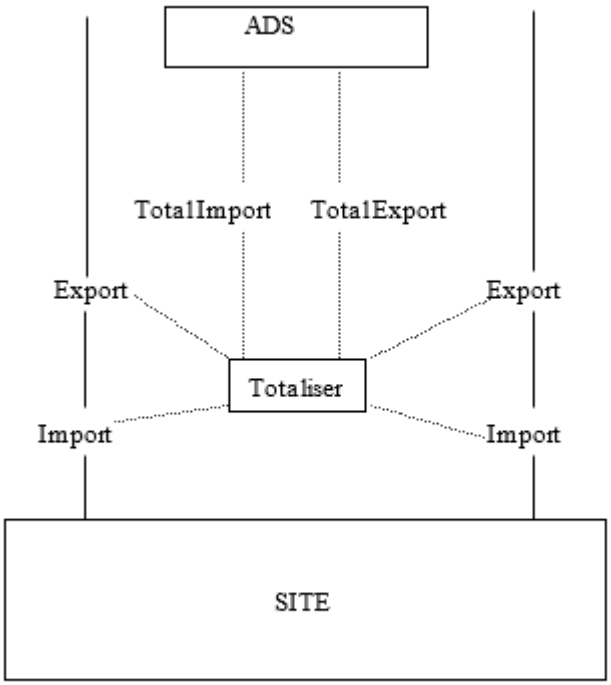
An alternative would be for each Import or Export Meter to have its own MSID. In this case, BSC Central Systems would carry out totalisation as opposed to the ADS, and the example above would have 2 Import MSIDs and 2 Export MSIDs. This arrangement would be more desirable since it is not a Complex Site and so would not require a Metering Dispensation.

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4.8.2 On-Site Totalisation.

This is an example of a non-complex site, where totalisation is possible by intelligent Outstations, this is permitted provided Import and Export data are provided separately to the ADS and then to BSC Central Systems for Settlement. In this example, two streams of data are sent from the on-site totaliser to the ADS, one set of UTC Period Consumption data for total Import and one set of UTC Period Consumption data for total Export.

Netting of Exports and Imports shall not be permitted at site.



No. of Import MSIDs = 1

No. of Export MSIDs = 1

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4.8.3 Customers on a Licence Exempt Distribution (Private) Networks requiring Third Party Access for a Supplier of their choice

This is an example where one or more customers within a Licence Exempt Distribution Network are supplied with electricity by a third party licensed Supplier and therefore customer have their own MSID. There are two ways the BSC can accommodate this:

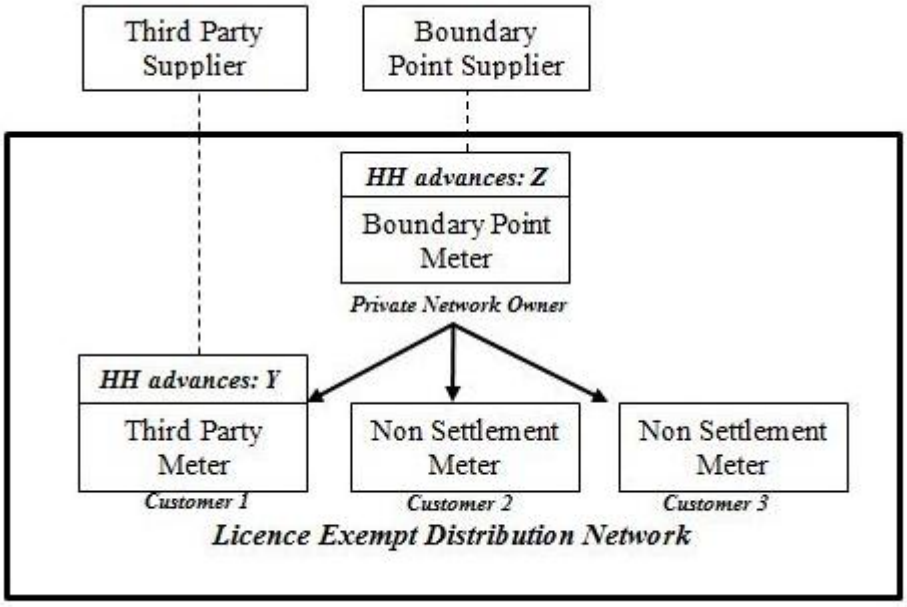
Full Settlement Option

If all customers on the private network have an MSID, a BSC Settlement Metering System with a Supplier of their choice, the private network becomes an 'Associated Distribution System'. MSIDs within an 'Associated Distribution System' will be similar to MSIDs connected to a Licensed Distribution Network, hence the same obligations shall be applicable.

Difference Metering Option

Where one or more customers (not all) have a BSC Settlement Metering System with a Supplier of their choice, this requires the deduction of the consumption through the Third Party Meter(s) from the Boundary Point Meter.

- Customer 1's HH advances: Y
- Private network owner's HH advances (Boundary Point Meter): Z - Y



In the context of a private network, the following terms are defined:

- Boundary Point Supplier: The Supplier appointed at the Boundary Point of the private network; usually appointed by the private network owner;
- Boundary Point Meter: Code of Practice (CoP) Compliant Settlement Meter at the Boundary Point;

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- Third Party Supplier: A Supplier appointed by a customer on the private network;
- Third Party Meter: CoP compliant Settlement Meter for the customer on the private network; and
- Non Settlement Meter: A meter that is not registered for Settlement purposes.

As the Third Party Meters will not be at the Boundary Point, a Metering Dispensation for each Metering System must be applied for if available, use any relevant Generic Metering Dispensation.

In order to maintain the integrity of Settlement under these arrangements it will be necessary for Registrants to:

- Be HH Settled;
- Appoint and maintain the same SVA MOA as the Boundary Point Supplier;
- Appoint and maintain the same ADS as the Boundary Point Supplier; and
- Account for electrical losses between the Defined Metering Point (DMP) and the Actual Metering Point (AMP). (DMP and AMP are definitions taken from the CoPs)

There are two options for how losses on a private network may be accounted for:

- By the appropriate application of factors either within the Meters as compensations or within the ADS system as constants identified within the complex site supplementary information (REC Complex Site Supplementary Information Form or
- No adjustment of Third Party Meter HH advances for losses on the private network. This means that all such losses remain the responsibility of the Boundary Point Supplier for BSC purposes (but does not preclude the private network owner from including an allowance for losses on the private network in the use of system charges made to Third Party Suppliers and/or customers).

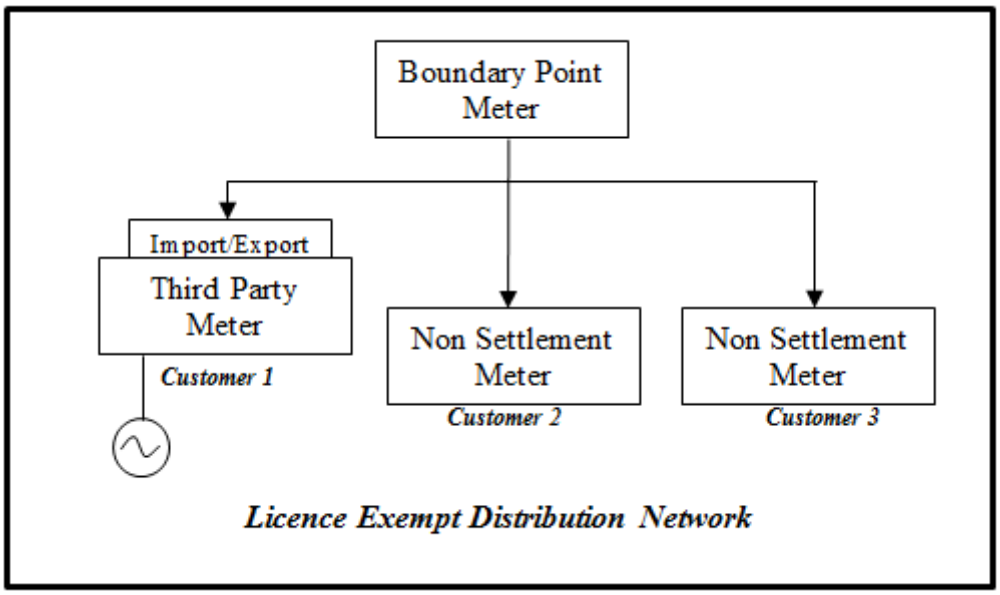
The SVA MOA at the Boundary Point of the private network will need to maintain the complex site supplementary information (REC Complex Site Supplementary Information Form) to allow the ADS to correctly difference the consumption between Boundary Point Meters and Third Party Meters.

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Export on Licence Exempt Distribution Network

On some private networks there may be on-site generation, and therefore the potential for individual customers and/or the private network as a whole to export as well as import. In such cases the possibility of Export will need to be taken into account in the differencing calculation performed by the single ADS, in order to accurately determine the energy generated that gets used within the private network or exported on the Distribution System, such that each customers can be Settled accurately. The required calculation is essentially the same in all cases, irrespective of the location of the generator within the private network.

The example below illustrates the case in which the customer with generation equipment has opted for third party supply and has an Export MSID.



In this example, one customer on the private network has embedded generation. If customer 1 generates 100kWh active energy and consumes 20kWh, this will leave 80kWh of Active Export onto the private network (which will be recorded on the customer's Export MSID). If the other customers on the private network consume 20kWh each, this will leave 40kWh recorded on the Boundary Point Meter as Active Export to the Distribution System. Therefore, customer 1 will have 80kWh of Active Export entering Settlement, and the ADS must accurately undertake the differencing to ensure that the 40kWh consumed on site by the two other customers is recognised as 40kWh Active Import and allocated to the Boundary Point Meter. The ADS will perform the differencing calculation as shown below:

Total Boundary Generation or Demand, $T_{Boundary}$ = (AE at Boundary Point Meter – AI at Boundary Point Meter) – (AE customer 1 – AI for customer 1)

If $T_{Boundary}$ is positive then the Boundary Point Supplier is a net Exporter, and $T_{Boundary}$ should be entered into Settlement as a positive quantity of Active Export.

If $T_{Boundary}$ is negative then the Boundary Point Supplier is a net Importer, and $T_{Boundary}$ should be entered into Settlement as a positive quantity of Active Import.

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The required calculation remains the same if it is one of the customers with a Non Settlement Meter who has the generation. In the above example, if the 100kWh of generation belonged to customer 3 rather than customer 1, the Settlement meters would record 40kWh of Active Export at the Boundary Point Meter, and 20kWh of Active Import from customer 1. The differencing calculation would be performed as above, and result in a Total Boundary Demand of 60kWh of Active Export.

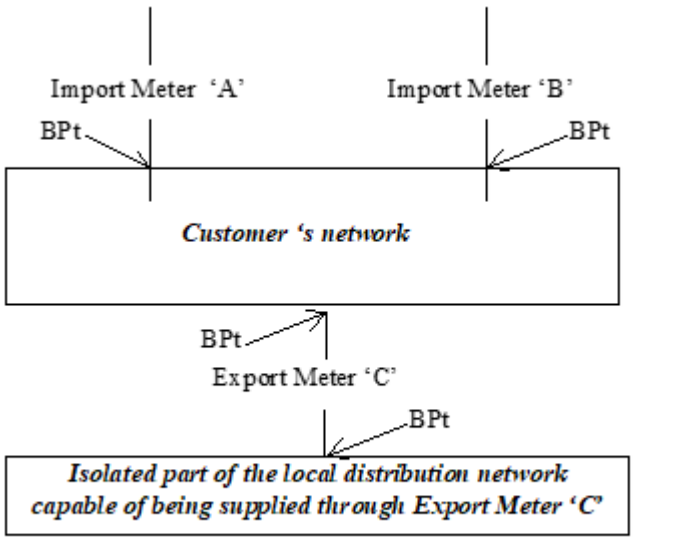
4.8.4 Feed-Through Sites at the Same Voltage with no Embedded Generation.

This is where a customer's network takes supply from the local Distribution System and feeds out from the customer's network at the same voltage to another part of the local Distribution System. In this example there is no embedded generation on the customer's network, and the isolated part of the local Distribution System is either incapable of being fed from any other source than via the customer's network, or would only be supplied from a different source (such as a restricted capacity feed from the main Distribution System) under abnormal conditions.

In this case, line losses within the customer network do not have to be considered since the feed into, and then out of, the customer network are assumed to have insignificant losses.

In this example, since there is no embedded generation, there is considered to be no Export. Import is derived as HH data:

Import Meter A + Import Meter B - Export Meter C.



BPt = Boundary Point

Import to the Customer's network = Import Meter 'A' + Import Meter 'B' – Export Meter 'C'

This is acceptable in SMRS since there is no on-site generation and an Export type Meter, Export Meter 'C', is measuring feed-through energy as opposed to embedded generation Export.

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No. of Import MSIDs = 1

No. of Export MSIDs = 0

Export Meter 'C' may have its own MSID allocated if it is also acting as a demand Meter to another customer, although this would be dealt with separately for Settlements.

4.8.5 Feed Through Sites at Different Voltages

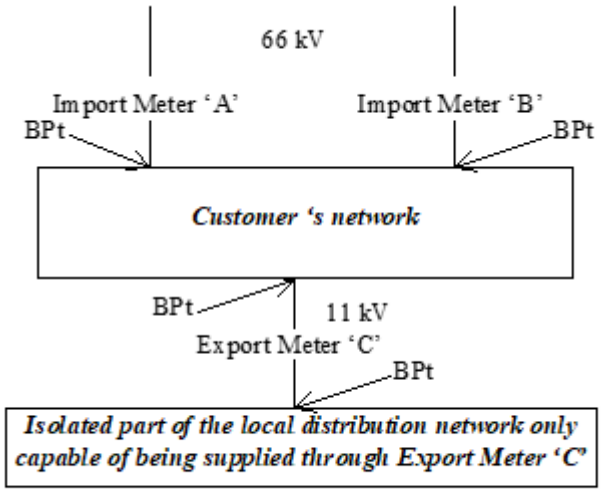
An example is where a factory takes supply at 66kV from the local Distribution System, and an 11kV feeder leaves the Complex Site to supply adjoining premises as part of the local Distribution System. In this example there is no embedded generation within the customer's network.

Voltage specific line losses can be applied to the HH data from Import Meter 'A', Import Meter 'B' and Export Meter 'C' to compensate for the losses incurred in the customer's network for passed through energy.

Totalisation would have to be carried out off-site by the ADS, and after adjustment for line losses, Import is derived as HH data:

Import Meter A + Import Meter B - Export Meter C.

Since there is no embedded generation, there is considered to be no Export.



Import to the Customer's network = Import Meter 'A' + Import Meter 'B' – Export Meter 'C'

This is acceptable in SMRS since there is no on-site generation and an Export type Meter, Export Meter 'C', is measuring feed through energy as opposed to embedded generation Export.

No. of Import MSIDs = 1

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No. of Export MSIDs = 0

Export Meter ‘C’ may have its own MSID allocated if it is also acting as a demand Meter to another customer, although this would be dealt with separately for Settlements.

4.8.6 Feed-Through Sites with Embedded Generation

Where a customer’s network has a feed through arrangement and has embedded generation within the Complex Site, the Complex Site demand and the true Export has to be determined.

It is assumed that the network supplied through Export Meter ‘C’ is connected to the local Distribution System through Import Meter ‘A’ so that customers connected to the isolated part of the local Distribution System preserve system time, i.e. both parts of the Distribution System are in synchronisation (Export generation protection shall prevent ‘island generating’).

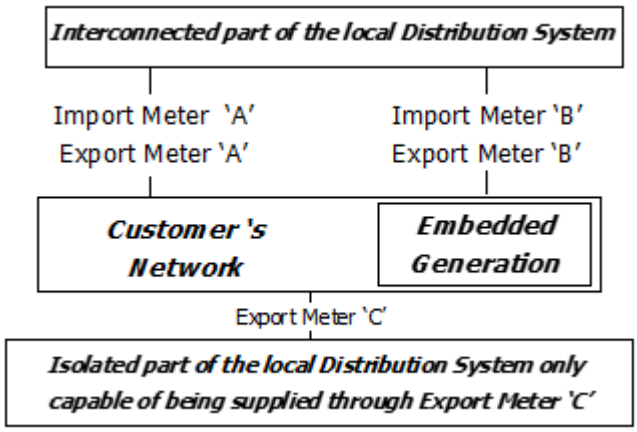
For any time period, for Settlement purposes, Customer’s total demand or total generation is derived from the Algorithm:

T_{CUST} = (Export ‘A’ – Import ‘A’) + (Export ‘B’ – Import ‘B’) + (Export ‘C’)

If T_{CUST} is positive then the Complex Site is a net Exporter.

If T_{CUST} is negative then the Complex Site is a net Importer.

Both Total Import and Total Export may be non-zero for any HH Settlement Period.



Import to the Customer’s network = Import Meter ‘A’ + Import Meter ‘B’ – Export Meter ‘C’

There is Embedded Generation. Export Meter ‘C’ can be getting its energy from either Import through ‘A’/’B’ or from generation. By definition there may be at least 1 Export MSID.

No. of Import MSIDs = 1 or n

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No. of Export MSIDs = 0 or n

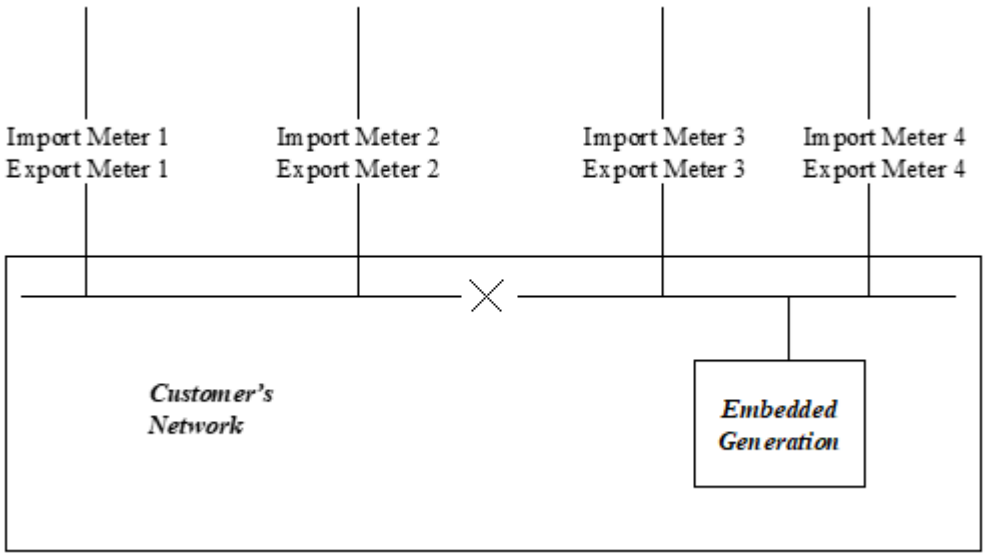
Export Meter 'C' may have its own MSID allocated if it is also acting as an Import Meter to another customer, although this would be dealt with separately for Settlements.

4.8.7 Separate Meter Points for Export and Import

In this example a customer is connected to a Distribution System via an intake busbar, with each feeder into the factory being separately metered, and with a section of busbar on two feeders having embedded generation connected.

In this case, each Import and Export Meter must be either provide separate sets of HH data into Settlement, or if totalisation is achieved either on-site or by the ADS, Import and Export HH data must be totalled separately and separate Import and Export sets of HH data provided to Settlement. **Export HH data must not be netted off Import HH data, or vice versa.**

Since this is an extension of the single feed Import / Export arrangement, this does not have to be considered as a 'Complex Site'.



Where totalisation is used:

No. Import MSIDs = 1

No. Export MSIDs = 1

Where totalisation is not used:

No. Import MSIDs = 4

No. Export MSIDs = 4

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4.8.8 Network Flows Impacting Settlement Meters

In some cases it is possible for electrical flows (either on the distribution system or the customer's own network) to be recorded by the Settlement Meters unintentionally. These will usually appear as additional Imports and Exports and usually on different feeders. The diagrams below illustrate this principle. It should be noted that these flows may occur under exceptional circumstances only. It would not be reasonable to regard all multi feeder sites as Complex Sites in anticipation that such flows may exist at some point in the future.

Figure 1 shows an example where a distribution network flow passes through Settlement Meters M2 (as Import) and M1 (as Export). This is in addition to any flow from the distribution system to the customer. Therefore if this site was not considered a Complex Site then the resulting addition of Import Meter readings would not be correct because of the presence of distribution flows through Settlement Meters.

The aggregation rule for such a site might be:

Import = (M1 AE + M2 AE) – (M1 AI + M2 AI)

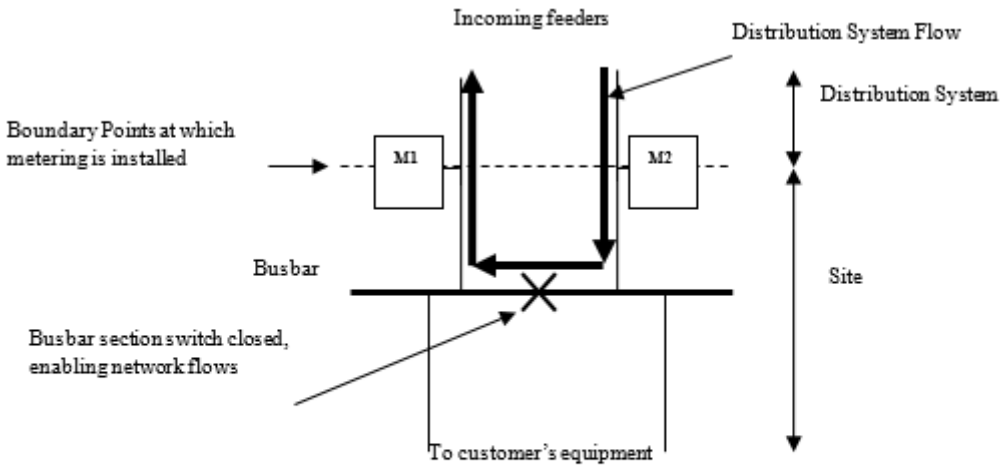


Figure 1. Distribution Network Flows

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Similarly Figure 2 shows an example where the customer is generating a flow which passes through Meter M2 as Export and back into its system via Meter M1 as Import. Exports as well as Imports are accounted for in Settlements therefore it is necessary to apply aggregations to both the Import MSID as well as the Export MSID.

The aggregation rules for such a site might be:

Import MSID = (M1 AE + M2 AE) – (M1 AI + M2 AI) and

Export MSID = (M1 AE + M2 AE) – (M1 AI + M2 AI)

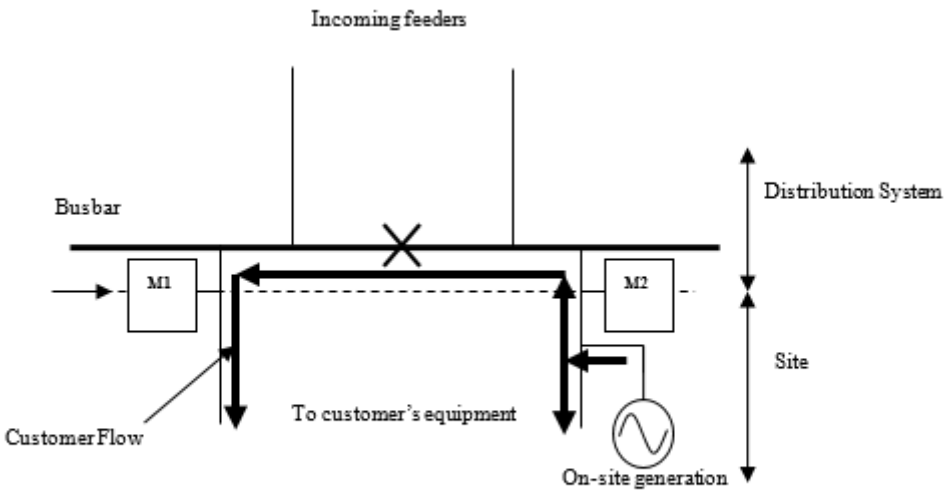


Figure 2. Customer Network Flows

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4.9 Service Levels

The ADS shall perform the services to be performed by it as ADS pursuant to this BSCP to standards which shall be at least as good as those specified in this Appendix.

ADS processes must be capable of providing statistical information to enable monitoring of performance by the Panel in accordance with this Appendix.

This Appendix has effect for the purposes of this BSCP to determine:

i) the functions to be performed by the ADS, as described in columns 2 to 5 of the table set out in this Appendix, in respect of which minimum standards of performance are required;

ii) the minimum standards of performance (Service Levels) relating to the functions referred to in paragraph (i) above, as described in columns 6 and 7 of the table set out in this Appendix; and

iii) a reference number (Serial) in respect of each Service Level, as described in column 1 of the table set out in this Appendix;

iv) the method by which the ADS's adherence to the Service Levels is to be measured, as described in column 8 of the table set out in this appendix.

For the purposes of this Appendix:

(a) the references in column 3 of the table to a numbered section are to the relevant section in this BSCP;

(b) the references in column 4 of the table to a sub-process/data flow are to the relevant sub-process or data flow as described in this BSCP;

(c) references to "Timescales" are to those specified by the relevant BSCP and, if applicable, the SVAA Calendar;

(d) references to a certain percentage of tasks being completed within a certain specified period are to be read as a reference to that percentage of tasks being completed during an applicable reporting period as specified by the relevant BSC procedure;

(e) references to an item being "valid" are to an item which conforms to an applicable SVA Data Catalogue item;

(f) reference to an item being in "correct format" are to an item which complies with the applicable SVA Data Catalogue format or the format specified by the relevant BSCP;

(g) references to an item being "accurate" are to an item being correctly recorded; and

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(h) in calculating percentages, the performance figures shall be rounded up or down to the nearest one decimal place (with 0.05 being rounded upwards).

AMENDMENT RECORD – BSCP702

Version	Date	Description of Change	Changes Included	Mod/Panel/Committee Ref.
1.0	22/09/2025	22 September 2025 Non-Standard Release	P478	Panel 355A/02
2.0	06/11/2025	06 November 2025 Standard Release	CP1611	ISG294/09 SVG296/07 PAB (via ex-committee)

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