Redlined BSCP502 text for CP1469 'Changes to support the implementation of the SRAG's recommendations

This CP proposes changes to sections 1, 3 and 4. We have redlined these changes against Version 25.0

We have also taken the opportunity to make some housekeeping changes. Specifically, we have removed the hyphen from Non-Half Hourly throughout the document.

There is no impact on any other part of this document for this CP.

Amend section 1 as follows:

1. Introduction

1.1 Purpose and Scope of the Procedure

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

It describes the key interfaces and timetables for sending appropriate HH SVA Metering System (MS) data values to the appropriate HH Data Aggregator (HHDA) 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).

This BSC Procedure, in respect of Unmetered Supplies, covers the validation rules and data estimation for half hourly data; all other requirements, including data collection, are covered in BSCP520.

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

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

This BSC Procedure should also be used in conjunction with BSCP68 for the Transfer of Registrations of Third Party Generator / Generating Plant 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.

This BSC Procedure also explains how HHDCs must estimate Demand Disconnection Volumes as and when required following a Demand Control Event.

1.2 Main Users of Procedure and their Responsibilities

This BSC Procedure should be used by Suppliers and their agent(s) (including Meter Operator Agents (MOAs), HHDAs and HHDCs), the SVA Agent, and by each Licensed Distribution System Operator (LDSO) and the Transfer Co-ordinator.

The HHDC shall perform the responsibilities and obligations set out in the Party Agent Service Line PSL100 and this BSC Procedure for a SVA MS for all Settlement Days for which the HHDC is appointed by the Supplier in a SMRS.

The HHDC shall use Qualified systems and processes so approved in accordance with BSCP537 in carrying out the collection of data from SVA Metering Equipment.

The HHDC shall ensure that its systems and processes so approved in accordance with BSCP537 used for the purposes of collecting data have protocols for every Meter type ~~(including an Equivalent Meter)~~ for which it is responsible for data retrieval. This obligation excludes Meter types which are compliant with the Smart Metering Equipment Technical Specifications (SMETS) and from which Half Hourly data is retrieved, or sourced, by the Supplier.

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

On change of HHDC to a new HHDC or a new NHHDC and irrespective of whether there is a Change of Measurement Class (CoMC), the HHDC shall retain responsibility for data collected for all Settlement Days that he was appointed by the Supplier in SMRS.

The HHDC shall send ~~active~~ Half Hourly energy data to the HHDA in kWh and in clocktime. Where Half Hourly Data is provided by the Supplier to the nearest Watt hour (Wh), the HHDC shall send the data to the HHDA with the same precision.

Where the HHDC has not received data in sufficient time to enable it to fulfil its obligations as HHDC, it shall request from the Supplier or its agent that the data that has not been received be supplied forthwith.

The HHDC 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 HHDC's appointment as the HHDC. The plans, which the HHDC undertakes to implement on any such expiry or termination, will include the transfer of data and other information to an incoming HHDC appointed by the Supplier in accordance with sections 3.2.4 and 3.2.7 of this BSCP.

On expiry or termination of the HHDC's appointment as HHDC in respect of a SVA MS the outgoing HHDC shall continue to retain data and support the Trading Disputes process, as specified in 10.2 and 10.3 of PSL100, for all Settlement Days that he was appointed by the Associated Supplier in SMRS.

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

The HHDC shall have the capability to collect and record all 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 all those SVA MS for which it is responsible and for which the Meter Technical Details indicate that the Meter is configured to record such data.

The HHDC'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 HHDC is appointed (with allowance for growth) for the retention periods specified.

The HHDC must only provide Suppliers with data relating to SVA MSs against which the Suppliers are contracted with the HHDC, and must ensure that LDSOs are not provided with data relating to SVA MSs supplied by the distribution networks of other LDSOs.

Where the same Metering Equipment (ME) is being utilised for the measurement of the Import and/or Export Active Energy for more than one MSID at a site, the Supplier(s) shall ensure that the same MOA is appointed for all of the MSIDs involved to comply with the requirements of the Code. Similarly, where a common Outstation is being utilised for the Import and/or Export Active Energy for more than one MSID, the Supplier(s) shall ensure that the same HHDC is appointed for all of the MSIDs involved. These obligations shall be fulfilled by mutual agreement between the Suppliers involved, except in the case of there being 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.

When a Demand Disconnection occurs as part of a Demand Control Event, the HHDC must provide Data Aggregators with a Settlement Period level estimate of the Demand Disconnection Volume for each impacted MSID where they are the appointed DC.

The SVAA will be managing the Market Domain Data in addition to performing the Supplier Volume Allocation role, and therefore SVAA is the Market Domain Data Manager (MDDM).

1.3   Use of the Procedure

The remaining sections in this document are:

Section 2 - This section is no longer in use.

Section 3 - Interface and Timetable Information: this section defines in more detail the requirements of each business process. In addition, there may be references to 'D' (Data Transfer Catalogue) 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 BSC Procedure 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 requirements of HHDCs under the Code can be found in BSC Sections J 'Party Agents' and S 'Supplier Volume Allocation'. An overview of these requirements is as follows:

The functions of a HHDC are defined in BSC Section J as follows: to retrieve, validate and process metering data from Half Hourly Meters and Equivalent Meters in respect of SVA Metering Equipment in accordance with the provisions of Section S.

HHDCs are subject to the Qualification Requirements of Section J.

The principal functions of a HHDC are defined in S2.3.1 as:

(a)   to collect metered data;

(b)   to validate data and provide reports;

(c)   to enter validated metered data into the relevant data collection system;

(d)   to maintain relevant standing data;

(e)   to undertake Meter Advance Reconciliation to reconcile half hourly energy values with meter advances;

(f)   to sum register level data to produce SVA Metering System level data;

(g)   to provide SVA Metering System level data to the relevant Half Hourly Data Aggregator; and

(h)   to provide validated metered data and SVA Metering System reports to the relevant Supplier and the relevant Distribution System Operator.

Where data retrieval is performed by the Supplier (from Meters that comply with the SMETS) the principal functions of the Supplier are:

(a)   to collect metered data;

(b)   to validate and estimate data where validation is not being undertaken by the HHDC; and

(c)   to provide SVA Metering System level data to the relevant HHDC.

1.5   Associated BSC Procedures

BSCP01   Overview of Trading Arrangements

BSCP11   Trading Disputes

BSCP32	Metering Dispensation
BSCP68	Transfer of Registration between CMRS and SMRS
BSCP503	Half Hourly Data Aggregation for Metering Systems Registered in SMRS
BSCP504	Non- Half Hourly Data Collector for SVA Metering Systems Registered in SMRS
BSCP508	Supplier Volume and Allocation Agent
BSCP515	Licensed Distribution
BSCP514	SVA Meter Operations for Metering Systems Registered in SMRS
BSCP520	Unmetered Supplies Registered in 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

1.6   Acronyms and Definitions

1.6.1   Acronyms

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

BSC	Balancing and Settlement Code
BSCP	BSC Procedure
CMRS	Central Meter Registration Service
CoMC	Change of Measurement Class
Complex Site	See Appendix 4.9
CoP	Code of Practice
CoS	Change of Supplier
CT	Current Transformer
DC	Data Collector
DCC	Data Communications Company
DSBR	Demand Side Balancing Reserve
DTN	Data Transfer Network
EAC	Estimated Annual Consumption
EM	Equivalent Meter
HH	Half Hourly
HHDA	Half Hourly Data Aggregator
HHDC	Half Hourly Data Collector
HHU	Hand Held Unit
Id	Identifier
kvarh	kilovoltamperes reactive hour
kWh	Kilowatt hour
LDSO	Licensed Distribution System Operator
LLF	Line Loss Factor
MAR	Meter Advance Reconciliation
MDD	Market Domain Data
MDDM	Market Domain Data Manager
MOA[1]	Meter Operator Agent
MS	Metering System
MSID	Metering System Identifier
MTD	Meter Technical Details
NHH	Non-Half Hourly
NHHDC	Non-Half Hourly Data Collector

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[1] MOA refers to the HH MOA unless otherwise stated.

Ref	Reference
SFIC	Systems Fault Information Centre
SMETS	Smart Metering Equipment Technical Specifications
SMRS	Supplier Meter Registration System
SSD	Supply Start Date
SVAA	Supplier Volume Allocation 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 Half Hourly Metering Systems'.

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

'Equivalent Meter' is defined in BSC Section U and BSCP520. It is the hardware and software used to calculate half hourly consumption for an Unmetered Supply.

Amend section 3.2 as follows:

3.2.1   New connection or Registration Transfers from CMRS to SMRS[2] - metered supply.

REF	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
3.2.1.1	On appointment of new HHDC.	Send appointment details for MS, including start date and IDs of HHDA and MOA.	Supplier.	HHDC.	D0148 Notification of Change to Other Parties. D0155[3] Notification of New Meter Operator or Data Collector Appointment and Terms. D0289 Notification of MC/EAC/PC [4]. D0302 Notification of Customer Details.	Electronic or other method, as agreed.
3.2.1.2	Upon receipt of SVA MS details.	Record SVA MS details. Validate SVA MS details received from the Supplier against MDD received from the SVAA.	HHDC.		Sufficient details of HHDC's appointment in respect of a SVA MS to enable the HHDC to perform its HHDC functions. These details shall include the relevant SVA MSID and the Identifiers for the MOA and, as the case may be, the HHDA, the LDSO and the applicable GSP Group. The details shall also include the Settlement Days for which the HHDC and HHDA are appointed.	Internal Process.
3.2.1.3	Within 5 WD of the installation and commissioning of MS.	Send initial Meter register readings Send MTD and Energisation Status.	MOA[5].	Supplier / HHDC / LDSO HHDC	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.

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[2] If a Registration Transfer from CMRS, proceed in accordance with BSCP68, Section 3.2

[3] The D0155 can be used to inform the HHDC of the Supplier read schedule for SMETS Meters by notifying the Retrieval Method of 'S' and an appropriate value of Regular Reading Cycle.

[4] Refer to Appendix 4.2 for rules on when the EAC should be used by the HHDC for data estimation purposes.

[5] The MOA shall provide the energisation status at MS or feeder level. If the energisation status is provided at feeder level, the HHDC shall assume that the MS is de-energised if all feeders are de-energised, and energised if one or more feeders is energised

REF	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
3.2.1.4	On agreement of reading schedule with Supplier.	Send Meter reading schedule.	HHDC.	Supplier, LDSO	D0012 Confirmation of the Inclusion of the Metering Point in the Reading Schedules.	Electronic or other method, as agreed.
3.2.1.5	From HHDC appointment start date.	Collect HH Metered Data.	HHDC.		Refer to Section 3.4.1.	Internal Process.
3.2.1.6	In accordance with timescales in Appendix 4.6.	Prove MS.	MOA.	HHDC.	Refer to Appendix 4.6.	Electronic or other method, as agreed.

3.3 Metering Activities.

Amend section 3.3 as follows:

3.3.1 Change of Measurement Class from Non -Half Hourly to Half Hourly SVA Metering System, coincident with change of Supplier, HHDC, HHDA and MOA[6].

REF	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
3.3.1.1	Prior to CoMC date change[7] or Within 5 WD of coincident CoS and CoMC change[8].	Send notification of appointment, including start date and associated Agent details.	New Supplier.	HHDC.	D0148 Notification of Change to Other Parties. D0155 Notification of New Meter Operator or Data Collector Appointment and Terms. D0289 Notification of MC/EAC/PC. D0302 Notification of Customer Details.	Electronic or other method, as agreed.
3.3.1.2	Within 5 WD of change or Within 5 WD of coincident CoS and CoMC change.	Send initial Meter reading(s) with date and time in GMT. Send MTD	HHMOA.	Supplier / HHDC[9] / LDSO. HHDC	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.
3.3.1.3	On agreement of Meter reading schedule with Supplier following 3.3.1.2.	Send Meter reading schedule.	HHDC.	Supplier, LDSO	D0012 Confirmation of the Inclusion of the Metering Point in the Reading Schedules.	Electronic or other method, as agreed.
3.3.1.4	From HHDC appointment start date.	Collect HH Metered Data.	HHDC.		Refer to Section 3.4.1.	Internal Process.
3.3.1.5	In accordance with timescales in Appendix 4.6.	Prove MS.	HHMOA.	HHDC.	Refer to Appendix 4.6.	Electronic or other method, as agreed.

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[6] This process can also be used where there is only a CoMC, not a coincident CoS and CoMC.

[7] Where there is a CoMC only, the HHDC shall be appointed from the date of the actual CoMC.

[8] Where there is a coincident CoS and CoMC, the HHDC shall be appointed from the Supply Start Date (SSD).

[9] Meter changes do not normally occur at midnight, therefore the HHDC should estimate consumption (in accordance with Appendix 4.2) from midnight of his appointment date until confirmation of the Meter change is received. To prevent "double counting" of consumption, the HHDC shall use a 'zero' advance between midnight on the SSD and the time of the Meter reading provided by the HHMOA.

3.3.2 Change of Measurement Class from Half Hourly to Non -Half Hourly SVA Metering System coincident with change of Supplier, NHHDC, NHHDA and MOA[6].

REF	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
3.3.2.1	Before planned date of change of measurement class.	Send Id of new NHHMOA and request to collect final HH Metered Data.	Current Supplier.	HHDC.	D0005 Instruction on Action.	Electronic or other method, as agreed.
3.3.2.2	Within 3 WD of 3.3.2.1 and before planned date of change of measurement class.	Arrange date by when final HH Metered Data should be collected. (Note that for the day of the change consumption for the half hour periods after the time of the change are set to zero).	HHDC.	NHHMOA.	D0005 Instruction on Action.	Electronic or other method, as agreed.
3.3.2.3	On date and time agreed in 3.3.2.2.	Collect final HH Metered Data.	HHDC.			Internal Process.
3.3.2.4	Immediately following 3.3.2.3.	Confirm final HH Metered Data collection.	HHDC.	NHHMOA.	The MOA will telephone the HHDC when the MOA is on site or is ready to reconfigure the MS remotely. Following the HHDC collecting the data, the HHDC will provide confirmation to the MOA.	Telephone.
3.3.2.5	Within 5 WD of receipt of final Meter register reading.	Send final Meter register reading.	HHMOA.	HHDC / Supplier.	D0010 Meter Readings.	Electronic or other method, as agreed.
3.3.2.6	On termination of appointment of HHDC.	Send appointment termination date for MS.	Current Supplier.	HHDC.	D0151 Termination of Appointment or Contract by Supplier.	Electronic or other method, as agreed.

REF	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
3.3.2.7	If no Meter register reading received within 10 WD of CoMC and initial reading required[10]	Request initial Meter register reading.	NHHDC	Supplier		Post / Fax / Email
3.3.2.8	Within 10 WD of 3.3.2.7	Send initial Meter register reading.	Supplier	NHHDC	D0010 Meter Readings	Electronic or other method as agreed.

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[10] An initial Meter reading is required for a co-incident CoS and CoMC. It is optional for a CoMC only.

3.4   Collection Activities

Amend section 3.4 as follows:

3.4.1   HHDC collects, validates and sends consumption data for SVA Metering Systems where Half Hourly data is not sourced by the Supplier

See section 3.4.6 for the process where the HHDC obtains data from the Supplier, processes and sends consumption data for SVA Metering Systems enrolled by the Data Communications Company (DCC).

REF	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
3.4.1.1	As appropriate.	Collect[11] and validate HH Metered Data and check items at site.	HHDC.		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.	HHDC.			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.	HHDC.			Internal Process.

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[11] The HHDC shall retrieve data from the Meter as soon as possible before historical data is overwritten.

REF	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
3.4.1.4	Following visiting site and in accordance with timescales in Appendix 4.1 and 4.8.	Provide relevant reports.	HHDC.	SFIC. Supplier, MOA. Supplier, MOA and (if requested) LDSO.	Refer to Appendix 4.1 and where relevant Appendix 4.8. D0135 Report Possible Safety Problem. D0136 Report to Supplier of Possible Irregularity. D0008 Meter Advance Reconciliation Report in accordance with Appendix 4.8.	Electronic or other method, as agreed.
3.4.1.5	When fault suspected with metering or communications equipment.	Investigate and report any faults detected.	HHDC.		Refer to Section 3.4.2.	Internal Process.
3.4.1.6	Within 2 WD of detecting consumption on de-energised metering or if maximum permissible energy exceeds that allowed.	Report any consumption detected on de-energised metering and escalate any occurrences where the energy recorded, for any Settlement Period, exceeds the maximum permissible on energised metering.	HHDC.	Supplier, MOA.	Refer to Appendix 4.1 D0001 Request Metering System Investigation.	Internal Process. Electronic or other method, as agreed.
3.4.1.7	When maximum permissible energy exceeds that allowed.	Send notification of action to be taken.	Supplier.	HHDC.	D0005 Instruction on Action. The HHDC will be instructed to validate the actual data or to replace the actual data with estimated successfully validated data.	Electronic or other method, as agreed.
3.4.1.8	Following 3.4.1.7.	Undertake action requested by Supplier or if no response provided by Supplier apply the rules defined in Appendix 4.1.	HHDC.			Internal Process.

REF	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
3.4.1.9	If no response received from Supplier and following 3.4.1.8.	Report any occurrences where estimated consumption data used because energy recorded exceeds that allowed and Supplier has not provided an appropriate course of action.	HHDC.	BSCCo.	P0208 Estimation Due To High Energy Recorded.	Manual.
3.4.1.10	Where required.	Provide operational data or additional information where the exceptions identified in Appendix 4.2 are met.	Supplier.	HHDC.	In accordance with Appendix 4.2.	Electronic or other method, as agreed.
3.4.1.11	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 defined in 3.4.1.6.	Estimate consumption data. Send estimated consumption data report.	HHDC.	Supplier, LDSO.	Refer to Appendix 4.2. D0022 Estimated Half Hourly Data Report.	Internal Process. Electronic or other method, as agreed.
3.4.1.12	As agreed with Supplier and prior to next Volume Allocation Run and if requested by Supplier to use data following 3.4.1.7.	Validate consumption data (actual and estimated).	HHDC[12].		Refer to Appendix 4.1.	Internal Process.
		Send valid consumption data (including data for Unmetered Supplies)[13]	HHDC	HHDA.	D0036 Validated Half Hourly Advances for Inclusion in Aggregated Supplier Matrix.	Electronic or other method, as agreed.

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[12] The HHDC shall provide data for a re-run authorised and timetabled by the Panel, as required.
[13] The HHDC shall transfer the complete active data for a SVA MSID to the HHDA to enable the Supplier to meet its obligations under the SVAA Calendar. The HHDC shall send to the HHDA:
    (i) for the Interim Information Volume Allocation, data for all Meter Period Values for all SVA MSIDs, which data may be actual or estimated; and
    (ii) for the Initial Volume Allocation and for reconciliations subsequent to Initial Volume Allocation, updates of this data where the data has changed

REF	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
		Send valid consumption data (including data for Unmetered Supplies)	HHDC.	Supplier.[14]	D0036 Validated Half Hourly Advances for Inclusion in Aggregated Supplier Matrix. AND/OR D0275 Validated Half Hourly Advances.	Electronic or other method, as agreed.
	On a monthly basis, subject to availability.[15]	Send cumulative register read.	HHDC.	LDSO.	For Metering Systems registered to any either Measurement Class F or G: D0010 Meter Readings.	Electronic or other method, as agreed.
		Send valid consumption data (including data for Unmetered Supplies).	HHDC.	LDSO.[14]	For Metering Systems registered to any other Measurement Class: D0036 Validated Half Hourly Advances for Inclusion in Aggregated Supplier Matrix. AND/OR D0275 Validated Half Hourly Advances.	Electronic or other method, as agreed.

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[14] The dataflow(s) to be used shall be those as agreed between the sender and recipients.
[15] HHDCs only need to send the D0010 when the HHDC has actual read data. If data cannot be obtained, then HHDC should not send estimated data to the LDSO.

3.4.3 HH 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 HHDC.	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.	MOA.			
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.	MOA.	HHDC.[16]	D0005 Instruction on Action.[17]	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 HHDC.	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.	MOA.			
3.4.3.6	If fault remains unresolved 15 WD after receipt of D0001.	Notify that the fault remains unresolved.	MOA.	HHDC.	D0005 Instruction on Action.	Electronic or other method, as agreed.
3.4.3.7	As soon as possible after 3.4.3.6.	Send update on investigation.[18]	HHDC.	Supplier.	Details of update.	As agreed.

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[16] The HHDC should contact and liaise with the Supplier if appropriate.

[17] The D0005 'Instruction on Action' should always be sent containing the high level points so that an audit trail can be maintained. For complex cases where the D0005 is not sufficient, or where requested by the HHDC, further details can be given in the fault resolution plan. In these instances the sending of the fault resolution plan should be referred to in the D0005. Any other correspondence between the Supplier, HHMOA and HHDC which is required to resolve the fault should be sent in a format and by a method agreed by those Participants involved.

[18] The Supplier and HHDC should agree whether this will be via normal weekly or monthly reporting, or by a specific report

3.4.6 HHDC obtains data from the Supplier, processes and sends consumption data for SVA Metering Systems enrolled by the Data Communications Company (DCC)[19].

See section 3.4.1 for the process where the HHDC collects, validates and sends consumption data for SVA Metering Systems where Half Hourly data is not sourced by the Supplier.

REF	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
3.4.6.1	As appropriate	Send Service request via DCC to retrieve data from smart Meter profile data log	Supplier	DCC	HH profile data from smart meter	DCC Service Request
3.4.6.2	When fault suspected with metering or communications equipment.	Supplier investigates and arranges for MOA to resolve	Supplier	Refer to Section 3.4.3.	Internal Process.	When fault suspected with metering or communications equipment.
3.4.6.3	Within 2 WD of detecting consumption on de-energised metering or if maximum permissible energy exceeds that allowed.	Report any consumption detected on de-energised metering and escalate any occurrences where the energy recorded, for any Settlement Period, exceeds the maximum permissible on energised metering.	Supplier	MOA.	Refer to Appendix 4.1 D0001 Request Metering System Investigation.	Internal Process. Electronic or other method, as agreed.
3.4.6.4	If validation and estimation undertaken by Supplier and prior to next Volume Allocation Run	Validate consumption data. When data is invalid or cannot be retrieved: Estimate consumption data. .	Supplier	Refer to Appendix 4.1 and 4.2	Internal Process.	

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[19] These processes can also be used where Suppliers obtain Half Hourly data from SMETS compliant Meters using alternative service providers to the HHDC or DCC

REF	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
3.4.6.5	Following 3.4.2.4	Send validated consumption data (actual and estimated)	Supplier	HHDC	Validated DXXXX Half Hourly Advances for Inclusion in Aggregated Supplier Matrix or DYYYY Half Hourly Advances UTC	Electronic or other method, as agreed.
3.4.6.6	If Supplier not validating the HH Metered data and prior to next Volume Allocation Run	Send non-validated consumption data (actual and estimated)	Supplier	HHDC	Non-validated DXXXX Half Hourly Advances for Inclusion in Aggregated Supplier Matrix or DYYYY Half Hourly Advances UTC or raw profile log data with other information as required	Electronic or other method, as agreed.
3.4.6.7		Validate consumption data.	HHDC	Refer to Appendix 4.1 and 4.2	Internal Process.	
3.4.6.8	When data is invalid, cannot be retrieved by Supplier, is missing for a HHDC appointment or if requested by Supplier to estimate consumption or if energy exceeds that allowed by more than the limit for SMETS Meters defined in 4.2.	Estimate consumption data. Send estimated consumption data report.	HHDC.	Supplier,	Refer to Appendix 4.2. D0022 Estimated Half Hourly Data Report.	Internal Process. Electronic or other method, as agreed.

REF	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
3.4.6.9		Send valid consumption data	HHDC	HHDA.	DXXXX Half Hourly Advances for Inclusion in Aggregated Supplier Matrix.	Electronic or other method, as agreed.
3.4.6.10		Send valid consumption data	HHDC.	Supplier.	DXXXX Half Hourly Advances for Inclusion in Aggregated Supplier Matrix.	Electronic or other method, as agreed.
3.4.6.11	On a monthly basis, subject to availability	Send cumulative register read.	Supplier/	LDSO.	For Metering Systems registered to either Measurement Class F or G: D0010 Meter Readings.	Electronic or other method, as agreed.

3.5 Proving a Metering System[20, 21].

Amend section 3.5.1 as follows:

3.5.1 Proving of a Metering System by Method 1. [23]

REF	WHEN [22] [23]	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.	MOA.	HHDC.	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 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).	HHDC.		As a minimum the HHDC shall obtain the data required by the 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 [24]. If unable to collect metering data for Settlement Period requested, send alternative Settlement Period HH Metered Data.	HHDC.	MOA.	D0001 Request Metering System Investigation. D0003 Half Hourly Advances.	Electronic or other method, as agreed.

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[20] The MOA shall decide what proving method is appropriate in conjunction with the HHDC.

[21] MS assigned to Measurement Class F , or where Half Hourly data is sourced by the Supplier from a Meter compliant with the SMETS, are exempt from proving tests.

[22] All timescales in this process are undertaken in accordance with Appendix 4.5.

[23] In the case of a Registration Transfer from CMRS to SMRS, the proving test shall be performed in accordance with the timescale described in BSCP68, Section 3.2.

[24] The HHDC shall use all reasonable endeavours to collect the data for the Settlement Period requested.

4. Appendices

Amend section 4 as follows:

4.1 Validate Meter Data <u>for SVA Metering Systems not enrolled by the DCC</u>.

Unless the HHDC is informed by the MOA that the retrieved data is incorrect, the HHDC shall accept Meter Period Value data collected from the Meter for validation processing.

The HHDC shall record all occurrences where data entering Settlements has been changed following instruction from the Supplier.

The HHDC shall retain the original reading value 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 step 4.1.3 'Outstation Time' shall be performed at least every 20 calendar days by interrogation only.

The HHDC shall perform a validation check of Reactive Power Meter Period Values in addition to the Active Power Meter Period Values within step 4.1.5 'Cumulative/Total Consumption Comparison' and 4.1.7 'Main/Check Comparison'.

4.1.8 Site Checks of SVA Metering System - Site Visit Report

The following checks shall be carried out by the HHDC on the HH MS when visiting a Site:

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.

5. Any potential safety concern with the metering or associated equipment.

NB   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 MSs should be visited at least annually and single phase at least at two yearly intervals to perform the checks described above. Sites traded in Measurement Classes E, F and G are exempt from this requirement, but Suppliers are expected to arrange for the inspection of Measurement Classes E, F and G Meters in accordance with provisions 12.14 – 12.16 of the Standard Conditions of the Electricity Supply Licence, notwithstanding that these provisions refer to Non -Half-Hourly Meters. Site visits made for other reasons may be used to carry out these checks.

Any problems are investigated in accordance with section 3.4.2 and a report is issued. The HHDC shall ensure that where a site visit was not possible, the reasons are explained sufficiently such that appropriate action can be taken to improve the chances of securing a successful site visit.

4.1.9 Reporting

Ensure that all cases of suspected MS faults are investigated in accordance with section 3.4.2 and are reported to the Supplier, MOA and LDSO, as appropriate.

Ensure that the original metered value (where obtained) and alarm(s), together with the reason for the changes to that value are retained.

4.2 Validate Meter Data for SVA Metering Systems enrolled in the DCC.

Meter consumption data for SVA Metering Systems can be validated by either the Supplier or the HHDC.

The HHDC shall record all occurrences where data entering Settlements has been changed by/ or following instruction from the Supplier.

Where the Supplier carries out validation, it shall retain the original reading value and, the reason for failure, where the value is invalid.

Where HHDC carries out validation, it shall retain the original reading value and, the reason for failure, where the value is invalid.

Maximum Permissible Energy for SMETS compliant Metering Systems

During validation where the energy recorded exceeds the permissible allowed, in accordance with column 4 in the table below, for one or more given Settlement Period, the HHDC or the Supplier will take the following action.

	Max. kW	Max kWh / Half Hour	Permissible Allowed: kWh per Half Hour
SMETS compliant meter	76	38	50

The Supplier or the HHDC shall enter the actual data into Settlements or will replace the actual data with estimated data and enter this into Settlements.

The Supplier or the HHDC will apply the following rules, either:

- use actual consumption data if the energy has exceeded the permissible allowed by no more than 20%; or

- use estimated consumption data, rather than the actual consumption data if the energy exceeded the permissible allowed by more than 20%.

If the data is missing, 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 SMETS Meters set out in below.

4.2 **Data Estimation, for SVA Metering Systems not enrolled in the DCC.**

Data will be estimated for Import and Export Metering using one of the following data estimation methods in the order of precedence specified below and will apply equally to above and below 100kW MSs. 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 HHDC receives information from the MOA, Revenue Protection Service, site reports or other sources concerning metered data which has been or will be collected and processed, the Meter Period Value data shall be estimated in accordance with this BSCP where the HHDC believes the data to be in error. The HHDC shall inform the Supplier where an error might affect a different Supplier or data affects the Final Reconciliation Volume Allocation Run.

The HHDC shall retain any original value collected, whether such value is processed before or after receipt of any details of invalid data from the MOA, Revenue Protection Service, site reports or other source, and any alarms set up at the Meter.

Details of all data estimations and the rationale behind using the chosen method must be recorded for Audit purposes.

The HHDC will notify the relevant Supplier and (where appropriate) the LDSO of the data estimation method in accordance with 4.2.4 below.

Data estimation shall, wherever possible, be constructed using previous actual[25] Metered Data and not previously estimated data.

HHDCs should take particular care when carrying out data estimation using, or during, public holiday periods, e.g. Christmas and New Year, where abnormal consumption patterns may be experienced. Profiles from similar periods in previous years may be used where applicable and available.

HHDCs 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 data estimation, e.g. when estimating consumption of energy for a building known to be a school during the month of August, the average load shape could be based on actual data for the same day of week and Settlement Periods from the previous year.

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[25] 'Actual' data means collected Metered Data – 'A' flagged – which has successfully passed a main / check data comparison (in accordance with Appendix 4.1.7) and Maximum validation (in accordance with Appendix 4.1.6).

Having estimated data using one of the methods below, a report is to be produced in accordance with 4.2.4 below.

If a data estimation has been completed and submitted to the HHDA and actual 'A' flag data **OR** information leading to more accurate estimated data becomes available, this revised data shall be notified to the Supplier and LDSO and submitted to the HHDA for use in the next Volume Allocation Run.

Where a MAR has failed, in accordance with Appendix 4.8, due to a data estimation being included in the period of reconciliation, that period of data estimation shall be re-estimated.

4.3 Data Estimation for SVA Metering Systems enrolled in the DCC

Data will be estimated for Import and Export Metering 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.

4.3.1 Standard Methods – Import Metering Systems

a. One Settlement Period missing or incorrect where a prime Meter register reading can be taken.

Missing or incorrect Settlement Period data calculated from the Meter register advance and the other actual HH data recorded for the specific period of the calculation. Note that the Meter register advance will not correlate to Settlement Periods.

Data Flag 'A'

b. Two or three Settlement Periods missing or incorrect for Meter register or one Settlement Period missing or incorrect where a Meter register reading cannot be taken.

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

Data Flag 'E'

c. Meter advance available.

kWh consumption calculated in the order of precedence below:

(i) HH data constructed by using the average load shape based on actual Metered Data for the same day of week and Settlement Periods over the previous or following month taking into account weekends and public holidays.

(ii) HH data constructed by using the average load shape based on actual Metered Data for the same day of week and Settlement Periods over the previous or following 2-3 weeks taking into account weekends and public holidays.

(iii)   HH data constructed by using the average load shape based on actual Metered Data for the same day of week and Settlement Periods over the previous or following week taking into account weekends and public holidays.

(iv)   Where actual Metered Data is not available to satisfy the criteria for (i), (ii) or (iii) above, the HH data shall be constructed using the average load shape based on actual data for the same day of week and Settlement Periods over the nearest 4 week period to that for which a data estimation is required.

(v)   Operational data or additional information will be used to construct the load shape supplied from another source (MOA, Supplier). Information to be supplied by the Supplier to the HHDC in a format agreed by both parties.

Data Flag 'E'

d.   Meter advance unavailable.

kWh consumption calculated in the order of precedence below:

(i)   The average energy values and load shape will be constructed based on actual Metered Data for the same day of week and Settlement Periods over the previous or following month taking into account weekends and public holidays.

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

(iii)   The average energy values and load shape will be constructed based on actual Metered Data for the same day of week and Settlement Periods over the previous or following week taking into account weekends and public holidays.

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

(v)   Operational data or additional information will be used to construct the load shape supplied from another source (MOA, Supplier). Information to be supplied by the Supplier to the HHDC in a format agreed by both parties.

Data Flag 'E'

e   No Meter advance, historical data, operational data or additional information available.

The HHDC will use the EAC and Profile Class Id provided by the Supplier together with the Default Period Profile Class Coefficients (DPPCCs) provided in Market Domain Data (MDD), to perform the estimation of consumption. For the avoidance of doubt, DPPCCs are defined in clock time (British Summer Time during the summer months) and therefore the estimated data based upon this method will also be in clock time.

When estimating Reactive Energy consumption the HHDC will use the Measurement Class specific Default EAC and Default Period Profile Class Coefficients (DPPCCs) provided in Market Domain Data (MDD).

Data Flag 'E'

f.   No EAC or Profile Class Id available.

Where the Supplier has not provided the data specified in 'g', the HHDC will use the DPPCCs for Profile Class 1 'Domestic Unrestricted Customers, and with the Measurement Class specific HH Default EAC provided in MDD, derive the HH estimates for the missing Settlement Periods.

Data Flag 'E'

4.2.2   Standard Methods – Export Metering Systems

a.   Export Measurement Quantity with missing values .

The HH metered 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 'E'

b.   One Settlement Period missing or incorrect where a Meter register reading can be taken.

Missing or incorrect Settlement Period data calculated from the Meter register advance and the other actual HH data recorded for the specific period of the calculation. Note that the Meter register advance will not correlate to Settlement Periods.

Data Flag 'A'

c.   Meter advance available

Operational data or additional information will be used to construct the profile supplied from another source.

Data Flag 'Flag.

d.   Meter advance unavailable

Operational data or additional information will be used to construct the profile supplied from another source.

Data Flag 'E'

4.4   Reasons for Requesting a Metering System Investigation.

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

- The HHDC suspects invalid MTD on the D0268 Half Hourly Meter Technical Details;

- The HHDC has reason to suspect data retrieved from a MS;

- The Supplier is responding to an alert from an SVA metering System enrolled by the DCC;

- The Supplier cannot establish communication with an SVA metering System enrolled by the DCC;

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- Data retrieved from a MS failed validation and/or Meter Advance Reconciliation;

- Consumption data is detected on a MS registered as de-energised;

- The HHDC 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.

4.6   Proving of Half Hourly Metering Systems.

4.6.1   Reasons for a Proving Test.

A proving test shall be carried out on both main and check MS and shall be carried out in the following circumstances:

- As a result of new connection or Registration Transfers from CMRS to SMRS;

- Following a change of HHDC but only in the event that the MTD was manually intervened;

- Following a change of MOA appointment but only in the event that the MTD was manually intervened;

- Following a concurrent Change of Supplier and HHDC but only in the event that the MTD was manually intervened;

- When a MS is reconfigured / replaced;

- Following a change of Measurement Class from NHH to HH;

- 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; and

- Where a feeder is energised for the first time.

'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.

MS assigned to Measurement Class F, and MS where Half Hourly data is sourced by the Supplier from a Meter compliant with the SMETS, are exempt from proving tests.