

**Redlined BSCP514 text for CP1472 'Removal of SVA proving tests for Meters with a pulse multiplier of one'.**

This CP proposes changes to sections 1.1, 5.5, 8.3 and 8.4. We have redlined these changes against Version 30.0

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

*Amend section 1.1 as follows.*

## **1 Introduction**

### **1.1 Purpose and Scope of the Procedure**

This BSC Procedure (BSCP) defines the processes that both the Half Hourly (HH) and Non-Half Hourly (NHH) Meter Operator Agent (MOA) shall use to carry out the work for meter operations (including, appointment changes, market data activities, connections, disconnections, reconfiguration or changes and where required proving (of HH Metering Systems (MS))) for all Supplier Volume Allocation (SVA) MS registered in the Supplier Meter Registration System (SMRS).

This BSCP describes the key interfaces and timetables for sending appropriate SVA MS data to the Associated HH and NHH Data Collector (HHDC and NHHDC), Meter Asset Provider (MAP) and distributor on behalf of the Associated Supplier. In this BSCP, the “Associated Data Collector” is the Data Collector for the relevant SVA Metering System for the time being appointed by the Associated Supplier of the relevant Supplier Agent. “Associated HH Data Collector” and “Associated NHH Data Collector” shall be construed accordingly.

This BSCP also focuses on the interfaces between the MOA and other agencies seen from the perspective of the MOA.

The purpose of this BSCP is to ensure that meter operations work of the MOA is carried out in an orderly and timely manner.

In this BSCP, any reference to “Meter Technical Details” means all the relevant information about Metering Equipment required by the appropriate Data Collector, Supplier or LDSO (or where appropriate, the Meter Operator Agent) to carry out his duties. For the avoidance of doubt this includes, but is not limited to the following items listed in Data Interface flows:

For Half Hourly trading

- D0268: Half Hourly Meter Technical Details

For Non Half Hourly trading

- D0150: Non Half Hourly Meter Technical Details;
- D0149: Notification of Mapping Details;
- D0313: Auxiliary Meter Technical Details (where appropriate); and
- D0367: Smart Meter Configuration Details (where appropriate).

For NHH advanced Meters, this also includes all appropriate information required by the NHHDC to retrieve data from the Metering System remotely (and, where appropriate, required by the Meter Operator Agent to configure the Metering System remotely). This may include, but is not limited to, the communications and security details of the Metering System and the Code of Practice of the Metering System installed. For any D0313 sent from one Meter Operator Agent to another Meter Operator Agent this must include, but is not limited

to, all communications, security and password details required to fully access all remote functions of the Metering System.

This BSCP 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.

Amend section 5.5 as follows.

## 5.5 Proving a Metering System<sup>1, 2</sup>

Complex Sites are subject to Complex site Validation test as set out in 5.5.6

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 Metering Systems are subject to a Proving Test.

### 5.5.1 Proving of a Metering System by Method 1<sup>3, 2</sup>

REF	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
5.5.1.1	When instructed by Supplier	Install or reconfigure commission to CoP4, record MTD and note HH Metered Data to cover a specific Settlement Period while on site.	HHMOA		See 5.2.2 or 5.3.4 as required.	Internal Process.
5.5.1.2	Following installation / reconfiguration, commissioning and once HH Metered Data retrieved or if previous proving test attempt failed	<del>If appropriate, send</del> 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.	HHMOA	HHDC	D0005 Instruction on Action. D0268 Half Hourly Meter Technical Details.  <del>If site is Complex, send Complex Site Supplementary Information Form. Refer to Appendix 8.4 Guide to Complex Sites.</del>	Electronic or other method, as agreed.

<sup>1</sup> The HHMOA shall decide what proving method is appropriate in conjunction with the HHDC. Refer to appendix 8.3.2 'Methods of Proving' for descriptions of the method of proving.

<sup>2</sup> MS assigned to Measurement Class F are exempt from proving tests.

<sup>3</sup> Note that if the Proving Test fails the MOA and HHDC may have to reconsider whether the Site should be considered as a Complex Site.

REF	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
5.5.1.3	Following 5.5.1.2	Read Meter for the same HH Settlement Period as requested by the HHMOA 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 collect the data required by the HHMOA, but may also collect and send more data than requested.	Internal Process.
5.5.1.4	Following 5.5.1.3	Send raw HH Metered Data or notification that Metered Data cannot be collected for the Settlement Periods requested. <sup>4</sup>  If unable to collect metering data for Settlement Period requested, send alternative Settlement Period HH Metered Data.	HHDC	HHMOA	D0001 Request Metering System Investigation.  D0003 Half Hourly Advances.	Electronic or other method, as agreed.
5.5.1.5	Following 5.5.1.4	If data received from HHDC, proceed to process 5.5.5 to undertake a comparison and issue the results.  If data not received from HHDC, proceed to 5.5.1.2 to undertake a re-test or use an alternative method to prove MS.	HHMOA			Internal Process.

<sup>4</sup> The HHDC shall use all reasonable endeavours to collect the data for the Settlement Period requested.

## 5.5.2 Proving of a Metering System by Method 2<sup>3, 2</sup>

REF	WHEN <sup>5</sup>	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
5.5.2.1	When instructed by Supplier	Install or reconfigure commission to CoP4 and record MTD while on site.	HHMOA		See 5.2.2 or 5.3.4 as required.	Internal Process.
5.5.2.2	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 HHDC or alternatively request re-test following failure of immediately preceding proving test and provide MTD.	HHMOA	HHDC	D0005 Instruction on Action. D0268 Half Hourly Meter Technical Details.  <del>If site is Complex, send Complex Site Supplementary Information Form. Refer to Appendix 8.4 Guide to Complex Sites.</del>	Electronic or other method, as agreed.
5.5.2.3	Following 5.5.2.2	Visit site a second time and note HH Metered Data to cover a specific Settlement Period.	HHMOA			Internal Process.
5.5.2.4	Following 5.5.2.3	Read Meter for the same HH Settlement Period as agreed with the HHMOA using 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).	HHDC		As a minimum the HHDC shall collect the data required by the HHMOA, but may also collect and send more data than requested.	Internal Process.

<sup>5</sup> 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

REF	WHEN <sup>5</sup>	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
5.5.2.5	Following 5.5.2.4	Send raw HH Metered Data or notification that Metered Data cannot be collected <sup>4</sup> . If unable to collect HH Metered Data for agreed Settlement Period, send alternative Settlement Period HH Metered Data.	HHDC	HHMOA	D0001 Request Metering System Investigation. D0003 Half Hourly Advances.	Electronic or other method, as agreed.
5.5.2.6	Following 5.5.2.5	If data received from HHDC, proceed to process 5.5.5 to undertake a comparison and issue the results.  If data not received from HHDC, proceed to 5.5.2. to undertake a re-test or use an alternative method to prove MS.	HHMOA			Internal Process.

### 5.5.3 Proving of a Metering System by Method 3<sup>3</sup>,<sup>2</sup>

REF	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
5.5.3.1	When instructed by Supplier	<p>Install or reconfigure, commission to CoP4,<sup>6</sup> retrieve HH Metered Data for a specific HH Settlement Period and note MTD while on site.</p> <p>From the office, use own data retrieval system to read remotely for the same HH Settlement Period as collected during site visit.</p> <p>Compare HHMOA HH Metered Data from data retrieval system against that collected during site visit.<sup>7</sup></p> <p>If problem with readings taken from data retrieval system, investigate and rectify the problem then re-do the steps above.</p>	HHMOA		See 5.2.2 or 5.3.4 as required.	Internal Process.
5.5.3.2	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. <sup>8</sup>	HHMOA	HHDC	<p>D0005 Instruction on Action.</p> <p>D0268 Half Hourly Meter Technical Details.</p> <p><del>If site is Complex, send Complex Site Supplementary Information Form. Refer to Appendix 8.4 Guide to Complex Sites.</del></p>	Electronic or other method, as agreed.

<sup>6</sup> The commissioning may be carried out when the HH MS is installed but may be deferred if load is not available at that time.

<sup>7</sup> If this data is correct then the MOAs data retrieval system has been successfully proved.

<sup>8</sup> The MOA does not specify the Settlement Periods to be collected by the HHDC.



REF	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
5.5.3.3	Following 5.5.3.2	Read Meter for Settlement Period of own choosing using 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).	HHDC			Internal Process.
5.5.3.4	Following 5.5.3.3	Send raw HH Metered Data or notification that Metered Data cannot be collected.	HHDC	HHMOA	D0001 Request Metering System Investigation. D0003 Half Hourly Advances.	Electronic or other method, as agreed.
5.5.3.5	Following 5.5.3.4	<p>Use own data retrieval system to collect HH Metered Data for the same HH Settlement Period as provided by the HHDC.</p> <p>If unable to collect data from data retrieval system, resolve problem then complete proving test.</p> <p>If data received from HHDC, proceed to process 5.5.5 to undertake a comparison and issue the results.</p> <p>If data not received from HHDC, proceed to 5.5.3.2 to undertake a re-test or use an alternative method to prove MS.</p>	HHMOA			Internal Process.

#### 5.5.4 Proving of a Metering System by Method 4<sup>3, 2</sup>

REF	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
5.5.4.1	When instructed by Supplier	Install or reconfigure, commission to CoP4, retrieve HH Metered Data for a specific HH Settlement Period and note MTD while on site.	HHMOA		See 5.2.2 or 5.3.4 as required.	Internal Process.
5.5.4.2	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.	HHMOA	HHDC	D0005 Instruction on Action. D0268 Half Hourly Meter Technical Details.  <del>If site is Complex, send Complex Site Supplementary Information Form. Refer to Appendix 8.4 Guide to Complex Sites.</del>	Electronic or other method, as agreed.
5.5.4.3	Following 5.5.4.2	Read Meter for Settlement Period of own choosing using 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).	HHDC			Internal Process.
5.5.4.4	Following 5.5.4.3	Send raw HH Metered Data or notification that Metered Data cannot be collected.	HHDC	HHMOA	D0001 Request Metering System Investigation. D0003 Half Hourly Advances.	Electronic or other method, as agreed.

REF	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
5.5.4.5	Following 5.5.4.4	<p>Uses either the manufacturer's software or software which has a relevant protocol approval in accordance with BSCP601 to read Meter constants, pulse multiplier, serial no etc, then read Meter pulses or engineering data for same HH period as provided by HHDC to calculate HH reading.</p> <p>If data received from HHDC, proceed to process 5.5.5 to undertake a comparison and issue the results.</p> <p>If data not received from HHDC, proceed to 5.5.4.2 to undertake a re-test.</p>	HHMOA			Internal Process.

### 5.5.5 Issuing Results of Proving Test (All Methods of Proving)

REF	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
5.5.5.1	Following receipt of data from the HHDC	Compare HHMOA HH Metered Data with HHDC HH Metered Data for the same Settlement Period.	HHMOA			Internal Process.
5.5.5.2	In accordance with timescales in Appendix 8.3.5	Send notification of successful proving test / re-test.	HHMOA	HHDC / Supplier / LDSO / BSCCo (Transfer Co-ordinator) if Registration Transfer	D0214 Confirmation of Proving Tests.	Electronic or other method, as agreed.
5.5.5.3	In accordance with timescales in Appendix 8.3.5	Send notification that proving test / re-test failed.	HHMOA	HHDC	D0002 Fault Resolution Report or Request for Decision on Further Action.	Electronic or other method, as agreed.
5.5.5.4	In accordance with timescales in Appendix 8.3.5	Investigate problem and take corrective action. Proceed to the appropriate method to re-do the proving test.	HHMOA			Internal Process.

### 5.5.6 Complex Site Validation Test

<u>REF</u>	<u>WHEN</u>	<u>ACTION</u>	<u>FROM</u>	<u>TO</u>	<u>INFORMATION REQUIRED</u>	<u>METHOD</u>
<u>5.5.6.1</u>	<u>Following installation / reconfiguration, commissioning and where previous Complex Site Validation Test failed</u>	<u>Collect HH Meter Readings<sup>9</sup> and aggregate in accordance with Complex Site rules and record values.</u>	<u>HHMOA</u>			<u>Internal Process</u>
<u>5.5.6.2</u>	<u>Following 5.5.6.1</u>	<u>Send request for proving test or alternatively request a re-test following failure of immediately preceding proving test and provide MTD.</u>	<u>HHMOA</u>	<u>HHDC</u>	<u>D0005 Instruction on Action.</u> <u>D0268 Half Hourly Meter Technical Details.</u> <u>Complex Site Supplementary Information Form. Refer to Appendix 8.4 Guide to Complex Sites.</u>	<u>Electronic or other method, as agreed.</u>
<u>5.5.6.3</u>	<u>Within 5 WD of 5.5.6.2</u>	<u>Collect Metered Data and aggregate in accordance with the Complex Site rules and send to HHMOA</u>	<u>HHDC</u>	<u>HHMOA</u>	<u>D0003 Half Hourly Advances.</u> <u>Email with aggregated consumption data for the day requested in 5.5.6.2.</u>	<u>Electronic or other method, as agreed.</u>
<u>5.5.6.4</u>	<u>Within 2 WD of 5.5.6.3</u>	<u>Validate Metered volumes</u>	<u>HHMOA</u>			<u>Internal Process</u>
<u>5.5.6.5</u>	<u>Within 2WD of 5.5.6.3 If validation test passes.</u>	<u>Send notification</u>	<u>HHMOA</u>	<u>HHDC, Supplier</u>	<u>D0214 Conformation of Proving Tests.</u>	<u>Electronic or other method, as agreed</u>
<u>5.5.6.6</u>	<u>Within 2WD of 5.5.6.3 If validation test fails</u>	<u>Send notification</u>	<u>HHMOA</u>	<u>HHDC, Supplier</u>	<u>D0002 Fault Resolution Report or Request for Decision on Further Action.</u>	<u>Electronic or other method, as agreed</u>

<sup>9</sup> Data collection methods as defined in Section 5.5.1 to 5.5.4

<u>REF</u>	<u>WHEN</u>	<u>ACTION</u>	<u>FROM</u>	<u>TO</u>	<u>INFORMATION REQUIRED</u>	<u>METHOD</u>
<u>5.5.6.7</u>	<u>Within 5WD of 5.5.6.6</u>	<u>Investing discrepancy with HHDC and resolve. Proceed to 5.5.6.1</u>  <u>Note: If unresolved after 5WD the HHDC is required to raise a D0001 'Request Metering System Investigation' via BSCP502 3.5.1.</u>	<u>HHMOA</u>			<u>Internal Process</u>

Amend section 8.3 as follows.

### 8.3 Proving of Half Hourly Metering Systems

A Proving Test is required where:

- The MS is a Complex Site (including where Measurement Class F); or
- The MS has a separate Outstation; or
- The MS has an integral Outstation which can have a Pulse Multiple other than 1, as identified on the ELEXON website (compliance and protocol approval list).

#### 8.3.1 Reasons for a Proving Test

Subject to 5.5, 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 appointment but only in the event that the MTD was manually intervened;
- Following a change of HHMOA 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 8.2);
- Where there has been a key field change (refer to Appendix 8.2) whilst a site has been de-energised and the MS becomes energised;
- Whenever a shared SVA MS arrangement is carried out; ~~and~~
- Where a feeder is energised for the first time; ~~and~~
- 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 tests)’ means that 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 are exempt from proving tests (except where part of a Complex Site).

#### 8.3.2 Methods of Proving

The HHMOA shall decide from methods 1 to 4 ~~what-which~~ method of proving test is appropriate in conjunction with the HHDC. A complex site shall always be proved using the Complex Site Validation Test. ~~and has one of the four methods outlined below to choose from:~~

### **Method 1**

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

### **Method 2**

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

### **Method 3**

The HHMOA installs / reconfigures the MS and commissions the MS and records the HH Meter register reading while on site. When at the office, the HHMOA then uses its own data retrieval system to read the MS for the same HH Settlement Period as collected during the site visit. The HHMOA then compares the HH Metered Data collected on site with the data retrieved at the office. The HHDC collects for the HH Settlement Period of own choosing and sends this to the HHMOA.<sup>10</sup> The HHMOA then uses its data retrieval system to read for the same HH Settlement Period as provided by the HHDC.

### **Method 4**

The HHMOA installs / reconfigures the MS and commissions the MS and records the HH Metered Data reading while on site. The HHDC collects for the HH Settlement Period of own choosing and sends this to the HHMOA<sup>10</sup>. The HHMOA 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 HHDC and calculates the reading.

### **Complex Site Validation Test**

Complex Sites (including Measurement Class F Metering System) shall be proven in the same way as non Complex Sites except the HHMOA shall use the aggregated data provided by the MS for comparison.

<sup>10</sup> Ideally this should be the latest Settlement Period for which non-zero data is available. This is to prevent the data from being overwritten in the Meter's memory before the HHMOA has had time to collect it.



### **8.3.3 Comparison of Data**

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

### **8.3.4 Reporting**

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

### **8.3.5 Proving Test / Re-Test Timescales**

#### **Proving Test Timescales**

A proving test may be undertaken prior to the appointment of the HHDC and / or HHMOA in the SMRS so long as there is agreement between the Supplier, HHMOA, HHDC 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 8.3.1 and the successful completion of the proving test by the HHMOA (by sending the D0214 Confirmation of Proving Tests) to the HHDC is listed below for each CoP.

#### **Re-Test Timescales**

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

## Extended Proving Test / Re-Test Timescales During the P272 Transition Period

For MS assigned to Code of Practice 10, the ‘extended’ timescale will be applied to any proving test and subsequent re-test where the original proving test is initiated during the period commencing on 5 November 2015 and ending on the last calendar day before the P272 Implementation Date inclusive. The ‘standard’ timescale will be applied where the original proving test is initiated on or before 4 November 2015 or on or after the P272 Implementation Date.

Any MS assigned to any other Codes of Practice will remain subject to standard proving test timescales at all times.

### Timescales

Code of Practice	WDs to Complete Proving Test <sup>11</sup>	WDs to Complete Re-Test	Total
One	5	5	10
Two	5	5	10
Three	10	10	20
Five	15	15	30
Ten (standard)	15	15	30
Ten (extended)	30	30	60

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.

*Amend section 8.4 as follows.*

## 8.4 Guide to Complex Sites

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

The primary electronic data flow between the HHMOA and HHDC for Half Hourly Meter Technical Details is the D0268. In the case of Complex Sites, this data flow alone is insufficient to accurately describe to the HHDC how to allocate the various channels of data that should be utilised in Settlements, therefore the D0268 is supplemented with the ‘Complex Site Supplementary Information Form’.

<sup>11</sup> The starting date for this time is either the Date of Meter Installation, the Date of Commissioning, the Effective From Date of the Meter, the Effective Date of a Change of Agent as described in Section 8.3.1, or the date when a Metering System becomes energised where there has been a key field change whilst the Metering System was de-energised, whichever is the later.

The HHMOA should identify a Complex Site by providing a 'Complex Site Supplementary Information Form' in addition to the D0268 data flow to the HHDC and Supplier and indicating in the D0268 data flow that the site is complex. The 'Complex Site Supplementary Information Form' shall be sent no later than the sending of the D0268 or preferably in advance of the D0268 data flow. This action shall alert the HHDC to expect a 'Complex Site Supplementary Information Form' from the HHMOA containing details of how to configure the data collection requirements and passing of information to the HHDA and Supplier. The 'Complex Site Supplementary Information Form' should be sent electronically or by any other method agreed.

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 HHMOA 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 HHMOA to the HHDC 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.

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 MS which are not fully compliant with the relevant CoP, 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.

A Complex Site Validation Test in accordance with section 5.5.6 shall be carried out by the HHMOA. The purpose of this test is to verify that the Complex Site Supplementary Information Form has been correctly interpreted by the HHDC. The information to be provided by the HHDC shall be the aggregated volumes of all the relevant Outstation channels associated with the Complex Site. The HHMOA will confirm the data provided is consistent with the complex rule or otherwise.

This Appendix 8.4.1 to 8.4.8 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 HHMOA is required to define the terms in the aggregation rule relative to the data.

The HHDC 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 HHMOA indicates Complex Site on the D0268 data flow, the HHMOA is required to provide all the information necessary, via the 'Complex Site Supplementary Information Form', for the HHDC to aggregate correctly. As part of the supplementary information, the HHMOA is required to provide a schematic diagram of the MS.

Form BSCP514/8.4.8 'Complex Site Supplementary Information Form' provides a means for the HHMOA to convey the information necessary for correct aggregation. BSCP514/8.4.8a gives an overview of the data source and BSCP514/8.4.8b shows the information needed to collect that data.

Where meter channel data is missing, incomplete or incorrect, the HHDC should attempt to use the associated check data indicated on BSCP514/8.4.8a.

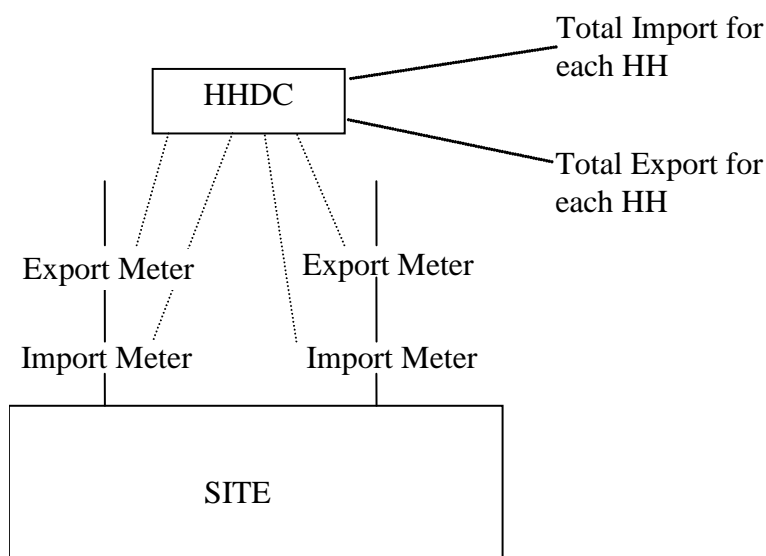
Where duplicated Outstations are provided, two sets of BSCP514/8.4.8a shall be provided each clearly indicating primary and secondary Outstations.

### 8.4.1 Off-site Totalisation

This example is an example of a non-Complex Site where multiple feeders exist. Each feeder is normally equipped with Code of Practice compliant Meter(s). The HH data is collected and summated off-site by the HHDC and then 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 HHMOA for a MS that measures both Export and Import active energy.



No. of Import MSIDs = 1

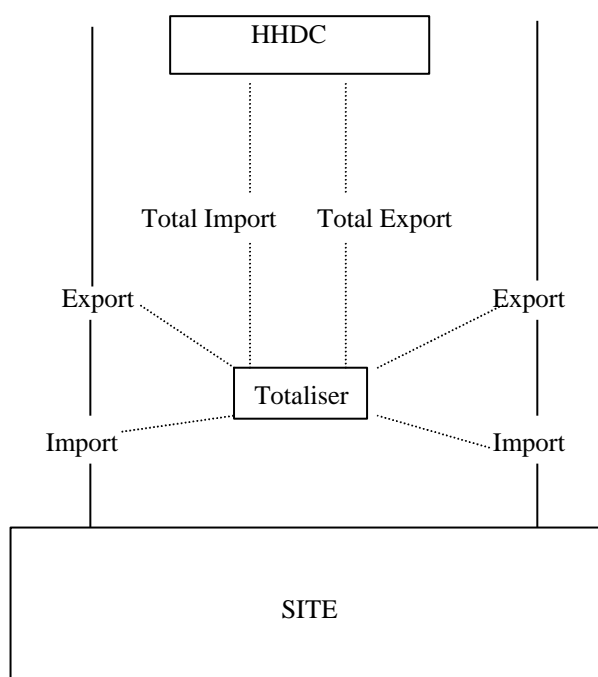
No. of Export MSIDs = 1

An alternative would be for each Import or Export Meter to have its own MSID. In this case, totalisation would be carried out by the HHDA as opposed to the HHDC, 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.

### 8.4.2 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 HHDC and then on to the HHDA for Settlement. In this example, two streams of data are sent from the on-site totaliser to the HHDC, one set of HH data for total Import and one set of HH 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

### 8.4.3 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:

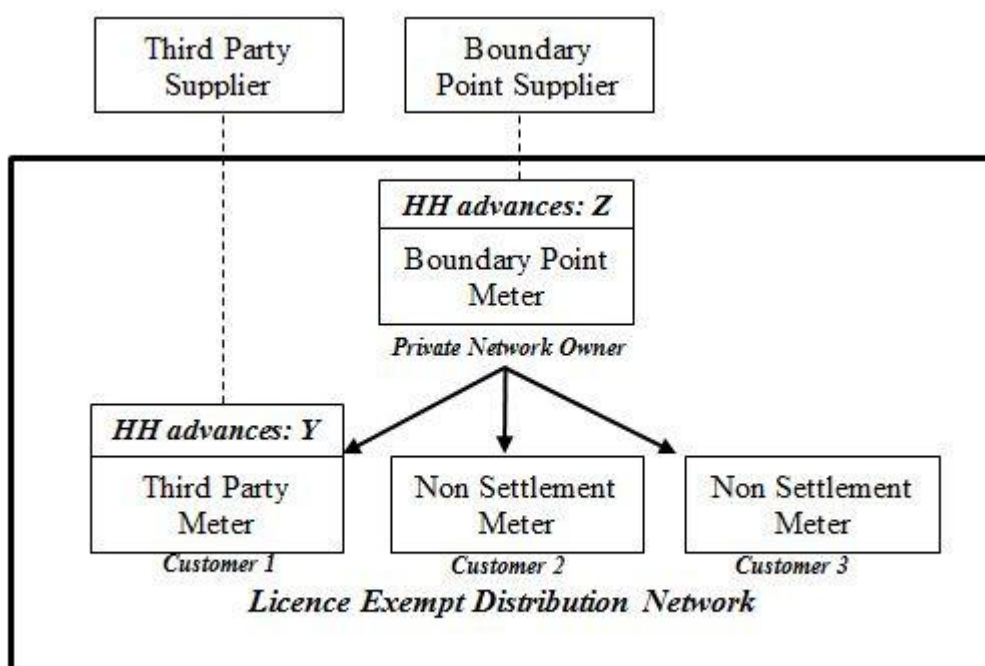
#### Full Settlement Option

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;
- 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, the Registrant for each Metering System must apply for a Metering Dispensation or 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 HHMOA as the Boundary Point Supplier;
- Appoint and maintain the same HHDC 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 HHDC system as constants identified within the Ceomplex Ssite supplementary information (BSCP514/8.4.8); 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).

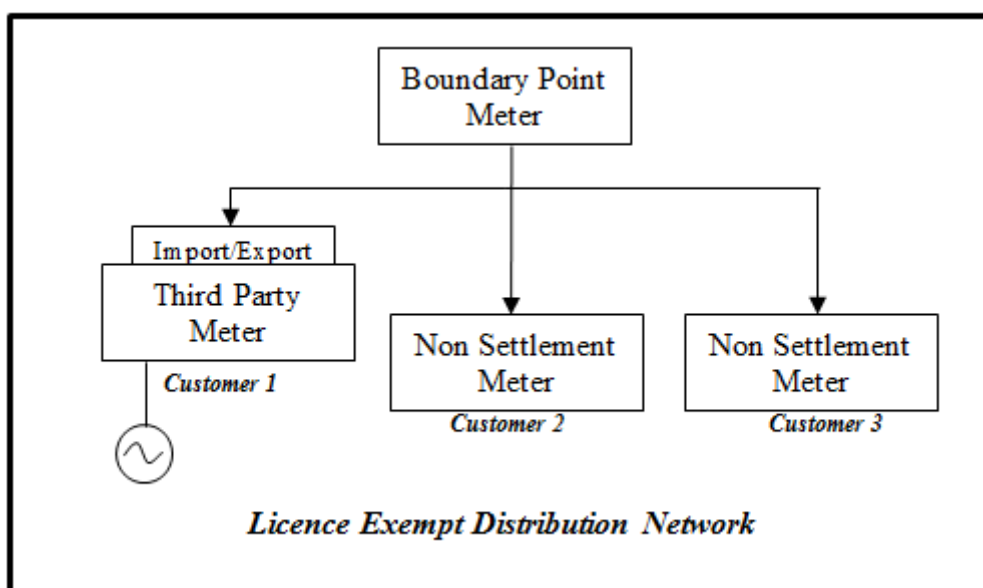
The HHMOA at the Boundary Point of the private network will need to maintain the Ceomplex Ssite supplementary information (BSCP514/8.4.8) to allow the HHDC to correctly difference the consumption between Boundary Point Meters and Third Party Meters.



## 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 HHDC, in order to accurately determine the energy generated that gets used within the private network or exported on the Distribution System, such that each customer 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 HHDC 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 HHDC will perform the differencing calculation as shown below:

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

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

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

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.