

Balancing and Settlement Code

BSC PROCEDURE

**Technical Assurance of Half Hourly Metering Systems for Settlement
Purposes**

BSCP27

Version 18.0

Date: 22 February 2018

BSC PROCEDURE 27**relating to****Technical Assurance of Half Hourly Metering Systems for Settlement Purposes**

1. Reference is made to the Balancing and Settlement Code dated Code Effective Date and, in particular, to the definition of “BSC Procedure” in Section X, Annex X-1 thereof.
2. This is BSC Procedure 27 Version 18.0 relating to Technical Assurance of Half Hourly Metering Systems for Settlement Purposes.
3. This BSC Procedure is effective from 22 February 2018.
4. This BSC Procedure has been approved by the BSC Panel.

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AMENDMENT RECORD

Version	Date	Description of Changes	Changes Included	Mods/ Panel/ Committee Refs
1.0	01/06/04	New BSCP (This BSCP supersedes BSCP526 and BSCP26)	CP998	
2.0	BETTA Effective Date	BETTA 6.3 and SVA February 2005 Release	CP1091 and BETTA 6.3	SVG/48/004
3.0	02/11/05	CVA Nov 05 Release	CP1062 version 1	SVG/56/014
4.0	22/02/07	Reformatted and Changes for CP1176 Updated following industry review	CP1164 CP1172 CP1176	SVG/68/04 ISG/69/01 ISG/66/06 SVG/66/04 ISG/68/002 SVG/67/002
5.0	23/08/07	P197 Release	P197	
6.0	01/11/07	November 07 Release	CP1195 CP1210	ISG77/03 SVG77/04 ISG79/02 SVG79/02
7.0	28/02/08	February 08 Release	CP1212	ISG81/01 SVG81/01
8.0	26/06/08	June 08 Release	CP1223	SVG84/02 ISG84/01 TDC109/01 PAB84/11
9.0	26/11/08	P207 Release	P207	ISG91/01 SVG91/06
10.0	25/06/09	June 09 Release	CP1265	ISG97/01 SVG97/01
11.0	24/06/10	June 10 Release	CP1324	ISG111/03
12.0	29/03/2013	29 March 2013	CP1379	PAB135/07 ISG139/01 SVG141/06
13.0	27/02/2014	February 2014 Release	CP1393	PAB152/05 ISG149/07 SVG152/06
14.0	26/02/2015	February 2015 Release	ORD005 ¹	Secretary of State
15.0	05/11/2015	November 2015 Release	P319 Self-Governance	Panel 239/07

¹ ORD005 was Directed by the Secretary of State on 1 August 2014

Version	Date	Description of Changes	Changes Included	Mods/ Panel/ Committee Refs
16.0	30/06/2016	June 2016 Release	CP1454	ISG179/01 SVG182/02
17.0	03/11/2016	November 2016 Release	CP1463	ISG184/06 SVG187/02
18.0	22/02/2018	February 2018 Release	CP1490	ISG197/05, SVG199/04

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1. Introduction

1.1 Purpose and Scope of the Procedure

This BSC Procedure (BSCP) defines the process of inspections of Supplier Volume Allocation (SVA) Half Hourly Metering Systems registered in a Supplier Meter Registration System (SMRS) and Central Volume Allocation (CVA) Metering Systems registered in the Central Meter Registration Service (CMRS).

It describes the key interfaces and timetable responsibilities for the role of the Technical Assurance Agent (TAA) and interested parties in the inspection of Metering Systems. The primary aim of Technical Assurance is to monitor Registrants' and Party Agents' compliance with their obligations as defined in the Balancing and Settlement Code (the Code) and Code Subsidiary Documents (CSDs) to ensure that the Active Energy Imported and/or Active Energy Exported through Boundary Points and System Connection Points is complete and accurate.

The secondary aim of Technical Assurance is to assess the overall health of all the Half Hourly Metering System population. The TAA will provide an indication of the overall health of these Metering Systems in the TAA Annual Report.

1.2 Risk Based Performance Assurance Framework

Performance Assurance Techniques (PAT) will be applied to Performance Assurance Parties (PAP) based on the net significance of the applicable Settlement Risk and an assessment of the PAP's contribution to the Settlement Risk.

Settlement Risks and their net significance are captured on the Risk Evaluation Register (RER). All the Settlement Risks identified are rated in terms of severity of impact and probability (including a weighting for the strength of controls).

The Settlement Risks are assigned PATs to mitigate those risks and these PATs are recorded in the Risk Operating Plan (ROP) against each Settlement Risk.

The RER and the ROP are produced for a Performance Assurance Operating Period in accordance with the Annual Performance Assurance Timetable and the agreed Risk Evaluation Methodology (REM), which details the processes used to identify and evaluate the Settlement Risks and assess their materiality.

At the end of a Performance Assurance Operating Period, the Performance Assurance Board (PAB) will prepare an Annual Performance Assurance Report for the Panel detailing the assurance that has been provided during the course of the period, the extent to which Settlement Risks have been mitigated, and BSCCo costs of providing that assurance.

Technical Assurance is a Performance Assurance Technique and will be deployed to a PAP in relation to relevant Settlement Risks.

1.3 Main Users of the Procedure and their Responsibilities

This Procedure should be used by the following for each type of Metering System:

CVA Metering Systems	SVA Metering Systems
<ul style="list-style-type: none"> • BSCCo • Central Data Collection Agent (CDCA) • Market Participants • Meter Operator Agents (MOA) • Panel • Panel Committees • Performance Assurance Administrator (PAA) • Registrants • Technical Assurance Agent (TAA) • Transmission Company 	<ul style="list-style-type: none"> • BSCCo • Half Hourly Data Collectors (HHDCs) • Licensed Distribution System Operators (LDSOs) • Market Participants • Meter Operator Agents (MOAs) • Panel • Panel Committees • Performance Assurance Administrator (PAA) • Registrants • Supplier Meter Registration Agents (SMRAs) • Technical Assurance Agent (TAA)

1.4 Use of the Procedure

The Registrant is responsible for ensuring the compliance of its Party Agents, in particular the MOA and DC, with the Code and CSDs.

The TAA shall determine a Metering System to be non-compliant if the Code or CSDs are not being adhered to, subject to any Metering Dispensations applicable to the Metering Equipment.

Throughout this procedure, where a timescale is stated, it refers to the number of Working Days (WD) by which the activity described shall be completed.

1.5 Balancing and Settlement Code Provision

This BSCP has been produced in accordance with the provisions of the Code and in particular Section L. In the event of an inconsistency between the provisions of this BSCP and the Code, the provisions of the Code shall prevail.

1.6 Associated BSC Procedures

This BSCP interfaces with:

CVA Metering Systems	SVA Metering Systems
BSCP02 – Proving Test Requirements for CVA Metering Systems	BSCP11 –Trading Disputes
BSCP06 – CVA Meter Operations for Metering Systems Registered in CMRS	BSCP32 - Metering Dispensations
BSCP11 –Trading Disputes	BSCP501 - Supplier Meter Registration Service
BSCP20 – Registration of Metering Systems for Central Volume Allocation	BSCP502 – Half Hourly Data Collection for SVA Metering Systems Registered in SMRS
BSCP32 – Metering Dispensations	BSCP514 –SVA Meter operations for Metering Systems registered in SMRS
BSCP537 – Qualification Process for SVA Parties, SVA Party Agents and CVA MOAs	BSCP515 – Licensed Distribution
BSCP538 – Error and Failure Resolution	BSCP537 – Qualification Process for SVA Parties, SVA Party Agents and CVA MOAs
BSCP601 - Metering Protocol Approval and Compliance Testing	BSCP538 – Error and Failure Resolution
	BSCP550 - Shared SVA Meter Arrangement of Half Hourly Import and Export Active Energy
	BSCP601 - Metering Protocol Approval and Compliance Testing

1.7 Responsibilities

For the purpose of this BSCP the Registrant is the Party responsible for the provision of Code-compliant Settlement Metering Systems.

The Meter Operator Agent and Licensed Distribution System Operator or Transmission Company will assist the Registrant in meeting the obligations, as described in the appropriate BSCPs, namely:

- Ensure that an appropriate person is in attendance when requested by the Registrant
- Provide all requested information (including measurement transformer certificates)
- Perform all actions to rectify a non-compliance
- Provide adequate evidence of rectified non-compliance to the TAA.

1.8 Metering System Sampling Groups

For SVA, the total number of Metering Systems to be inspected in any one year shall be as determined by the Performance Assurance Board (PAB) in accordance with the ROP. This may include a percentage of re-inspections. The selection of the actual Metering Systems to be inspected shall be at the discretion of BSCCo.

The TAA shall select SVA Metering Systems for the following sampling groups:

- Targeted Inspections
- Specific Sample
- Main Sample

For CVA, the total number of Metering Systems to be inspected in any one year shall be as directed from time to time by the PAB. This will include a percentage of re-inspections. The selection of the Metering Systems to be inspected shall be at the discretion of BSCCo, in accordance with the scope as directed by the PAB.

The TAA shall select CVA Metering Systems for the following sampling groups:

- Targeted Inspections
- Main Sample

1.8.1 Targeted Inspections

The TAA may target a number of Metering Systems where non-compliance is suspected. These may be identified as a consequence of information obtained by BSCCo (including that information provided by the PAA), by the TAA or as directed by the PAB. BSCCo will inform the TAA of those Metering Systems that require a targeted Inspection Visit.

The basis for this sample will be on information provided by Registrants and other parties to enable BSCCo to target specific Metering Systems, GSP Groups, types of Metering Equipment, Party Agents or BSC Parties. Targeted inspections will not necessarily be carried out each time a group of inspections is arranged.

1.8.2 Specific Sample - SVA Only

It is intended that specific samples will focus on where there is perceived risk to Settlement. The PAB will determine the size of the specific sample. It is anticipated this specific sample will account for no more than 20% of the total number of visits agreed by the PAB to be performed each year. The focus of this specific sample will be set by the PAB on an annual basis. It is envisaged that this group will be sampled from, but not limited to, the following:

1. Code of Practice (CoP) One, Two and G Metering Systems and Scottish Code of Practice One (S1) and Two (S2) Metering Systems.
2. Import/Export Metering Systems: those Metering Systems that record Import and Export electricity will be targeted for inspection, to ensure that the technical details have been correctly recorded in Settlement.

3. Multi-Feeder Metering Systems.
4. Complex Sites: those Metering Systems that cannot be adequately expressed via the D0268, Half Hourly Meter Technical Details, and where the MOA is required to provide additional information.

The registered MOA and LDSO will be responsible for and will use reasonable endeavours to provide complete and accurate Metering System data, upon request to the TAA or BSCCo for the purposes of Technical Assurance.

1.8.3 Main Sample – CVA and SVA

The TAA, on behalf of BSCCo, shall ensure that a representative sample of Metering Systems is inspected for both SVA and CVA Half Hourly Metering Systems. The selection of Metering Systems will be based upon consideration of:

- GSP Group (SVA Only)
- Registrant
- Meter Operator Agent
- Code of Practice
- Metering Equipment
- Previous inspection(s)

1.9 Information Required to Enable Sampling of Metering Systems

1.9.1 Specific Sample – SVA

In order to ensure that the relevant Metering Systems are inspected, each Registrant, LDSO or MOA where appropriate will provide details of all Metering Systems (described in section 1.8.2) so that a representative sample can be determined by the TAA. The Registrant will provide the following information for each Metering System:

- Metering System ID.
- GSP Group.
- MOA ID.
- HHDC ID.
- Site Address Details.
- Applicable CoP.
- Details of any current applicable Metering Dispensation.

These details are required as a minimum. This is not an exhaustive list.

The TAA will, on behalf of BSCCo, create a schedule of inspections that meets the PAB's agreed requirements.

1.9.2 Main Sample – CVA

The CDCA shall submit an electronic list of all Metering System IDs registered in the Central Meter Registration Service (CMRS), together with associated information to BSCCo. The lists shall be provided four times a year on dates agreed with BSCCo. The required information will be forwarded to the TAA to initiate the sample selection process.

The TAA will use reasonable endeavours to minimise the number of repeated inspections when selecting the Metering Systems to be inspected.

The TAA will select 10% more Metering System IDs than will be inspected. The additional 10% will enable the TAA to categorise the Metering Systems and ensure that there is no bias towards any one Party, Metering Equipment type or sampling area. This initial sample will be sub-divided by Registrant and MOA.

BSCCo will provide additional guidance for the selection of sampled inspections.

On finalising the sample, the relevant Registrant will be notified of the Metering Systems to be inspected.

1.9.3 Main Sample – SVA

This is the main sample selection process (excluding those detailed in 1.8.2) for SVA Metering Systems.

Each SMRA shall ensure that the details it holds are updated daily to a central online database in line with the requirements detailed in the Master Registration Agreement (MRA), together with any associated information as specified in BSCP501 to the PAA via BSCCo. The required information will then be used by the TAA to initiate the sample selection process.

The TAA will use reasonable endeavours to minimise the number of repeated visits when selecting the Metering Systems to be inspected.

The TAA will select 10% more Metering System IDs than will be inspected. The additional 10% will enable the TAA to categorise the Metering Systems ensuring that there is no bias towards any one Party, Metering Equipment type or sampling area. This initial sample will be sub divided by GSP Group, Registrant and MOA.

On finalising the sample, the relevant Registrant will be notified of the Metering Systems to be inspected.

1.10 Re-Inspections

Where a non-compliance has been identified and subsequently reported as rectified, it is possible that the Metering System will be re-inspected by the TAA to confirm compliance.

BSCCo will inform the TAA of the percentage of previously non-compliant Metering Systems which should be re-inspected. Re-inspections will be selected with consideration given to the category and number of non-compliances associated with the previous inspection.

The TAA will submit the proposed schedule of re-inspections to BSCCo for approval. Upon approval the TAA shall carry out a re-inspection to confirm compliance.

1.11 Targeted Inspections

Where the PAB requires assurance about a particular Metering System, they may request a targeted inspection to take place.

The PAB will use the following information when deciding to perform a targeted check:

- Previous non compliances;
- Information provided by the BSC Auditor;
- Technical Assurance of Performance Assurance Parties checks;
- Line Loss Factor Audits;
- Information from Parties;
- Performance related issues;
- Settlement error;
- Information provided by its sub-committees; or
- Information provided by the Panel.

This list is not exhaustive.

1.12 Metering System Inspection

On selection of an appropriate Metering System the TAA shall notify the relevant Registrant, MOA and LDSO prior to the date of the intended Inspection Visit. The Registrant or a nominated representative will be invited to attend the Inspection Visit and shall make all reasonable endeavours to ensure access to all Metering Equipment and will liaise with the LDSO or Transmission Company (if necessary) to arrange such access.

The Registrant shall be required to ensure that the MOA and LDSO (mandatory attendance for High Voltage Metering Systems) or Transmission Company (if necessary) will be in attendance and that the person attending the site is technically competent to discuss problems relating to any defects or non-compliances and able to agree the resolution of any defects or non-compliances. The person should be able to access *all* the relevant Metering Equipment (where safe access is possible).

The Registrant shall notify the TAA (the Registrant may discharge this to the MOA), prior to the intended Inspection Visit that the MOA (and LDSO if applicable) will be in attendance. In addition the Registrant will inform the TAA of any other representatives that will be present at the Inspection Visit. Failure to do so will be reported to PAB at the discretion of BSCCo.

A MOA may appoint a competent third party who may attend on their behalf.

For SVA Metering Systems the appropriate LDSO shall arrange to gain independent access to the LDSO's equipment associated with the Metering System and the MOA shall arrange for access to the Meter and associated Metering Equipment for which it is responsible. The LDSO shall accede to such a request within 10 working days of the request from the Registrant and / or MOA.

For CVA Metering Systems the Registrant (or its nominated representative) shall provide access to the Metering Equipment during the Inspection Visit.

The TAA may, with the agreement of BSCCo, arrange for an urgent revisit (SVA and CVA Metering Systems) to be initiated. This will be at the expense of the Registrant if:

- (a) The Registrant fails to arrange access on the agreed date and time or access cannot be obtained upon arrival by the TAA;
- (b) The MOA fails to attend an Inspection Visit; or
- (c) The LDSO or Transmission Company fails to attend an Inspection Visit.

Any costs incurred by the MOA or LDSO or Transmission Company as a result of its attendance at an Inspection Visit shall be met by themselves.

Where the TAA has gained access to the Metering System but has been unable to complete the Inspection Visit, a result of 'incomplete Inspection Visit' and the reason for non-completion will be recorded. These instances will be reported to PAB at the discretion of BSCCo.

Where the TAA has been unable to gain access to the Metering System a result of 'no access' and the reason for no access will be recorded. These instances will be reported to PAB at the discretion of BSCCo.

1.13 Additional Metering Equipment Details Required by the TAA

When a Metering System has been selected for inspection, the MOA will be required to provide the following additional Metering Equipment Technical Details prior to the Inspection Visit, as a minimum:

1.13.1 General Information

- Site name
- Site address
- Site telephone number

1.13.2 Accuracy

- Circuit Identifier
- Applicable CoP (including the specific Issue)

- Current applicable Metering Dispensation(s)
- Meter Calibration Certificates
- Current Transformer Test Certificates (including details of manufacturer, type, serial number and class).
- Voltage Transformer Test Certificates (including details of manufacturer, type, serial number and class).
- Applicable Meter Compensation values (including evidence to support the applied values).
- This list is not exhaustive and any relevant information that may help the TAA obtain access to all the Metering Equipment should be made available to the TAA.

The determination of the overall accuracy of Metering Systems requires the provision of all associated measurement transformer errors. Details for the processes to be followed by the various parties for the provision of this information are given in section 4 of this BSCP.

1.13.3 Half Hourly Metering System Functional Information

- Channel Number(s) (for Active Energy)
- Measurement Quantity Id
- Date of First Registration

The HHDC will also be required to provide the Meter Technical Details that it uses to collect data from the Metering System, prior to the Inspection Visit in line with the timescales set out in section 3 and 4 of this BSCP.

1.13.4 Half Hourly Metering System Functional Information

Failure to provide the above information to the TAA within the required timescales as defined in section 4 shall be classified as a non-compliance.

The TAA may request any additional information that is felt necessary and reasonable for any Metering System being audited. This additional information will also be provided by the Registrant in a reasonable timeframe prior to the inspection visit where possible.

Where appropriate, all information to be provided to the TAA regarding an Inspection visit should be provided via the software system used by the TAA.

1.14 Non-Compliance

The TAA shall raise a non-compliance if, after taking into account any Metering Dispensations:

- (a) The requirements of the Code and CSDs are not being adhered to;
- (b) The actual configurable Meter parameters are not consistent with the Meter Technical Details recorded in Settlement systems as provided by the HHDC or CDCA, or MOA prior to the Inspection Visit.

The findings of the Inspection Visit will be recorded on an Inspection Schedule and presented to the MOA at the time of the Inspection Visit. Wherever possible any identified non-compliances shall be rectified by the MOA at the time of the visit.

Categorisation of non compliances

NC	A non-compliance has been identified through the Consumption Data Comparison Check that is deemed to be currently affecting the quality of data for Settlement purposes.
Category 1 Non Compliance	A non-compliance has been identified which is deemed to be currently affecting the quality of data for Settlement purposes
Category 2 Non Compliance	A non-compliance has been identified which is deemed to have the potential to affect the quality of data for Settlement purposes
Observation	A non-compliance has been identified which is deemed neither to affect nor to have the potential to affect the quality of data for Settlement purposes

On completion of an inspection, the TAA shall issue notices of compliance or non-compliance to the Registrant, MOA, HHDC, LDSO and Transmission Company as appropriate and where a non-compliance has been determined, the TAA shall provide the Registrant with the details of the non-compliance.

Where a non-compliance has been determined the Registrant shall be responsible for progressing the rectification of the non-compliance and must submit a rectification plan to the TAA in a timely manner and must ensure that the action to resolve the non-compliance is performed in a timely manner. The Registrant will be required to take all reasonable steps to ensure that the party that can take direct action does so, and that the Registrant pursues that party to the extent necessary. Where BSCCo deems it necessary, non-compliances not rectified by the Registrant will be reported to the PAB who will decide on further action in accordance with BSCP538, Error and Failure Resolution.

1.15 Queries & Appeals

Where a non-compliance has been identified, this may be queried by:

- The Registrant responsible for that Metering System; or
- The relevant MOA, HHDC, LDSO or the Transmission Company.

The non-compliance can be queried as follows:

1. Initially to the TAA who will review the query and provide a response.
2. If unsuccessful in 1, the raiser may pursue the query with BSCCo, or withdraw the query. If the query is not withdrawn, BSCCo will review the query and provide a response to the raiser.
3. If unsuccessful in 2, the raiser may raise an appeal with BSCCo and the Panel, or withdraw the query. The Panel may choose to delegate this responsibility to the PAB.

The Registrant (or MOA, HHDC, LDSO or the Transmission Company on behalf of the Registrant) will be required to provide evidence in support of the queries and appeals if requested to do so by the Registrant and BSCCo.

1.16 Rectification Action

The Registrant (or MOA, LDSO, HHDC or the Transmission Company on behalf of the Registrant) will rectify the non-compliance or provide a rectification plan (BSCP27/05), which will detail the appropriate milestones and actions to be taken in order to achieve rectification within the timescales required and set out in section 4.

1.17 Post Rectification Action

Where a Registrant is required to perform testing as per CoP 4, 'Code of Practice for the Calibration, Testing and Commissioning Requirements of Metering Equipment for Settlement Purposes', following the rectification of a non-compliance, the PAA or BSCCo or TAA shall have the option to attend and/or request details of the tests performed.

The costs associated with the rectification of a non-compliance and any subsequent testing shall be borne by the responsible Party.

1.18 Reporting

BSCCo may report the findings of an Inspection Visit and any outstanding non-compliances to the PAB.

1.19 Acronyms and Definitions

1.19.1 List of Acronyms

BSC	Balancing and Settlement Code (The “Code”)
BSCCo	Balancing and Settlement Code Company
BSCP	BSC Procedure
CDCA	Central Data Collection Agent
CMRS	Central Meter Registration Service
CoP	Code of Practice
CSD	Code Subsidiary Document
CT	Current Transformer
CVA	Central Volume Allocation
HH	Half Hour
HHDC	Half Hourly Data Collector
HV	High Voltage
LDSO	Licensed Distribution System Operator
LV	Low Voltage
MOA	Meter Operator Agent
MRA	Master Registration Agreement
MSID	Metering System ID
MTD	Meter Technical Details
PAA	Performance Assurance Administrator
PAB	Performance Assurance Board
PAP	Performance Assurance Party (Includes Registrants and Party Agents)
REM	Risk Evaluation Methodology
RER	Risk Evaluation Register
ROP	Risk Operating Plan
SCoP	Scottish Code of Practice (for Metering Systems registered in Scotland prior to the BETTA Effective Date)
SMRA	Supplier Meter Registration Agent
SMRS	Supplier Meter Registration Service
SVA	Supplier Volume Allocation
TAA	Technical Assurance Agent
VT	Voltage Transformer
WD	Working Day

1.19.2 Definitions

Additional Metering Technical Details – Additional Meter Technical Details not included within the D0268 dataflow or listed in BSCP20, Registration of Metering Systems for CVA.

Inspection Visit – the on site inspection of a Metering System.

A full list of definitions is provided in the Code.

1.20 EMR Requirements

BSCCo shall notify all NC and Category 1 Non Compliances it becomes aware of to any CFD Settlement Services Provider and any CM Settlement Services Provider. BSCCo shall provide:

- The MSID relating to the applicable SVA or CVA Metering System; and
- The nature of the non-compliance.

2 Not used

3 Interface and Timetable Information

3.1 Main Sample Selection Process – CVA and SVA

REF	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
3.1.1	As specified in section 1.9	Request Metering System Ids and associated information.	BSCCo	CDCA	Relevant information from HH Metering System Id, GSP Group, Registrant, MOA, HHDC and Measurement Class.	Email or as agreed
3.1.2	As specified in section 1.9	Request Metering System Ids and associated information.	TAA	SMRA	Relevant information from HH Metering System Id, GSP Group, Registrant, MOA, HHDC and Measurement Class.	Email or as agreed
3.1.3	Within 10 WD of request in 3.1.1	Provide Half Hourly Metering System Ids and associated information.	CDCA	BSCCo	Relevant information from HH Metering System Id, GSP Group, Registrant, MOA, HHDC and Measurement Class.	Email or as agreed
3.1.4	Within 10 WD of request in 3.1.1	Provide Half Hourly Metering System Ids and associated information.	SMRA	TAA	Relevant information from HH Metering System Id, GSP Group, Registrant, MOA, HHDC and Measurement Class.	Email or as agreed
3.1.5	Upon receipt of data in 3.1.3	Provide the TAA with the data.	BSCCo	TAA	Lists of HH Metering System Ids and associated Registrant and MOA.	Email or as agreed
3.1.6	Within 10 WD of receipt of data in 3.1.4 and 3.1.5	Randomly select 10% more Metering Systems than will be inspected, as agreed by BSCCo. Finalise sample of HH Metering System to avoid bias towards any one party or type of Metering Equipment and derive inspection schedule. Proceed to Section 3.5	TAA		Lists of HH Metering System Ids and associated Registrant and MOA.	Internal process

3.2 Specific Sample Selection Process – SVA Only

REF	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
3.2.1	At PAB meeting	Agree and notify BSCCo of Specific Sample.	PAB	BSCCo	Number and type of each Metering System to form Specific Sample.	PAB Paper: Risk Operating Plan
3.2.2	Within 5 WD of 3.2.1	Confirm to the TAA, the Specific Sample.	BSCCo	TAA	Number and type of each Metering System to form Specific Sample.	Email or as agreed
3.2.3	Within 10 WD of 3.2.2	Request information from each Registrant, MOA and LDSO for all relevant Specific Sample Metering Systems registered in SMRSs.	TAA BSCCo (as appropriate)	Registrant, MOA and LDSO	Information about Specific Sample Metering Systems as requested.	Email or as agreed
3.2.4	Within 20 WD of receipt of request at 3.2.3	Provide information on all Specific Sample Metering Systems as requested.	Registrant, MOA and LDSO	TAA BSCCo (as appropriate)	Information about Specific Sample Metering Systems as requested.	Email or as agreed
3.2.5	Upon on receipt of information	BSCCo will provide this information to the TAA.	BSCCo	TAA	Information about Specific Sample Metering Systems.	Email or as agreed
3.2.6	Upon receipt of information	Randomly select the agreed number of each type of Metering System which comprises the agreed Specific Sample group.	TAA		Select sample as instructed by BSCCo.	Internal process
3.2.7	At least 20 WD prior to the Inspection Visit	Request information.	TAA	MOA Registrant (as necessary) HHDC	Meter Technical Details. Additional Metering Equipment Technical Details. BSCP514/8.4.8a Complex Site Supplementary Information Form, where applicable (SVA only).	Online database or other agreed method

REF	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
3.2.8	Within 10 WD of receipt of request in 3.2.7 as necessary	Provide information (as necessary).	Registrant HHDC	TAA	Meter Technical Details. Additional Metering Equipment Technical Details. BSCP514/8.4.8a Complex Site Supplementary Information Form, where applicable (SVA only).	Online database or other agreed method
3.2.9	On the day of the Inspection Visit or within 10 WD of receipt of TAA request in 3.2.7	Provide information	MOA	TAA	Meter Technical Details. Additional Metering Equipment Technical Details BSCP514/8.4.8a Complex Site Supplementary Information Form, where applicable (SVA only)	Online database or other agreed method
3.2.10	Prior to Inspection Visit	Collate information required for inspection. Proceed to Section 3.5.	TAA			Internal process

3.3 Determination of Metering Systems for Targeted Inspections

REF	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
3.3.1	At any time	Provide information on SVA Half Hourly or CVA Metering Systems that may require a targeted inspection.	Market Participant, PAA, Panel, PAB or TAA BSCCo	BSCCo	Metering System with reasons and supporting evidence of suspected non-compliance.	Email or as agreed
3.3.2	Within 5 WD of receipt of information in 3.3.1	Determine Metering System that requires a targeted inspection.	BSCCo		Suspected non-compliance.	Internal process
3.3.3	Within 1 WD of 3.3.2.	Instruct the TAA to carry out a targeted inspection and inform the TAA of the urgency.	BSCCo	TAA	Metering System and reason for targeted inspection.	Email or as agreed
3.3.4	At least 10 WD prior to the Inspection Visit	Request information.	TAA	MOA Registrant (as necessary) HHDC or CDCA	Meter Technical Details Additional Metering Equipment Technical Details. BSCP514/8.4.8a Complex Site Supplementary Information Form, where applicable (SVA only).	Online database or other agreed method
3.3.5	Within 5 WD of receipt of the request in 3.3.4 as necessary	Provide information (as necessary).	Registrants	TAA	Meter Technical Details. Additional Metering Equipment Technical Details. BSCP514/8.4.8a Complex Site Supplementary Information Form, where applicable (SVA only).	Online database or other agreed method

REF	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
3.3.6	Where CVA: Within 5 WD of receipt of TAA request in 3.3.4 Where SVA: On the day of the Inspection Visit or within 5 WD of receipt of TAA request in 3.3.4	Provide information.	MOA	TAA	Meter Technical Details. Additional Metering Equipment Technical Details. BSCP514/8.4.8a Complex Site Supplementary Information Form, where applicable (SVA only).	Online database or other agreed method
3.3.7	Within 5 WD of receipt of the request in 3.3.4	Provide information.	HHDC or CDCA	TAA	Meter Technical Details. BSCP514/8.4.8a Complex Site Supplementary Information Form, where applicable (SVA only).	Online database or other agreed method
3.3.8	Prior to Inspection Visit	Collate information required for Inspection Visit and proceed to section 3.5.	TAA			Internal process

3.4 Selection of Metering Systems for Re-inspections

REF	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
3.4.1	On a Quarterly basis	Identify Metering Systems that were found to be non-compliant and have since been notified as rectified. Randomly select Metering Systems agreed by BSCCo.	TAA		Previous inspection history. Percentages as agreed by BSCCo.	Internal process
3.4.2	Prior to Inspection Visit	Collate information for Inspection Visit and proceed to Section 3.5.5.	TAA			Internal process

3.5 Inspection Visit

REF	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
3.5.1	At least 20 WD ² prior to an Inspection Visit	Notify Registrant, LDSO (or Transmission Co) and MOA of HH Metering System identified for Inspection Visit.	TAA	Registrant, LDSO (or Transmission Company) and MOA HHDC / CDCA	Date, time and Metering System to be inspected. (as detailed in Appendix 4.5.1 - BSCP27/01)	Online database or other agreed method
3.5.2	Within 10 WD of receipt of notification in 3.5.1.	Arrange for access to Metering System for the purposes of an Inspection Visit.	Registrant	MOA, Customer, and if necessary LDSO (or Transmission Company if appropriate)	Date, time and Metering System to be inspected.	Email or as agreed
3.5.3	At least 10 WD prior to an Inspection Visit	Notify the TAA and MOA of acceptance of impending Inspection Visit and those parties attending.	Registrant	TAA MOA	Acceptance of terms and required attendees of an impending Inspection Visit. (as detailed in Appendix 4.5.2 - BSCP27/02).	Online database or other agreed method
3.5.4	Where CVA: Within 10 WD of receipt of TAA request in 3.5.1 Where SVA: On the day of the Inspection Visit or within 10 WD of receipt of TAA request in 3.5.1	Registrant, LDSO (or Transmission Co), MOA to provide required information to the TAA for the purposes of the Inspection Visit.	Registrant MOA LDSO (or Transmission Company)	TAA	Meter Technical Details. Additional Metering Equipment Technical Details. BSCP514/8.4.8a Complex Site Supplementary Information Form, where applicable (SVA only).	Online database or other agreed method

² In the case of Inspection Visits to Metering Systems located offshore, the TAA shall provide a minimum of 90 WD notice. In such cases, where a visit has not taken place within 20 WD of the intended visit date, the TAA shall notify BSCCo, giving reasons for the failure. BSCCo may refer the matter to the Performance Assurance Board. In the case of Targeted Inspections, the TAA shall provide no more than 10 WD notice.

REF	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
3.5.5	On the day of the Inspection Visit	TAA performs Inspection Visit with MOA and LSDO (or Transmission Company) in attendance, is appropriate.	TAA MOA LSDO (or Transmission Company) if appropriate			
3.5.6	On completion of Inspection Visit Within 2 WD of completion of the Inspection Visit	TAA produces Inspection Visit findings and determines Metering System compliance. If a non compliance is identified, initiate process 3.6. If an observation is identified – notify the relevant parties If Inspection Visit is identified as compliant – notify the relevant parties.	TAA	Registrant and MOA, CDCA / HHDC, LSDO (or Transmission Company) if appropriate	Completed and signed Inspection Schedule	Online database or other agreed method
3.5.7	Within 2 WD of completion of Inspection Visit	Request current actual consumption data held by the CDCA or HHDC for the same period as recorded during the Inspection Visit.	TAA	CDCA or HHDC	Current actual consumption data held by the CDCA or HHDC for the same HH period.	Email or as agreed
3.5.8	Within 5 WD of receipt of request	Provide HH data requested in 3.5.7.	CDCA or HHDC	TAA	HH data.	Online database or other agreed method
3.5.9	Within 2 WD of receipt of 3.5.8	TAA performs Consumption Data Comparison Check and determines Metering System compliance. If a non compliance is identified, initiate process 3.6. If an observation is identified – notify the relevant parties If Inspection Visit is identified as compliant – notify the relevant parties.	TAA	Registrant and MOA, HHDC / CDCA, LSDO (or Transmission Company) if appropriate	Completed, updated and signed Inspection Schedule.	Online database or other agreed method

3.6 Category 1, 2 and CDCC Non-Compliance

REF	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
3.6.1	Within 2 WD of completion of an Inspection Visit (3.5.6)	Notify the Registrant, MOA, and HHDC/CDCA of relevant of non-compliance. If the visit was a targeted visit, or a Category 1 Non Compliance has been identified, notify BSCCo.	TAA	Registrant, MOA, HHDC, CDCA; BSCCo (for targeted visit and Category 1 Non Compliances only)	Specific details of non-compliance (Completed and signed Inspection Schedule).	Online database or other agreed method
3.6.1A	Within 1 WD of 3.6.1	Notify NC and Category 1 Non Compliances	BSCCo	EMR Settlement Services provider	Details of the non-compliance including the MSID relating to the applicable SVA or CVA Metering System and the nature of the non-compliance.	Email or other agreed format
3.6.2	Within 2 WD of performing Consumption Data Comparison Check (3.5.9)	Notify the Registrant, and CDCA/HHDC of non-compliance. If relevant notify the MOA. If the visit was a targeted visit notify BSCCo.	TAA	Registrant, and HHDC/CDCA; MOA (if appropriate); BSCCo (for targeted visit only)	Specific details of non-compliance (Completed and signed Inspection Schedule).	Online database or other agreed method
3.6.3	Within 1 WD of receiving notification in 3.6.1 and 3.6.2.	Inform the TAA that a non-compliance notification has been received.	Registrant	TAA	Acknowledgement.	Online database or other agreed method

REF	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
3.6.4	Within 10 WD of receiving a non-compliance notification in 3.6.1 & 3.6.2.	(a) Where the Registrant, MOA, HHDC, CDCA agrees that Metering System is non-compliant; provide a rectification plan to the TAA or rectify the Metering System defects ³ and inform the TAA of action taken. Proceed to Section 3.6.7.	Registrant, MOA, HHDC, CDCA,	TAA	Details of the Rectification action taken, or a rectification plan (Appendix 4.5.5 - BSCP27/05).	Online database or other agreed method
	Or following 3.6.6.	(b) Where the Registrant or MOA disagrees with the non-compliances raised; inform the TAA and follow the query process set out in 3.7.	Registrant, MOA	TAA	Non-compliance appealed and reason for disagreement	Online database or other agreed method
3.6.5	On 11 th WD after notifying a Registrant of non-compliance	Where a query or appeal has <i>not</i> been received, and no rectification details or plan are received from the Registrant, MOA, or HHDC/CDCA, send a reminder to the Registrant, MOA, and HHDC/CDCA, requesting a rectification plan or details of the rectification action taken.	TAA	Registrant, MOA or HHDC/CDCA	Details of non-compliance and request for rectification plan or details of the rectification action taken.	Online database or other agreed method
3.6.6	Within 1 WD of receiving the reminder detailed in 3.6.5.	Inform the TAA that a reminder notification has been received and proceed to 3.6.4.	Registrant, MOA and HHDC/CDCA	TAA	Acknowledgement of reminder notification.	Online database or other agreed method
3.6.7	Within 3 WD of 3.6.6	Where no rectification plan or details of the rectification action taken are received, the TAA will report the instances to BSCCo. (a) The TAA will inform the Registrant, MOA, and HHDC/CDCA that they have failed to provide adequate rectification details and have been reported to BSCCo. (b) BSCCo will confirm to the Registrant that it is investigating the issue ⁴ .	TAA TAA BSCCo	BSCCo Registrant, MOA or HHDC/CDCA Registrant		Email or as agreed

³ It should be noted that it is the responsibility of the Registrant to progress any non-compliances associated with a Settlement Metering System. However, the MOA can progress the rectification of a non-compliance at the request of the Registrant and will follow the actions of the Registrant detailed in this process.

⁴ This may result in escalation to the PAB.

REF	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
3.6.8	Within 2 WD of 3.6.4a or following 3.6.9a	Analyse the Information provided. (a) Where the Registrant, MOA or HHDC/CDCA has provided adequate information to show the rectification action is complete, close the non-compliance and notify the Registrant. MOA and HHDC/CDCA. Process ends.	TAA	Registrant, MOA and HHDC/CDCA		Internal process Online database or other agreed method
		(b) Where the Registrant, MOA or HHDC/CDCA does not provide adequate information to show the rectification action is complete; or a complete rectification plan, notify the Registrant, MOA, and HHDC/CDCA with the reasons and proceed to 3.6.3. (c) Where the Registrant, MOA or HHDC/CDCA provides an adequate rectification plan, notify the Registrant and MOA and HHDC/CDCA that the plan is satisfactory.		Registrant, MOA and HHDC/CDCA Registrant, MOA and HHDC/CDCA		Online database or other agreed method Online database or other agreed method
3.6.9	As appropriate for the milestones in the rectification plan.	Monitor completion of milestones in the rectification plan. Analyse the information required. (a) Where the milestones have been met provide confirmation to the Registrant, MOA, HHDC/CDCA, and BSCCo. If the final milestone has been met proceed to 3.6.8a. (b) Where the milestones have not been met or no information is received regarding the completion of milestones from the Registrant, MOA or HHDC/CDCA, Go to 3.6.7.	TAA TAA	Registrant, MOA, HHDC/CDCA and BSCCo		Internal process Online database or other agreed method Online database or other agreed method

3.6A Category 1 Non-Compliance Materiality Calculation

REF	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
3.6A.1	Within 2 WD of 3.6.1 and where a Category 1 Non Compliance has been identified	Request HH consumption data held by the HHDC/CDCA.	BSCCo	HHDC/CDCA	HH consumption data for the period affected by Category 1 Non Compliance.	Email or other agreed format
3.6A.2	Within 5 WD of 3.6A.1	Provide HH consumption data requested in 3.6A.1	HHDC, CDCA	BSCCo	HH consumption data for the period affected by Category 1 Non Compliance.	Email or other agreed format
3.6A.3	Within 2 WD of 3.6A.2	Perform estimated metered net error materiality calculation.	BSCCo		Estimated metered net error materiality.	Online database or other agreed method

3.7 Queries

Ref	When	Action	From	To	Information Required	Method
3.7.1	Following 3.6.4b	The Registrant, MOA, or HHDC/CDCA raises a query with the TAA.	Registrant MOA HHDC/CDCA	TAA	Party details, Contact details and Supporting information.	Online database or other agreed method
3.7.2	Within 5 WD of 3.7.1	The TAA will review the information and record a summary of all discussions and information gathered.	TAA		A summary of all discussions and information gathered.	Online database or other agreed method
3.7.3	Within 5 WDs of 3.7.1 (and in parallel with 3.7.2)	The TAA will present its decision to the raising party.	TAA	Registrant MOA HHDC/CDCA	Supporting information.	Online database or other agreed method
3.7.4	Following 3.7.3	The raising party will consider the TAAs decision, if agrees the TAA will leave the non-compliance open as it is considered valid. Go to 3.6.	Registrant MOA HHDC/CDCA	TAA		Online database or other agreed method
3.7.5	Following 3.7.3	If the raising party disagrees with the TAAs decision, the TAA will initiate the query arbitration process (which escalates the decision process to a senior member of the TAA).	TAA			Internal process
3.7.6	Following 3.7.5	The raising party will consider the TAAs escalated decision, if agrees the TAA will leave the non-compliance open as it is considered valid. Go to 3.6.	Registrant MOA HHDC/CDCA	TAA		Online database or other agreed method
3.7.7	Following 3.7.5	If the raising party disagrees with the TAAs escalated decision the raising party may escalate the query to BSCCo for consideration.	Registrant MOA HHDC/CDCA	BSCCo	Supporting information.	Email or as agreed

Ref	When	Action	From	To	Information Required	Method
3.7.8	Following 3.7.7	BSCCo will consider the raising party's issue and inform them of its decision.	BSCCo	Registrant MOA HHDC/CDCA		Email or as agreed
3.7.9	Following 3.7.8.	If the raising party disagrees with BSCCo's decision the raising party may raise an appeal, to be considered by the PAB. If so, proceed to the appeal process (3.8).	Registrant MOA HHDC/CDCA			Online database or other agreed method

3.8 Appeal Process

REF	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
3.8.1	Registrant raises an appeal	The Registrant raises an appeal against a specific non-compliance.	Registrant	TAA	Reasons why the non-compliance has been appealed.	Online database or other agreed method
3.8.2	Following 3.8.1	The TAA notifies BSCCo that an appeal has been raised and provides all relevant information.	TAA	BSCCo	Reasons why the non-compliance has been appealed. Any information from the Query process. Any supporting evidence.	Online database or other agreed method
3.8.3	Within 20 WD of receipt of appeal.	BSCCo considers the grounds for the appeal and decides that: (a) The appeal is valid and withdraws the non-compliance and informs the Registrant of the decision and that the appeal is now closed. Process ends. (b) The appeal is not valid and informs the Registrant that the non-compliance will be upheld.	BSCCo	Registrant Registrant	Reasons why the non-compliance has been appealed. Details of why the non-compliance has been removed. Details of why non-compliance is still valid.	Internal process Email or as agreed Email or as agreed
3.8.4	Following 3.8.3.	BSCCo directs the TAA to take any action required. (a) The appeal is valid and withdraws the non-compliance. Process ends. (b) The appeal is not valid and the non-compliance will be upheld.	BSCCo	TAA	Reasons why the non-compliance has been appealed. Details of why the non-compliance has been removed. Details of why non-compliance is still valid.	Email or as agreed

REF	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
3.8.5	Within 5 WD of receiving notification in 3.8.1	<p>Registrant considers appeal decision.</p> <p>(a) If Registrant accepts decision; inform BSCCo. Proceed to 3.6.3.</p> <p>(b) If Registrant still disagrees with the non-compliance, acknowledge receipt of decision.</p> <p>Notify BSCCo that they wish to present appeal to the PAB⁵.</p> <p>The Registrant may request attendance at the next PAB meeting.</p>	Registrant	BSCCo BSCCo	<p>Reasons why the non-compliance has been upheld.</p> <p>Acknowledgement of receipt of appeal decision.</p> <p>Reasons why the non-compliance has been appealed.</p>	Email or as agreed
3.8.5	Within 1 WD of receipt of the appeal details in 3.8.4	Notify the TAA of appeal to PAB.	BSCCo	TAA	Reasons why the non-compliance has been appealed.	Email or as agreed
3.8.6	At next appropriate meeting of the PAB.	BSCCo reports the appeal details to the PAB for decision.	BSCCo	PAB	Details of non-compliance and details of why the non-compliance has been appealed by the Registrant	PAB Paper
3.8.7	At PAB meeting	<p>PAB considers the grounds of the appeal and decides whether to uphold or withdraw the non-compliance.</p> <p>(a) The PAB decides that the appeal is valid and informs the relevant parties to withdraw the non-compliance. Process ends.</p> <p>(b) The PAB decides that the appeal is not valid and informs the relevant parties to continue with the non-compliance procedure. Proceed to 3.6.3.</p>	<p>PAB</p> <p>PAB via BSCCo</p> <p>PAB via BSCCo</p>	<p>Registrant</p> <p>TAA</p> <p>Registrant</p> <p>TAA</p>	<p>Reasons why the non-compliance has been appealed, all relevant supporting information and the report from the TAA and BSCCo.</p> <p>The PAB's decision and reasons.</p> <p>The PAB's decision and reasons.</p>	<p>Internal Process</p> <p>Email or as agreed</p> <p>Email or as agreed</p>

⁵ The Panel have delegated authority to the PAB.

3.9 Reporting

REF	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
3.9.1	Monthly	Provide BSCCo with a report of the results of all Inspection Visits completed in the previous month and details of all outstanding non-compliances and progress of these outstanding non-compliances.	TAA	BSCCo		Online database or other agreed method
3.9.2	On or before PAB paper day	Provide the PAB with details of Inspection Visits completed by the TAA in the previous month and details of all outstanding non-compliances.	BSCCo	PAB		PAB Paper
3.9.3	At the PAB meeting	Determine what action, if any, needs to be taken in respect of a non-compliant Registrant. The PAB may also choose to initiate the Removal of Qualification Process for a MOA and HHDC.	PAB		Details of Inspection Visits completed by the TAA in the previous month and details of all outstanding non-compliances.	Removal of Qualification Process is defined in BSCP537.

4 Appendices

4.1 Description of Inspection Checks

This appendix describes the tests & checks that may be required to be carried out by the TAA as part of an Inspection Visit, as determined by the PAB. This is not an exhaustive list.

4.1.1 Measurement Transformer Specification (where appropriate)

Where possible check the:

- (a) Ratio, class, rated burden and polarity from the labels physically attached to the measurement transformers and/or the identification plates attached to switchgear or other enclosures containing measurement transformers (in practice this will not always be practical for safety reasons). And
- (b) Test records/certificates detailing specific measured errors held by the LDSO, or equipment owner, associated with the measurement transformers on site or from agreed Generic CT/VT certificates (SVA) in the case of CTs and VTs.

4.1.2 Meter Technical Details

Check to ensure that the actual Meter Technical Details conform to those recorded in Settlement Systems using:

- (a) Information provided by the CDCA (CVA), Registrant (SVA) or Party Agent in accordance with Section 1.14 of this BSCP, including any measurement transformer error offsets & commissioning details.
- (b) Information supplied to the CDCA, HHDC and MOA.

(This may require a remote/local interrogation of data for comparison purposes).

4.1.3 Accuracy

The following checks should be performed to verify the overall accuracy requirements of the Metering System:

- (a) Measurement transformers relate to test certificates provided;
- (b) Meter - test certificate calibration details are in accordance with requirements in CoP Four;
- (c) Metering Equipment installed is in accordance with the relevant CoP and where required the Main and Check Meters are correctly identified.

The overall accuracy is to be determined by the TAA and shall be within the requirements of the applicable CoP.

4.1.4 Correct Energy Measurement Check

To verify that the Metering System is recording the correct amount of energy, checks shall be carried out that compare the primary load with that being recorded

by the Metering System. However, due to the possible restrictive physical location of the primary conductors and Plant at an installation, access may be limited. Where this is the case, other suitable methods may be used to determine correct measurement.

For SVA sites installations can be divided up into the following three categories:

- (a) LV whole current;
- (b) LV, CT operated;
- (c) HV, CT & VT operated.

Sites that fall into categories (a) and (b) will prove to be the most accessible for prevailing load checks. Sites in category (c) may be more difficult to access, but it is often possible to use a clip-on ammeter around the current transformer cables where access to switchgear is restricted.

Note: When all preferred methods of checking the prevailing load fails, other suitable engineering methods may be adopted to establish correct measurement.

Methods of establishing primary load (in order of preference):

1. The demand (derived from independently measured primary values) shall be compared to the Meter's instantaneous demand reading for the same period; or
2. The demand (derived from independently measured secondary values where the primary/secondary ratios can be established) shall be compared to the Meter's demand reading for the same period; or
3. Where appropriate an alternative measurement device shall be used for comparison with that of the Settlement Meter; or
4. The MOA shall provide the TAA with appropriate commissioning records. The TAA is required to establish that these details sufficiently verify that the Meter has been proven to be operating correctly during commissioning; or
5. In the event that none of the above is possible, the TAA will notify BSCCo giving the reasons. (This recognises that if 1 to 4 are not possible additional checks do not add value.)

4.1.5 Consumption Data Comparison Check

The TAA shall compare the metered energy data for one half hour recorded at the time of the Inspection Visit with the consumption data held by the HHDC or CDCA for that same half-hour period. If the values differ by more than agreed tolerances the TAA will issue a non-compliance. This check can take place on site or off site at the discretion of the TAA and either method forms part of the Inspection Visit.

The tolerances will be agreed from time to time by the PAB.

In order to obtain and verify stored Meter data values that are eventually transferred to the HHDC or CDCA, it will be necessary to use a Hand Held Unit running relevant approved Hand Held Unit protocol to download data from the Meter or Outstation. This process will also provide engineering units (e.g. kW half hours) or raw pulses and some standing data. Once the pulse multiplier or constant (e.g. a multiplication constant of 0.5 is required to convert kW/MW half hour values to kWh/MWh half hour values) is applied the kWh/MWh value can be compared with the consumption data held by the CDCA or HHDC and the Meter's (displayed) cumulative advance over the same half hour period. The kWh/MWh value will also be compared with the measured value obtained from the Correct Energy Measurement Check.

This Consumption Data Comparison Check shall take the following format:

1. Compare the Meter Technical Details provided by both the HHDC or CDCA and MOA with that observed on-site. Consideration should also be given to Commissioning and historic proving test information.
2. Take a reading (for the dominant Active Energy flow direction at the time) of the cumulative register on the Meter's display at the beginning and end of the same half hour period that is to be downloaded from the Meter's Outstation and requested from the CDCA or HHDC.
3. Using the Meter Register Multiplier, calculate the true Meter register half hour advance for that half hour period.

This cumulative Meter register half hour advance shall also be used to confirm the findings from the Correct Energy Measurement Check where, ideally, the readings for that check were taken within the same half hour period and the load (or generation) was relatively constant during that period. The TAA shall use its discretion, bearing in mind the predictability of the load (or generation), where the readings weren't taken in the same half hour period.

4. Download a half hour reading from the Meter's Outstation and convert the value (raw pulses or engineering units) into a kWh half hour reading (for SVA registered Metering Systems) or
5. Request the current actual consumption data held by the CDCA or HHDC for the same half hour period and compare the energy recorded by the Settlement Meter (cumulative Meter register half hour advance) and its associated Outstation(s) (half hour value) with the energy value held in the CDCA or HHDC systems which will be submitted to Settlement.

One Active Energy channel will be requested unless a non-compliance is identified.

4.1.6 Code of Practice Compliance

All points to be checked as specified in the appropriate CoP.

4.1.7 Quality of Installation

All points to be checked as specified in the applicable CoP, including:

- (a) Labelling of equipment.
 - (b) General standard of installation i.e. good working practice.
- 4.1.8 ELEXON will perform an estimated metered error calculation, to be included in the Annual Report to the PAB, to provide an indication of the impact of errors on Settlement, in particular the impact that category 1 non-compliances may be having, this will mean that ELEXON will need to record the estimated materiality for all category 1 non-compliances.

This estimated net error calculation shall take the following format:

- (a) Calculate the percentage error.
- (b) Using the percentage error, calculate what would have been in Settlement if the error had not occurred.
- (c) Calculate the difference between what should have been in Settlement and what is actually in Settlement to provide a materiality in MWh.

4.2 Not Used

4.3 Provision of Measurement Transformer Certificates for Metering Equipment

4.3.1 Objective

BSC Parties require assurance that Metering Equipment operates within the accuracy limits defined in the appropriate CoP. As part of the process of establishing this assurance, evidence is required of the measurement transformer errors associated with the Metering System. This section explains the process involved in achieving such assurance.

4.3.2 Ownership

In the context of this BSCP, Equipment Owner is defined as the owner of the measurement transformers which form part of the Metering System.

4.3.3 Responsibilities

The MOA responsibilities are as stated in the Code and Code Subsidiary Documents.

The Equipment Owners responsibilities regarding the provision of measurement transformer certificates and co-operation with the MOA, are stated in the Code and Code Subsidiary Documents.

The MOA should request the measurement transformer certificates from the Equipment Owner. The Equipment Owner should provide these certificates to MOA within the required timescales. Consistent failure to do so may lead to the Equipment Owner being requested to explain why to the PAB.

4.3.4 Procedures for CoP1, CoP2, S1 and S2

The MOA should obtain the necessary measurement transformer test certificates from the Equipment Owner. This should be provided within 10 WD of the request.

If the necessary test certificates are not immediately available, the Equipment Owner shall advise the MOA of that situation (**within 10 WD of the request**) and state what steps are being taken to obtain the test certificates associated with the measurement transformers for that circuit/Site.

If the Equipment Owner does not have the necessary test certificates readily available, the Equipment Owner should request copies of the original test certificates. Where these are obtained, they should then be supplied to the MOA as soon as possible after the request from the MOA.

If the required test certificates are not available, the Equipment Owner must either:

- (a) Quote errors for a measurement transformer of similar characteristics, e.g. accuracy class, ratio, burden rating, manufacturer, type, age, etc; or
- (b) Obtain measurement transformer errors by testing; or
- (c) Replace the installed units by units with known errors at the earliest opportunity.

In either of (a) or (b) above, the Equipment Owner shall provide evidence to support the errors provided. This information shall be passed to the MOA within a further period of 10 WD of the errors being established.

The MOA will, as required, provide to the TAA the information supplied by the Equipment Owner.

4.3.5 Procedures for CoP3, CoP5, S3 and S5

The MOA should obtain the necessary measurement transformer error certificates from the Equipment Owner. This should be provided within 10 WD of the request⁶.

If the necessary error certificates are not readily available the Equipment Owner must provide the MOA, (**still within the 10 WD of the request**), with one of the following:

- Copies of the original certificates
- A generic certificate.

A generic certificate needs to be approved by the Panel. In order to approve a generic certificate, the Panel requires evidence that the statistical analysis method used is robust. The statistical analysis needs to be specific to ratio, make, rating, class and type.

⁶ Where the LV CTs are of accuracy class 0.5 or below the TAA will not require the MOA to obtain the CT certificates and the error shall be deemed that of the accuracy class in both directions for the purpose of establishing the overall error.

When carrying out an audit the TAA will ask the MOA for the measurement transformer error certificates. The MOA will provide to the TAA, the information provided by the LDSO.

4.4 Details of Forms for use in Technical Assurance

For the purposes of Technical Assurance the following forms can be utilised. However all exchange of information required⁷ is encouraged through the use of the software system, as used by the TAA:

BSCP27/01 - Notification of an Inspection Visit.

BSCP27/02 - Confirmation of Attendance at Technical Assurance Inspection Visit.

BSCP27/03 – No longer used

BSCP27/04 – No longer used

BSCP27/05 - Rectification Plan

4.4.1 Notice of Inspection Visit – BSCP27/01

This form, BSCP27/01, is used by the TAA to inform the Registrant of impending Inspection Visits. It contains the date, time and site address for the Inspection Visit. The Registrant is required to respond (by acknowledgement) to this notice in a timely manner; failure to do so may result in the matter being escalated to the PAB.

4.4.2 Confirmation of Attendance – BSCP27/02

This form, BSCP27/02, is used by the Registrant to confirm attendance at an impending Inspection Visit and acceptance of the arrangements requested by the TAA. It is sent in response to a BSCP27/01 form. Failure to respond to this confirmation in a timely manner may be reported to the PAB.

4.4.3 Inspection Schedule for Half Hourly Metering Systems – Part 1 – BSCP27/03

No longer used.

4.4.4 Inspection Schedule for Half Hourly Metering Systems – Part 2 – BSCP27/04

No longer used.

4.4.5 Rectification Plan – BSCP27/05

This form is used by the Registrant, MOA and HHDC / CDCA to provide details to the TAA and/or BSCCo of the action that the party intends to take in order to rectify the non-compliance. Details of all relevant milestones should also be included.

4.5 Forms

Details of all forms follow below in section 4.5.1.

All forms must contain the information stipulated.

⁷ The TAA is able to request any additional information in relation to any Metering System, and is not restricted to the Metering Systems which are being physically audited.

4.5.1 BSCP27/01 - Notification of Inspection Visit SVA / CVA

The form must contain the following data items:

Contact Details:

- To
- From
- Email address

Date

Number of Pages (only if Faxing)

List of planned Inspection Visits with the following details:

- Date
- Time
- MSID
- Visit Ref
- Site Name / Address
- Attendees

Details that the Registrant must send or facilitate sending prior to the Inspection Visit:

- Meter Test Certificates for all listed MSIDs
- Test Certificates for all Measurement Transformers for all listed MSIDs
- Commissioning documentation
- Compensation calculations (including Transformer Losses, etc), on a circuit by circuit basis
- Metering Equipment Alarm reporting procedure
- And all other reasonable requests made by the TAA

The TAA must stipulate which areas it will require access to, e.g. Metering Equipment Room, Central Control Room, Gen Alternator Pit, Gen VT Chamber, CT / VT's, substations (this list is not exhaustive).

4.5.2 BSCP27/02 - Confirmation of Attendance at Technical Assurance Visit

The form must contain the following data items:

Contact Details:

- To
- From
- Email address

Date

Number of Pages (only if Faxing)

Written confirmation of Attendance at the TAA visit

Contact details for the site (per MSID):

- MSID
- Contact
- Company
- Telephone Number
- TAA visit Reference

Attending Parties:

- Meter Operator Agent Contact
- Registrant Contact
- LDSO Contact
- Customer Contact

4.5.3 BSCP27/03 - Not used

4.5.4 BSCP27/04 - Not used

4.5.5 BSCP27/05 - Rectification Plan Proforma

The form must contain the following data items:

Registrant

MOA

HHDC

LDSO

Contact Details:

- Telephone number
- Email address

MSID

TAA Site Visit Reference

Registrant Ref Number

Site Name & Address

Non Compliances - 1 rectification plan per non compliance:

- Category
- Associated Rectification Action
- Target date for completion
- Key Milestones (e.g. MTDs provided by specific date)
- Where the responsibility is for completing the action