

Balancing and Settlement Code

BSC PROCEDURE

**Proving Test Requirements for Central Volume Allocation Metering
Systems**

BSCP02

Version 9.2

Date: DD MM YYYY

BSC Procedure 02 relating to Proving Test Requirements for Central Volume Allocation Metering Systems

1. Reference is made to the Balancing and Settlement Code and in particular, to the definition of “BSC Procedure” in Section X, Annex X-1 thereof.
2. This is BSC Procedure 02 Version 9.2 relating to Proving Test Requirements for Central Volume Allocation Metering Systems.
3. This BSC Procedure is effective from DD MM YYYY
4. This BSC Procedure has been approved by the Panel.

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AMENDMENT RECORD

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1. INTRODUCTION

1.1 Purpose and Scope of the Procedure

This BSCP defines the minimum requirements for the proving of, and the Commissioning End to End Check (CEEC) for, new, and changes to existing, Central Volume Allocation (CVA) Metering Systems. In order to maintain the integrity of Settlement every CVA Metering System is required to go through a full ‘end-to-end’ set of commissioning and Proving Tests when it is first registered for Settlement purposes in the Central Meter Registration Service (CMRS). Commissioning tests and Proving Tests do not necessarily have to be carried out on the same day, provided a reference Settlement Period is identified by the CVA Meter Operator Agent (MOA) for the comparison between Meter Register data and that collected by the Central Data Collection Agent (CDCA) for the same Settlement Period. However, commissioning tests must be completed prior to carrying out a Proving Test, and all testing and sealing completed before the Effective From Date, except where a Supplier Volume Allocation (SVA) Metering System transfers to CVA under [BSCP68](#) (see [Section 1.5](#)).

A CEEC shall be carried out on all new CVA Metering Systems and where certain changes to existing CVA Metering Systems are made. The CDCA shall initiate a CEEC data comparison with the Registrant when metered data (consumption or generation, as applicable) is detected for the relevant CVA Metering Subsystem ID (MSSID). A CEEC shall be carried out after commissioning tests and, where applicable, Proving Tests have been carried out.

This Balancing and Settlement Code Procedure (BSCP) differentiates between commissioning tests, Proving Tests and CEECs associated with CVA Metering Systems and defines the boundaries of each activity, as shown in Fig. 1. Commissioning tests, as defined in Code of Practice Four (CoP 4), are the minimum requirements necessary to establish that the CVA Metering Equipment is accurately measuring and recording the energy (consumption or generation) in an Outstation at a Site.

Whilst the general requirements for commissioning tests in relation to the various activities performed on CVA Metering Systems by the CVA MOA which may, or may not, lead to a Proving Test or CEEC being necessary, are covered in the table - Appendix 5: Table of Testing Requirements and Methods of Assurance of Settlement Data and associated Guidance Notes – any detail associated with those commissioning test requirements are out of scope of this procedure, and are not intended to replace the requirements of CoP4.

In Fig. 1, the CVA Metering System is bounded by a thin solid line, and the boundary for ‘commissioning’ by the CVA MOA is shown as a dotted line – Box A.

The purpose of a Proving Test is to establish the following:

- (a) The Meter Technical Details (MTD) submitted by the CVA MOA or Registrant to the CDCA to enable data collection are complete, accurate and correctly transferred to the CDCA instation;

- (b) The CDCA is able to interrogate the CVA Metering System Outstation and satisfactorily retrieve the relevant metered data in the required format; and
- (c) Prove that a Meter register advance for a given Settlement Period is consistent with the metered data retrieved by the CDCA for that same Settlement Period.

The purpose of a CEEC is the following:

- (a) The CDCA confirms that metered data being recorded, for the relevant Outstation channel, for the relevant MSSID, is reflective of the amount, and direction, of energy flowing in the primary circuit, related to a CVA Metering System; and
- (b) The Registrant confirms that for the relevant Outstation channel, for the relevant MSSID is recording energy with the same order of magnitude, and in the correct direction, to that expected.

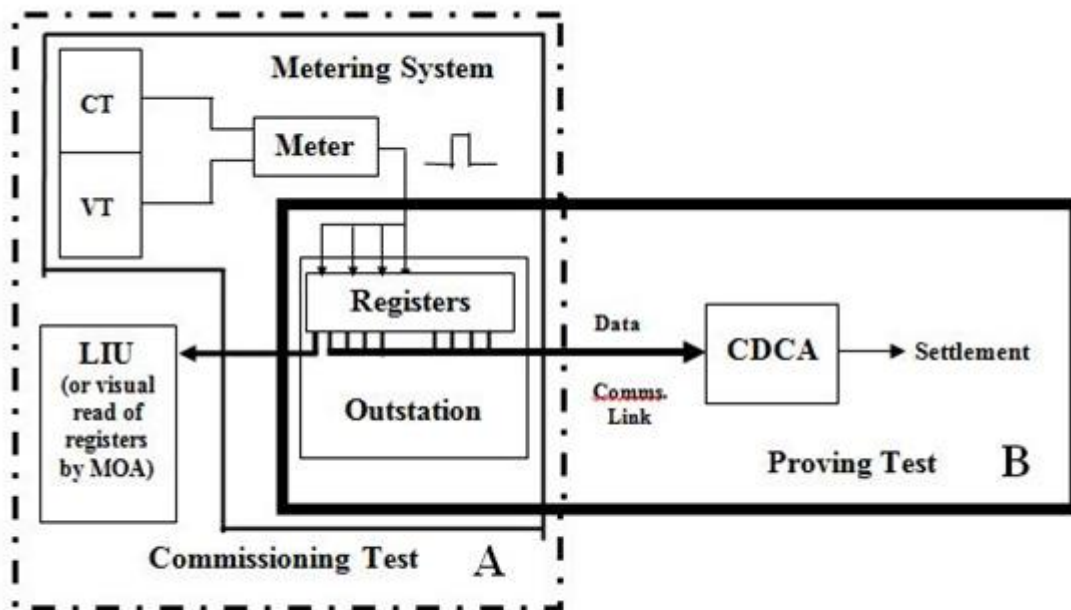


Fig. 1 – Boundaries for Commissioning and Proving Test Activities

The boundary for a Proving Test, carried out by the CDCA in conjunction with the CVA MOA, is shown in Fig. 1 as a thick solid line – Box B.

The boundary for a CEEC, carried out by the CDCA, in conjunction with the Registrant, is shown in Fig. 1 as both the thick solid line (i.e. Box B) and the dotted line (i.e. Box A), and shall include any independent metering equipment (i.e. non-Settlement) used by the Registrant to carry out a data comparison between the metered data recorded for Settlement against either independent metering equipment or, where not practically possible, and with reason(s) provided by the Registrant to the CDCA as to why it was not practically possible, the Registrant can compare the HH readings provided by the CDCA against the expected consumption or generation based on Plant rated capacity and operational load at the time.

This procedure describes the process for determining the requirements for carrying out such Proving Tests, CEECs or other agreed checks on CVA Metering Systems. This procedure also describes the activities involved in carrying out Proving Tests, CEECs, and any additional checks that may be required either at the same time as, or in place of, a Proving Test.

NOTE: CVA MOAs and CDCA should ensure that all recorded readings associated with commissioning and Proving Tests, in accordance with this procedure, are defined in MWh or Mvarh.

CDCA and Registrants should ensure that all recorded readings associated with CEECs, in accordance with this procedure, are defined in MWh or Mvarh.

Proving Tests, CEECs or other agreed checks must use the MTD submitted to the CDCA by the Registrant or CVA MOA in accordance with [BSCP20](#), either via form [BSCP20/4.3 'Registration of Meter Technical Details'](#) or the CDCA-I003 'Meter Technical Details'. The CVA MOA and CDCA shall not use MTD which are provided by any other method as the basis for a Proving Test, CEEC or other agreed check.

1.1.1 This procedure covers situations where the Registrant or CVA MOA is proposing to:

- (a) Install new, or additions to existing CVA Metering Systems;
- (b) Remove and / or replace Meters and / or Outstations;
- (c) Reprogram Meters and / or Outstations;
- (d) Replace, repair or modify any part of the Metering Equipment associated with a CVA Metering System ; and(e) Change the registration of a Metering System from a Supplier Metering Registration Service (SMRS) to the Central Metering Registration Service (CMRS), i.e. a SVA Metering System becomes a CVA Metering System.

This procedure also covers situations where a third party (other than the Registrant or the CVA MOA), for example the Equipment Owner is proposing to:

- (f) Replace, repair or modify any part of the Metering Equipment associated with a CVA Metering System.

Some scenarios will not require a Proving Test to be carried out. Simple comparison checks may be adequate in some circumstances by agreement between the CVA MOA and the CDCA using other relevant metered data from the CVA Metering System collected by the CDCA. Where comparison checks are deemed acceptable the evaluation must take into account the overall integrity of Settlement. These comparison checks will largely be dependent on the degree of duplication within each Metering System.

Other scenarios that are not covered by this procedure may require commissioning and / or a limited degree of Proving Tests. In these cases the CVA MOA should consult with the CDCA and / or BSCCo (Elexon), as appropriate, to agree the scope of testing required. [Form BSCP02/4.1](#) should be used to confirm any agreements between the CVA MOA and CDCA.

Some scenarios will not require a CEEC to be carried out. The requirement for a CEEC will largely be dependent on the degree of duplication within each CVA Metering System; the nature of the work carried out on a CVA Metering System; and whether a CEEC has previously been carried out.

1.1.2 This procedure specifically excludes the requirement for Proving Tests or additional checks for Metering Systems registered in SMRS (these are covered in the Retail Energy Code Metering Operations Schedule).

[\[MHHS\]](#) 1.1.3 Proving Tests or additional checks are not required for:

- (a) Change of Registrant – since there is no impact on the physical CVA Metering System or associated parameters (unless PINs are changed) - this activity is then covered under reprogramming of Meters / Outstations;
- (b) Change of Data Collector/[Advanced Data Service](#) – except where there is a transfer of Metering System registration from SMRS to CMRS - since there is only one BSC Agent acting as a Data Collector (CDCA) for CVA Metering Systems.
- (c) Change of Meter Operator Agent – since this only requires a registration change by the Registrant, in accordance with [BSCP20](#);

1.2 Objectives

- (a) Every new CVA Metering System must go through a full end-to-end set of commissioning and Proving Tests before its registration becomes effective for Settlement purposes, although not necessarily on the same day, provided a reference Period is identified by the CVA MOA for the comparison between Meter Register data and that collected by the CDCA for the same Settlement Period. However, all commissioning tests must be completed prior to carrying out a Proving Test, and all testing must be completed prior to the Effective From Date.
- (b) Once Proving Tests are complete, any work on the CVA Metering System must be carried out in such a way as to maintain the integrity of the data entering Settlement and with the prior approval of the CDCA, except in cases of emergency.
- (c) Simplified commissioning and Proving Tests may be employed following subsequent work on a CVA Metering System, with agreement of the CDCA / BSCCo provided the integrity of Settlement data can be shown to be maintained.
- (d) Where a component part of the CVA Metering System being worked on is fully duplicated, and the duplicate item remains intact, i.e. is not physically changed in any way, then the Proving Tests may be carried out by comparison between the duplicate parts of the CVA Metering System during a complete Settlement Period. In such scenarios the CVA MOA shall submit the Proving Test form to the CDCA. For the avoidance of doubt, where the relevant Section of the BSCP requires a Proving Test form to be submitted and the Proving Test is carried out by a simple dial up, the CVA MOA shall submit the Proving Test form to the CDCA (i.e. [Section 3.7](#) in relation to Ref 14 of [Section 5.2.6](#) for reprogramming an Outstation at system level).
- (e) For non-duplicated items acceptable Proving Tests will be required.
- (f) Every new CVA Metering System must go through a CEEC.
- (g) Where CVA Metering Equipment has been worked on, that CVA Metering System may require a CEEC if the work meets the criteria in [Appendix 5](#) 'Table of Testing Requirements and Methods of Assurance of Settlement Data'.

1.3 Main Users of the Procedures and their Responsibilities

This procedure should be used by:

- (a) **CDCA** to liaise with CVA MOA in determining requirements, timing and carrying out a Proving Test or comparison checks, and, in conjunction with the CVA MOA, to provide confirmation of a successful Proving Test; and to notify Registrant of the result of a Proving Test; and to liaise with Registrant to carry out a CEEC, and to acknowledge the outcome of the CEEC to the Registrant; and to escalate to BSCCo issues with any CEEC where the Registrant does not respond.
- (b) **CVA MOA** to confirm to the CDCA that the CVA Metering Equipment is fully installed and commissioned, to liaise with the CDCA in determining requirements of a Proving Test or comparison checks, timing of such tests, and, in conjunction with the CDCA, to provide confirmation of a successful Proving Test; and to notify the CDCA where a CEEC is required;
- (c) **CVA MOA** to **perform** a risk assessment, where necessary;
- (d) **Registrant** to receive results of Proving Test, to notify the CDCA where a CEEC is required and complete the CEEC where necessary; and
- (e) **BSCCo** in conjunction with CDCA, to agree the scope of testing required with CVA MOA for scenarios not described in this BSCP, and to agree simplified commissioning and Proving Tests where appropriate; and to deal with CEEC escalations from the CDCA.

1.4 Risk Assessment

Where full end-to-end Proving Tests are not considered to be necessary, as defined in Section 5: 'Table of Testing Requirements and Methods of Assurance of Settlement Data', a risk assessment should be carried out to confirm that any reduction in testing will not involve any tangible risk to the accuracy of the Settlement process.

The risk assessment should include the following requirements:

- (i) Confirmation that the combined commissioning and Proving Test(s) will provide a high level of assurance that the changes that have been carried out to the CVA Metering System(s) are correct, the CVA Metering System is functioning correctly and is compliant with the relevant Metering Code of Practice;
- (ii) The communications equipment is installed and operating correctly;
- (iii) The changes resulting from a modification to the MTDs have been correctly applied by the CDCA; and
- (iv) Any components of the CVA Metering System not directly affected, but which interface with any physical changes being made, or could indirectly be disturbed by the physical changes, are fully tested to provide a high level of

assurance that all aspects of the CVA Metering System are functioning correctly.

The risk assessment should be developed from the pretext that full commissioning and Proving Tests are always necessary. Individual elements of these tests should then be considered on the basis of the level of assurance they provide in the end-to-end testing process. Where each testing element is assessed as not providing any additional assurance or the required level of assurance is provided by other functional tests, the CVA MOA must state why these tests are not necessary in the risk assessment.

In all situations the CVA MOA shall take a risk adverse stance and shall carry out any tests where there is doubt about the need to do so. The CVA MOA should always support the CDCA in proving that the central systems are processing metered data correctly.

1.5 Key Milestones

The key milestones in this procedure are:

- For new CVA Metering Systems / additions to CVA Metering Systems - satisfactory completion of Commissioning Tests and Proving Tests at least 8 WD prior to the Effective From Date, as registered in accordance with BSCP20;
- For existing commissioned and proven Metering Systems in SMRS which are being transferred into CMRS – satisfactory completion of CVA Proving Tests within 5 WD of the Effective From Date;
- For all other work – as soon as practicable, recognising the importance of maintaining integrity of Settlement data.

1.6 Balancing and Settlement Code Provision

This BSCP should be read in conjunction with the Code and in particular [Section L](#). This BSCP has been produced in accordance with the provisions of the Code. In the event of an inconsistency between the provisions of this BSCP and the Code, the provisions of the Code shall prevail.

1.7 Associated BSC Procedures

BSCP06	CVA Meter Operations for Metering Systems Registered in CMRS
BSCP20	Registration of Metering Systems for Central Volume Allocation
BSCP25	Registration of Transmission System Boundary Points, Grid Supply Points, GSP Groups and Distribution System Connection Points
BSCP38	Authorisations
BSCP68	Transfer of Registration of Metering Systems between CMRS and SMRS

2. ACRONYMS AND DEFINITIONS

[MHHS]2.1 List of Acronyms

The terms used in this BSCP are defined as follows:

<u>ADS</u>	<u>Advanced Data Service</u>
BSCCo	Balancing and Settlement Code Company Limited
BSCP	Balancing and Settlement Code Procedure
CDCA	Central Data Collection Agent
CMRS	Central Meter Registration Service
CoP	Code of Practice
CEEC	Commissioning End to End Check
CRA	Central Registration Agent
CT	Current Transformer
CVA	Central Volume Allocation
GSP	Grid Supply Point
LIU	Local Interrogation Unit
MOA	Meter Operator Agent
MSID	Metering System Identifier
MSSID	Metering Subsystem Id
MSN	Meter Serial Number
MTD	Meter Technical Details
MWh	Mega-Watt hours
SMRS	Supplier Meter Registration Service
SD	Settlement Day
SVA	Supplier Volume Allocation
UPI	Units per Impulse

UTC	Co-ordinated Universal Time
VT	Voltage Transformer
WD	Working Day

2.2 List of Definitions

For the purpose of this Balancing and Settlement Code Procedure –

Calibration	<i>means</i>	<i>the procedure whereby the relevant errors of any item of Metering Equipment are determined.</i> <i>(a) Periodic calibration of Class 0.2S Active Energy Meters shall be performed in a laboratory or test house (including any manufacturers works.</i>
Commissioning	<i>means</i>	<i>activities carried out by the CVA MOA to ensure that the accurate measured data is available at the Meter Register(s) and Outstation(s), as described in CoP4. Where a BSC Party owns the measurement transformers, they shall be responsible for commissioning them.</i>
Commissioning End to End Check	<i>means</i>	<i>a data comparison check performed by the Registrant of a CVA Metering System, in conjunction with the CDCA, where the Registrant confirms that a CVA Metering System is recording energy with the same order of magnitude, and in the correct direction, to that expected and that recorded by the CDCA instation.</i>
Equipment Owner	<i>means</i>	<i>in relation to a CVA Metering System, a person which is the owner of Metering Equipment comprised in that CVA Metering System but is not the Registrant of that CVA Metering System.</i>
Proving Test	<i>means</i>	<i>with respect to a CVA Metering System, a Proving Test will confirm that the stored metered data associated with the energy imported to, or exported from the Total System (including System Connection Points), or alternatively provided by supply injection, and derived from a fully commissioned and BSC compliant CVA Metering System at a Site, can be satisfactorily transferred via a suitable communications link to, and correctly recorded by, the Central Data Collection Agent systems.</i>
Meter reprogramming	<i>means</i>	<i>adjustment to the Meter to change Current Transformer (CT) and / or Voltage Transformer (VT) ratios, pulse values, and CT / VT or power transformer compensation, etc.</i>
simple dial up	<i>means</i>	<i>a communication check carried out by the CDCA to confirm that an instation can collect data from an Outstation. No further validation of this data is required.</i>

Full definitions of the acronyms in Section 2.1 are, where appropriate, included in the Balancing and Settlement Code.

3. INTERFACE AND TIMETABLE INFORMATION

3.1 Proving Test Requirements for New Installations

	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
3.1.1	At least 15 WD prior to Effective From Date	Advise CDCA of the date commissioning will be completed and the proposed date for Proving Test.	CVA MOA	CDCA	Proposed Proving Test date NOTE: The Proving Test date must be at least 8 WD prior to the Effective From Date and after the CVA Metering Equipment has been fully commissioned.	Fax / Email

	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
3.1.2	Prior to 3.1.3 and completion of Proving Test	Carry out commissioning tests in accordance with CoP 4	CVA MOA		BSCP02 / 4.2(a) & BSCP02 / 4.2(b) : Metering System Commissioning Test Record	

	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
3.1.3	Before or in the same time period as 3.1.6	Confirm that the CVA Metering System has been installed, commissioned in accordance with CoP 4, and is operating satisfactorily in accordance with the relevant Code of Practice.	CVA MOA	CDCA	BSCP02/4.4 : Confirmation of Installation of Metering Equipment	Fax / Email / Letter

	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
		Send commissioning test records to CDCA			BSCP02 / 4.2(a) & BSCP02 / 4.2(b) : Metering System Commissioning Test Record	
3.1.4	On date agreed in 3.1.1	Carry out Proving Tests in accordance with Section 5 – Ref. 1 in section 5.1	CVA MOA / CDCA		BSCP20 / 4.3 : Registration of Meter Technical Details (CDCA-I003 Meter Technical Details) NOTE: A Proving Test or other agreed check shall not be considered successful unless it is carried out using MTD submitted in this format.	Fax / Email / Post
3.1.5	On day of Proving Test	Liaise with CDCA to confirm that half-hourly data is correct.	CVA MOA	CDCA		Phone

	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
3.1.6	Within 3 WD of completion of Proving Test	Send completed form BSCP02/4.3	CVA MOA	CDCA	BSCP02/4.3 : Metering System Proving Test Record. NOTE: Form must be signed by an Authorised Person registered in accordance with BSCP38/5.3.	Fax / Email
3.1.7	Within 1 WD of 3.1.6	Confirm results of Proving Test. Where it is unsuccessful agree measures to rectify problem and return to 3.1.3.	CDCA	Registrant CVA MOA	BSCP02/4.3 : Metering System Proving Test Record.	Fax / Email

3.2 Proving Test Requirements for Extension to Existing Installation

REF	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
3.2.1	At least 15 WD prior to Effective From Date	Advise CDCA of the date commissioning of additional CVA Metering Equipment will be completed and the proposed date for Proving Test.	CVA MOA	CDCA	Proposed Proving Test date NOTE: The Proving Test date must be at least 8 WD prior to the Effective From Date and after the CVA Metering Equipment has been fully commissioned.	Fax / Email
3.2.2	Prior to 3.2.3 and completion of Proving Test	Carry out commissioning tests in accordance with CoP 4	CVA MOA		BSCP02 / 4.2(a) & BSCP02 / 4.2(b) : Metering System Commissioning Test Record	
3.2.3	Before or on the same day as in 3.2.6	Confirm that the CVA Metering System has been installed, commissioned in accordance with CoP 4, and is operating satisfactorily in accordance with the relevant Code of Practice. Send commissioning test records to CDCA.	CVA MOA	CDCA	BSCP02/4.4 : Confirmation of Installation of additional Metering Equipment BSCP02 / 4.2(a) & BSCP02 / 4.2(b) : Metering System Commissioning Test Record	Fax / Email / Letter
3.2.4	On date agreed in 3.2.1	Carry out Proving Tests in accordance with Section 5 – Ref. 2 in section 5.1 .	CVA MOA / CDCA		BSCP20 / 4.3 : Registration of Meter Technical Details (CDCA-I003 Meter Technical Details) NOTE: A Proving Test or other agreed check shall not be considered successful unless it is carried out using MTD submitted in this format.	Fax / Email / Post
3.2.5	On day of Proving Test	Liaise with CDCA to confirm that half-hourly data is correct.	CVA MOA	CDCA		Phone

REF	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
3.2.6	Within 3 WD of completion of Proving Test	Send completed form BSCP02/4.3 .	CVA MOA	CDCA	BSCP02/4.3 : Metering System Proving Test Record. NOTE: Form must be signed by an Authorised Person registered for purpose in accordance with BSCP38/5.3.	Fax / Email - followed by postal delivery of original
3.2.7	Within 1 WD of 3.2.6	Confirm results of Proving Test. Where it is unsuccessful agree measures to rectify problem and return to 3.2.3 .	CDCA	Registrant CVA MOA	BSCP02/4.3 : Metering System Proving Test Record.	Fax / Email

3.3 Proving Test Requirements where a Metering System Registration is transferred from SMRS to CMRS

REF	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
3.3.1	Within 5 WD prior to the Effective From Date	Assess whether the CVA Metering System is operating satisfactorily in accordance with the relevant Code of Practice.	CVA MOA		Commissioning records and calibration certificates and any onsite checks	
3.3.2	As in 3.3.1	Agree date for Proving Test	CVA MOA	CDCA	Proposed Proving Test date	Phone
3.3.3	Before or on the same day as in 3.3.6	Confirm that the CVA Metering System is operating satisfactorily in accordance with the relevant Code of Practice.	MOA	CDCA	BSCP02/4.4 : Confirmation of Installation of Metering Equipment	Fax/ Letter
3.3.4	On date agreed in 3.3.2 and within 5 WD after Effective From date	Carry out Proving Tests in accordance with Section 5 Ref. 27 in section 5.4 .	CVA MOA / CDCA		BSCP20/4.3 : Registration of Meter Technical Details (CDCA-I003 Meter Technical Details) NOTE: A Proving Test or other agreed check shall not be considered successful unless it is carried out using MTD submitted in this format.	Fax / Email / Post
3.3.5	On day of Proving Test	Liaise with CDCA to confirm that half-hourly data is correct.	CVA MOA	CDCA		Phone
[MHHS] 3.3.6	Within 3 WD of completion of Proving Test	Send completed form BSCP02/4.3 NOTE: CDCA may provide initial information to CVA MOA to allow this process to start, e.g. where Proving Test is by comparison of data in the CDCA system with the data collected by a SVA data collector or Advanced Data Service .	CVA MOA	CDCA	BSCP02/4.3 : Metering System Proving Test Record. NOTE: Form must be signed by an Authorised Person, registered for purpose, in accordance with BSCP38/5.3 .	Fax/ Email

REF	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
3.3.7	Within 1 WD of 3.3.6	Confirm results of Proving Test. Where it is unsuccessful agree measures to rectify problem and return to 3.3.3.	CDCA	Registrant CVA MOA	BSCP02/4.3 : Metering System Proving Test Record.	Fax/ Email

NOTE: For CVA Metering Systems installed to CoP 3 or below, alternative Proving Test methods and timescales may be more appropriate. Any alternatives shall be agreed with the CDCA beforehand, using BSCP02 / 4.1.

3.4 Proving Test Requirements where a Meter has been Replaced with a Different Meter

REF	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
3.4.1	Immediately on replacing the Meter	Carry out commissioning tests in accordance with CoP 4	CVA MOA		BSCP02/4.2(a) & BSCP02/4.2(b) : Metering System Commissioning Test Record	
3.4.2	Within 1 WD of 3.4.1	Advise CDCA of the date commissioning will be completed and the proposed date for Proving Test. Proving Test to be as soon as practicable following, but within 5 WD of, 3.4.1	CVA MOA	CDCA	Proposed Proving Test date NOTE: The Proving Test date must be after the CVA Metering Equipment has been fully commissioned.	Fax/ Email
3.4.3	Before or on the same day as in 3.4.6	Confirm that the Meter has been installed, commissioned in accordance with CoP 4, and is operating satisfactorily in accordance with the relevant Code of Practice. Send commissioning test records to CDCA	CVA MOA	CDCA	BSCP02/4.4 : Confirmation of Installation of Metering Equipment BSCP02/4.2(a) & BSCP02/4.2(b) : Metering System Commissioning Test Record	Fax/ Email
3.4.4	On date agreed in 3.4.2	Carry out Proving Tests in accordance with Section 5 Ref. 6 in section 5.2	CDCA/ CVA MOA		BSCP20/4.3: Registration of Meter Technical Details (CDCA-I003 Meter Technical Details) NOTE: A Proving Test or other agreed check shall not be considered successful unless it is carried out using MTD submitted in this format.	Fax / Email / Post
3.4.5	On day of Proving Test	Liaise with CDCA to confirm that half-hourly data is correct.	CVA MOA	CDCA		Phone

REF	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
3.4.6	Within 3 WD of completion of Proving Test	Send completed form BSCP02/4.3 NOTE: CDCA may provide initial information to CVA MOA to allow this process to start, e.g. where Proving Test is by comparison of data in the CDCA system	CVA MOA	CDCA	BSCP02/4.3 : Metering System Proving Test Record. NOTE: Form must be signed by an Authorised Person registered in accordance with BSCP38/5.3.	Fax / Email
3.4.7	Within 1 WD of 3.4.6	Confirm results of Proving Test. Where it is unsuccessful agree measures to rectify problem and return to 3.4.3.	CDCA	Registrant CVA MOA	BSCP02/4.3 : Metering System Proving Test Record.	Fax / Email

3.5 Proving Test Requirements where a Outstation has been Replaced by Same Type

REF	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
3.5.1	Immediately on replacing Outstation	Carry out commissioning tests in accordance with CoP 4	CVA MOA		BSCP02/4.2(a) & BSCP02/4.2(b) : Metering System Commissioning Test Record	
3.5.2	Immediately on replacing Outstation	Advise CDCA that the replacement Outstation has been commissioned and agree date when the dial-up checks can be carried out. The dial-up check should be carried out as soon as practicable following, but within 5 WD of, 3.5.1	CVA MOA	CDCA	NOTE: The dial-up checks must be carried out after the CVA Metering Equipment has been fully commissioned.	Fax/ Email
3.5.3	Within 3WD of 3.5.1	Confirm that the Outstation has been installed, commissioned in accordance with CoP4, and is operating satisfactorily in accordance with the relevant Code of Practice. Send commissioning test records to CDCA.	CVA MOA	CDCA	BSCP02/4.4 : Confirmation of Installation of Metering Equipment BSCP02/4.2(a) & BSCP02/4.2(b) : Metering System Commissioning Test Record	Fax/ Email
3.5.4	On date agreed in 3.5.2	Carry out dial-up checks in accordance with Section 5 Ref. 11 in section 5.3	CDCA			
3.5.5	Within 1 WD of 3.5.4	Confirm results of dial-up checks to CVA MOA. Where test are unsuccessful agree actions to rectify problem and retest.	CDCA	CVA MOA	Confirmation of successful dial-up	Fax/ Email

3.6 Proving Test Requirements where a Outstation has been Replaced by Different Type

REF	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
3.6.1	Immediately on replacing Outstation	Carry out commissioning tests in accordance with CoP 4	CVA MOA		BSCP02/4.2(a) & BSCP02/4.2(b) : Metering System Commissioning Test Record	
3.6.2	At 3.6.1 or within 1 WD of 3.6.1	Advise CDCA of the date commissioning of replacement Outstation will be completed, and the date when Proving Tests can be carried out. Proving Test to be as soon as practicable following, but within 5 WD of, 3.6.1	CVA MOA	CDCA	Proposed date of Proving Tests NOTE: The Proving Tests must be carried out after the CVA Metering Equipment has been fully commissioned.	Fax/ Email
3.6.3	Before or on the same day as in 3.6.6	Confirm that the Outstation has been installed, commissioned in accordance with CoP 4, and is operating satisfactorily in accordance with the relevant Code of Practice. Send commissioning test records to CDCA	CVA MOA	CDCA	BSCP02/4.4 : Confirmation of Installation of Metering Equipment BSCP02/4.2(a) & BSCP02/4.2(b) : Metering System Commissioning Test Record	Fax/ Email
3.6.4	On date agreed in 3.6.2	Carry out Proving Tests in accordance with Section 5 Ref. 12 in section 5.3	CDCA / CVA MOA		BSCP20/4.3 : Registration of Meter Technical Details (CDCA-I003 Meter Technical Details) NOTE: A Proving Test or other agreed check shall not be considered successful unless it is carried out using MTD submitted in this format.	Fax / Email / Post
3.6.5	On day of Proving Test	Liaise with CDCA to confirm that half-hourly data is correct.	CVA MOA	CDCA	BSCP02/4.3 : Metering System Proving Test Record.	Fax

REF	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
3.6.6	Within 3 WD of completion of Proving Test	Send completed form BSCP02/4.3 NOTE: CDCA may provide initial information to CVA MOA to allow this process to start, e.g. where Proving Test is by comparison of data in the CDCA system	CVA MOA	CDCA	BSCP02/4.3 : Metering System Proving Test Record. NOTE: Form must be signed by an Authorised Person, registered for purpose, in accordance with BSCP38/5.3.	Fax - followed by postal delivery of original
3.6.7	Within 1 WD of 3.6.6	Confirm results of Proving Test. Where it is unsuccessful agree measures to rectify problem and return to 3.6.3.	CDCA	Registrant CVA MOA	BSCP02/4.3 : Metering System Proving Test Record.	Fax/ Email

3.7 Proving Test Requirements where a Outstation has been Reprogrammed

(i) at Channel Level

(ii) at System Level

REF	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
3.7.1	On identifying reprogramming of Outstation is required	Notify CDCA of intended work and date when to be carried out. Advise CDCA of proposed date for Proving Tests. Proving Test to be carried out within 5 WD of completing reprogramming of Outstation	CVA MOA	CDCA	Proposed date for Proving Tests. NOTE: The Proving Tests must be carried out after the CVA Metering Equipment has been fully commissioned.	Fax/Email
3.7.2	Immediately on reprogramming Outstation	Carry out commissioning tests in accordance with CoP 4.	CVA MOA		BSCP02/4.2(a) & BSCP02/4.2(b) : Metering System Commissioning Test Record	
3.7.3	Before or on the same day as in 3.7.6	Confirm that work is completed and fully commissioned Send commissioning test records to CDCA	CVA MOA	CDCA	BSCP02/4.4 : Confirmation of Installation of Metering Equipment BSCP02/4.2(a) & BSCP02/4.2(b) : Metering System Commissioning Test Record	Fax/ Email
3.7.4	On date agreed in 3.7.1	Carry out Proving Tests in accordance with Section 5 Ref. 13 in section 5.3 (for Channel level); and Ref. 14 in section 5.3 (for System level)	CDCA / CVA MOA		BSCP20/4.3: Registration of Meter Technical Details (CDCA-I003 Meter Technical Details) NOTE: A Proving Test or other agreed check shall not be considered successful unless it is carried out using MTD submitted in this format.	Fax / Email / Post
3.7.5	On day of Proving Test	Liaise with CDCA to confirm that half-hourly data is correct.	CVA MOA	CDCA		Phone

REF	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
3.7.6	Within 3 WD of completion of Proving Test	Send completed form BSCP02/4.3 ¹	CVA MOA	CDCA	BSCP02/4.3 : Metering System Proving Test Record. NOTE: Form must be signed by an Authorised Person, registered for purpose, in accordance with BSCP38/5.3.	Fax - followed by postal delivery of original
3.7.7	Within 1 WD of 3.7.6	Confirm results of Proving Test. Where it is unsuccessful agree measures to rectify problem and return to 3.7.3.	CDCA	Registrant CVA MOA	BSCP02/4.3 : Metering System Proving Test Record.	Fax/ Email

¹ For the avoidance of doubt, the CVA MOA shall submit the Proving Test form to the CDCA where a simple dial up is required (i.e. when reprogramming an Outstation at system level. See Ref 14 of Section 5.2.6).

3.8 Commissioning End to End Check

REF	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
3.8.1	As soon as aware of any work on CVA Metering Equipment	Send notification of work carried out on, or a suspected issue with, CVA Metering Equipment.	Registrant, BSCCo, CVA MOA, any Party, or Equipment Owner (whether or not a Party), as appropriate	CDCA	Site Name MSID MSSID(s)	Email
3.8.2	As soon as possible after 3.8.1	Send notification that commissioning tests in accordance with CoP4 and Proving Test may be required.	CDCA	Registrant MOA BSCCo	MSID MSSID(s)	Email
3.8.3	As soon as possible after 3.8.2	Investigate the MSSID for inconsistencies and determine, and, if applicable, arrange, the relevant CoP4 commissioning tests and, if applicable, a Proving Test.	Registrant		MSID MSSID(s)	Internal process
3.8.4	Following 3.8.2	Where an inconsistency has been identified follow BSCP06.	Registrant			Internal process
3.8.5	Following 3.8.1 or prior to MTD Effective From Date and within 10WDs	CDCA to confirm with Registrant date to start monitoring circuit to see if consumption or generation is visible in the metered data retrieved from the relevant Outstation(s) channel(s) and agree suitable threshold (Section 5.5).	CDCA	Registrant	MSID MSSID(s)	Email

REF	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
3.8.6	Following 3.8.5 or 3.8.18, as appropriate, and within 5WDs	Registrant confirms date to start monitoring and suitable threshold relevant (Section 5.5) for Outstation(s) channel(s); Continue to 3.8.7.	Registrant	CDCA	Date Threshold value BSCP20/4.3, Registration of Meter Technical Details MSID MSSID(s)	Email
		Where no response from the Registrant after a week, and this is the first notification, escalate to BSCCo and continue to 3.8.17.	CDCA	BSCCo	Registrant contact details MSID MSSID(s)	Email
3.8.7	From the date provided in 3.8.6	Check if metered data present on relevant Outstation (s) channel(s) for relevant MSSID(s) identified in 3.8.1 or in BSCP20/4.3, Registration of Meter Technical Details .	CDCA		BSCP20/4.3, Registration of Meter Technical Details MSID MSSID(s)	Internal process

REF	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD	
3.8.8	Following 3.8.7	Where metered data is present on the Outstation channel for relevant MSSID(s), and it meets the threshold specified by the Registrant in 3.8.6, continue to 3.8.12; or	CDCA				Internal process
		Where metered data is present on the Outstation channel for relevant MSSID(s), but does not meet the threshold specified by the Registrant in 3.8.6, ask the Registrant if they wish to do the CEEC on these values or wait for the threshold, specified by the Registrant in 3.8.6, to be met? Continue to 3.8.9.	CDCA	Registrant	MSID MSSID(s)	Email	
		Where metered data is zero (e.g. 0MWh) on the Outstation channel for relevant MSSID(s), continue to monitor on a weekly basis and continue to 3.8.7; or	CDCA				Internal process
		Where zero (e.g. 0MWh) metered data is present on the MSSID(s) for one month after the date agreed with the Registrant or, following 3.8.11, notify the Registrant to investigate and continue to 3.8.10.	CDCA	Registrant BSCCo	MSID MSSID(s)	Email	

REF	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
3.8.9	Following 3.8.8	Registrant confirms whether metered data levels present can be used for a CEEC. Where metered data can be used continue to 3.8.12; or Where metered data cannot be used continue to monitor on a weekly basis and continue to 3.8.7.	Registrant	CDCA	MSID MSSID(s)	Email
3.8.10	Following 3.8.8 and as soon as possible	Registrant investigates the energisation status and level of prevailing consumption or generation, as applicable, of the relevant MSSID(s).	Registrant		MSID MSSID	Internal process
3.8.11	Following 3.8.10	Send notification of MSSID(s) energisation status and continue to 3.8.8. Where the MSSID is energised and there is consumption or generation in the primary circuit that is not being received by the CDCA instation follow the fault investigation and resolution process in BSCP06.	Registrant Registrant	CDCA BSCCo	MSID MSSID(s) Energisation Status Confirmation of demand/generation present on the circuit. MSID MSSID(s)	Email Internal process

REF	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
3.8.12	Following 3.8.8 and within 5WD	Notify the Registrant and submit a sample of Settlement Period data (usually one Settlement Period for each relevant Outstation channel for the main Meter (and, if installed, the check Meter), for Active (and Reactive) Energy, for the relevant Outstation.	CDCA	Registrant	BSCP02/4.6: Confirmation of Commissioning End to End Check	Email
3.8.13	Following 3.8.12 or 3.8.16 or 3.8.18 or 3.8.20, as applicable, and within 20WD	Compare the Settlement Period data using one of the techniques in Section 5.5 against the limits of error specified in Section 5.5 . Where no response received continue to 3.8.16.	Registrant CDCA		BSCP02/4.6: Confirmation of Commissioning End to End Check	Internal process Internal process
3.8.14	Within 3 WD following completion of 3.8.13	Send notification of Commissioning End to End Check result.	Registrant	CDCA	BSCP02/4.6: Confirmation of Commissioning End to End Check	Email
3.8.15	Within 1 WD of 3.8.14	Confirm results of Commissioning End to End Check. Where it is unsuccessful, agree measures to rectify problem and, where applicable, follow the fault investigation and resolution process in BSCP06. END PROCESS	CDCA	Registrant BSCCo	BSCP02/4.6: Confirmation of Commissioning End to End Check	Email

REF	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
3.8.16	Following 3.8.13 and within 2 WD	Resend the notification to the Registrant and submit a sample of Settlement Period data (usually one Settlement Period for each relevant Outstation channel for the main Meter (and, if installed, the check Meter), for Active (and Reactive) Energy), for the relevant Outstation. Where this is the first notification, escalate to BSCCo and continue to 3.8.17	CDCA CDCA	Registrant BSCCo	BSCP02/4.6: Confirmation of Commissioning End to End Check	Email Email
3.8.17	Following 3.8.6 or 3.8.16, as appropriate, and within 2WD	Send notification to the Registrant to complete Commissioning End to End Check.	BSCCo	Registrant	BSCP02/4.6: Confirmation of Commissioning End to End Check; or MSID MSSID(s) (as applicable)	Email

REF	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
3.8.18	Following 3.8.17 and within 5WD	<p>Registrant provides reasons for not being able to complete the Commissioning End to End Check (BSCCo may escalate this to the BSC Panel) or agrees to complete it.</p> <p>Where the Registrant agrees to confirm to the CDCA the date to start monitoring circuit to see if consumption or generation is visible in the metered data retrieved from the relevant Outstation(s) channel(s) and agree suitable threshold (Section 5.5) continue to 3.8.5; or</p> <p>Where the Registrant agrees to complete the Commissioning End to End Check, continue to 3.8.13 where metered data has been received from the CDCA; or</p> <p>Where the Registrant provides reasons for not being able to complete the Commissioning End to End Check, continue to 3.8.19.</p>	Registrant	BSCCo CDCA	BSCP02/4.6: Confirmation of Commissioning End to End Check	Email
3.8.19	Following 3.8.18 and within 5WD	Registrant provides rectification plan with date that Commissioning End to End Check can be completed and, where this requires data from the CDCA from a different Settlement Date, from that sent in 3.8.12, the Registrant should request this from the CDCA.	Registrant	CDCA BSCCo	Rectification Plan Settlement Data request for another Settlement Date	Email

REF	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
3.8.20	Following 3.8.19 and with 2WD	Acknowledge receipt of rectification plan and either: Continue to 3.8.13; or Send updated BSCP02/4.6 Confirmation of Commissioning End to End Check with revised data and continue to 3.8.13	CDCA	Registrant BSCCo	BSCP02/4.6: Confirmation of Commissioning End to End Check	Email

4 APPENDICES

The following forms and table should be used in conjunction with Section 3: Interface and Timetable Information.

Forms

BSCP02/4.1: Confirmation of Discussion / Testing Requirements with CDCA

Form 4.1 should be used whenever a method of assurance is proposed which deviates from the methods defined in the BSCP.

BSCP02/4.2: Metering System Commissioning Test Record

a – Dial Advance Tests (Primary Outstation)

b – Dial Advance Tests (Secondary Outstation)

Form 4.2 is included within this BSCP in recognition that a dial advance record is required as part of the full 'end-to-end' commissioning and Proving Tests required on a new installation. The form ensures consistency of record keeping.

BSCP02/4.3: Metering System Proving Test Record

Form 4.3 should be used to record and sign-off all Proving Tests which are carried out. Information recorded in Form 4.2 as part of the commissioning process may be used to populate the fields in Form 4.3.

BSCP02/4.4: Confirmation of Installation of Metering Equipment (including Extension or Modification of Metering System)

Form 4.4 is the official certificate provided by the CVA MOA, on behalf of the Registrant, that the CVA Metering System has been installed and commissioned in accordance with the Meter Technical Details forwarded to the CDCA.

BSCP02/4.5: Risk Assessment

Form 4.5 should be used by the CVA MOA to identify the proposed work to be carried out, the component parts of the CVA Metering System involved, the potential risks and impact of that work on data quality, and the controls employed to mitigate against those risks.

BSCP02/4.6: Metering System Commissioning End to End Check Test Record

Form 4.6 should be used by the Registrant to confirm to the CDCA the method of data comparison used for the CEEC and whether the results of the data comparison are satisfactory (i.e. within the allowed tolerances dependant on the method used). It shall also be used by the Registrant to provide details of a Rectification Plan, if applicable, and to request Settlement Data for a different demand period than that originally provided by the CDCA. The CDCA shall use the form to acknowledge to the Registrant the result of the data comparison and provide the Registrant with any comments.

BSCP02/4.1 - Confirmation of Discussion / Testing Requirements with CDCA

To: CDCA	Date Sent: _____
From: Participant Details	
CVA MOA ID: _____	Name of Sender: _____
Contact email address: _____	
Our Ref: _____	Contact Tel. No. _____
Name of Authorised Signatory: _____	
Authorised Signature: _____	Password: _____

Site: _____ **MSID:** _____

Name of CDCA Operator

confirms that the Proving Test requirements for the CVA Metering System(s) at the above location, and required for Settlement purposes, have been discussed between the CVA MOA and CDCA. The result of those discussions and the testing requirements are listed below.

Location of Metering System

OS Grid Reference: _____	GSP Reference: _____ <small>(if applicable)</small>
_____	MSID: _____
_____	_____
Site Name: _____	
Site Address: _____	

Detail of Testing Requirements

Confirmed by CDCA

Name: _____	Date: _____
Signature: _____	

BSCP02/4.2a - Metering System COMMISSIONING Test Record

To: CDCA	Date Sent: _____
From: Participant Details	
CVA MOA ID: _____	Name of Sender: _____
Contact email address: _____	
Our Ref: _____	Contact Tel. No. _____
Name of Authorised Signatory: _____	
Authorised Signature: _____	Password: _____

A Dial Advance Tests

The purpose of this test is to ensure that UPI and dial values set in the Outstation(s) align with the meter. All additional commissioning tests required by CoP4 will have been completed.

	Primary Outstation (if separate from Meter)	Secondary Outstation² (if separate from Meter)
Check UPI values in Outstation align with the meters.		
Check dial values in Outstation align with the meters.		

Dial advance tests should then be performed under conditions of injection test where appropriate. In order to achieve sufficient resolution, dial advances equivalent to operating the Meter at rated voltage and current for at least 10 minutes should be achieved.

Site: _____ **MSID:** _____

Commissioning Test Date: _____

A.1 Primary (or main Meter if integral) Outstation – for first 16 channels

Ch	Estimated Energy Injected / Prevailing Load *	Meter dial values					Outstation dial values (for Installations with separate Meters and Outstations)					Dial advance diff. (%)
		MWh / MVARh					MWh / MVARh					
		Start Time	Start Value	Finish Time	Finish Value	Adv.	Start Time	Start Value	Finish Time	Finish Value	Adv.	
00												
01												
02												
03												
04												
05												
06												
07												
08												
09												
10												
11												
12												
13												
14												
15												

To be completed by on-site Meter Operator Agent personnel at time of test

² Normally CoP1 only

BSCP02/4.2a (Cont'd)

A.1 Primary Outstation (or main Meter if integral) – for 32 channel Outstations

SITE: _____

MSID: _____

Commissioning Test Date: _____

Ch	Estimated Energy Injected / Prevailing Load *	Meter dial values					Outstation dial values (for Installations with separate Meters and Outstations)					Dial advance diff. (%)
		MWh / MVARh					MWh / MVARh					
		Start Time	Start Value	Finish Time	Finish Value	Adv.	Start Time	Start Value	Finish Time	Finish Value	Adv.	
16												
17												
18												
19												
20												
21												
22												
23												
24												
25												
26												
27												
28												
29												
30												
31												

Comments:

To be completed by on-site Meter Operator Agent personnel at time of test

** This column is for use by the CVA MOA to confirm that the Meter is functioning correctly. It is not an accuracy test. The value may differ from the Meter advance for a number of reasons, e.g. Meter compensation, changes in load when carried out against prevailing load conditions, or the method of estimating the injected energy.*

BSCP02/4.2b

A.2 Secondary (or check Meter if integral) Outstation – for first 16 channels

SITE: _____

MSID: _____

Commissioning Test Date: _____

Ch	Estimated Energy Injected / Prevailing Load *	Meter dial values					Outstation dial values (for Installations with separate Meters and Outstations)					Dial advance diff. (%)
		MWh / MVARh					MWh / MVARh					
		Start Time	Start Value	Finish Time	Finish Value	Adv.	Start Time	Start Value	Finish Time	Finish Value	Adv.	
00												
01												
02												
03												
04												
05												
06												
07												
08												
09												
10												
11												
12												
13												
14												
15												

Comments:

To be completed by on-site Meter Operator Agent personnel at time of test

BSCP02/4.2b (Cont'd)

A 2 Secondary (or check Meter if integral) Outstation – for 32 channels

SITE: _____ MSID: _____

Commissioning Test Date: _____

Ch	Estimated Energy Injected / Prevailing Load *	Meter dial values					Outstation dial values (for Installations with separate Meters and Outstations)					Dial advance diff. (%)
		MWh / MVARh					MWh / MVARh					
		Start Time	Start Value	Finish Time	Finish Value	Adv.	Start Time	Start Value	Finish Time	Finish Value	Adv.	
16												
17												
18												
19												
20												
21												
22												
23												
24												
25												
26												
27												
28												
29												
30												
31												

Meter dial advances agree with estimated value of primary energy applied to the Meter?	Y/N	
Are all dial advance differences in A.1 and A.2 less than 2%?	Y/N	
Are the respective Primary (or main Meter if integral) and (or check Meter if integral) Secondary Outstation dial advances in A.1 and A.2 within 2% of each other? i.e. Primary ch 1 to Secondary ch 1	Y/N	

Comments:

To be completed by on-site CVA Meter Operator Agent personnel at time of test

** This column is for use by the CVA MOA to confirm that the Meter is functioning correctly. It is not an accuracy test. The value may differ from the Meter advance for a number of reasons, e.g. Meter compensation, changes in load when carried out against prevailing load conditions, or the method of estimating the injected energy.*

BSCP02/4.3 - Metering System PROVING Test Record

To: CDCA	Date Sent: _____
From: Participant Details	
CVA MOA ID: _____	Name of Sender: _____
Contact email address: _____	
Our Ref: _____	Contact Tel. No. _____
Name of Authorised Signatory: _____	
Authorised Signature: _____	Password: _____

SITE: _____ **MSID:** _____

Related MSIDs:			
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Complete the tables below for a selected demand period, all channels must be driven to a count of at least 100 pulses.

For use with 16 channel Outstations

			Primary (or main Meter if integral) Outstation Values			Secondary (or check Meter if integral) Outstation Values		
			Outstation / LIU¹	Settlement Instation		Outstation / LIU¹	Settlement Instation	
Ch	Start Time / Sett. Period	End Time / Sett. Period	Demand MW*/MVAR Advance MWh*/MVARh	Collected (Pulses * / MWh * /MVARh)	Scaled MWh / MVARh	Demand MW*/MVAR Advance MWh*/MVARh	Collected (Pulses * / MWh * /MVARh)	Scaled MWh / MVARh
00								
01								
02								
03								
04								
05								
06								
07								
08								
09								
10								
11								
12								
13								
14								
15								

* Delete as appropriate

BSCP02/4.3 (cont'd)

For use with 32 channel Outstations

MSID: _____

			Primary (or main Meter if integral) Outstation Values			Secondary (or check Meter if integral) Outstation Values		
			Outstation / LIU ¹	Settlement Instation		Outstation / LIU ¹	Settlement Instation	
Ch	Start Time / Sett. Period	End Time / Sett. Period	Demand MW*/MVAR Advance MWh*/MVARh	Collected (Pulses * / MWh * /MVARh)	Scaled MWh / MVARh	Demand MW*/MVAR Advance MWh*/MVARh	Collected (Pulses * / MWh * /MVARh)	Scaled MWh / MVARh
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								
31								

* *Delete as appropriate*

Are all Primary (or main Meter if integral) Outstation and Settlement instation values the same for each channel?	Y/N
Are all Secondary (or check Meter if integral) Outstation and Settlement instation values the same for each channel?	Y/N

CVA MOA must state the units of Demand and Meter Advance data (e.g. MW/MWh)

CVA MOA completes Outstation data.

CDCA completes Settlement Instation data.

Comments:

Signed for CDCA

Date: _____
Name: _____
Signature: _____

¹ Where the commissioning and Proving Tests are not carried out at the same time, the recorded values in the Local Interrogation Unit (LIU) at the time of commissioning may be substituted for the Proving Test provided the same Settlement Period data is collected and compared by the CDCA.

BSCP02/4.4 - Confirmation of Installation of Metering Equipment (Including Extension or Modification to Metering Systems)

To: CDCA	Date Sent: _____
From: Participant Details	
CVA MOA ID: _____	Name of Sender: _____
Contact email address: _____	
Our Ref: _____	Contact Tel. No. _____
Name of Authorised Signatory: _____	
Authorised Signature: _____	Password: _____

Details of Registrant and Meter Operator Agent

Name of Registrant: _____

Name of Meter Operator Agent: _____

confirm that as at hours on/...../..... the Metering System required for the purposes of the Code is fully installed, commissioned and operational at the site detailed below.

Location of Metering System

OS Grid Reference: _____ GSP reference: (if applicable) _____
 _____ MSID: _____

Site Name: _____

Site Address: _____

Signed for Registrant

	Date: _____
Name of Authorised Signatory: _____	
Authorised Signature: _____	Password: _____

BSCP02/4.5 - Risk Assessment

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To: CDCA	Date Sent: _____
From: Participant Details	
CVA MOA ID: _____	Name of Sender: _____
Contact email address: _____	
Our Ref: _____	Contact Tel. No. _____
Name of Authorised Signatory: _____	
Authorised Signature: _____	Password: _____

Metering Equipment Details

Site: _____ **MSID:** _____

Circuit(s): _____

Details of work to be carried out:

Details of proposed Proving Test:

Metering System Component	Potential Impact of Proposed Work on Metering Data Quality	Method of Controlling Risk
Primary Plant		
CTs and VTs		
Cabling and Marshalling Boxes		
Metering Panel		

BSCP02/4.5 (Cont'd)

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Metering System Component	Potential Impact of Proposed Work on Metering Data Quality	Method of Controlling Risk
Meters		
<u>[MHHS]Data Collectors or Advanced Data Services</u>		
Auxiliary Power Supplies		
Communications Equipment		
Other		

Existing Control Measures:

Additional Information:

CDCA Comments:

Signed for CDCA

Signatory: _____ Signature: _____	Date: _____
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BSCP02/4.6 - Metering System Commissioning End to End Check Test Record

To: Registrant	Date Sent: _____
From: CDCA	
Name: _____	Signature: _____
Our Ref: _____	Contact Tel. No. _____

SITE NAME: _____

MSID: _____ **Effective From Date:** _____

Confirm method of comparison used (**To be completed by Registrant**):

Has the Settlement Period data been compared against an independent measurement source? If not, please provide reason why this is not practically possible, here:	Y/N
Allowed tolerance between Settlement Period data within +/- 10%; or	
Has the Settlement Period data against the expected consumption or generation based on Plant rated capacity and operational load at the time?	Y/N
Allowed tolerance between Settlement Period data within +/- 10%	

Confirm result (**To be completed by Registrant**):

Are the results of the comparison satisfactory (i.e. within the allowed tolerances dependant on the method used)?	Y/N
---	-----

Comments (Registrant to provide details of Rectification Plan if applicable):

Registrant request for revised Settlement Data:

Request data for a different Settlement Date	Date:
	Time (period ending in UTC):

Complete the table below for a selected demand period for all Outstation channels associated with the relevant MSSID..

Metering Subsystem ID	Outstation Id	Primary (or Main) or Secondary (or Check) Outstation	Measurement Quantity ID (AI, AE, RI, or RE)	Outstation Channel Number	Settlement Date and Time (period ending in UTC)	Settlement Period Value MWh or MVarh	Prevailing Load/Generation *

* Registrant to confirm the level of prevailing load/generation used for the comparison check and the units (i.e. is it MW or MWh / MVar or MVarh)

Signed for Registrant

Registrant ID: _____	Name of Sender: _____
Date Sent: _____	
Contact email address: _____	
Our Ref: _____	Contact Tel. No. _____
Name of Authorised Signatory: _____	
Authorised Signature: _____	Password: _____

CDCA acknowledgement of result signed by:

Name: _____	Date: _____
Signature: _____	

CDCA Comments:

<i>Comments:</i>

5. Table of Testing Requirements and Methods of Assurance of Settlement Data

5.1 New CVA Metering Systems / Additions to CVA Metering Systems

Ref.	Activity	Commissioning Test Required		Proving Test Required		Notes	Commissioning End-to-End Check (CEEC) Required	
		Non Duplicate System *	Duplicate System *	Non Duplicate System *	Duplicate System *		Non Duplicate System *	Duplicate System *
1	Install complete CVA Metering System	Secondary injection test or prevailing load test	Secondary injection test or prevailing load test	Proving Test	Proving Test	CoP 4 and BSCP02 Refer to Section 3.1 for Interface and Timetable Information	Yes	Yes
		For CVA Metering Systems which are installed to CoP 3 or below, alternative Proving Test methods and timescales may be more appropriate. These shall be agreed with the CDCA beforehand, using BSCP02/4.1.						Yes
2	Addition of new circuit to existing CVA Metering System	<i>For New Channels (i.e. requiring registration)</i>						
		Secondary injection test or prevailing load test	Secondary injection test or prevailing load test	Proving Test on new channels.	Proving Test on new channels.	Refer to Section 3.2 for Interface and Timetable Information	Yes	Yes
		<i>For Existing Channels (i.e. already registered)</i>						
		Secondary injection test or prevailing load test on all existing channels or comparison of outstation dials to Meter dials.	Secondary injection test or prevailing load test on existing channels and comparison test for channels unchanged	Proving Test on existing channels	Comparison test on existing channels	Refer to Section 3.2 for Interface and Timetable Information	Yes	Yes

NOTE: *Reference to 'Non-Duplicate System' and 'Duplicate System' relates to the specific requirement of a Code of Practice, i.e. CoP 1 requires installation of 'duplicate' Outstations, whereas CoP 2 requires only one Outstation, but has a limit for storage of data of 100MW Aggregated Circuit Capacity, and is therefore 'non-duplicate'.

5.2 Work Affecting Existing Meters

Ref.	Activity	Commissioning Test Required		Proving Test Required		Notes	Commissioning End-to-End Check (CEEC) Required	
		Non Duplicate System *	Duplicate System *	Non Duplicate System *	Duplicate System *		Non Duplicate System *	Duplicate System *
3	Removal of Meter, to be repaired on site and replaced (in a short period)	Secondary injection test or prevailing load test. Outstation advance checked by CVA MOA on affected channels.	Secondary injection test or prevailing load test. Outstation advance checked by CVA MOA on affected channels.	None	None	Repair means “no change to measurement calibration or programming”	Yes	Yes See note 10 below
4	Removal of Meter from site (to be taken off site and repaired at a later date)	None	None	None	None	This does not include the act of replacing the Meter when it is returned to site.	No	No
5	Replacement of Meter after repair or recalibration (i.e. after 4 and 7)	Secondary injection test or prevailing load test. Outstation advance checked by CVA MOA on affected channels.	Secondary injection test or prevailing load test. Outstation advance checked by CVA MOA on affected channels.	None	None	Programming of Meter unchanged	Yes	Yes See note 10 below

Ref.	Activity	Commissioning Test Required		Proving Test Required		Notes	Commissioning End-to-End Check (CEEC) Required	
		Non Duplicate System *	Duplicate System *	Non Duplicate System *	Duplicate System *		Non Duplicate System *	Duplicate System *
6	Permanent replacement with a different tariff Meter (i.e. change of Meter)	Secondary injection test or prevailing load test. Outstation advance checked by CVA MOA on affected channels.	Secondary injection test or prevailing load test. Outstation advance checked by CVA MOA on affected channels.	Proving Test on channels affected	CDCA Comparison test assisted by CVA MOA	Covers both like for like and replacement with new type of Meter Refer to Section 3.4 for Interface and Timetable Information	Yes	Yes See note 10 below
7	Removal of Meter and replacement with a temporary Meter (sometimes known as a “travelling spare”). The original Meter will be replaced as 5 above at a later date. (This is an operational requirement, usually only done for larger sites.)	Not applicable for Active Energy Meters.	None	Not applicable for Active Energy Meters.	None	CDCA to take readings before and after each Meter change. The CVA MOA should advise the CDCA that a travelling spare will be fitted, using the BSCP06 forms. The travelling spare is only fitted to the “check” channel; a standing data change will be required if the “main” channel is to be swapped.	No	Yes See note 10 below

Ref.	Activity	Commissioning Test Required		Proving Test Required		Notes	Commissioning End-to-End Check (CEEC) Required	
		Non Duplicate System *	Duplicate System *	Non Duplicate System *	Duplicate System *		Non Duplicate System *	Duplicate System *
8	Reprogramming Meter	Secondary injection test or prevailing load test. Outstation advance checked by CVA MOA on affected channels.	Secondary injection test or prevailing load test. Outstation advance checked by CVA MOA on affected channels.	Proving Test on channels affected	CDCA Comparison test assisted by CVA MOA	Refer to Section 3.6 for Interface and Timetable Information	Yes	Yes See note 10 below
9	Use “check” Meter as “main” tariff Meter for Settlements purposes	None	None	None	None	Standing data change by registrant. The CDCA will carry out any checks required.	No	Yes See note 10 below
10	Adjustment or calibration of Meter in situ	Secondary injection test or prevailing load test. Outstation advance checked by CVA MOA on affected channels.	Secondary injection test or prevailing load test. Outstation advance checked by CVA MOA on affected channels.	None	None	Risk assessment required. Does not affect Meter program.	Yes	Yes See note 10 below

NOTE: *Reference to ‘Non-Duplicate System’ and ‘Duplicate System’ relates to the specific requirement of a Code of Practice, i.e. CoP 1 requires installation of ‘duplicate’ Outstations, whereas CoP 2 requires only one Outstation, but has a limit for storage of data of 100MW Aggregated Circuit Capacity, and is therefore ‘non-duplicate’.

5.3 Work Affecting Existing Outstations

Ref.	Activity	Commissioning Test Required		Proving Test Required		Notes	Commissioning End-to-End Check (CEEC) Required	
		Non Duplicate System *	Duplicate System *	Non Duplicate System *	Duplicate System *		Non Duplicate System *	Duplicate System *
11	Outstation change for same type (no other change)	Secondary injection or prevailing load on all channels or comparison of Outstation dials to Meter dials	Outstation comparison on sufficient channels to ensure correct operation	Simple dial up	Simple dial up	No change to Meter Technical Details. The comparison test may be carried out by the CDCA in conjunction with the CVA MOA as agreed at the time.	Yes	Yes See note 10 below
12	Outstation change for different type	Secondary injection or prevailing load on all channels or comparison of Outstation dials to Meter dials	Secondary injection or prevailing load on all channels, or comparison of Outstation dials to Meter dials, or comparison between new and existing duplicate Outstations.	Proving Test on all channels	Proving Test on all channels or comparison of Outstations by CDCA assisted by CVA MOA	Refer to Section 3.6 for Interface and Timetable Information	Yes	Yes See note 10 below
13	Reprogramming Outstation at channel level	Secondary injection test or prevailing load test on all channels or comparison of Outstation dials to Meter dials.	Secondary injection test or prevailing load test on channels affected and comparison test for channels unchanged	Proving Test on channels affected	Proving Test on channels affected	Will be done in conjunction with reprogramming Meter See note 7 below. Refer to Section 3.7 for Interface and Timetable Information	Yes	Yes See note 10 below

Ref.	Activity	Commissioning Test Required		Proving Test Required		Notes	Commissioning End-to-End Check (CEEC) Required	
		Non Duplicate System *	Duplicate System *	Non Duplicate System *	Duplicate System *		Non Duplicate System *	Duplicate System *
14	Reprogramming Outstation at system level, e.g. change of Password	Secondary injection or prevailing load on all channels or comparison of Outstation dials to Meter dials	Outstation comparison on sufficient channels to ensure correct operation	Simple dial up	Simple dial up	The comparison test may be carried out by the CDCA in conjunction with the CVA MOA as agreed at the time. Refer to Section 3.7 for Interface and Timetable Information	Yes	Yes See note 10 below
15	Comms change - phone number	None	None	Simple dial up	Simple dial up	CVA MOA not required on site	Yes See note 11 below	Yes See note 11 below
16	Comms change - modem	None	None	Simple dial up	Simple dial up	CVA MOA is required on site	Yes See note 11 below	Yes See note 11 below
17	Change batteries	None	None	None	None	CVA MOA to reset alarms	Yes See note 11 below	Yes See note 11 below
18	Realigning Outstation dials	None	None	None	None	CVA MOA to inform CDCA	Yes See note 11 below	Yes See note 11 below
19	Use secondary Outstation for Settlements purposes.	None	None	None	None	Standing data change by registrant. The CDCA will carry out any checks required.	No	Yes See note 11 below

NOTE: *Reference to ‘Non-Duplicate System’ and ‘Duplicate System’ relates to the specific requirement of a Code of Practice, i.e. CoP 1 requires installation of ‘duplicate’ Outstations, whereas CoP 2 requires only one Outstation, but has a limit for storage of data of 100MW Aggregated Circuit Capacity, and is therefore ‘non-duplicate’.

5.4 Other Activities

Ref.	Activity	Commissioning Test Required		Proving Test Required		Notes	Commissioning End-to-End Check (CEEC) Required	
		Non Duplicate System *	Duplicate System *	Non Duplicate System *	Duplicate System *		Non Duplicate System *	Duplicate System *
20	Change of primary plant which affects CVA Metering System	Primary injection test (where practicable)	Meter Comparison by CVA MOA, provided change does not affect both main and check metering channels. Otherwise treat as non-duplicate system.	None	None	Only applies to components of CVA Metering System. (e.g. Gen Transformer covered by reprogramming meter) Additional tests will be required if there is a change to Meter Technical Details or Meter programming.	Yes	Yes See note 12
21	VT/CT multicore changes	Secondary injection test as close as practicable to CT/VT	Secondary injection test as close as practicable to CT/VT or Comparison Test if full duplicity	None	None	If CT/VT burden affected see Ref 8 for reprogramming Meter	Yes	Yes See note 12
22	Other wiring changes affecting tariff metering	Secondary injection test or prevailing load test	Secondary injection test or prevailing load test or Comparison Test if full duplicity	None	None	Risk assessment required	Yes	Yes See note 12

Ref.	Activity	Commissioning Test Required		Proving Test Required		Notes	Commissioning End-to-End Check (CEEC) Required	
		Non Duplicate System *	Duplicate System *	Non Duplicate System *	Duplicate System *		Non Duplicate System *	Duplicate System *
23	Other wiring changes operational (non tariff)	None	None	None	None	Risk assessment required	Yes See note 11	Yes See note 11
24	Change of Registrant	None	None	None	None		Yes See note 11	Yes See note 11
25	Change of CVA MOA	None	None	None	None		Yes See note 11	Yes See note 11
26	Change of DC	None	None	Parallel running of CDCA's systems	Parallel running of CDCA's systems	Out of scope of proposed BSCP	No	No
27	Change from SVA to CVA	None	None	Proving test or compare with SVA DC metered data for same period.	Proving test or compare with SVA DC metered data for same period.		No	No
28	Replacement of critical components (applicable to all CVA Metering Systems)	Secondary injection test or prevailing load test	Secondary injection test or prevailing load test	None	None	e.g. single card in Opus data collector. Risk assessment required.	Yes	Yes See note 12

Ref.	Activity	Commissioning Test Required		Proving Test Required		Notes	Commissioning End-to-End Check (CEEC) Required	
		Non Duplicate System *	Duplicate System *	Non Duplicate System *	Duplicate System *		Non Duplicate System *	Duplicate System *
29	Change to power supplies (auxiliary)	None	None	None	None	Reset alarms	Yes See note 13	Yes See note 13

NOTE: *Reference to 'Non-Duplicate System' and 'Duplicate System' relates to the specific requirement of a Code of Practice, i.e. CoP 1 requires installation of 'duplicate' Outstations, whereas CoP 2 requires only one Outstation, but has a limit for storage of data of 100MW Aggregated Circuit Capacity, and is therefore 'non-duplicate'.

5.5 Guidance Notes

1. Where commissioning is required, it must always be done before any Proving Tests or Commissioning End to End Check that may be required.
2. Where two or more activities are undertaken simultaneously, then commissioning and Proving Tests will be carried out to the highest of the applicable requirements, e.g. where a Meter with integral Outstation is changed then it is necessary to carry out a Proving Test.
3. Data used in commissioning can be used for proving at a later date (subject to Outstation data retention).
4. Any deviations or exceptions to the requirements in [Section 5](#) must be agreed between the CVA MOA, the CDCA and BSCCo as appropriate.
5. Where comparison tests against prevailing load are required and it is not practical to do so, then a secondary injection test shall be substituted. Secondary injection tests shall not be used as part of the CEEC.
6. A risk assessment and method statement shall be carried out by CVA MOA/CDCA where identified in [Section 5](#).
7. When reprogramming an Outstation at channel level, for non-duplicate systems, an injection test is required on all channels. For duplicate systems, where it is necessary to reprogram both Outstations, an injection test is required for those channels changed, for other channels, a comparison test is carried out on a half hour period after reprogramming the first Outstation, then, after waiting a further half hour, the second Outstation may be reprogrammed and the comparison test repeated for the second Outstation.
8. The requirements given in this table are the minimum acceptable to confirm that the quality of data in the Settlements system is maintained. More onerous tests may be carried out at the discretion of the CVA MOA or where the risk assessment indicates.
9. A Commissioning End to End Check shall be carried by the Registrant in conjunction with the CDCA where identified in [Section 5](#).
10. For references 3, 5 to 10, and 11 to 14, only where there is a Duplicate System, a CEEC only needs to be performed if both Meters/Outstations are changed or re-programmed; and if one Meter/Outstation is replaced or re-programmed and the other unaffected Meter/Outstation has not previously completed a CEEC.
11. For references 15 to 19, and 23 to 25 a CEEC only needs to be performed where one has not previously been completed. Registrant can request that all MSSIDs under the MSID shall have a CEEC performed.

12. For references 20 to 22 and 28, only where there is a Duplicate System, a CEEC shall be performed unless a CEEC has been performed before on any unaffected:
- a) part of duplicated CVA Metering Equipment e.g. only main CTs are changed but check CTs have had a CEEC done; or
 - a) CT/VT multicore e.g. main CT/VT multicore is changed but check CT/VT multicore has had a CEEC done; or
 - b) wiring for duplicated CVA Metering Equipment e.g. only wiring from the main Meter test block to the main Meter is changed but the check Meter has had a CEEC done; or
 - c) components for duplicated CVA Metering Equipment e.g. only components were replaced in the main Meter but the check Meter has had a CEEC done.
13. For reference 29 a CEEC shall be performed for a non-duplicate system unless a CEEC has been done before and any backup battery in the Meter or Outstation has not failed during power supply interruption; and for a duplicate system unless a CEEC has been done before on (any) unaffected Outstation and any backup battery in the affected Meter or Outstation has not failed during power supply interruption.

CEEC Techniques

1. The preferred technique for a CEEC, wherever possible, is for the Registrant to compare the HH readings provided by the CDCA against readings from an independent measurement source from the Settlement measurement transformers, e.g. independent transducers used as part of a Substation Control System (SCS), or a Supervisory Control and Data Acquisition (SCADA) system, or from protection CTs or ammeter readings, all provided that the transducer/transformer ratios have been confirmed through testing.
2. Where the preferred technique (option 1 above) is not practically possible, the Registrant can compare the HH readings provided by the CDCA against the expected consumption or generation based on Plant rated capacity and operational load at the time.

CEEC CDCA Thresholds

1. The threshold for a CEEC to be initiated by the CDCA is when the metered data being recorded for the relevant Outstation channel, for the relevant MSSID, reaches the level agreed with the Registrant.

Note: The Registrant may determine the threshold to be a percentage of rated capacity of the circuit or the percentage of the Outstation channel Maximum defined in the [BSCP20/4.3](#) form.

CEEC Limits of Error

1. The threshold for CEEC to be passed using technique 1 is for the HH readings provided by the CDCA to be within +/- 10% of the readings from the independent measurement source.
2. The threshold for CEEC to be passed using technique 2 is for the HH readings provided by the CDCA to be within +/- 10% of the expected consumption or generation based on Plant rated capacity and operational load at the time.

Timescales

1. For new Metering CVA Systems, or new circuits added to existing systems, the commissioning and Proving Tests shall be carried out before the Effective From Date, in accordance with the timescales laid down in this BSCP and [BSCP20](#).
2. For all other work on the CVA Metering Equipment the commissioning and Proving Tests should be carried out as soon as reasonably practicable, considering the requirement for accurate data in the Settlements system.
3. Where a Commissioning End to End Check is required, this shall be carried out with the timescales laid down in this BSCP.