

Collated Responses to DCP0005

No.	Organisation	Section No.	Section	Comment	BSCCo Response
32	Western Power Distribution	???	(P12 Calibration	<p>The Draft CP says in the proposed solution section (item 8) that COP3 meters installed in the last 5 years will still required to be tested every 5 years.</p> <p>This is not contained in the draft COP (and was not agreed to by the review group)</p>	<p>Noted. Draft CP was incorrect. No action required.</p>
2	Member of Expert Group and ex Consultant to the Association of Meter Operators	1	Page 6, 1. Scope	<p>The expert group had included an initial paragraph that referred to the lack of information for NHH equipment. The paragraph was not well drafted and needed further consideration. However it should not be dropped completely.</p> <p>As it now stands I suggest the Scope is incorrect. It does not state "the practices that shall be employed...", since section 6 "is intentionally blank"</p> <p>I believe the expert group were agreed that NHH must be included, but recognise that to include it now would unnecessarily delay the implementation of this document.</p> <p>SVG should initiate further work to consider this as soon as possible, in the meantime words to recognise this should be included in the scope.</p>	<p>Scope narrowed in paragraph 1 to HH MS's. New Paragraph added to Section 1 for NHH MS's.</p> <p>[Does the Expert Group (EG) agree with this drafting?]</p>
3	Member of Expert Group and ex Consultant to the Association of Meter Operators	1	Page 6, 1. Scope. Last three paragraphs.	The rewording of these paragraphs has significantly changed the intention of the expert group, which related to the role of third parties. The intention was to clearly state that they also have obligations, this	It is not clear what this comment is suggesting.

Collated Responses to DCP0005

No.	Organisation	Section No.	Section	Comment	BSCCo Response
				<p>has been considerably diluted by the new wording.</p> <p>The new wording correctly recognises the role of the registrant, but could be construed as implying the MOA and other agents have no responsibility. This was clearly not the intention.</p> <p>The original words also referred to Section L of the BSC, any relevant BSCP, not just 27, and referred to inconsistencies. The meaning here is different.</p>	ELEXON to contact KS
146	Siemens Energy Services	1	Section 1 - Scope	<p>Para 2 – References to BSCP06 and BSCP514 are not relevant and should be removed. It is sufficient to state that if a meter falls outside its defined limits, that it is either replaced or adjusted/calibrated so that it falls within the CoP4 accuracy limits applicable for the CoP to which the metering installation complies.</p> <p>Para 3 – It is stated that, save in exceptional circumstance, that Metering Dispensations shall not be granted in respect of this CoP4. Because it is also stated that this CoP is retrospective with effect from the implementation date, the need for dispensations is a certainty. This is particularly relevant to legacy installations where historic CT and VT certificates do not quote limits of uncertainty. These sites will be immediately non-compliant and require site</p>	<p>Changes made.</p> <p>[EG may wish to link accuracy failure to Meter fault processes]</p> <p>Noted. [ELEXON will consider raising a Dispensation covering legacy issues as this change represents an exceptional circumstance].</p>

Collated Responses to DCP0005

No.	Organisation	Section No.	Section	Comment	BSCCo Response
				by site dispensation application. For this area of non-compliance CoP4 should provide generic dispensation for sites commissioned prior to the implementation date.	
161	United Utilities	1	Scope	Paragraph 2 suggests meter accuracies should be in line with BSCP 06. This BSCP is about the sealing of meters. Wrong reference used.	BSCP06 removed under Ref 146.
169	Southern Electric Power Distribution; Keadby Generation Ltd; SSE Energy Supply Ltd; SSE Generation Ltd; and Scottish Hydro-Electric Power Distribution Ltd; Medway Power Ltd;	1	Section 1 – Scope	Paragraph 2 – Reference to BSCP06 and BSCP514 does not appear to be relevant. These CoP's cover the process of gaining access to metering equipment. It is suggested that all references to these CoP's be removed from the text. If a meter is found to be out of calibration then simply state that meter either needs to be replaced, or adjusted, and calibrated until the accuracy by CoP4 and the relevant CoP is achieved. Under Scope the document should include a reference to NHH, even if it explains why it is not included and perhaps suggested timescale to when it will be included. Link between CoP4 and Electricity Act has been removed. Why is this the case?	BSCP514 and BSCP06 removed under Ref 146. Comment addressed. See Ref 2. Link now irrelevant under MID which is why it was removed,

Collated Responses to DCP0005

No.	Organisation	Section No.	Section	Comment	BSCCo Response
				<p>Similarly original CoP4 referred to Section L of the BSC. This has been removed. Need to explain where the CoP4 gets its authority. This line was included in a previous draft – why was it removed?</p>	<p>however see Ref 2.</p> <p>This is inherent in all Code Subsidiary Documents; however a paragraph has been re-instated for clarity.</p>
204	British Energy	1	1. SCOPE	<p>1. BE do not consider Paragraph 2 references to BSCP06 and BSCP514 to be relevant here. The former is primarily a sealing document and the latter is primarily an operational document. BE suggests references to BSCP06 and BSCP514 should be deleted and that amended wording should stress the need for all Calibration failures to be rectified and re-checked or replaced to demonstrate compliance with CoP4 and the relevant Codes of Practice.</p> <p>2. The Shell documents which preceded this draft included text which referred to non-half hourly (NHH) metering. BE believes some suitable wording should be reinstated here to make it clear NHH (per CoP 8 & 9) will be part of CoP4 scope, to explain the reasons for temporary exclusion of NHH from the next issue (e.g. pending completion of IMAG discussions) and, if possible, to</p>	<p>BSCP514 and BSCP06 removed under Ref 146.</p> <p>Changes have been made to reflect this under Ref 2; however it is not certain that IMAG will be developing non half hourly commissioning requirements. ELEXON to raise a Change Proposal to implement IMAG solution plus any others as necessary.</p>

Collated Responses to DCP0005

No.	Organisation	Section No.	Section	Comment	BSCCo Response
				<p>indicate the likely timescale for rectification.</p> <p>3. Like the current CoP4 and Shell documents which preceded this draft, BE believe the updated version should state the link to the Electricity Act :</p> <p>"Meters that are certified under the Electricity Act 1989 shall be calibrated in accordance with the Electricity Act 1989 and shall be deemed to meet this Code of Practice."</p> <p>4. Also like the current CoP4 and Shell documents which preceded this draft, BE consider the updated version should state its relationship with the BSC Code :</p> <p>"This Code of Practice derives force from the Metering provisions (Section L) of the Code, to which reference should be made. It should also be read in conjunction with relevant BSC Procedures. In the event of any inconsistency between the provisions of this Code of Practice and the Code, the latter shall prevail."</p>	<p>Link re-instated. See Ref 2.</p> <p>Paragraph re-instated. See Ref 169.</p>
244	Chair, CVA MOA Forum	1	Section 1 – Scope	Paragraph 2 – Reference to BSCP06 and BSCP514 does not appear to be relevant. These CoP's cover the process of gaining	Actioned. See Ref 146.

Collated Responses to DCP0005

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				<p>access to metering equipment. It is suggested that all references to these CoP's be removed from the text. If a meter is found to be out of calibration then simply state that meter either needs to be replaced, or adjusted, and calibrated until the accuracy by CoP4 and the relevant CoP is achieved.</p> <p>Under Scope the document should include a reference to NHH, even if it explains why it is not included and perhaps suggested timescale to when it will be included.</p> <p>Link between CoP4 and Electricity Act has been removed. Why is this the case?</p> <p>Similarly original CoP4 referred to Section L of the BSC. This has been removed. Need to explain where the CoP4 gets its authority. This line was included in a previous draft – why was it removed?</p>	<p>Actioned under Ref 2.</p> <p>Re MID. Actioned under Ref 2.</p> <p>Actioned. See Ref 169</p>
128	SAIC Ltd. Response provided on behalf of: ScottishPower Energy Management Ltd. ScottishPower Generation Ltd. ScottishPower Energy Retail	2	CoP 4, Issue 5, v4.1 Page 7	<p>2. 'APPLICATION TO OTHER CODES OF PRACTICE'</p> <p>Remove the word 'This' at beginning of sentence.</p>	Actioned.

Collated Responses to DCP0005

No.	Organisation	Section No.	Section	Comment	BSCCo Response
	Ltd. SP Manweb plc. SP Transmission Ltd. SP Distribution Ltd.				
4	Member of Expert Group and ex Consultant to the Association of Meter Operators	3	Page 8, 3 References	The sentence "It should be noted that the latest version of each document shall apply." Has been omitted. This should be reinstated, at least in intent. If purchasing equipment, or obtaining services, a MOA would be expected to use the latest specification available, not necessarily the one in use when CoP4 was drafted.	Not implemented. No visibility of future documents and their requirements. Therefore inappropriate to refer to an unknown document. May cause significant TAA issues.
67	E.ON UK plc	3	Section 3	MOCoPA is referenced. Where can the document be obtained? This must not be enforced on CVA MOA's who are not signatories.	Document location added to reference section. No enforcement implied.
103	Association of Meter Operators	3	3	Copies of MOCoPA can be obtained from www.mocopa.org.uk	Actioned. See Ref 67.
170	Southern Electric Power Distribution; Keadby Generation Ltd; SSE Energy Supply Ltd; SSE Generation Ltd; and Scottish Hydro-Electric Power Distribution Ltd; Medway Power Ltd;	3	Section 3 - References	MOCoPA is referenced. Where can the document be obtained? Must not be enforced on CVA MOA's who are not signatories.	Actioned. See Ref 67.

Collated Responses to DCP0005

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205	British Energy	3	3. REFERENCES	BE understands that the CoP4 Review Group recommended the addition of SI 1679 here and in appropriate sections of the document to cover CoP 6 & 7. This needs to be checked and confirmed.	Not implemented. MID applies only to non half hourly (See Ref 2 - Section 6 of CoP4). [Does EG agree?]
245	Chair, CVA MOA Forum	3	Section 3 - References	MOCOPA is referenced. Where can the document be obtained? Must not be enforced on CVA MOA's who are not signatories.	Actioned. See Ref 67.
5	Member of Expert Group and ex Consultant to the Association of Meter Operators	4	Page 10, 4.2.1 Traceable	<p>This definition was changed subsequent to the last meeting of the expert group. The original wording was much shorter and some may have felt lacked detail. However in expanding the definition some important considerations have been overlooked.</p> <p>For example, for sealing equipment, the sealing plier ID, per se, is not important. Its value is in using it to trace the person who last worked on the piece of equipment. The object therefore is that the individual is traceable. This involves a system, including not only the sealing plier ID but a record of the IDs issued to staff.</p> <p>This is why a very simple sentence had been chosen.</p>	<p>4.21 was expanded to provide clarification as a result of comments received by EG after final meeting.</p> <p>Specific comment relating to Sealing has been incorporated.</p>
27	Western Power Distribution	4	P8 Definitions. First para, 2 nd sentence.	Typo – “Where a capitalised terms <u>s</u> ..” (delete s)	Actioned. Paragraph removed. See Ref 28.

Collated Responses to DCP0005

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28	Western Power Distribution	4	P8 Definitions	The existing COP indicates where definitions are as in the BSC, those with the same meaning as the BSC but modified (eg amplified on, by adding examples) and those just for COP4. This is helpful and should be retained in the new COP4.	Actioned. ELEXON concluded that the original wording was more helpful and has re-instated this wording but without reference to BSC modified definitions as there are none.
47	Npower Limited, Npower Northern Limited, Npower Northern Supply Limited, Npower Yorkshire Limited, Npower Yorkshire Supply Limited, Npower Direct Limited	4	8	There is a point 4.5 immediately followed by 4.8 – but no 4.6 or 4.7	Actioned. Bullets updated.
104	Association of Meter Operators	4	4	First para is inconsistent with use of BSC & Code	Not applicable. See Ref 28.
162	United Utilities	4	Section 4 (Definitions)	There is no definition for a "Test House" or a "Laboratory" and so we have to assume.	Actioned. New definition for Test House added to Section 4 Definitions. [EG to confirm definition]
171	Southern Electric Power Distribution; Keadby Generation Ltd; SSE Energy Supply Ltd; SSE Generation Ltd; and Scottish Hydro-Electric Power Distribution Ltd; Medway Power Ltd;	4	Section 4 – Definitions and Interpretations	Other CoPs used to include some preceding text which explained which definitions were taken directly from the BSC and those which had been modified for clarity. For instance "Metering Equipment" which was previously highlighted as differing from the BSC.	Actioned. See Ref 28.

Collated Responses to DCP0005

No.	Organisation	Section No.	Section	Comment	BSCCo Response
				<p>Why was this removed? CoP4 is now out of step with the other codes.</p> <p>What happened to 4.6 and 4.7?</p> <p>"Test House" – definition is missing. Accredited Laboratory is included. Suggest that a definition of Test House be included for completeness.</p>	<p>Removed by ELEXON during internal review but now reinstated as above. Actioned. See Ref 47.</p> <p>Actioned. See Ref 162.</p>
206	British Energy	4	4. DEFINITIONS AND INTERPRETATIONS	<p>1. The Shell documents which preceded this draft included the following text to clarify the use of Code definitions with and without modification :</p> <p>"Definitions marked with an asterisk (*) are taken from the Code without modification. Definitions marked with a double asterisk (**) are based on Code definitions with slight modification, but do not infer any change of meaning."</p> <p>For clarity and for consistency with other Codes of Practice, BE consider these notes and the related asterisks should be reinstated.</p> <p>2. Items 4.6 and 4.7 are missing from the numbering sequence. Providing none of the required definitions are missing here, Items 4.8 onwards should be corrected.</p>	<p>Actioned. See Ref 28.</p> <p>Actioned. See Ref 47.</p>

Collated Responses to DCP0005

No.	Organisation	Section No.	Section	Comment	BSCCo Response
				<p>3. A number of defined terms are used here and in other parts of the document without the required capitalisation (e.g. "Commissioning" in the Foreword, "Compensation" in Item 4.4, "Standard" in Items 4.18, 4.22 & 4.23, "Meter" in 5.1.1, etc.). Instances have also been noted of the capitalised use of the undefined term "certificate" (e.g. in Section 5.1.2.1). These should all be checked and corrected.</p> <p>4. Assuming the Standards referred to in 4.18, 4.20, 4.22 and 4.23 are all included in this document to reflect their use in the Calibration of Meters, BE suggest the words "and testing" should be deleted from 4.22 and 4.23.</p>	Actioned. Terms capitalised. Actioned. 'and testing' removed.
246	Chair, CVA MOA Forum	4	Section 4 – Definitions and Interpretations	<p>Other CoPs used to include some preceding text which explained which definitions were taken directly from the BSC and those which had been modified for clarity. For instance "Metering Equipment" which was previously highlighted as differing from the BSC.</p> <p>Why was this removed? CoP4 is now out of step with the other codes.</p> <p>What happened to 4.6 and 4.7?</p> <p>"Test House" – definition is missing.</p>	Actioned. See Ref 28. Removed by ELEXON during internal review but now reinstated as above. Actioned. See Ref 47. Actioned. See Ref 162.

Collated Responses to DCP0005

No.	Organisation	Section No.	Section	Comment	BSCCo Response
				Accredited Laboratory is included. Suggest that a definition of Test House be included for completeness.	
48	Npower Limited, Npower Northern Limited, Npower Northern Supply Limited, Npower Yorkshire Limited, Npower Yorkshire Supply Limited, Npower Direct Limited	4.21	10	<p>4.21 Replace a) with original version and remove b). This would then read as follows:</p> <p>Traceable means providing an audit trail so as to identify:</p> <ul style="list-style-type: none"> a) the person or persons and equipment used. For example this could be works number, sealing plier Id or computer generated signature. b) In relation to Calibration equipment that such equipment has been tested against identified standards held by a test house or an Accredited Laboratory. 	Not Actioned. Conflicts with Ref 5. [EG to consider as an issue]
105	Association of Meter Operators	4.21	4.21 b)	Traceability needs to be to the operative with the sealing pliers with that unique Id issued to them at that time, as per BSCP06 or MOCoPA as appropriate	Actioned. See Ref 5.
6	Member of Expert Group and ex Consultant to the Association of Meter Operators	5	Page 11, 5 HH Metering Systems. Last sentence	The word "also" should be removed. There is nothing else covered.	Actioned.

Collated Responses to DCP0005

No.	Organisation	Section No.	Section	Comment	BSCCo Response
111	Association of Meter Operators	5	5.2 & 5.3.1	Poor drafting, avoid the use of the term 'new' and 'newly'. A 'newly' installed meter in 2007 will be an old one in 2017. Does 'new' include a refurbished meter which is reinstalled.	Actioned. [E.G. to consider ELEXONs changes]
7	Member of Expert Group and ex Consultant to the Association of Meter Operators	5.1	Page 11, 5.1 Meters Calibration Whole, paragraph	The expert group had deliberately excluded this paragraph as it adds nothing to what follows. The title is sufficient and this paragraph is redundant	Actioned. Whole paragraph removed.
8	Member of Expert Group and ex Consultant to the Association of Meter Operators	5.1.1	Page 11, 5.1.1. Types of Calibration 1 st para. After bullet points.	A carriage return seems to have been omitted. Sentence starting "For Calibrations carried out on site...." Should be a new paragraph	Action. Carriage return inserted.
9	Member of Expert Group and ex Consultant to the Association of Meter Operators	5.1.1	Page 11, 5.1.1. Types of Calibration Paragraph referred to above and next paragraph.	I see no advantage in splitting this requirement into two paragraphs for on site and in the laboratory. This only adds words and therefore more chance of confusion.	Actioned. Paragraphs redrafted. [EG to confirm requirement met]
10	Member of Expert Group and ex Consultant to the Association of Meter Operators	5.1.1	Page 11, 5.1.1. Types of Calibration Reference to PARh meters	These were not in the original expert group draft and were introduced after the last meeting. There is no reference to PARh meters (I believe) in CoPs 1,2,3,5,6 Or 7. They were referred to in the old version of CoP4 as they were in the Alpha Codes. They are outdated and unsuitable for current systems. To include them here is an	Not Actioned. PARh Meters are referenced in CoP2.

Collated Responses to DCP0005

No.	Organisation	Section No.	Section	Comment	BSCCo Response
				additional complication that will cause confusion and imply that they are acceptable.	
29	Western Power Distribution	5.1.1	P11 5.1.1 Types of Calibration. Para starting "Meter Calibration shall.." 2 nd sentence.	"The measured errors ... with such measurement uncertainties <u>not exceeding</u> those as stated in Appendix D. (add "not exceeding those").	Actioned. Words 'not exceeding those...' added after measurement uncertainties.
30	Western Power Distribution	5.1.1	P12 5.1.1 last sentence	Typo – "before return to service .." (delete second .)	Actioned. Full stop removed.
49	Npower Limited, Npower Northern Limited, Npower Northern Supply Limited, Npower Yorkshire Limited, Npower Yorkshire Supply Limited, Npower Direct Limited	5.1.1	11	The last paragraph of 5.1.1 does not state what type of calibration is required. We believe this should be a type B calibration.	Actioned but ELEXON considers a Type C Calibration is more appropriate than a Type B Calibration. [EG to consider Type B or C]
68	E.ON UK plc	5.1.1	5.1.1, Types of Calibration	In the last paragraph it is unclear what is needed to confirm that the calibration of the compensated meter. Provided that the meter has previously been calibrated then the compensation change could be confirmed through suitably robust QA, a prevailing load check, comparison to a commissioned meter (e.g. the Check meter if Main meter changed) or a commissioning	Actioned see also Ref 49. The principle agreed by the E.G. is to calibrate a meter after compensation to establish the actual errors in a meter. ELEXON agrees with this principle and has suggested a type C would be the appropriate calibration for this

Collated Responses to DCP0005

No.	Organisation	Section No.	Section	Comment	BSCCo Response
				test. This would allow a blank calibrated meter to be installed on site and compensated from a program file, for instance, without the need for a full calibration.	purposes. However, ELEXON acknowledges the application of compensations after installation and has made a specific change that allows not re-cal if the compensation is linear and a type C cal if non-linear.
106	Association of Meter Operators	5.1.1	5.1.1	Last paragraph, the approach described here is not very clear, the definition of Compensation has disappeared from this version. The implication of some commentators is that a replacement meter would be "compensated" by adjusting it in line with pre-existing metering (eg replacement main meter adjusted to align with existing check meter) – this is completely counter-intuitive and provides no assurance of an accurate measurement (ie the existing meter accuracy may have drifted). If this approach is repeated then the error can continue to be magnified. The compensation applied should be based on demonstrable calculations auditable by the TAA.	Actioned see Ref 49. [EG to consider whether ELEXON suggested change to this section are appropriate.]
129	SAIC Ltd. Response provided on behalf of: ScottishPower Energy Management Ltd.	5.1.1	CoP 4, Issue 5, v4.1 Page 12 Section 5.1.1	Should the last sentence make specific reference to CoP 4 as it does in the 'Detailed Level Changes to CoP4 Issue 5 (v4.0) Requirements' document on page 10.	Not Actioned. 'Detailed Level Changes to CoP4 Issue 5 (v4.0)' document is incorrect. CoP4 contains the accuracy requirements for Meters and

Collated Responses to DCP0005

No.	Organisation	Section No.	Section	Comment	BSCCo Response
	ScottishPower Generation Ltd. ScottishPower Energy Retail Ltd. SP Manweb plc. SP Transmission Ltd. SP Distribution Ltd.				measurement transformers; it does not contain the overall accuracy requirements for Metering Systems for the individual CoPs. Compensation is applied to Meters (in some cases) to ensure overall accuracy of the Metering System is within the limits set out in a specific CoP; therefore CoP4 should refer to the relevant CoP in relation to Compensation.
147	Siemens Energy Services	5.1.1	Section 5.1.1 - Types of Calibration	<p>Para 2 – Same comment as in Section 1 - References to BSCP06 and BSCP514 are not relevant and should be removed.</p> <p>Para 5 – The ability to take a blank calibrated meter, install it on site and apply compensation from a pre-configured programming file, without the need for a full calibration, must be preserved, particularly in the CoP3/5 arena. Where the measurement device is electronic and electronically programmable, the application of pre-configured compensation correction programming files can be treated as a mathematical function. The requirement to re-calibrate is unnecessary and costly, provided that a suitable Quality Process is used to determine the compensation required. The effectiveness of compensation can be adequately</p>	<p>Actioned see Ref 9.</p> <p>Changes made by ELEXON following this and other comments to this requirement require a type C re-cal after compensation is applied only if the compensation is linear.</p>

Collated Responses to DCP0005

No.	Organisation	Section No.	Section	Comment	BSCCo Response
				<p>checked by load test/commissioning or comparison with another meter, avoiding the need for full calibration.</p> <p>Application of compensation errors to a Mechanical Meter is normally carried out by the breaking of calibration seals to gain access to jumpers/capacitors. Only when compensation is applied by the removal of calibration seals should it be necessary to repeat a Type A Calibration to check the effectiveness of the compensation. Once calibration has been applied then a new calibration seal will be applied by the test facility.</p>	
172	Southern Electric Power Distribution; Keadby Generation Ltd; SSE Energy Supply Ltd; SSE Generation Ltd; and Scottish Hydro-Electric Power Distribution Ltd; Medway Power Ltd;	5.1.1	Section 5.1.1 – Types of Calibration	<p>Last paragraph – is unclear what is needed to confirm that the calibration of the compensated meter. Provided that the meter has previously been calibrated then the compensation change could be confirmed through suitably robust QA, a prevailing load check, comparison to a commissioned meter (eg the Check meter if Main meter changed) or a commissioning test. This would allow a blank calibrated meter to be installed on site and compensated from a program file, for instance, without the need for a full calibration.</p> <p>Second major paragraph – remove</p>	Actioned. See Ref 9

Collated Responses to DCP0005

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				reference to BSCP06 and 514.	
207	British Energy	5.1.1	5.1.1 Types of Calibration	<p>1. Paragraph 3 is an unnecessary duplication of Paragraph 2 of the CoP4 Scope. One of these should be deleted and the comments made by BE above against Scope should also be applied to the text which is retained. If Paragraph 3 is retained, "laboratory" should be replaced by defined term "Accredited Laboratory".</p> <p>2. Paragraph 5 is unclear as to what is needed to confirm the calibration of the compensated meter. Provided that the meter has previously been calibrated then the compensation change could be confirmed through suitably robust QA, a prevailing load check, comparison to a commissioned meter (eg the Check meter if Main meter changed) or a commissioning test. This would for example allow a blank calibrated programmable meter to be installed on site and compensated from a program file without the need for a type B or C re-Calibration.</p>	Actioned. See Ref 204 & Ref 9 Actioned. See Ref 9
247	Chair, CVA MOA Forum	5.1.1	Section 5.1.1 – Types of Calibration	Last paragraph – is unclear what is needed to confirm that the calibration of the compensated meter. Provided that the meter has previously been calibrated then	Actioned See Ref 9

Collated Responses to DCP0005

No.	Organisation	Section No.	Section	Comment	BSCCo Response
				<p>the compensation change could be confirmed through suitably robust QA, a prevailing load check, comparison to a commissioned meter (eg the Check meter if Main meter changed) or a commissioning test. This would allow a blank calibrated meter to be installed on site and compensated from a program file, for instance, without the need for a full calibration.</p> <p>Second major paragraph – remove reference to BSCP06 and 514.</p>	
11	Member of Expert Group and ex Consultant to the Association of Meter Operators	5.1.2.1	Page 12, 5.1.2.1 Type A Calibration 2 nd Paragraph	<p>The expert group said "in most case", this has been changed to "in practice". This changes the meaning entirely.</p> <p>In most cases allows an alternative, for example if the meter owner decides to calibrate this meter in his own test house and then treat it as new he may do so.</p> <p>In practice implies it will always be the manufacturer.</p> <p>Please revert to original.</p>	Actioned.
12	Member of Expert Group and ex Consultant to the Association of Meter Operators	5.1.2.1	Page 12, 5.1.2.1 Type A Calibration 4 th Paragraph	<p>Original words said "certificate shall confirm the tests undertaken". New words say "certificate shall confirm what tests were undertaken".</p> <p>I am not sure the original was correct, but</p>	Actioned. New words provided by ELEXON

Collated Responses to DCP0005

No.	Organisation	Section No.	Section	Comment	BSCCo Response
				the latter is definitely incorrect. The point is that it is the results that are important and should be included on the certificate. Simply saying what tests were undertaken is not sufficient.	
50	Npower Limited, Npower Northern Limited, Npower Northern Supply Limited, Npower Yorkshire Limited, Npower Yorkshire Supply Limited, Npower Direct Limited	5.1.2.1	12	Section 5.1.2.1 'A Type A Calibration shall be carried out to the relevant product standard'. Further clarification required on what a relevant product standard is, i.e. is this recognised by meter manufacturers?	Not Actioned. [E.G. to consider what product standards to include]
69	E.ON UK plc	5.1.2.1	5.1.2.1, Type A Calibration	Is there a conflict between the requirements of the BS EN for the meter and the calibration points given in Appendix B? Is it appropriate to ask the manufacturer to calibrate to additional test points outside the BS EN?	Not Actioned. [E.G. to consider]
148	Siemens Energy Services	5.1.2.1	Section 5.1.2.1 – Type A Calibration	The current calibration certificates issued by meter manufacturers to BS EN standards differ to the requirements of this CoP4 Appendix B. This anomaly needs to be corrected on a national basis before this CoP4 can be introduced.	Not Actioned. [E.G. to consider] See Ref 248.
173	Southern Electric Power Distribution; Keadby Generation Ltd; SSE Energy	5.1.2.1	Section 5.1.2.1 – Type A Calibration	First sentence – what does the "relevant product standard mean". Is it what is expanded in the next paragraph?	Not Actioned. [E.G. to consider] See Ref 248.

Collated Responses to DCP0005

No.	Organisation	Section No.	Section	Comment	BSCCo Response
	Supply Ltd; SSE Generation Ltd; and Scottish Hydro-Electric Power Distribution Ltd; Medway Power Ltd;			Is there a conflict between the requirements of the BS EN for the meter and the calibration points given in Appendix B. Is it appropriate to ask the manufacturer to calibrate to additional test points outside the BS EN?	
208	British Energy	5.1.2.1	5.1.2.1 Type A Calibration	In Paragraph 1 CoP4 needs to clarify the relationship between relevant BS ENs and Appendix B test points and needs to state which takes precedence in the event of any conflict.	Not Actioned. [E.G. to consider] See Ref 248.
248	Chair, CVA MOA Forum	5.1.2.1	Section 5.1.2.1 – Type A Calibration	First sentence – what does the “relevant product standard mean”. Is it what is expanded in the next paragraph? Is there a conflict between the requirements of the BS EN for the meter and the calibration points given in Appendix B. Is it appropriate to ask the manufacturer to calibrate to additional test points outside the BS EN?	Not Actioned. [E.G. to consider] See Ref 248
70	E.ON UK plc	5.1.2.3	5.1.2.3, Type C Calibration	Suggest for clarity that a reference to Appendix D is included for details of uncertainties in different locations.	Actioned.
100	E.ON UK, Power Technology	5.1.2.3	5.1.2.3	<u>Accuracy of On-Site Type “C” calibrations</u> We are very concerned that the Draft CoP4 allows Type C calibrations to be carried out on site to lower levels of measurement uncertainty than are required for type C laboratory calibrations. Type C calibrations are meant to be high accuracy calibrations	[E.G. to consider]

Collated Responses to DCP0005

No.	Organisation	Section No.	Section	Comment	BSCCo Response
				<p>of the in service meters. Our understanding is that it was originally intended by the review group for Type C tests to be carried out in the Lab, not on site, for CVA meters. This is not stated explicitly and has led to confusion during the discussions on the meter calibration programme. In appendix D, a wider tolerance on uncertainty is allowed for on site calibration so there is nothing to encourage the lab calibration of these high accuracy meters. We do not want to prevent the calibration being carried out on site if it can be achieved to sufficiently high accuracy and repeatability, and calibration equipment of this standard may become available in the future, however there would appear to be no justification for the differentiation currently included in appendix D.</p>	
249	Chair, CVA MOA Forum	5.1.2.3	5.1.2.3 – Type C Calibration	Suggest for clarity that include reference to Appendix D for details of uncertainties in different locations.	Actioned See Ref 70
13	Member of Expert Group and ex Consultant to the Association of Meter Operators	5.1.2.4	Page 13, 5.1.2.4 Calibration of existing....Meters Bullet Point	This is still very ambiguous. Over the 10 year period, am I required to calibrate 20% each year, 2% each year, or can I leave the whole 20% until year 10?	[E.G. to consider]

Collated Responses to DCP0005

No.	Organisation	Section No.	Section	Comment	BSCCo Response
31	Western Power Distribution	5.1.2.4	P13 5.1.2.4 Header	" .. Code of Practice1.." (space required).	Actioned.
72	E.ON UK plc	5.1.2.4	5.1.2.4, Calibration of 'Existing Installed' CoP 1&2 Meters	<p>Bullet point – the words "without adjustment" imply that there is no need to do any work on a meter that is found to be out of the required accuracy requirements. An additional sentence is required after the bullet point to emphasise that where a meter is found to be outside the accuracy requirements then it needs to be removed from service and either replaced or adjusted and calibrated.</p> <p>The bullet point and the succeeding paragraph could allow an interpretation that meters on existing installation do not have to have a phased calibration regime, bringing them into line with the new CoP requirements. This needs to be clarified.</p>	Actioned.
107	Association of Meter Operators	5.1.2.4	5.1.2.4	<p>The 'soft start' of this CoP4 for certain meter types is not adequately described. It could be regarded as 10% per year over 10 years or that all can be tested in year 9. If this requirement remains than the compliance approach must be explicit to ensure the differing interpretation of the current CoP4 is not perpetuated. Further definition and probably additional examples provided in a guidance note would ensure clear & common understanding.</p>	Not Actioned. See Ref 13

Collated Responses to DCP0005

No.	Organisation	Section No.	Section	Comment	BSCCo Response
135	National Grid plc	5.1.2.4	5.1.2.4 Calibration of 'existing installed'...	This paragraph should state that this section replaces the need for both periodic and sample calibration. The last paragraph should be modified to show "meter types" Not "meters".	Change made to paragraph Change made to Meter Types
174	Southern Electric Power Distribution; Keadby Generation Ltd; SSE Energy Supply Ltd; SSE Generation Ltd; and Scottish Hydro-Electric Power Distribution Ltd; Medway Power Ltd;	5.1.2.4	5.1.2.4 – Calibration of "Existing Installed" Code of Practice 1 and 2 Meters	Bullet point – the words "without adjustment" imply that there is no need to do any work on a meter that is found to be out of the required accuracy requirements. An additional sentence is required after the bullet point to emphasise that where a meter is found to be outside the accuracy requirements then it needs to be removed from service and either replaced or adjusted and calibrated. The bullet point and the succeeding paragraph could allow an interpretation that meters on existing installation do not have to have a phased calibration regime, bringing them into line with the new CoP requirements. This needs to be clarified.	Actioned See Ref 72 Not Actioned See Ref 13
209	British Energy	5.1.2.4	5.1.2.4 Calibration of Existing Installed CoP 1 & 2 Meters	BE have two MAJOR concerns relating to the bullet point : First, the suggestion that none of the existing meters subjected to Type C Calibrations over the first 10 years will have	Not Actioned See Ref 13

Collated Responses to DCP0005

No.	Organisation	Section No.	Section	Comment	BSCCo Response
				<p>to be adjusted. Regardless of whether Meters are new or old, CoP4 <u>must</u> require their adjustment and re-calibration whenever Calibrations reveal they are outside CoP limits. The words "without adjustment" have to be deleted here if CoP4 is to retain any legitimacy.</p> <p>Second, BE accept this clause has been included to provide a 10-year "cut-over" for those CVA MOAs whose testing regimes would immediately be non-compliant with new CoP4 requirements. However, as written, "20% of each meter type over 10 years" represents a test rate of 2% per year which (i) is no better than the least onerous interpretation of the current CoP4, and (ii) will still leave all affected parties non-compliant at year 10. For CoP4 to retain any credibility, the wording must clearly define the test rate necessary to ensure full compliance is achieved by all MOAs within 10 years of the next CoP4 release.</p>	
250	Chair, CVA MOA Forum	5.1.2.4	5.1.2.4 – Calibration of "Existing Installed" Code of Practice 1 and 2 Meters	Bullet point – the words "without adjustment" imply that there is no need to do any work on a meter that is found to be out of the required accuracy requirements. An additional sentence is required after the bullet point to emphasise that where a meter is found to be outside the accuracy requirements then it needs to be removed	Actioned See Ref 72

Collated Responses to DCP0005

No.	Organisation	Section No.	Section	Comment	BSCCo Response
				<p>from service and either replaced or adjusted and calibrated.</p> <p>The bullet point and the succeeding paragraph could allow an interpretation that meters on existing installation do not have to have a phased calibration regime, bringing them into line with the new CoP requirements. This needs to be clarified.</p>	Not Actioned See Ref 13
51	Npower Limited, Npower Northern Limited, Npower Northern Supply Limited, Npower Yorkshire Limited, Npower Yorkshire Supply Limited, Npower Direct Limited	5.1.3	13	<p>Section 5.1.3 states that meters should be sealed by the manufacturer in accordance with BSCP06/514. Only MOAs can seal in accordance with BSCP06/514 and we would not want to issue manufacturers with our pliers. This should be changed to the manufacturer should apply a manufacturers paper (or metal) seal.</p> <p>The last paragraph states that calibration certificates shall provide a means to identify what equipment was used to carry out the calibration. We can not provide this retrospectively so the majority of our test certificates will become non-compliant immediately.</p>	Actioned See Ref 2 Actioned. See Ref 211.
73	E.ON UK plc	5.1.3	5.1.3, Sealing	In it not appropriate to place BSCP06 and BSCP514 requirements on meter manufacturers and laboratories.	Actioned See Ref 2

Collated Responses to DCP0005

No.	Organisation	Section No.	Section	Comment	BSCCo Response
				<p>The physical design of meter may not lend itself to a wire seal.</p> <p>Allowance must be provided for "non-approved" seal, such as a paper seal, which would still provide evidence that the seal had been broken after the meter was calibrated.</p>	
108	Association of Meter Operators	5.1.3	5.1.3	<p>There needs to be a seal which is appropriate to the design of the physical metering equipment, if it can be physically sealed preferably using a wire seal, otherwise a paper seal. Both wire and paper are recognised as seals in BSCP06. The object is to confirm that the device has not been interfered with (accidentally or maliciously) between calibration, commencing and during continued operational use.</p> <p>A physical method of sealing can not be proscribed in CoP4 unless the hardware has been specified to accommodate that method of sealing under CoP1, 2, 3, 5, etc. This should perhaps raise a potential change to the metering CoPs to ensure the facilities to "seal" are provided within the meter approval.</p>	Actioned See Ref 2
136	National Grid plc	5.1.3	5.1.3 Sealing	Our meters are likely to be manufactured outside of the UK (China?). We cannot	Actioned See Ref 2

Collated Responses to DCP0005

No.	Organisation	Section No.	Section	Comment	BSCCo Response
				meet this requirement.	
149	Siemens Energy Services	5.1.3	Section 5.1.3 – Sealing	<p>Same Comment as for specific questions 1 and 2 - We do not believe that the sealing of a meter after it has been calibrated needs to be a settlement seal. The test facility must be allowed to provide its own sealing arrangements in any acceptable format.</p> <p>The purpose of sealing of a meter is to show that no access has been gained to the calibration components of the device since the calibration errors were finalised. The sealing arrangements have to be appropriate to the meter design. The Meter Operator/Settlements seal applied by the Meter Operator, as part of the site installation/commissioning process needs to protect the calibration seal. To specify calibration sealing methods in CoP4 or a BSCP is not appropriate, as Meter Manufacturers are not party to the formulation of either.</p>	Actioned See Ref 2
175	Southern Electric Power Distribution; Keadby Generation Ltd; SSE Energy Supply Ltd; SSE Generation	5.1.3	5.1.3 Sealing	<p>In it not appropriate to place BSCP06 and BSCP514 requirements on meter manufacturers and laboratories.</p> <p>The physical design of meter may not lend</p>	Actioned See Ref 2

Collated Responses to DCP0005

No.	Organisation	Section No.	Section	Comment	BSCCo Response
	Ltd; and Scottish Hydro-Electric Power Distribution Ltd; Medway Power Ltd;			<p>itself to a wire seal.</p> <p>Allowance must be provided for "non-approved" seal, such as a paper seal, which would still provide evidence that the seal had been broken after the meter was calibrated.</p>	
210	British Energy	5.1.3	5.1.3 Sealing	<p>A number of existing makes and models of Meters are designed for rack mounting. As such they do not incorporate any provisions for the fitting of BSCP06/BSCP514 approved seals to ensure they are not tampered with after Calibration and before installation. Moreover, neither manufacturers nor Accredited Laboratories are on the Sealing Register. BE therefore suggest the addition of the following paragraph to cover these exceptions :</p> <p>"Where seals approved by BSCP06/BSCP514 cannot be installed, Meters shall be fitted with tamper-evident frangible paper or metallic security seals immediately following Type A and (off-site) Type C Calibrations."</p>	Actioned See Ref 2
251	Chair, CVA MOA Forum	5.1.3	5.1.3 Sealing	<p>In it not appropriate to place BSCP06 and BSCP514 requirements on meter manufacturers and laboratories.</p> <p>The physical design of meter may not lend</p>	Actioned See Ref 2

Collated Responses to DCP0005

No.	Organisation	Section No.	Section	Comment	BSCCo Response
				<p>itself to a wire seal.</p> <p>Allowance must be provided for "non-approved" seal, such as a paper seal, which would still provide evidence that the seal had been broken after the meter was calibrated.</p>	
52	Npower Limited, Npower Northern Limited, Npower Northern Supply Limited, Npower Yorkshire Limited, Npower Yorkshire Supply Limited, Npower Direct Limited	5.1.4	14	<p>It is stated that statements of uncertainties covering all measurement points shall be included. This can not be provided retrospectively and again most of our test certificates will become non-compliant. Is it possible to provide measurement uncertainties for all points – what is the benefit of this requirement when a general statement of uncertainty would suffice?</p> <p>Re 'The Calibration Certificates may be held as either hard paper copies, or in 'non-editable electronic format'. However historical information is stored using PDF or Excel documents that are editable. This would make all historical records non-compliant.</p> <p>The 3rd paragraph 'All calibrations shall be conducted...' requires further clarification. The last sentence of the paragraph will be very difficult to comply with as it is unlikely that manufacturers will state that they are a Type A Calibration. This sentence should be removed.</p>	<p>Actioned. Statements of uncertainties is now only required after the effective date of the new CoP4.</p> <p>Actioned. now only required after the effective date of the new CoP4.</p> <p>Actioned. Sentence removed & new added to require certificates to identify the body responsible for testing.</p>

Collated Responses to DCP0005

No.	Organisation	Section No.	Section	Comment	BSCCo Response
				<p>The 7th paragraph 'Evidence shall be retained ...' This contradicts the 5th paragraph that states CoPs 3, 5, 6 & 7 only require the latest set of calibration certificates to be retained.</p> <p>What is the benefit of the obligation to inform the BSCCo if calibration certificates are not available? The requirement to conduct a type C test would mean that the meter could not be kept on the wall (as it could if a type B test was conducted utilising on site load). A type C test has more points than a type A. We believe that for CoP3 and 5 the requirement should be to conduct a type B as this will still give the assurance that the meter is recording data to the correct accuracy.</p> <p>The annual calibration report is additional to the work carried out by the MOA at present and there will be a cost associated with it. What is the information going to be used for? The obligation should be placed on the BSCCo to provide a summary of the report to the Panel and to circulate information to the MOAs in order to highlight any makes / models of meter that are less reliable / accurate. If this is not the case, then the current spot checks that the TAA carry out during site policing visits should be adequate. The report may not</p>	<p>Actioned. Clause added to cater for latest certificate.</p> <p>Not actioned. The MOA is required to attend site in either case. The additional tests needed for a type C over a type B would not constitute significant additional burden.</p> <p>MOAs should give consideration as a matter of routine to the output of calibrations to ensure their population of Meters are, and remain, fit for purpose.</p> <p>ELEXON are simply collating this information on a National basis to provide confidence to the Panel (obligation added). As a report will be provided to the Panel, – this information will be available to all MOAs.</p>

Collated Responses to DCP0005

No.	Organisation	Section No.	Section	Comment	BSCCo Response
				<p>pick up meters which have become faulty and been replaced. The report format for this should be mandatory to ensure a consistent response. How would this report be managed under P207?</p>	<p>Meters that have become faulty are not within the scope of this exercise.</p>
53	Npower Limited, Npower Northern Limited, Npower Northern Supply Limited, Npower Yorkshire Limited, Npower Yorkshire Supply Limited, Npower Direct Limited	5.1.4	15	<p>Sections 5.1.4.3 and 5.1.4.4 both state that the MOA shall ensure that the relevant accredited laboratory or test house shall make available all test reports, records and certificates. We may be able to do this going forward but can not ensure this retrospectively. If a test house was to close or a company to cease trading then what assurance would be in place to retain records. Could this lead to a situation where all meters would require immediate replacement?</p> <p>Also section 5.1.4.3 states that the results of all Calibrations and samplings tests performed on meters shall be retained as traceable records. This does not agree with one of the paragraphs in section 5.1.4.1 that states CoPs 3, 5, 6 & 7 only need to retain the latest set of calibration certificates.</p>	<p>ELEXON has changed this requirement such that the MOA is responsible for the provision of information to BSCCo as required. It is not specified whether the MOA or test house etc ultimately provides the information.</p> <p>Section 5.1.4.4 removed as it is a BSCP 27 requirement.</p> <p>Clause added to cover CoPs 3 & 5 to this end.</p>
74	E.ON UK plc	5.1.4	5.1.4, Records	General comment – Meters, VT's, CT's – uncertainty details are not generally available on older metering equipments. CoP4 requires uncertainty data to be made	Actioned See Ref 52

Collated Responses to DCP0005

No.	Organisation	Section No.	Section	Comment	BSCCo Response
				<p>available on all test certificates and is retrospective. This will lead to a large number of non-compliances.</p> <p>Manufacturers have not had any input into the development of the CoP and may not be aware of its forthcoming issue. These requirements may not be achievable.</p>	[E.G. to consider this requirement]
77	E.ON UK plc	5.1.4	5.1.4.3 & 5.1.4.4, Inspection of Certificates, Records and Testing/Technical Audit	<p>How does this apply to retrospective certificates where may not be available. Suggest also including a time limit – as in 30 years time a company may not be trading. Suggest include words “where reasonably”.</p> <p>Last paragraph contradicts statement in 5.1.4.1 regarding retention of certificates on CoPs 3,5,6 and 7.</p> <p>There are serious concerns over the transfer of records between MOA's. Meters are owned by customer and transfer of MOA's can be frequent. Under BSCP20 the only requirement is to transfer Meter Technical Details.</p>	Actioned See Ref 53
176	Southern Electric Power Distribution; Keadby Generation Ltd; SSE Energy Supply Ltd; SSE Generation Ltd; and Scottish Hydro-Electric Power Distribution Ltd; Medway Power Ltd;	5.1.4	5.1.4 Records	<p>General comment – Meters, VT's, CT's – uncertainty details are not generally available on older metering equipments. CoP4 requires uncertainty data to be made available on all test certificates and is retrospective. This will lead to a large number of non-compliances.</p> <p>Manufacturers have not had any input into</p>	Actioned See Ref 52

Collated Responses to DCP0005

No.	Organisation	Section No.	Section	Comment	BSCCo Response
				the development of the CoP and may not be aware of its forthcoming issue. These requirements may not be achievable.	
179	Southern Electric Power Distribution; Keadby Generation Ltd; SSE Energy Supply Ltd; SSE Generation Ltd; and Scottish Hydro-Electric Power Distribution Ltd; Medway Power Ltd;	5.1.4	5.1.4.3 and 5.1.4.4 – Inspection of Certificates, Records and Testing / Technical Audit	<p>Reference to test house – not included in definitions</p> <p>How does this apply to retrospective certificates where may not be available. Suggest also including a time limit – in 30 years time existing time, company may not be trading. Suggest include words “where reasonably”.</p> <p>Last paragraph contradicts statement in 5.1.4.1 regarding retention of certificates on CoPs 3,5,6 and 7.</p> <p>There are serious concerns over the transfer of records between MOA's. Meters are owned by customer and transfer of MOA's can be very often.. Under BSCP 20 only requirement is to transfer Meter Technical Details.</p>	Actioned See Ref 162 See Ref 53 See Ref 53 This is wider than CoP4 and is addressed in the AMO's Code of Practice.
252	Chair, CVA MOA Forum	5.1.4	5.1.4 Records	<i>General comment – Meters, VT's, CT's – uncertainty details are not generally available on older metering equipments. CoP4 requires uncertainty data to be made available</i>	Actioned. See Ref 52

Collated Responses to DCP0005

No.	Organisation	Section No.	Section	Comment	BSCCo Response
				<p><i>on all test certificates and is retrospective. This will lead to a large number of non-compliances.</i></p> <p><i>Manufacturers have not had any input into the development of the CoP and may not be aware of its forthcoming issue. These requirements may not be achievable.</i></p> <p><i>Elexon have previously agreed that uncertainty measurements may not be available for existing equipment but have stated in correspondence that where certificate does not include a statement of the measurement of uncertainty covering all test points the Party will need to provide supporting evidence. It is unclear to the Forum members just what evidence could be provided and clarification of this comment has not been provided by Elexon.</i></p>	Changes made as a result of this consultation have addressed this issue such that, this requirement only applies to equipment installed after the CoP effective date. See Ref 52
255	Chair, CVA MOA Forum	5.1.4	5.1.4.3 and 5.1.4.4 – Inspection of Certificates, Records and Testing / Technical Audit	<p>Reference to test house – not included in definitions</p> <p>How does this apply to retrospective certificates where may not be available. Suggest also including a time limit – in 30 years time existing time, company may not be trading. Suggest include words “where reasonably”.</p>	Actioned See Ref 162 Actioned See Ref 53

Collated Responses to DCP0005

No.	Organisation	Section No.	Section	Comment	BSCCo Response
				<p>Last paragraph contradicts statement in 5.1.4.1 regarding retention of certificates on CoPs 3,5,6 and 7.</p> <p>There are serious concerns over the transfer of records between MOA's. Meters are owned by customer and transfer of MOA's can be very often.. Under BSCP 20 only requirement is to transfer Meter Technical Details.</p>	<p>Actioned see Ref 53</p> <p>This is wider than CoP4 and is addressed in the AMO's Code of Practice.</p>
14	Member of Expert Group and ex Consultant to the Association of Meter Operators	5.1.4.1	Page 13, 5.1.4.1 Calibration Certificates 2 nd Paragraph	<p>The words "amongst other things" have been added. What other things? The previous paragraph identifies the calibration details, this paragraph identifies other matters.</p> <p>Therefore to what does "amongst other things" refer, if there are any they must be specified, if there are not then the words are incorrect. Please remove.</p>	Actioned – "amongst other things" removed
15	Member of Expert Group and ex Consultant to the Association of Meter Operators	5.1.4.1	Page 14, 5.1.4.1 Calibration Certificates 7 th Paragraph	<p>The words "for the lifetime of the meter" have been added. This is incorrect and inconsistent with the following paragraph. They should be removed.</p> <p>If there is any need to specify at all (and I think not) then there should be reference to settlement timescales following the removal of the meter, it could be disputed for some time after removal.</p>	<p>Actioned – paragraph removed.</p> <p>Is this in 5.1.4.1 Records? See Ref 75.</p>

Collated Responses to DCP0005

No.	Organisation	Section No.	Section	Comment	BSCCo Response
33	Western Power Distribution	5.1.4.1	P14 5.1.4.1 para 8 "Starting For Code of Practices 3, 5, .."	Additionally, if a Type B ...both the Type B and Type C Calibration Certificates should shall be retained. (delete should, add shall)	Actioned
75	E.ON UK plc	5.1.4.1	5.1.4.1, Calibration Certificates	<p>Third Paragraph – “Equipment used and person (or persons) responsible for the calibration” – this level of information may not be included on existing test certificates. For example CEWE manufacturers test certificates do not state the equipment used. This will lead to a huge number of non-compliances.</p> <p>The way that this and the preceding paragraph are drafted suggests that existing Type A calibration certificates need to include more information than new Type A calibration certificates</p> <p>Paragraph 4 – Statements of Uncertainties are not available on a large number of the test certificates for existing meters. As a result there will be a large number of non-compliances against this requirement.</p> <p>Paragraph 6 – Text is ambiguous – what is the Standard? British Standard or Reference / Working Standard? This paragraph also asks for information to be added to the test</p>	Actioned see Ref 52 See Ref 52 Actioned see Ref 52 Actioned paragraph removed

Collated Responses to DCP0005

No.	Organisation	Section No.	Section	Comment	BSCCo Response
				<p>certificate. We cannot expect the manufacturer or external lab to comply with all the requirements stated in terms of information to be placed on the certificate. Suggest paragraph is removed.</p> <p>Paragraph 8 – There are concerns that this allows the audit trail will be lost, so MOA will not be able to show that they have complied with MCoP4 over lifetime of the meter. This is contradicted to some degree by Paragraph 10 where evidence is required.</p> <p>Paragraph 9 – needs to be reconsidered based on outcome of wording for Section 5.1.1 last paragraph</p>	<p>Actioned – Agreed this paragraph adds confusion and conflicts with overall requirement to retain audit trail.</p> <p>Actioned – Agreed conflicts with 5.1.1 paragraph 9 removed.</p>

Collated Responses to DCP0005

No.	Organisation	Section No.	Section	Comment	BSCCo Response
137	National Grid plc	5.1.4.1	5.1.4.1 Calibration Certificates	Needs a statement as to how uncertainty is required and confidence limits (as per 5.3.1)	Change made See Ref 137 comment 2
150	Siemens Energy Services	5.1.4.1	Section 5.1.4.1 – Calibration Certificates	<p>Uncertainty details are not normally available on historic meter accuracy certificates from meter manufacturers. A large number of non-compliance will be generated if the retrospective aspects of this CoP are implemented. Non Compliance with this aspect of the CoP needs to be restricted to sites commissioned after its implementation.</p> <p>To insure that new metering installations are compliant, Manufacturers need to be prepared for this additional requirement before CoP4 can go live.</p>	Actioned See Ref 2 See Ref 74
177	Southern Electric Power Distribution; Keadby Generation Ltd; SSE Energy Supply Ltd; SSE Generation Ltd; and Scottish Hydro-	5.1.4.1	5.1.4.1 – Calibration Certificates	Third Paragraph – “Equipment used and person (or persons) responsible for the calibration” – this level of information may not be included on existing test certificates. For example CEWE manufacturers test certificates do not state the equipment	Actioned see Ref 52

Collated Responses to DCP0005

No.	Organisation	Section No.	Section	Comment	BSCCo Response
	Electric Power Distribution Ltd; Medway Power Ltd;			<p>used. This will lead to a huge number of compliances.</p> <p>The way that this and the preceding paragraph are drafted suggests that existing Type A calibration certificates need to include more information than new Type A calibration certificates</p> <p>Paragraph 4 – Statements of Uncertainties are not available on a large number of the test certificates for existing meters. As a result there will be a large number of non-compliances against this requirement.</p> <p>Paragraph 6 – Text is ambiguous – what is the Standard? British Standard or Reference / Working Standard? This paragraph also asks for information to be added to the test certificate. We cannot expect the manufacturer or external lab to comply with all the requirements stated in terms of information to be placed on the certificate. Suggest paragraph is removed.</p> <p>Paragraph 8 – There are concerns that this allows the audit trail will be lost, so MOA will not be able to show that they have complied with MCoP4 over lifetime of the meter. This is contradicted to some degree by Paragraph 10 where evidence is required.</p>	<p>See Ref 52</p> <p>See Ref 52</p> <p>Actioned see Ref 75</p> <p>Actioned see Ref 75</p>

Collated Responses to DCP0005

No.	Organisation	Section No.	Section	Comment	BSCCo Response
				Paragraph 9 – needs to be reconsidered based on outcome of wording for Section 5.1.1 last paragraph	
211	British Energy	5.1.4.1	5.1.4.1 Calibration Certificates	The list of information on Meter Calibration certificates should include “measurement uncertainties”.	Actioned
253	Chair, CVA MOA Forum	5.1.4.1	5.1.4.1 – Calibration Certificates	<p>Third Paragraph – “Equipment used and person (or persons) responsible for the calibration” – this level of information may not be included on existing test certificates. For example CEWE manufacturers test certificates do not state the equipment used. This will lead to a huge number of non-compliances.</p> <p>The way that this and the preceding paragraph are drafted suggests that existing Type A calibration certificates need to include more information than new Type A calibration certificates</p> <p>Paragraph 4 – Statements of Uncertainties are not available on a large number of the test certificates for existing meters. As a result there will be a large number of non-compliances against this requirement.</p> <p>Paragraph 6 – Text is ambiguous – what is the Standard? British Standard or</p>	Actioned see Ref 52 Actioned see Ref 52 Actioned See Ref 52 Actioned see Ref 75

Collated Responses to DCP0005

No.	Organisation	Section No.	Section	Comment	BSCCo Response
				<p>Reference / Working Standard? This paragraph also asks for information to be added to the test certificate. We cannot expect the manufacturer or external lab to comply with all the requirements stated in terms of information to be placed on the certificate. Suggest paragraph is removed.</p> <p>Paragraph 8 – There are concerns that this allows the audit trail will be lost, so MOA will not be able to show that they have complied with MCoP4 over lifetime of the meter. This is contradicted to some degree by Paragraph 10 where evidence is required.</p> <p>Paragraph 9 – needs to be reconsidered based on outcome of wording for Section 5.1.1 last paragraph</p>	<p>Actioned see Ref 75</p> <p>Actioned See Ref 75</p>
76	E.ON UK plc	5.1.4.2	5.1.4.2, Annual Calibration Report	<p>This is additional to the work carried out by the MOA at present and there will be a cost associated with it. What is the information going to be used for? The obligation should be placed on the BSCCo to provide a summary of the report to the Panel and to circulate information to the MOA's in order to highlight any makes/models of meter that are less reliable/accurate.</p> <p>How would this be managed under P207?</p> <p>If this is not the case, then the current spot</p>	See Ref 52

Collated Responses to DCP0005

No.	Organisation	Section No.	Section	Comment	BSCCo Response
				<p>checks that the TAA carry out during site policing visits should be adequate.</p> <p>The report may not pick up meters which have been gone faulty and been replaced.</p> <p>We would suggest that format of report is mandatory. However format in Appendix E is confusing, as it does not capture the necessary information and needs to be completely revised.</p>	
151	Siemens Energy Services	5.1.4.2	Section 5.1.4.2 – Calibration Report	<p>Referenced to Specific Question 3 - The requirement for annual reporting of test results introduces additional work and costs for Meter Operators. This additional cost can be offset if Elexon or the TAA acted on these reports and recommended corrective actions. It will also highlight meter types that have abnormal performance and need special attention.</p>	See Ref 52
178	Southern Electric Power Distribution; Keadby Generation Ltd; SSE Energy Supply Ltd; SSE Generation Ltd; and Scottish Hydro-Electric Power Distribution Ltd; Medway Power Ltd;	5.1.4.2	5.1.4.2 – Annual Calibration Report	<p>This is additional to the work carried out by the MOA at present and there will be a cost associated with it. What is the information going to be used for? The obligation should be placed on the BSCCo to provide a summary of the report to the Panel and to circulate information to the MOA's in order to highlight any makes / models of meter that are less reliable / accurate.</p> <p>How would this be managed under P207?</p>	See Ref 52

Collated Responses to DCP0005

No.	Organisation	Section No.	Section	Comment	BSCCo Response
				<p>If this is not the case, then the current spot checks that the TAA carry out during site policing visits should be adequate.</p> <p>The report may not pick up meters which have been gone faulty and been replaced.</p> <p>We would suggest that format of report is mandatory. However format in Appendix E is confusing, does not capture the necessary information and needs to be completely revised.</p>	
212	British Energy	5.1.4.2	5.1.4.2 Annual Calibration Report	<ol style="list-style-type: none"> 1. BE note with concern that Appendix E has been described as a "suggested" format. Unless CoP4 defines firm requirements for all MOAs to report annual achievements in a consistent way, the data provided will be difficult for the BSCCo to interpret, and may seriously limit its potential value. 2. If the proposed annual MOA reports are to serve any useful purpose, BE consider the clauses should include the additional requirement for the BSCCo to supply annual summaries and analyses of the information they contain to the Panel. Such information should also be made more widely available, at the very least to inform MOAs of any poor accuracy/reliability trends relating to 	Actioned Actioned see also Ref 52

Collated Responses to DCP0005

No.	Organisation	Section No.	Section	Comment	BSCCo Response
				<p>particular makes and models of Meters.</p> <p>3. Please see further BE comments below against Appendix E.</p>	Noted
254	Chair, CVA MOA Forum	5.1.4.2	5.1.4.2 – Annual Calibration Report	<p>This is additional to the work carried out by the MOA at present and there will be a cost associated with it. What is the information going to be used for? The obligation should be placed on the BSCCo to provide a summary of the report to the Panel and to circulate information to the MOA's in order to highlight any makes / models of meter that are less reliable / accurate.</p> <p>How would this be managed under P207?</p> <p>If this is not the case, then the current spot checks that the TAA carry out during site policing visits should be adequate.</p> <p>The report may not pick up meters which have been gone faulty and been replaced.</p> <p>We would suggest that format of report is mandatory. However format in Appendix E is confusing, does not capture the necessary information and needs to be completely revised.</p>	Actioned see also Ref 52
34	Western Power Distribution	5.1.4.3	P15 5.1.4.3 Last sentence.	Type – “... Traceable records. .” (delete second .)	Actioned

Collated Responses to DCP0005

No.	Organisation	Section No.	Section	Comment	BSCCo Response
213	British Energy	5.1.4.3	5.1.4.3 Inspection of certificates, records & testing	<p>1. CoP4 should state how Paragraph 1 requirements will apply where retrospective certificates are unavailable or where the company is no longer trading. In addition, BE suggests a time limit of say 30 years should apply.</p> <p>2. Paragraph 2 contradicts statement in 5.1.4.1 regarding retention of certificates on CoPs 3,5,6 and 7.</p>	<p>Actioned. Footnote added A time limit would breach BSC obligations (Section L 2.5.3 (a)).</p> <p>Actioned. See Ref 53</p>
78	E.ON UK plc	5.1.4.5	5.1.4.5, Quality Assurance	<p>Should this requirement be on the Registrant? The Registrant should be able to appoint an Accredited MOA and the accreditation should include the quality process.</p> <p>BS EN for calibration is 17025. Should this be the preferred standard rather than BS EN ISO 9001?</p>	<p>Actioned – Changed to MOA [E.G. to consider relevant standard]</p>
138	National Grid plc	5.1.4.5	5.1.4.5 Quality Assurance	Is reference to Registrant correct?	Actioned see Ref 78
152	Siemens Energy Services	5.1.4.5	Section 5.1.4.5 – Quality Assurance	BS EN ISO 9001 is a general standard. BS EN 17025 is specific to the General Competence and Testing and Calibration Laboratories. As this is a preferable and more appropriate standard for meter	[E.G. to consider appropriate standard] See Ref 78.

Collated Responses to DCP0005

No.	Organisation	Section No.	Section	Comment	BSCCo Response
				testing, should this be expressed as the preferred quality system rather than 9001.	
163	United Utilities	5.1.4.5	Section 5.1.4.5	Do not agree that BSCLCo should have the right to recover reasonable additional incurred costs from the MOA. What is reasonable additional cost?	This is carried over from the existing CoP4 where the TAA has the right to recover additional costs from the MOA Section 17.2. This is a reasonable business clause. No change made.
180	Southern Electric Power Distribution; Keadby Generation Ltd; SSE Energy Supply Ltd; SSE Generation Ltd; and Scottish Hydro-Electric Power Distribution Ltd; Medway Power Ltd;	5.1.4.5	5.1.4.5 – Quality Assurance	Should this requirement be on the Registrant? The Registrant should be able to appoint an Accredited MOA and the accreditation should include the quality process. BS EN for calibration is 17025. Should this be the preferred standard rather than BS EN ISO 9001.	Actioned. see comment Ref 78 See Ref 78.
214	British Energy	5.1.4.5	5.1.4.5 Quality Assurance	<ol style="list-style-type: none"> BE do not consider it reasonable for this requirement be on the Registrant. The appointment by Registrants of Accredited MOAs should ensure the application of required quality processes. Should BS EN 17025 be the preferred standard for calibration rather than BS EN ISO 9001? If so, Paragraph 2 and Section 3 should be amended accordingly. 	Actioned See Ref 78 See Ref 78.

Collated Responses to DCP0005

No.	Organisation	Section No.	Section	Comment	BSCCo Response
256	Chair, CVA MOA Forum	5.1.4.5	5.1.4.5 – Quality Assurance	<p>Should this requirement be on the Registrant? The Registrant should be able to appoint an Accredited MOA and the accreditation should include the quality process.</p> <p>BS EN for calibration is 17025. Should this be the preferred standard rather than BS EN ISO 9001.</p>	Actioned See Ref 78 See Ref 78.
118	Association of Meter Operators	5.12	5.12	The broader issue is the retrospective nature of the implementation which may have implications for all 110,000 meter installations. Clearly the new CoP4 would apply to new installs from that date, but for the installed meter base, in what way does it apply? There is no wish to have two documents running in parallel for ten years.	Actioned. Clause added to not make the requirement retrospective.
16	Member of Expert Group and ex Consultant to the Association of Meter Operators	5.2	Page 16, 5.2 Sample Calibrations Last paragraph	<p>This example is unnecessary and will cause confusion.</p> <p>There is no requirement for the MOA to evenly phase his type B calibrations. He will most likely leave them all until year 15. As he will be installing meters every year this will not give him an uneven workload. In all probability he will therefore be required to start his 1% at year 8.</p> <p>This paragraph is in danger of introducing a further requirement and is not acceptable</p>	Actioned. Paragraph removed.

Collated Responses to DCP0005

No.	Organisation	Section No.	Section	Comment	BSCCo Response
35	Western Power Distribution	5.2	P15 5.2 Sample Calibrations	<p>"(a) Sample Calibration will apply to all newly installed Meter Types"; and"</p> <p>This appears to have the same meaning as (b).</p> <p>No meter will be sampled for 8 years from initial calibration so it will no longer be newly installed, so no meter will ever be selected for this criteria!!</p> <p>What is this sentence intending?</p>	[ELEXON considers that the use of the term "new meter types" in this section is not appropriate. ELEXON is to provide alternative text for E.G. consideration]
36	Western Power Distribution	5.2	P16 Sample Calibration	The process needs an end date for sampling of any given type. 7 years after starting (15 years after the A Calibration would be when all meters would be into B or C calibrations, so sampling would be superfluous.	See Ref 35
37	Western Power Distribution	5.2	P16 Sample Calibration	Rather than sample all new meter types for ever, the panel should instruct BSCCo to maintain on the website either an additional item in the Approved Meter Types list or on a separate list indicating which types need to be sampled.	See Ref 35
54	Npower Limited, Npower Northern Limited, Npower Northern Supply Limited, Npower Yorkshire Limited, Npower Yorkshire Supply Limited, Npower Direct Limited	5.2	16	<p>States that 'new' meter types should be sample tested. What qualifies as a 'new' meter type?</p> <p>Section 5.2 Sample calibrations is confusing. The first paragraph states that the sample calibrations are in addition to</p>	See Ref 35

Collated Responses to DCP0005

No.	Organisation	Section No.	Section	Comment	BSCCo Response
				<p>the periodic calibration requirements. However the example at the end of the section indicates that this is not the case if the MOA carries out the periodic calibrations evenly over the 10 or 15 years.</p>	
79	E.ON UK plc	5.2	5.2, Sample Calibrations	<p>Why do the sample calibrations not start much earlier? – otherwise meters will be in service for 8 years before there is any indication that there could be a problem with the meter accuracy. By this time there may be 000's of meters in service. Routine calibration programme may not start until year 15, by which time many of the meters may be thrown out. As there is no requirement for an end of life calibration these meters will never have been calibrated.</p> <p>It is unclear what is required. Are these additional calibrations if MOA is already doing sufficient type B calibrations during their normal routines? We do not believe that this is intended, but alterations to the wording may be required.</p> <p>What happens if there is a change to a MCoP, such as has just happened under MCoP 1 and 2 where all existing meter approvals become invalid.? Wording in CoP4 suggests that all meter types would immediately require sample calibration even though they are not really new.</p>	See Ref 35

Collated Responses to DCP0005

No.	Organisation	Section No.	Section	Comment	BSCCo Response
109	Association of Meter Operators	5.2	5.2	Similar comment to Appendix F below, should remove 'For example' – is this a requirement of how to do it? Move into a guidance note to expand and clarify the requirement in plainer English. Also recognise that in practice the test pattern is a rolling programme as there is a rolling installation/replacement programme.	See Ref 35
110	Association of Meter Operators	5.2	5.2 b)	Need to be a little careful that 1% per MOA, per meter type, per CoP per annum does not lead to some MOAs having to test the one out of one that they have within that definition.	See Ref 35
153	Siemens Energy Services	5.2	Section 5.2 – Sample Calibrations	<p>Reference to Specific Question 3 - The proposed changes to CoP4 allow a newly installed meter to form part of the settlements process for 8 years before being subject to accuracy testing. The 1% sampling rate allows most meters to remain unchecked for 15 years. There is a risk from inaccurate metering to all parties involved in the Settlement process by leaving a meter untouched for this period of time. Issues will be difficult to resolve after 8 years, impossible after 15.</p> <p>There may be a case for some testing from year one after installation to protect the settlements process and all involved in it whilst volumes are small and involved</p>	See Ref 35

Collated Responses to DCP0005

No.	Organisation	Section No.	Section	Comment	BSCCo Response
				parties are available.	
181	Southern Electric Power Distribution; Keadby Generation Ltd; SSE Energy Supply Ltd; SSE Generation Ltd; and Scottish Hydro-Electric Power Distribution Ltd; Medway Power Ltd;	5.2	5.2 – Sample Calibrations	<p>It is unclear what is required. Are these additional calibrations if MOA is already doing sufficient type B calibrations during their normal routines? We do not believe that this is intended, but alterations to the wording may be required.</p> <p>What happens if there is a change to a MCoP, such as has just happened under MCoP 1 and 2 where all existing meter approvals become invalid. Wording in CoP4 suggests that all meter types would immediately require sample calibration even though they are not really new.</p>	See Ref 35
215	British Energy	5.2	5.2 Sample Calibrations	<ol style="list-style-type: none"> 1. BE comments against 5.1.4.2 above also apply here. 2. Draft CoP4 Section 5.2 (b) refers to meters which were CoP compliant 5 years prior to the updated CoP4 effective date. BE suggests the BSCCo should provide a list of meters not requiring sampling. 3. BE disagrees strongly with the Section 5.2 proposal not to start sampling until 8 years after installation. For previously 	See Ref 35

Collated Responses to DCP0005

No.	Organisation	Section No.	Section	Comment	BSCCo Response
				<p>unproven meter makes and models this could mean there will be no track record of performance for some CoP1 & 2 meters (under a Type C Calibration regime) or for all CoP3, 5, 6 & 7 meters over this significant period. In the meantime hundreds or even thousands of additional badly performing meters may be brought into service before there is any evidence that there is a problem. Moreover, with the first CoP 3, 5, 6 & 7 periodic calibration regime not requiring completion until year 15, in the absence of any end-of-life test requirement, many of these meters could be removed from service without any lifetime accuracy measurement. This cannot be justified and should not be allowed to stand.</p> <p>To rectify this, BE urge Elexon to reword Section 5.2 to require 2% of all such CoP 1 & 2 meters and 1% of such CoP 3, 5, 6 & 7 meters (minimum of 10-off and maximum of 50-off per type) to be sampled annually starting within 2 and 4 years respectively of commissioning.</p> <p>4. If it is intended that ongoing programmes of type B and C calibrations which achieve higher rates than those required by sampling will</p>	

Collated Responses to DCP0005

No.	Organisation	Section No.	Section	Comment	BSCCo Response
				<p>remove the need for separate sample calibrations (as implied by the Example), this should be clearly stated.</p> <p>5. Please clarify the requirements in the event of changes to CoPs, such as has just happened under CoP 1 and 2 when all existing meter approvals become invalid. Draft CoP4 wording suggests that all meter types would immediately require sample calibration even though they are not really new.</p>	
257	Chair, CVA MOA Forum	5.2	5.2 – Sample Calibrations	<p><i>CVA members of review group had written to Elexon, suggesting that sample calibration should start much earlier – otherwise meters will be in service for 8 years before there is any indication that there could be a problem with the meter accuracy. By this time there may be 1000's of meters in service. Routine calibration programme may not start until year 15, by which time many of the meters may be thrown out. As there is no requirement for an end of life calibration these meters will never have been calibrated.</i></p> <p>It is unclear what is required. Are these additional calibrations if MOA is already doing sufficient type B calibrations during their normal routines? We do not believe</p>	See Ref 35

Collated Responses to DCP0005

No.	Organisation	Section No.	Section	Comment	BSCCo Response
				<p>that this is intended, but alterations to the wording may be required.</p> <p>What happens if there is a change to a MCoP, such as has just happened under MCoP 1 and 2 where all existing meter approvals become invalid. Wording in CoP4 suggests that all meter types would immediately require sample calibration even though they are not really new.</p>	
17	Member of Expert Group and ex Consultant to the Association of Meter Operators	5.3	Page 17, 5.3 Measurement transformers	This paragraph refers to sample calibrations, there is no such thing for measurement transformers	See Ref 18 – Paragraph removed.
18	Member of Expert Group and ex Consultant to the Association of Meter Operators	5.3	Page 17, 5.3 Measurement transformers	The expert group had deliberately excluded this paragraph as it adds nothing to what follows. The title is sufficient and this paragraph is redundant	Actioned. Paragraph removed.
55	Npower Limited, Npower Northern Limited, Npower Northern Supply Limited, Npower Yorkshire Limited, Npower Yorkshire Supply Limited, Npower Direct Limited	5.3	17	<p>How is 'new measurement transformers' quantified?</p> <p>Section 5.3.3 states that all certificates shall have statements of measurements uncertainties covering all test points. We can not get this information retrospectively so most of our test certificates will immediately become non-compliant. As this is a DNO asset how will this requirement be enforced by the BSCCo?</p>	Actioned. New changed to newly installed. Actioned. Change made such that requirement is not retrospective.

Collated Responses to DCP0005

No.	Organisation	Section No.	Section	Comment	BSCCo Response
				5.3.3 Should maintain the requirement that class 0.5 LV CT's do not require a test certificate if the rating plate on the CT can be visually inspected, as long as the overall accuracy is not exceeded.	The use of the class accuracy is a BSCP 27 work around and is therefore not a CoP4 matter.
80	E.ON UK plc	5.3	5.3, Measurement Transformers	See general comment in point 74: uncertainty	See Ref 74. [E.G. to consider this requirement]
112	Association of Meter Operators	5.3	5.3	It is unclear whether manufacturer/providers of CT/VTs can provide the uncertainty information now requested. It is proposed that the manufacturers should be approached	See Ref 74.
113	Association of Meter Operators	5.3	5.3	As requesting this information is a new requirement the requirement should be clearly wording as to whether this applies to equipment installed from the effective date or equipment ordered from the effective date. There may be a long lead time from specify/order to commissioning.	See Ref 18
114	Association of Meter Operators	5.3	5.3	There appears to be a different approach currently operated in the SVA & CVA market with respect to missing CV/VT certificates, often because they were installed years ago or the certificate was simply lost. If there is an agreed approach acceptable to Parties then this could be stated in the CoP4 (or a TAA guidance note), ie CT/VTs installed prior to 1990 are	See Ref 18 W.R.T section 5.3? There are work-a-rounds associated with TAA. The SVA options are documented in BSCP 27 & guidance notes but none documented for CVA. [ELEXONs TA team to give

Collated Responses to DCP0005

No.	Organisation	Section No.	Section	Comment	BSCCo Response
				treated as X. This has been an ongoing problem for MOAs who receive TAA non-compliances but do not have the ability to resolve the issue as the absence of records is due to the equipment owner the LDSO, transmission co, or generator.	consideration to any CVA work rounds – post comment, ELEXON to draft guidance for the TA page of the website]
154	Siemens Energy Services	5.3	Section 5.3 – Measurement Transformers	<p>Uncertainty details are not normally available on historic CT and VT accuracy certificates from manufacturers. A large number of non-compliance will be generated if the retrospective aspects of this CoP are implemented. Non Compliance with this aspect of the CoP needs to be restricted to sites commissioned after its implementation.</p> <p>To insure that new metering installations are compliant, Manufacturers need to be prepared for this additional requirement before CoP4 can go live.</p> <p>Unless a general dispensation is granted for sites that are prior to the CoP implementation date there will be a large number of non-compliances. There are many sites that have been established and operated without event for the last 20 – 40 years The last thing that the industry requires is the bureaucratic process of raising and dealing with individual dispensation requests on a site by site basis. This issue has to be addressed before the CoP can be implemented.</p>	Actioned see Ref 55 See Ref 74 Actioned see Ref 55

Collated Responses to DCP0005

No.	Organisation	Section No.	Section	Comment	BSCCo Response
				<p>CoP4 places the responsibility of maintaining accuracy certificates on the Meter Operator. In reality the Meter Operator has very little control over this process as CT's and VT's are purchased and installed by third parties. For CoP2/3/5 sites it is particularly difficult to obtain CT/VT certificates before the site is commissioned. The responsibility to provide CT/VT certificates is more effectively levied on the asset owner – the distribution company or the customer. This area needs a greater degree of clarity if non-conformances are to be prevented.</p>	ELEXON recognises this issue however, it is a BSC matter which is being given consideration elsewhere.
164	United Utilities	5.3	Section 5.3	Are existing CT certificates to be exempt from these requirements?	Yes. See Ref 55.
182	Southern Electric Power Distribution; Keadby Generation Ltd; SSE Energy Supply Ltd; SSE Generation Ltd; and Scottish Hydro-Electric Power Distribution Ltd; Medway Power Ltd;	5.3	5.3 – Measurement Transformers	Remove word "sample" in sentence 1.	Paragraph removed. See Ref 18
216	British Energy	5.3	5.3 Measurement Transformers	Sample Calibrations are not required for measurement transformers. Please amend "...initial Calibration, periodic Calibration and sample Calibration for..." to read "...initial Calibration and periodic Calibration	Paragraph removed. See Ref 18.

Collated Responses to DCP0005

No.	Organisation	Section No.	Section	Comment	BSCCo Response
				for...".	
258	Chair, CVA MOA Forum	5.3	5.3 – Measurement Transformers	<p><i>See general comment already made on uncertainty.</i></p> <p>Remove word "sample" in sentence 1.</p>	Paragraph removed. See Ref 18.
81	E.ON UK plc	5.3.1	5.3.1	<p>Suggest that it would be clearer if the sentence referred to equipment installed from CoP4 Effective Date.</p> <p>Paragraph 3 – provides detail on uncertainty of measurement. Same level of detail was not included for meter calibration.</p>	Actioned.
139	National Grid plc	5.3.1	5.3.1 Initial Calibration	<p>It is not accepted that multi ratio CTs are tested on all ratios. On a 8 ratio CT this has a significant impact on cost; only the ratio used needs to be tested</p>	Actioned. Costs for CVA ratio tests are in excess of £1.5k/ ratio. Therefore this requirement is excessive. This equally applied pro rata to SVA. ELEXON has removed this requirement where the minimum test is for the ratio used for Settlement purposes.
183	Southern Electric Power Distribution; Keadby Generation Ltd; SSE Energy Supply Ltd; SSE Generation Ltd; and Scottish Hydro-Electric Power Distribution	5.3.1	5.3.1	<p>Paragraph – suggest that it would be clearer if the sentence referred to equipment installed from CoP4 Effective Date.</p> <p>Paragraph 3 – provides detail on</p>	Actioned. See Ref 81.

Collated Responses to DCP0005

No.	Organisation	Section No.	Section	Comment	BSCCo Response
	Ltd; Medway Power Ltd;			uncertainty of measurement. Same level of detail was not included for meter calibration.	
217	British Energy	5.3.1	5.3.1 Calibration Initial	In Paragraph 1, please amend "New measurement transformers shall..." by "Measurement transformers installed after the CoP4 effective date shall..."	This is a basic BSC requirement which cannot be overridden by a CoP. (BSC Section L 3.5.6). Provision is made in this draft of CoP4 in 5.3.3 for missing records. Suggested change not made.
259	Chair, CVA MOA Forum	5.3.1	5.3.1	Paragraph – suggest that it would be clearer if the sentence referred to equipment installed from CoP4 Effective Date. Paragraph 3 – provides detail on uncertainty of measurement. Same level of detail was not included for meter calibration.	Actioned. See Ref 81. See Ref 137. Change made.
82	E.ON UK plc	5.3.3	5.3.3	General comment – Meters, VT's, CT's – uncertainty details are not generally available on older metering equipments. CoP4 requires uncertainty data to be made available on all test certificates and is retrospective. This will lead to a large number of non-compliances. Manufacturers have not had any input into the development of the CoP and may not be aware of its forthcoming issue. These	Actioned. See Ref 81. [E.G. to consider]

Collated Responses to DCP0005

No.	Organisation	Section No.	Section	Comment	BSCCo Response
				<p>requirements may not be achievable.</p> <p>For existing metering schemes, especially those installed at vesting, certificates may not be available and it was accepted that certificates from equipment with similar serial numbers would be acceptable. For HV reactive metering, certificates were not available and it was accepted that name plate data would be sufficient. In CVA metering systems there will be insufficient data available for the equipment to be included in the national transformer error statement.</p> <p>This section of CoP4 will raise a large number of non-compliances, unless this is treated as an "exceptional circumstance" as covered by paragraph 4. If the CoP is introduced then there will be a large number of applications to the BSCCo for derogations.</p> <p>Where CT's and VT's are not provided by the MOA but are owned by the site or other party so provision of this data may not be within the MOA's control.</p>	<p>[This process has not changed however it is undocumented. ELEXONs TA team will consider documenting the acceptable work around for TAA purposes.]</p> <p>Noted. Changes have been made to address this. See Ref 81.</p> <p>The BSC places the obligation on the MOA. Changes to CoP4 cannot address this as it is wider than the CoP. The matter is also currently under consideration by LDSOs & MOAs.</p>
183a	Southern Electric Power Distribution; Keadby	5.3.3	5.3.3	Meters, VT's, CT's – uncertainty details are not generally available on older metering	Actioned See Ref 81

Collated Responses to DCP0005

No.	Organisation	Section No.	Section	Comment	BSCCo Response
	Generation Ltd; SSE Energy Supply Ltd; SSE Generation Ltd; and Scottish Hydro-Electric Power Distribution Ltd; Medway Power Ltd;			<p>equipments. CoP4 requires uncertainty data to be made available on all test certificates and is retrospective. This will lead to a large number of non-compliances.</p> <p>Manufacturers have not had any input into the development of the CoP and may not be aware of its forthcoming issue. These requirements may not be achievable.</p> <p>For existing metering schemes, especially those installed at vesting, certificates may not be available and it was accepted that certificates from equipment with similar serial numbers would be acceptable. For HV reactive metering, certificates were not available and it was accepted that name plate data would be sufficient. In CVA metering systems there will be insufficient data available for the equipment to be included in the national transformer error statement.</p> <p>This section of CoP4 will raise a large number of non-compliances, unless this is treated as an "exceptional circumstance" as covered by paragraph 4. If the CoP is introduced then there will be a large number of applications to the BSCCo for derogations.</p> <p>Where CT's and VT's are not provided by the MOA but are owned by the site or other</p>	<p>[E.G. to consider]</p> <p>See comment on Ref 81.</p> <p>See Ref 81</p> <p>See comment Ref 82</p>

Collated Responses to DCP0005

No.	Organisation	Section No.	Section	Comment	BSCCo Response
				party so provision of this data may not be within the MOA's control.	
218	British Energy	5.3.3	5.3.3 (Measurement Transformer) Records	<p>1. This section should (i) clearly state that existing certificates are acceptable without measurement uncertainties*, and (ii) include references to the use of National Measurement Transformer error statement where records are missing.</p> <p>2. In addition, the requirement for measurement uncertainties to be provided should be qualified by "wherever practicable" to recognise that not all MOAs are responsible for specifying, ordering or approving measurement transformers. In such cases they have no control over whether such information is supplied and should not be non-compliant because it is missing. BE would also point out that (i) there is no track record of problems to justify making this a mandatory (potential TAA non-compliance) issue, and (ii) manufacturer/test house Measurement transformer test results will always be limited by being done without installed burdens.</p> <p>3. Manufacturers have not had any input</p>	<p>This has been addressed. See comment Ref 81.</p> <p>Missing records are addressed in comment Ref paragraph 2 of 5.3.3.</p> <p>[E.G. to give consideration to the justification for the requirement to provide certificates with uncertainty statements.]</p>

Collated Responses to DCP0005

No.	Organisation	Section No.	Section	Comment	BSCCo Response
				<p>into proposed CoP4 changes, may be unaware of its forthcoming issue and may not be able to achieve these requirements.</p> <p>(* Elexon have previously agreed uncertainty measurements may not be available for existing equipment but have stated that where certificates do not include statements of measurement uncertainties covering all test points Parties will need to provide supporting evidence. It is unclear just what evidence could be provided.)</p>	[E.G to consider] See comment Ref 252
260	Chair, CVA MOA Forum	5.3.3	5.3.3	<p><i>General comment – Meters, VT's, CT's – uncertainty details are not generally available on older metering equipments. CoP4 requires uncertainty data to be made available on all test certificates and is retrospective. This will lead to a large number of non-compliances.</i></p> <p><i>Manufacturers have not had any input into the development of the CoP and may not be aware of its forthcoming issue. These requirements may not be achievable.</i></p> <p><i>Elexon have previously agreed that uncertainty measurements may not be available for existing equipment but have stated in correspondence that</i></p>	Actioned See Ref 55 [E.G. to consider] See Ref 252.

Collated Responses to DCP0005

No.	Organisation	Section No.	Section	Comment	BSCCo Response
				<p><i>where certificate does not include a statement of the measurement of uncertainty covering all test points the Party will need to provide supporting evidence. It is unclear to the Forum members just what evidence could be provided and clarification of this comment has not been provided by Elexon.</i></p> <p>For existing metering schemes, especially those installed at vesting, certificates may not be available and it was accepted that certificates from equipment with similar serial numbers would be acceptable. For HV reactive metering, certificates were not available and it was accepted that name plate data would be sufficient. In CVA metering systems there will be insufficient data available for the equipment to be included in the national transformer error statement.</p> <p>This section of CoP4 will raise a large number of non-compliances, unless this is treated as an "exceptional circumstance" as covered by paragraph 4. If the CoP is introduced then there will be a large number of applications to the BSCCo for derogations.</p>	<p>See comment 82.</p> <p>Actioned Ref 55.</p>

Collated Responses to DCP0005

No.	Organisation	Section No.	Section	Comment	BSCCo Response
				Where CT's and VT's are not provided by the MOA but are owned by the site or other party so provision of this data may not be within the MOA's control.	Not a CoP4 matter but one for the BSC See Ref 82.
83	E.ON UK plc	5.4	5.4, Voltage Failure Alarm	CoP does not include confirmation that an alarm is raised and indicated remotely. Suggest this is included.	Actioned.
184	Southern Electric Power Distribution; Keadby Generation Ltd; SSE Energy Supply Ltd; SSE Generation Ltd; and Scottish Hydro-Electric Power Distribution Ltd; Medway Power Ltd;	5.4	5.4 – Voltage Failure Alarm	Suggest remove reference to BSCP 06 and 514 CoP does not include confirmation that an alarm is raised and indicated remotely. Suggest this is included	Actioned. See Ref 83.
219	British Energy	5.4	5.4 Voltage Failure Alarm	1. BE believe this Section should clearly cover checks of both voltage failure <u>detection</u> and of the correct operation of remote voltage failure <u>alarms</u> for (i) meters with discrete external relays and (ii) meters with integral sensors/contacts. As written, Paragraph 1 only covers the former (although the distinction between detection and alarms is not at all clear and should be corrected). A new paragraph should be added to cover the latter.	Actioned See Ref 83.

Collated Responses to DCP0005

No.	Organisation	Section No.	Section	Comment	BSCCo Response
				2. BE do not consider Paragraph 3 references to BSCP06 and BSCP514 to be relevant here. The former is primarily a sealing document and the latter is primarily an operational document. BE suggests references to BSCP06 and BSCP514 should be deleted and that amended wording should stress the need for all failures of voltage failure alarm checks to be rectified and re-checked to demonstrate compliance with CoP4 and the relevant Codes of Practice.	Actioned. See Ref 184.
261	Chair, CVA MOA Forum	5.4	5.4 – Voltage Failure Alarm	Suggest remove reference to BSCP 06 and 514 CoP does not include confirmation that an alarm is raised and indicated remotely. Suggest this is included	Actioned. See Ref 184. Actioned See Ref 83.
19	Member of Expert Group and ex Consultant to the Association of Meter Operators	5.5	Page 18, 5.5 Commissioning 1 st paragraph	The expert group had deliberately excluded this paragraph as it adds nothing to what follows. The title is sufficient and this paragraph is redundant	Actioned. Paragraph removed.
20	Member of Expert Group and ex Consultant to the Association of Meter Operators	5.5	Page 18, 5.5 Commissioning 3 rd paragraph	The Elexon lawyer has changed the word "shall" to "must". Previously he had changed the word "will" to "shall". I am confused, could we have consistency?	Actioned. Changed to 'shall' to be more consistent.

Collated Responses to DCP0005

No.	Organisation	Section No.	Section	Comment	BSCCo Response
41	Western Power Distribution	5.5	P18/19 Calibration	<p>There is no mention of testing the instruments used for commissioning metering systems.</p> <p>Add:</p> <p>Instruments for Commissioning</p> <p>The Meter Operator shall have a process to periodically check the instruments used for commissioning. Each instrument shall be traceable (eg have a serial number) The MO shall maintain records to list what instruments are used for commissioning, when an instrument was last tested, and when it is next due for testing.</p> <p>The period of testing shall be determined by the MO, depending on the type of instrument used and manufacturer's recommendations, but in any event not exceed 2 years."</p> <p>(or similar)</p>	Actioned. New paragraph added with minor amendments made to the suggested text.
56	Npower Limited, Npower Northern Limited, Npower Northern Supply Limited, Npower Yorkshire Limited, Npower Yorkshire Supply Limited, Npower Direct Limited	5.5	18	<p>The commissioning responsibility should be clearly defined to the responsible party – i.e. DNO for VT/CT and MOA for meter.</p> <p>5.5.1 Should state 'where appropriate' as, dependant on the type of metering system, not all of the requirements are possible.</p>	<p>Not Actioned. The BSC places the obligation on the MOA Section J 1.2.2.</p> <p>See Ref 21</p>
115	Association of Meter	5.5	5.5	Clarification of which tests need to apply	Actioned. Paragraph added.

Collated Responses to DCP0005

No.	Organisation	Section No.	Section	Comment	BSCCo Response
	Operators			when a component of a metering system is changed, fairly obvious for a CoP5 installation with a single feeder, but less clear for a metering stem covering multiple exit points on a generation site.	[E.G. to review ELEXONs additional test.]
21	Member of Expert Group and ex Consultant to the Association of Meter Operators	5.5.1	Page 18, 5.5.1 Commissioning tests 1 st paragraph	<p>This first sentence originally read “.....and record the following where appropriate.” It now reads “.....and record amongst other things the following.</p> <p>That has totally changed the meaning and is wrong. All metering systems do not have all of the list of bullet points. You have to choose the ones that are appropriate, hence the expression used was correct.</p>	Actioned. Changed to ‘where appropriate’.
38	Western Power Distribution	5.5.1	P18 5.5.1 Commissioning Tests 2 nd bullet point	“The voltage transformers are the correct ratio and polarity and correctly located to record the required power flow ” (add the latter to be consistent with Appendix F.1.1)	Actioned.
84	E.ON UK plc	5.5.1	5.5.1, Commissioning Tests	The way that this is written suggests that every commissioning process includes all these steps. This is not necessarily the case. The full list of tests is only appropriate to a new metering installation.	Actioned. See Ref 21.
116	Association of Meter Operators	5.5.1	5.5.1	Instead of ‘amongst other things’ replace with ‘where appropriate’. This again demonstrates that the CoP should clearly	Actioned. See Ref 21.

Collated Responses to DCP0005

No.	Organisation	Section No.	Section	Comment	BSCCo Response
				state requirements	
185	Southern Electric Power Distribution; Keadby Generation Ltd; SSE Energy Supply Ltd; SSE Generation Ltd; and Scottish Hydro-Electric Power Distribution Ltd; Medway Power Ltd;	5.5.1	5.5.1 – Commissioning Tests	The way that this is written suggests that every commissioning process includes all these steps. This is not necessarily the case. The full list of tests is only appropriate to a new metering installation.	Actioned. See Ref 21.
220	British Energy	5.5.1	5.5.1 Commissioning Tests	As worded, the introductory sentence implies that all the listed tests are always required. Since this is not necessarily the case, BE suggest it should be amended to read "Commissioning tests on site shall be performed to confirm and record the following as appropriate :"	Actioned See Ref 21.
262	Chair, CVA MOA Forum	5.5.1	5.5.1 – Commissioning Tests	The way that this is written suggests that every commissioning process includes all these steps. This is not necessarily the case. The full list of tests is only appropriate to a new metering installation.	Actioned See Ref 21.
130	SAIC Ltd. Response provided on behalf of: ScottishPower Energy Management Ltd. ScottishPower Generation Ltd. ScottishPower Energy Retail Ltd.	5.5.2	CoP 4, Issue 5, v4.1 Page 19 Section 5.5.2	I believe the BSCP (s) should be referenced or a it may be easier to add a footnote.	Actioned. Ref to BSCP 06 and BSCP 514 added.

Collated Responses to DCP0005

No.	Organisation	Section No.	Section	Comment	BSCCo Response
	SP Manweb plc. SP Transmission Ltd. SP Distribution Ltd.				
221	British Energy	5.5.2	5.5.2 Sealing	Please amend "...in accordance with the requirements of any relevant BSC Procedure " to read either "...in accordance with the requirements of BSCP06" (if this covers CoP1, 2, 3, 5, 6 & 7 meters) or "...in accordance with the requirements of the relevant BSC Procedure".	Actioned See Ref 130
22	Member of Expert Group and ex Consultant to the Association of Meter Operators	5.5.3	Page 19, 5.5.3 Records 2 nd Paragraph	The words "as required" have been deleted from the end of this paragraph. BSC Co do not need to know every time a meter is changed. To avoid confusion perhaps the paragraph could read:- "If Metering Equipment is changed, then its Commissioning record should be retained by the MOA and provided to BSC Co if required."	Actioned. Suggested change made.
39	Western Power Distribution	5.5.3	P19 5.5.3 Records 2 nd para.	If Metering Equipment is changed, then its Commissioning should be evidenced and reported to BSCCo. (delete as indicated) As written, every time a meter is changed, it would have to be reported to BSCCo.	Actioned see Ref 22.
40	Western Power Distribution	5.5.3	P19 5.5.3 Records Penultimate para	An example form of Commissioning evidence is shown in the MOCOPA, Appendix 2, section A2.3 This should be removed as there is a proposal to remove this from MOCOPA, as	Actioned. Paragraph removed.

Collated Responses to DCP0005

No.	Organisation	Section No.	Section	Comment	BSCCo Response
				it is no longer pertinent. It is only an example of a form.	
57	Npower Limited, Npower Northern Limited, Npower Northern Supply Limited, Npower Yorkshire Limited, Npower Yorkshire Supply Limited, Npower Direct Limited	5.5.3	19	<p>Section 5.5.3 states that if metering equipment is changed then its commissioning should be evidenced and reported to the BSCCo. Do the BSCCo really want a report every time metering equipment is changed (eg changing out a failed meter)? What would they propose to do with all this data? If the words 'as required' were added to the end of this sentence it would seem more sensible.</p> <p>The final paragraph causes confusion as the requirements are not the same as the referenced 5.1.3-5 as stated. The word 'traceable' would be appropriate in its place.</p>	Actioned See Ref 22. Actioned. ELEXON considers this paragraph add no substance and has therefore removed it.
85	E.ON UK plc	5.5.3	5.5.3, Records	<p>Paragraph 2 – original draft had "as required" at end of sentence. As it is drafted BSCCo will get a report from the MOA every time a meter is changed. We do not believe this was the intention. Suggest the original wording be reinstated.</p> <p>See previous comments against 5.1.4.3-5.1.4.5</p>	Actioned. See Ref 22.
117	Association of Meter Operators	5.5.3	5.5.3	Not sure BSCCo wants to know every time a piece of metering equipment is changed!	Actioned. See Ref 22.

Collated Responses to DCP0005

No.	Organisation	Section No.	Section	Comment	BSCCo Response
165	United Utilities	5.5.3	Section 5.5.3	Evidence should only be provided to BSCCo on request and not every time a meter is changed as this paragraph implies.	Actioned. See Ref 22.
186	Southern Electric Power Distribution; Keadby Generation Ltd; SSE Energy Supply Ltd; SSE Generation Ltd; and Scottish Hydro-Electric Power Distribution Ltd; Medway Power Ltd;	5.5.3	5.5.3 – Records	Paragraph 2 – original draft had “as required” at end of sentence. As it is drafted BSCCo will get a report from the MOA every time a meter is changed. We do not believe this was the intention. Suggest the original wording be reinstated.	Actioned. See Ref 22.
222	British Energy	5.5.3	5.5.3 Records	<ul style="list-style-type: none"> 1. Paragraph 2 of the Shell documents which preceded this draft had “as required” at the end of the sentence. As now drafted, the BSCCo will get MOA reports every time following every meter equipment change. Assuming this was not the intention, the original wording should be reinstated. 2. For clarity, listed minimum commissioning information from “Site name” to “Results of inspections, tests and observations” inclusive should be inset. 	Actioned. See Ref 22. Actioned.
263	Chair, CVA MOA Forum	5.5.3	5.5.3 – Records	Paragraph 2 – original draft had “as required” at end of sentence. As it is drafted BSCCo will get a report from the MOA every time a meter is changed. We do not believe this was the intention. Suggest the original wording be reinstated.	Actioned See Ref 22.

Collated Responses to DCP0005

No.	Organisation	Section No.	Section	Comment	BSCCo Response
				<i>See previous comments against 5.1.4.3-5.1.4.5</i>	
131	SAIC Ltd. Response provided on behalf of: ScottishPower Energy Management Ltd. ScottishPower Generation Ltd. ScottishPower Energy Retail Ltd. SP Manweb plc. SP Transmission Ltd. SP Distribution Ltd.	5.6	CoP 4, Issue 5, v4.1 Page 20 Section 5.6	I believe the BSCP (s) should be referenced or a it may be easier to add a footnote.	Actioned References to BSCPs 514 and 02 added.
223	British Energy	5.6	5.6 Proving	Please amend "...in accordance with any relevant BSC Procedure " to read "...in accordance with the relevant BSC Procedures".	Actioned See Ref 131.
119	Association of Meter Operators	6	6	Reference to SI 2006/1679 should be included with respect to NHH meters, until a later change implements further details for NHH	Actioned. Reference has been added to The Act rather than the MID.
23	Member of Expert Group and ex Consultant to the Association of Meter Operators	7	Page 20, 7 Calibration Equipment for Meters 1 st paragraph	The expert group had deliberately excluded this paragraph as it adds nothing to what follows. The title is sufficient and this paragraph is redundant	Actioned. Paragraph removed.

Collated Responses to DCP0005

No.	Organisation	Section No.	Section	Comment	BSCCo Response
140	National Grid plc	7.1	7.1.1.2 and 7.1.2.2	Belong in section 8; clause 7 is for meters only	Change made
224	British Energy	7.1	7.1.1.1/7.2.1.1	Temperature variations should be factored into uncertainty budgets. Please remove last sentence.	Actioned. Sentence/s removed.
86	E.ON UK plc	7.1.1.1	7.1.1.1	Any temperature variation should be factored into uncertainty budgets. Remove last sentence.	Actioned See Ref 224.
155	Siemens Energy Services	7.1.1.1	Section 7.1.1.1 – Temperature Tolerance	All temperature tolerances should be included in the uncertainty budget. Reference to a maximum of $\pm 2^{\circ}\text{C}$ needs to be removed.	Actioned See Ref 224.
187	Southern Electric Power Distribution; Keadby Generation Ltd; SSE Energy Supply Ltd; SSE Generation Ltd; and Scottish Hydro-Electric Power Distribution Ltd; Medway Power Ltd;	7.1.1.1	7.1.1.1	Any temperature variation should be factored into uncertainty budgets. Remove last sentence.	Actioned See Ref 224.
264	Chair, CVA MOA Forum	7.1.1.1	7.1.1.1	Any temperature variation should be factored into uncertainty budgets. Remove last sentence.	Actioned See Ref 224.
188	Southern Electric Power Distribution; Keadby Generation Ltd; SSE Energy Supply Ltd; SSE Generation	7.1.1.2	7.1.1.2	Has lost the words "Save as it is necessary to meet the accuracy requirement of this standard". These should be reinstated.	Actioned. Section is now 8.1.1.1

Collated Responses to DCP0005

No.	Organisation	Section No.	Section	Comment	BSCCo Response
	Ltd; and Scottish Hydro-Electric Power Distribution Ltd; Medway Power Ltd;				
225	British Energy	7.1.1.2	7.1.1.2	Please amend "Reference Standard Current..." to read "Save as it is necessary to meet the accuracy requirement of this Code of Practice, Reference Standard Current...".	Actioned. See Ref 188.
265	Chair, CVA MOA Forum	7.1.1.2	7.1.1.2	Has lost the words "Save as it is necessary to meet the accuracy requirement of this standard". These should be reinstated.	Actioned. See Ref 188.
156	Siemens Energy Services	7.1.2	Section 7.1.2 – Calibration Intervals	<p>This is a watering down of UCAS Accreditation principals. Some UCAS Accreditation's allow for a 60 month verification frequency, particularly where two reference standards are used back to back and the standards are verified staggered 30 months apart.</p> <p>UCAS Accreditation also permits Reference Standards to be calibrated at intervals of 10 years, where historical drift indicates that this is appropriate.</p> <p>Consideration should be given to the importance of UCAS Accreditation principals.</p>	Actioned. Where the UKAS directive M3003 is not followed for calibration interval shall.....
226	British Energy	7.1.2.2	7.1.2.2	"Parties will apply to" should read "Parties may apply to". In addition, to	

Collated Responses to DCP0005

No.	Organisation	Section No.	Section	Comment	BSCCo Response
				assist MOAs, please reinstate earlier Shell text which suggested applications for extensions of Calibration intervals could include evidence of either negligible or predictable deviations from previous Calibrations.	Actioned.
87	E.ON UK plc	7.2.1.1	7.2.1.1	Any temperature variation should be factored into uncertainty budgets. Remove last sentence.	Actioned See Ref 224.
102	E.ON UK Energy Services Limited	7.2.1.1	7.2.1.1	Section should start with the word Transfer not Reference	Actioned.
189	Southern Electric Power Distribution; Keadby Generation Ltd; SSE Energy Supply Ltd; SSE Generation Ltd; and Scottish Hydro-Electric Power Distribution Ltd; Medway Power Ltd;	7.2.1.1	7.2.1.1	Should say "Transfer Standards" not "Reference Standards" Any temperature variation should be factored into uncertainty budgets. Remove last sentence.	Actioned. See also Ref 102
227	British Energy	7.2.1.1	7.2.1.1	"Reference Standards..." should read "Transfer Standards..."	Actioned. See also Ref 102
266	Chair, CVA MOA Forum	7.2.1.1	7.2.1.1	Should say "Transfer Standards" not "Reference Standards" Any temperature variation should be factored into uncertainty budgets. Remove last sentence.	Actioned. See also Ref 102.
228	British Energy	7.2.2.2	7.2.2.2	To assist MOAs, please reinstate earlier Shell text which suggested applications for	Actioned.

Collated Responses to DCP0005

No.	Organisation	Section No.	Section	Comment	BSCCo Response
				extensions of Calibration intervals could include evidence of either negligible or predictable deviations from previous Calibrations.	
88	E.ON UK plc	7.3.1.1	7.3.1.1	For consistency we need to include a reference to uncertainty. Also for consistency it should include the effect of temperature variation on uncertainty budget.	Actioned. See Ref 2.
141	National Grid plc	7.3.1.1	7.3.1.1	Should also state that the effects of temperature are included in the uncertainty budget (see 7.1.1.1)	Actioned.
190	Southern Electric Power Distribution; Keadby Generation Ltd; SSE Energy Supply Ltd; SSE Generation Ltd; and Scottish Hydro-Electric Power Distribution Ltd; Medway Power Ltd;	7.3.1.1	7.3.1.1	For consistency we need to include a reference to uncertainty. For consistency should also include effect of temperature variation on uncertainty budget.	Actioned. See Ref 2.
229	British Energy	7.3.1.1	7.3.1.1	For consistency should include reference to uncertainty and to the effect of temperature variation on uncertainty budget.	Actioned. See Ref 2.
267	Chair, CVA MOA Forum	7.3.1.1	7.3.1.1	For consistency we need to include a reference to uncertainty. For consistency should also include effect of temperature variation on uncertainty budget.	Actioned. See Ref 2.

Collated Responses to DCP0005

No.	Organisation	Section No.	Section	Comment	BSCCo Response
166	United Utilities	7.3.2.2	Section 7.3.2.2	Why are working standards to be calibrated at 3 monthly intervals when this was previously 6 monthly intervals? This is at odds with the reasoning behind the new CoP 4 that is introduced due to greater reliability of new technologies. As manufacturers of working standards propose a 2 yearly calibration I think a 12 monthly calibration is reasonable, provided that statistical evidence is available to support it.	Not Actioned Calibration intervals for working standards are monthly in the existing CoP4 and may be extended to up to 6 months. This change requires 3 month intervals and can be extended to 6 monthly. [E.G. to consider proposal]
157	Siemens Energy Services	7.3.2.3	Section 7.3.2.3 – Working Standards	Consideration should be given to extending the interval between calibrations beyond 6 months, where suitable historic performance records show that it is safe to do so.	Not actioned. See Ref 166. [E.G. to consider proposal]
230	British Energy	7.3.2.3	7.3.2.3	Comments regarding reinstatement of earlier Shell text as for 7.1.2.2 above apply.	Actioned.
58	Npower Limited, Npower Northern Limited, Npower Northern Supply Limited, Npower Yorkshire Limited, Npower Yorkshire Supply Limited, Npower Direct Limited	7.4.2	23	Section 7.4.2 states that the MOA shall maintain a traceable record of each calibration standard employed in relation to metering equipment. I would expect the MOA to maintain records for any standards that they use themselves but that the relevant test house or contractor should maintain records for equipment used by them.	Actioned. Text removed.

Collated Responses to DCP0005

No.	Organisation	Section No.	Section	Comment	BSCCo Response
				Section 8 states in the second paragraph that 'It is important to note that confidence must be established in the organisations which calibrate current and voltage transformers'. This is very easy for a large organisation to comply with as they have staff who can visit all test facilities. This becomes much more onerous and difficult for the smaller MOA and Registrant.	This is a basic requirement which must be carried out. Using a third party to calibrate equipment without any confidence is risky not only for the MOA & Registrant concerned but for Settlements as a whole. Not actioned.
89	E.ON UK plc	7.4.2	7.4.2, Records	This implies that where a meter is sent to an external laboratory the MOA then needs to obtain a calibration record of all the standards held by the external lab for that calibration. This is not reasonable.	Actioned See Ref 58.
191	Southern Electric Power Distribution; Keadby Generation Ltd; SSE Energy Supply Ltd; SSE Generation Ltd; and Scottish Hydro-Electric Power Distribution Ltd; Medway Power Ltd;	7.4.2	7.4.2	Implies that where a meter is sent to an external laboratory the MOA then needs to obtain a calibration record of all the standards held by the external lab for that calibration. This is not reasonable.	Actioned See Ref 58.
231	British Energy	7.4.2	7.4.2	BE do not consider it reasonable to require MOAs to obtain calibration records of all Standards held by external Accredited Laboratories to which they send meters for Calibration.	Actioned See Ref 58.
268	Chair, CVA MOA Forum	7.4.2	7.4.2	Implies that where a meter is sent to an external laboratory the MOA then needs to obtain a calibration record of all the standards held by the external lab for that	Actioned See Ref 58.

Collated Responses to DCP0005

No.	Organisation	Section No.	Section	Comment	BSCCo Response
				calibration. This is not reasonable.	
192	Southern Electric Power Distribution; Keadby Generation Ltd; SSE Energy Supply Ltd; SSE Generation Ltd; and Scottish Hydro-Electric Power Distribution Ltd; Medway Power Ltd;	7.4.3	7.4.3	Should specifically reference UKAS standard M3003.	Actioned.
232	British Energy	7.4.3	7.4.3	Please amend the reference to the "current UKAS directive" to read "UKAS directive M3003".	Actioned See Ref 192.
269	Chair, CVA MOA Forum	7.4.3	7.4.3	Should specifically reference UKAS standard M3003.	Actioned See Ref 192.
24	Member of Expert Group and ex Consultant to the Association of Meter Operators	8	Page 23, 8 Calibration Equipment for Measurement Transformers 1 st Paragraph	The expert group had deliberately excluded this paragraph as it adds nothing to what follows. The title is sufficient and this paragraph is redundant	Actioned. Text removed.
90	E.ON UK plc	8	8, Calibration Equipment for Measurement Transformers	It may be difficult for a smaller MOA to gain confidence in the supplier of CT's and VT's. A full scale factory inspection may not be appropriate on an order for a couple of VT's – is it sufficient to buy equipment from a manufacturer with a suitable quality certificate and with equipment supplied to the relevant product standard?	Not Actioned. Section 8 (i) allows for this.

Collated Responses to DCP0005

No.	Organisation	Section No.	Section	Comment	BSCCo Response
120	Association of Meter Operators	8	8	<p>Some of the requirements appearing here (eg 8.1.1) should be with the CT/VT sections of the relevant CoP1, 2, 3, 5, etc. CoP4 is about commissioning and checking equipment, the definition of standards for what should be installed should be stated within the metering equipment CoPs. CoP4 can then pick up on that the records from the manufacturers should be maintained and available, etc. This also resolves the associated effective from date issues.</p>	<p>Not Actioned.</p> <p>This would be a much wider change than is proposed. These requirements exist in the current version of CoP4 and have been amended to take into account the effective date.</p>
142	National Grid plc	8	8 Calibration Equipment for Measurement Transformers	<p>This section needs a rehash see 7.1.1.2 and 7.1.2.2 and these then need to be expanded.</p>	See Ref 188
144	National Grid plc	8	8 Records	<p>General comment. In the introduction the note is made that periodic calibration is not required and that initial calibration is key. On this basis the validity of calibration records is only relevant at the time of test. We are concerned that say on a 400 kV power station metering (unlicensed work) where the instrument transformers are manufactured in South America with an installed cost of £200k, then who pays for the retest (and consequential lost Generation costs) if the TAA audit after 1 year, and are not satisfied?</p> <p>See comment 1 [comment about compromises have been made etc]. This</p>	<p>Not Actioned.</p> <p>This comment has been noted but the onus is on the MOA (and therefore its Registrant) to satisfy itself that equipment purchased is suitably compliant with the requirements. It is not for the TAA to make a judgment on the effectiveness of that assessment but to ensure the process was carried out. The TAA may make comment if it has concerns regarding the assessment which will be brought to ELEXONs attention where, if appropriate a</p>

Collated Responses to DCP0005

No.	Organisation	Section No.	Section	Comment	BSCCo Response
				<p>document makes no allowance for the cost, risk and timescales of major projects and it will need to, otherwise we will significantly increase the risk margin for any new metering projects in the future. This is a more important section than that for the meters in the CVA world. It is not an option to sweep it under the carpet or dilute it.</p> <p>Our suggestions are that:</p> <ul style="list-style-type: none"> a) The TAA provide a list of laboratories that are acceptable (both GIS and AIS) for this purpose under (i) and it is clear that the risk lies with the TAA and; b) Under (i) and (ii) the TAA remit for action is limited to the pre-contract stage; we would present information to them and they would have an opportunity to comment/ reject. This will allow additional contract costs to be factored in, in order to have the transformers tested elsewhere to the TAA satisfaction. 	<p>metering dispensation may apply.</p> <p>Change made such that the new CoP4 will not be retrospective in this regard.</p>
193	Southern Electric Power Distribution; Keadby Generation Ltd; SSE Energy Supply Ltd; SSE Generation Ltd; and Scottish Hydro-Electric Power Distribution Ltd; Medway Power Ltd;	8	8 – Calibration Equipment for Measurement Transformers	<p>Second paragraph can be quite onerous. This may be fine for large organisations which order hundreds of VT's and CT's, but may be difficult for smaller meter operators to achieve where they purchase a few VT's and CT's at any one time.</p> <p>What is meant by "confidence"?</p>	Not Actioned. See Ref 90.

Collated Responses to DCP0005

No.	Organisation	Section No.	Section	Comment	BSCCo Response
233	British Energy	8	8 Calibration Equipment for Measurement Transformers	Paragraph 2 combines explicit requirements for accreditation/conformance with standards with the subjective concept of "confidence". BE does not consider the latter to be necessary or helpful.	Not Actioned. See Ref 90.
270	Chair, CVA MOA Forum	8	8 – Calibration Equipment for Measurement Transformers	Second paragraph can be quite onerous. This may be fine for large organisations which order hundreds of VT's and CT's, but may be difficult for smaller meter operators to achieve where they purchase a few VT's and CT's at any one time. What is meant by "confidence"?	Not Actioned. See Ref 90.
91	E.ON UK plc	8.1.1	8.1.1, Records	This has a specific exclusion for existing metering equipment. Should this apply to all paragraphs in this section?	[E.G. to consider]
194	Southern Electric Power Distribution; Keadby Generation Ltd; SSE Energy Supply Ltd; SSE Generation Ltd; and Scottish Hydro-Electric Power Distribution Ltd; Medway Power Ltd;	8.1.1	8.1.1	has a specific exclusion for existing metering equipment. This should apply to all paragraphs in this section.	See Ref 91 [E.G. to consider]
271	Chair, CVA MOA Forum	8.1.1	8.1.1	has a specific exclusion for existing metering equipment. This should apply to all paragraphs in this section.	See Ref 91 [E.G. to consider]
92	E.ON UK plc	8.1.2	8.1.2	Is this relevant to "Records". Should this paragraph be moved into the main text under section 8?	Actioned. Paragraph moved.
143	National Grid plc	8.1.2	8.1.2	Does not apply if 8 (i) is the chosen option	Actioned.

Collated Responses to DCP0005

No.	Organisation	Section No.	Section	Comment	BSCCo Response
					Clarified in document. See also Ref 92.
195	Southern Electric Power Distribution; Keadby Generation Ltd; SSE Energy Supply Ltd; SSE Generation Ltd; and Scottish Hydro-Electric Power Distribution Ltd; Medway Power Ltd;	8.1.2	8.1.2	<p>Is this relevant to "Records". Should this paragraph be moved into the main text under section 8?</p> <p>If the metering equipment is bought by the site rather than the MOA where does the obligation lie? Who would receive the non-compliance?</p>	Actioned. See Ref 92. The obligation (a BSC requirement) remains with the MOA.
234	British Energy	8.1.2	8.1.2	<p>This text does not appear to be relevant to "Records". BE suggest it should be relocated to Section 8 and subsequent Item numbering amended accordingly. It should be noted however that where the MOA is not the "Purchaser", it may be unreasonable for the MOA to be held responsible for any non-compliance arising.</p>	Actioned. See Ref 92.
272	Chair, CVA MOA Forum	8.1.2	8.1.2	<p>Is this relevant to "Records". Should this paragraph be moved into the main text under section 8?</p> <p>If the metering equipment is bought by the site rather than the MOA where does the obligation lie? Who would receive the non-compliance?</p>	Actioned. See Ref 92.
93	E.ON UK plc	8.1.3	8.1.3	Is this clause retrospective? See also comments above (5.1.4.3 and 5.1.4.4) regarding time limits – in 30 years time the calibration facility may no longer be trading.	See Ref 91.

Collated Responses to DCP0005

No.	Organisation	Section No.	Section	Comment	BSCCo Response
196	Southern Electric Power Distribution; Keadby Generation Ltd; SSE Energy Supply Ltd; SSE Generation Ltd; and Scottish Hydro-Electric Power Distribution Ltd; Medway Power Ltd;	8.1.3	8.1.3	<p>Is this clause retrospective. See also comments above (5.1.4.3 and 5.1.4.4) regarding time limits – in 30 years time the calibration facility may no longer be trading.</p> <p>Subscripts 2 and 3 – should wording be the same? Why is there a difference?</p>	<p>See Ref 91.</p> <p>[E.G. to consider wording and use of footnotes]</p>
235	British Energy	8.1.3	8.1.3	<p>It is not clear whether this requirement will be retrospective, but if so, third party policies on record retention may raise immediate non-compliances. In addition, BE Comment 1 on 5.1.4.3 above also applies here.</p>	<p>See Ref 91</p> <p>[E.G. to consider]</p>
273	Chair, CVA MOA Forum	8.1.3	8.1.3	<p>Is this clause retrospective. See also comments above (5.1.4.3 and 5.1.4.4) regarding time limits – in 30 years time the calibration facility may no longer be trading.</p> <p>Subscripts 2 and 3 – should wording be the same? Why is there a difference?</p>	<p>See Ref 91</p> <p>[E.G. to consider]</p>
121	Association of Meter Operators	A	Appendix A	<p>CoP1 & 2 reactive calibrations may not occur for 20 years after install, then further 20 years. This seems too long, is there any justification for this extended period?</p>	<p>[E.G. to consider]</p>
159	Siemens Energy Services	A	Appendix A	<p>When cross-referencing test points for test B and test C it can be seen that there are no serious additional tests associated with a test C.</p> <p>For half the amount of testing a type C test can extend the life of a metering</p>	<p>Not Actioned.</p> <p>[E.G. to consider]</p>

Collated Responses to DCP0005

No.	Organisation	Section No.	Section	Comment	BSCCo Response
				<p>installation. There appears little point in carrying out a type B test. Particularly as a type C test can be completed on site, there seems little incentive to use the type B schedule of testing. A much better correlation of testing would be achieved if a type C test were only performed in a lab environment.</p> <p>Because of the revenue implications for CVA metering the type C testing in a lab should be a desirable choice.</p>	
197	Southern Electric Power Distribution; Keadby Generation Ltd; SSE Energy Supply Ltd; SSE Generation Ltd; and Scottish Hydro-Electric Power Distribution Ltd; Medway Power Ltd;	A	Appendix A	In table, against CoP 1 and 2, would be clearer if horizontal line was extended into the year 5 box and text clarified.	Actioned.
236	British Energy	A	APPENDIX A – Calibration Table	<ol style="list-style-type: none"> The contents of the "By Year 5" column against CoP1 & 2 are unclear. The Shell documents which preceded this draft showed "Either" and "Or" with separate horizontal and diagonal arrows pointing respectively to the "Type C only" and the "Type B + C" options. Alternatively, BE suggest new text "no test" should read "no type B Cal" and "or B and" should read "or type B & C Cals". Under Paragraph 2, "...are twice that for..." should read "...are twice those 	Actioned. See Ref 197. Actioned.

Collated Responses to DCP0005

No.	Organisation	Section No.	Section	Comment	BSCCo Response
				<p>for..."</p> <p>3. A new paragraph should be added (with cross-reference in Paragraph 4 of Section 5.1.1) to cover PARh meters.</p> <p>4. BE understand that in response to the final Shell review, Elexon agreed to add some words to encourage MOAs to apply ongoing programmes of calibration and to avoid delaying work to near the end of permitted periods. Additional text should now be added to cover this.</p>	<p>Actioned. Paragraph added.</p> <p>Actioned.</p>
274	Chair, CVA MOA Forum	A	Appendix A	In table, against CoP 1 and 2, would be clearer if horizontal line was extended into the year 5 box and text clarified.	Actioned.
203	British Energy	Amendment Record	AMENDMENT RECORD	A number of references are made throughout this draft document to "Issue 5 Version 4.1 of CoP4". Prior to formal release, all of these must be amended to reflect the correct Issue and Version No.	Noted.
158	Siemens Energy Services	Appendices	Section Appendices	In general section headings and table headings are confusing and unhelpful. E.g. there are various meanings assigned to "C" and labelling a table B3 in section B2 adds to the confusion. To increase clarity and reduce errors in understanding the headings and references need to be reworked.	Actioned.

Collated Responses to DCP0005

No.	Organisation	Section No.	Section	Comment	BSCCo Response
42	Western Power Distribution	B	P27 Appendix B Table B2	<p>COP4 draft shell V0.8 (21/01/07) showed only one table with footnote "For COP5, load points should be as equivalent certification points, ie for 20/100 Meter 100%, 20%, 1% at upf, 100% and 20% (polyphase) at 0.5 lag pf"</p> <p>Table B2 does not reflect these values, and would require manufacturers to do something special. The table needs to reflect the certification test points for 10/100 and 40/100 as well.</p> <p>I list below the certification test point table. I have assumed a "Basic/Max" meter as all COP5 meters have been made since 1993.</p> <p>I have not entered any reactive test points as these are not covered by SI 1566 for certifying meters.</p>	Not Actioned. [E.G. to consider]
43	Western Power Distribution	B	P27 Appendix B Table B2	<p>Meters can be bought for use as both COP3 and COP5. If tested to COP3 ie to table B1, they should be permitted to be used as COP5.</p> <p>Table B2 requires a footnote "As an alternative, Meters for COP5, 6 and 7 may be tested in accordance with table B1".</p>	Not Actioned. CoP3 meters are required to be class 1 where CoP5 requires class 2 meters. Therefore a CoP3 meter exceeds the minimum requirement for CoP5 and can be used.
44	Western Power Distribution	B	P27 Appendix B Table B3	Header " B2. Type B Calibration Test Points " needs underlining.	Actioned.
45	Western Power Distribution	B	P28 Table B4	The re-test values of Type C Calibrations	[E.G. to consider]

Collated Responses to DCP0005

No.	Organisation	Section No.	Section	Comment	BSCCo Response
				need to be a subset of the Type A Calibrations. Table B4 has more test points than the current table B2 for COPs 5, 6 & 7. Table B4 needs to reflect whatever changes result from point 17 above.	
59	Npower Limited, Npower Northern Limited, Npower Northern Supply Limited, Npower Yorkshire Limited, Npower Yorkshire Supply Limited, Npower Direct Limited	B	26	Table B1 (also tables B3 And B4) uses the letter C to denote all elements combined. However the letter C is also used in table A1 to denote a type C calibration. This could lead to confusion so we suggest a different letter should be used in table B1, B2 and B3, perhaps T?	Actioned. See also Ref 158.
60	Npower Limited, Npower Northern Limited, Npower Northern Supply Limited, Npower Yorkshire Limited, Npower Yorkshire Supply Limited, Npower Direct Limited	B	27	Table B2 gives an excessive number of test points in our opinion (18 for a bi-directional active meter). At present we use 6 test points for such a meter and we have not found that type C calibrations are finding meters errors that are not picked up during a type B calibration. We suggest that the following test points would be adequate. Active meter (all elements): At 100% I_n Unity, 0.5 inductive & 0.8 (or 0.5) capacitive and at 5% I_n Unity. Reactive meter (all elements): At 100% I_n Zero, 0.866 inductive and 0.866 capacitive and at 5% I_n zero. We don't see that there is any advantage to testing the elements of a 2 or 3 element meter individually. Any inaccuracies would be picked up with all phases combined.	[E.G. to consider]

Collated Responses to DCP0005

No.	Organisation	Section No.	Section	Comment	BSCCo Response
				<p>Also the notes for table B3 have a typing error. They should read 'These tests shall be carried out for import/export directions....'</p> <p>Tables B3 and B4 have confusing headings, e.g. for table B3 :</p> <p>B2 Type B calibration Test Points</p> <p>Table B3. Type B Meter Calibrations for Codes of Practice 1 and 2</p>	Actioned. Actioned.
94	E.ON UK plc	B	Appendix B, Tables B1, B3 and B4	Need to clarify whether the "overload" test is required. Normal practice would be to test at 120% of rated current so we presume that it is required?	Not Actioned. Load current for overload test are optional and include 120%.
95	E.ON UK plc	B	Appendix B, Table B2	There appears to be an excessive number of test points for these on site tests. It should be sufficient to carry out the on-site tests at a reduced number of test points, using the more extensive Type C calibrations to confirm the veracity of the Type B calibrations. This would follow the experience from existing CVA metering systems where there has been no evidence that doing a reduced number of tests has led to less accurate data in Settlements. This can be backed up with previous test evidence if required.	See Ref 60.
122	Association of Meter Operators	B	Appendix B	The use of C in this table is confusing with the use of C in Appendix A	Actioned. See Ref 158.

Collated Responses to DCP0005

No.	Organisation	Section No.	Section	Comment	BSCCo Response
123	Association of Meter Operators	B	Appendix B	The number of test points is thought to be too great. A lower number is said to be adequate, eg table B3. The evidence/rational to justify this number needs to be stated.	Actioned. See Ref 158.
198	Southern Electric Power Distribution; Keadby Generation Ltd; SSE Energy Supply Ltd; SSE Generation Ltd; and Scottish Hydro-Electric Power Distribution Ltd; Medway Power Ltd;	B	Appendix B	<p>General comment – section and table headings are confusing.</p> <p>Tables B1 to B4. The use of "C" in this table may introduce confusion as "C" is also used in Appendix A and for the type of calibration (eg. Type A,B and C)</p> <p>Tables B1, B3 and B4 – need to clarify whether the "overload" test is required. Normal practice would be to test at 120% of rated current so we presume that it is required, but may not be interpreted this way by others.</p> <p>Table B2 – the number of tests required in this table would appear to be excessive. Custom and practice has been to carry out a reduced number of tests at critical test points, supported by a random sample of laboratory calibrations to confirm that the site tests are indeed adequate. There has been no evidence that doing a reduced number of tests has led to less accurate data in Settlements. This can be backed up with previous test evidence if required.</p>	Actioned. See Ref 94 See Ref 60
237	British Energy	B	APPENDIX B Tables B1 – B4 : Calibration	1. The use of Section numbering B1, B2 &	Actioned.

Collated Responses to DCP0005

No.	Organisation	Section No.	Section	Comment	BSCCo Response
			Test Points	<p>B3 and Table numbering B1, B2, B3 and B4 is confusing. BE suggest Section numbering should be retained and Tables B1, B2, B3 & B4 should be identified as B1.1, B1.2, B2.1 and B3.1 respectively. Related CoP 4 cross-references will need to be amended accordingly.</p> <p>2. The use of "C" in Tables B1 – B4 may cause confusion as "C" is also used in Appendix A where it refers to type C Calibration. To avoid the same problem, the selected replacement letter should not be either A or B.</p> <p>3. Tables B1, B3 and B4 need to clarify whether "overload" tests are optional or mandatory.</p> <p>4. The number of test points required by Table B2 seems excessive (and represents a significant proportion of the test points required by Type C Calibrations). If this remains unchanged it is less likely that MOAs will choose to use type B Calibrations. Moreover there is no evidence that the current reduced number of tests has led to less accurate data in Settlements.</p> <p>5. Given Reactive meter accuracy limits are stated in Appendix C Table C3 in terms of 0.5 Inductive or Capacitive,</p>	<p>Actioned.</p> <p>See Ref 60.</p> <p>See Ref 60.</p> <p>Table C3 shows the limits of error acceptable for table B1-4 test points.</p>

Collated Responses to DCP0005

No.	Organisation	Section No.	Section	Comment	BSCCo Response
				<p>why are test points for Reactive meters defined in Tables B1 – B4 in terms of 0.866 Inductive and Capacitive. Test points and associated accuracy limits should be specified on the same basis.</p> <p>6. Please clarify which of the Appendix B Tables apply to PARh meters.</p>	See Section 5.1.1
275	Chair, CVA MOA Forum	B	Appendix B	<p>General comment – section and table headings are confusing.</p> <p>Tables B1 to B4. The use of "C" in this table may introduce confusion as "C" is also used in Appendix A and for the type of calibration (eg. Type A,B and C)</p> <p>Tables B1, B3 and B4 – need to clarify whether the "overload" test is required. Normal practice would be to test at 120% of rated current so we presume that it is required, but may not be interpreted this way by others.</p> <p>Table B2 – the number of tests required in this table would appear to be excessive. Custom and practice has been to carry out a reduced number of tests at critical test points, supported by a random sample of laboratory calibrations to confirm that the site tests are indeed adequate. There has been no evidence that doing a reduced number of tests has led to less accurate data in Settlements. This can be backed up</p>	<p>Actioned.</p> <p>See Ref 60.</p> <p>See Ref 60.</p>

Collated Responses to DCP0005

No.	Organisation	Section No.	Section	Comment	BSCCo Response
				with previous test evidence if required.	
124	Association of Meter Operators	C	Appendix C	'directly connected' could be replaced with 'whole current' to add clarity.	Actioned.
132	SAIC Ltd. Response provided on behalf of: ScottishPower Energy Management Ltd. ScottishPower Generation Ltd. ScottishPower Energy Retail Ltd. SP Manweb plc. SP Transmission Ltd. SP Distribution Ltd.	C	CoP 4, Issue 5, v4.1 Page 30	APPENDIX C. MEASURED ERRORS Table C3 is referenced in this document as 'Summary of Class accuracy requirements for Class 2 and Class 3' but in the 'Detailed Level Changes to CoP4 Issue 5 (v4.0) Requirements' document on page 24 Table C3 is referenced as 'Reactive Meters Class 2 and 3'	Comment noted.
199	Southern Electric Power Distribution; Keadby Generation Ltd; SSE Energy Supply Ltd; SSE Generation Ltd; and Scottish Hydro-Electric Power Distribution Ltd; Medway Power Ltd;	C	Appendix C	Table C1 and C3 – Column headed "directly connected meters". No where else in the document have we referred to directly connected meters. Should there be a note in appendix B to confirm that tables refer equally to directly and non-directly connected meters. Also should they be referred to at some place in the main text? Table C1 and C3 only define limits from 2% and up. However tables in Appendix B define tests at 1%. These need to be aligned.	Actioned. See Ref 124. [ELEXON to investigate further]

Collated Responses to DCP0005

No.	Organisation	Section No.	Section	Comment	BSCCo Response
238	British Energy	C	APPENDIX C Tables C1 - C3 : Measured Error Limits	<ul style="list-style-type: none"> 1. For consistency with Table B2 (which requires testing at 1% current), the lowest current rating for Transformer Operated Meters in Table C1 should be defined as "0.01 I_n". 2. Although not previously referred to throughout this draft CoP4, references are made in Tables C1 and C3 to "Direct Connected Meters". If these are relevant to CoP4, other Sections and Tables should refer to them. If not, they should be deleted. 3. Please clarify which of the Appendix C Tables apply to PARh meters. 4. If Table C limits were derived from BS EN Standards, these should be referenced here & added to Section 3. 5. Accuracy limits in Tables C1 – C3 are defined by meter classes for the test points in Tables B1 – B4 which are defined by Codes of Practice. For clarity BE suggest both sets of tables should be based on CoPs. 	<p>[E.G. to consider]</p> <p>Standards require different accuracy requirements for different meter types and although CoP4 applies equally to both types the specifics of the errors are referenced in C1 and C3.</p> <p>Actioned. Clause in 5.1.1 repeated in Appendix C.</p> <p>Actioned.</p> <p>[E.G. to consider]</p>
276	Chair, CVA MOA Forum	C	Appendix C	Table C1 and C3 – Column headed "directly connected meters". No where else in the document have we referred to directly	<p>Actioned.</p> <p>Reference added to Appendix C.</p>

Collated Responses to DCP0005

No.	Organisation	Section No.	Section	Comment	BSCCo Response
				<p>connected meters. Should there be a note in appendix B to confirm that tables refer equally to directly and non-directly connected meters. Also should they be referred to at some place in the main text?</p> <p>Table C1 and C3 only define limits from 2% and up. However tables in Appendix B define tests at 1%. These need to be aligned.</p>	See Ref 238
25	Member of Expert Group and ex Consultant to the Association of Meter Operators	D	Page 31, Appendix D	<p>This appendix was changed considerably after the last meeting of the expert group. It was not right before and it is now even worse. In my view it is now simply wrong and needs re-addressing.</p> <p>The principle, I believe agreed unanimously at an early meeting, was that the Types of Calibration (A, B and C) would be specified, where the Calibration would be carried out was agreed as irrelevant.</p> <p>Appendix A specifies the frequency (timing) of the Calibrations.</p> <p>Appendix B specifies the test points.</p> <p>Appendix C specifies the error limits.</p> <p>Appendix D should specify the uncertainty requirement for each type of calibration (this may vary by CoP). Where it is done should not be specified.</p> <p>(People are wrapped up in pre-conceptions</p>	Actioned. References to location removed.

Collated Responses to DCP0005

No.	Organisation	Section No.	Section	Comment	BSCCo Response
				of what is technically possible in labs and on site, that is necessarily restricted to the present day. Measurement techniques are constantly changing and if we specify where calibrations are to be carried out, simply because that is all we know now, then we will have to review and change this document regularly and that is not necessary if we specify what we want done, not where it is done.)	
61	Npower Limited, Npower Northern Limited, Npower Northern Supply Limited, Npower Yorkshire Limited, Npower Yorkshire Supply Limited, Npower Direct Limited	D	31	<p>Tables D2 and D4 should refer to site measurements not site tests.</p> <p>On page 31 the tables for uncertainty measurements require some revision. For laboratory conditions (tables D1 and D3) the uncertainties have been doubled for measurements that are not at Unity. This is not the case for site measurements (tables D2 and D4) where the uncertainties are the same for all power factors. This seems unreasonable.</p>	<p>See Ref 25</p> <p>See Ref 239</p>
71	E.ON UK plc	D	Accuracy of On-Site Type 'C' Calibrations	We are very concerned that the Draft CoP4 allows Type C calibrations to be carried out on site to lower levels of measurement uncertainty than are required for type C laboratory calibrations. Type C calibrations are meant to be high accuracy calibrations of the in service meters. Our understanding is that it was originally intended by the	The review group considered the location of calibration is not important. What is, are the levels of uncertainty. If a type C calibration can be achieved on site there should be no reason to prevent it.

Collated Responses to DCP0005

No.	Organisation	Section No.	Section	Comment	BSCCo Response
				<p>review group for Type C tests to be carried out in the Lab, not on site, for CVA meters. This is not stated explicitly and has led to confusion during the discussions on the meter calibration programme. In Appendix D, a wider tolerance on uncertainty is allowed for on site calibration so there is nothing to encourage the lab calibration of these high accuracy meters. We do not want to prevent the calibration being carried out on site if it can be achieved to sufficiently high accuracy and repeatability, and calibration equipment of this standard may become available in the future, however there would appear to be no justification for the differentiation currently included in Appendix D.</p>	See also Ref 25
96	E.ON UK plc	D	Appendix D	<p>(See comments against 5.1.2.3)</p> <p>In order to achieve the required accuracy of calibration at type C calibration for class 0.2 and 0.5 meters it is suggested that Table D1 be applied to type A and type C calibration for active meters, regardless of where the calibration is carried out.</p> <p>Table Heading becomes "Type A and Type C Calibrations".</p> <p>Table D2 becomes "Type B Calibration"</p>	Actioned. See Ref 25

Collated Responses to DCP0005

No.	Organisation	Section No.	Section	Comment	BSCCo Response
				only. Similarly for D3 and D4.	
101	E.ON UK, Power Technology	D	Appendix D	<p>(See comments against 5.1.2.3)</p> <p>In order to achieve the required accuracy of calibration at type C calibration for class 0.2 and 0.5 meters it is suggested that Table D1 be applied to type A and type C calibration for active meters, regardless of where the calibration is carried out.</p> <p>Table Heading becomes "Type A and Type C Calibrations"</p> <p>Table D2 becomes "Type B Calibration" only.</p> <p>Similarly for D3 and D4.</p>	Actioned. See Ref 96
125	Association of Meter Operators	D	Appendix D	Uncertainty measurements should be irrespective of location of test, either lab or on site. Unclear why a type C test can have different uncertainties dependent upon location of test.	Actioned See Ref 25.
145	National Grid plc	D	Appendix D table D2	There is no good reason for the uncertainties for type C test being different in tables D1 and D2 if D1 values can't be achieved then the tests shouldn't be done on site. Furthermore, the location (site/laboratory) of the tests should be removed from all of the tables.	Actioned See Ref 25.

Collated Responses to DCP0005

No.	Organisation	Section No.	Section	Comment	BSCCo Response
160	Siemens Energy Services	D	Appendix D	<p>Ambient Temperature needs to be included in the Accuracy Basket when calculating uncertainty of error calculation.</p> <p>Table D1 and Table D2 have different test equipment uncertainty levels applied for a type C tests. The level of uncertainty for class 0.2 metering is also different for a type C calibration dependent on where the test is performed – site or lab.</p> <p>The levels of test equipment uncertainty need to be the same for on site testing and lab testing if the revenue calculated by metering systems is to be protected. It would not be helpful to have two different accuracy levels for CVA metering.</p> <p>Tables D1 and D2 therefore need to be consistent in the allowable uncertainties.</p> <p>It is clear that a much better confidence level can be attributed to testing carried out in a lab under table D1. The opportunities for site based testing need to be supported by the same confidence limits for achieving the same levels of accuracy.</p> <p>This confusion again supports the original concept that CVA metering should be tested in a lab environment at the prescribed intervals for a type C test.</p>	<p>[E.G. to consider]</p> <p>Table D1 applies to Active Meters and D3 to Reactive and therefore different classes apply.</p> <p>[E.G. to consider]</p>

Collated Responses to DCP0005

No.	Organisation	Section No.	Section	Comment	BSCCo Response
239	British Energy	D	APPENDIX D Tables D1 – D4 : Measurement Uncertainties	<ul style="list-style-type: none"> 1. BE note that in Tables D2 and D4, "Measurements at other than unity/zero power factor" carry the same uncertainty values as those for "Measurements at unity/zero power factor". Given that uncertainty levels below unity are higher in Tables D1 and D3, please confirm the source and validity of D2 & D4 values. 2. Please clarify which of the Appendix D Tables apply to PARh meters. 3. BE consider it would be helpful if CoP4 included guidance on the application of discrete measurement transformer and meter uncertainties to calculate metering system overall uncertainties. 4. In Tables D1 – D4, "test equipment" should read "Calibration equipment". 5. As for Tables C1 – C3 above, levels of measurement uncertainty should be based on CoPs. 6. BE believes there is some confusion in Tables D1 – D4 titles which (a) removes a significant distinction between Type B and C Calibrations, and (b) implies a fixed link between uncertainties and the location of the 	<p>[EG to consider rationale]</p> <p>Actioned. Paragraph added for clarity.</p> <p>Clarified with respondent. Guidance on how to calculate overall accuracy and overall uncertainty is desired. [E.G to consider further]</p> <p>Actioned.</p> <p>Not Actioned. Both tables C1 and C2 apply to CoP 2 for example.</p> <p>Actioned. See Ref 25.</p>

Collated Responses to DCP0005

No.	Organisation	Section No.	Section	Comment	BSCCo Response
				<p>Calibration. The former needs to be clarified to ensure there is some incentive to perform type B calibrations and the latter should allow location to be determined by Calibration equipment accuracy. In time this may allow laboratory levels of uncertainty to be achieved on-site. To this end BE propose the following titles :</p> <p>Table D1 : Active Meters (Type A and C Calibrations) Table D2 : Active Meters (Type B Calibrations) Table D3 : Reactive Meters (Type A and C Calibrations) Table D4 : Reactive Meters (Type B Calibrations)</p>	
277	Chair, CVA MOA Forum	D	Appendix D	<p>Tighter limits on uncertainty on calibration at type C – what is the incentive on MOAs to achieve this level of accuracy, rather than just carrying out a lower accuracy test on site.</p> <p>Tables D2 and D4 – final shell document was not fully populated for measurements other than at unity power factor. Where were the values for “Measurements at other than unity power factor” derived from as it is not consistent with tables D1 and D3 where the “non-unity power factor” uncertainties are double the “unity power</p>	[E.G. to consider] [E.G. to consider]

Collated Responses to DCP0005

No.	Organisation	Section No.	Section	Comment	BSCCo Response
				factor" values.	
26	Member of Expert Group and ex Consultant to the Association of Meter Operators	E	Page 32, Appendix E	This appendix was added after the last meeting of the expert group. Consequently it has not been given any serious review to ensure it meets the requirements.	Actioned. [E.G. to consider]
62	Npower Limited, Npower Northern Limited, Npower Northern Supply Limited, Npower Yorkshire Limited, Npower Yorkshire Supply Limited, Npower Direct Limited	E	32	The suggested Records Formats are poor. The tables should be revised and guidance text on filling the tables in added.	Actioned.
97	E.ON UK plc	E	Appendix E	This table is confusing and is unclear what data is actually required. For instance the third column appears to want 3 figures but quite what is needed is unknown. ELEXON have so far been unable to provide an answer when questioned. Submission also needs space for explanatory text for MOA to provide a narrative on the data they have submitted.	Actioned see Ref 62
126	Association of Meter Operators	E	Appendix E	I am aware that others have proposed a format for this report. It should be considered that the CoP should require submission of Calibration records, but the detail of the report format and structure would be specified in a guidance note. For a new process, it is likely that it will take	Actioned. See Ref 62.

Collated Responses to DCP0005

No.	Organisation	Section No.	Section	Comment	BSCCo Response
				several years of iterations to result in a comprehensive report for all situations.	
200	Southern Electric Power Distribution; Keadby Generation Ltd; SSE Energy Supply Ltd; SSE Generation Ltd; and Scottish Hydro-Electric Power Distribution Ltd; Medway Power Ltd;	E	Appendix E	<p>This table is confusing and is unclear what data is actually required. For instance the third column appears to want 3 figures but quite what is needed is unknown. Elexon were unable to provide an answer when questioned.</p> <p>Submission also needs space for explanatory text for MOA to provide a narrative on the data they have submitted.</p>	Actioned. See Ref 62.
240	British Energy	E	APPENDIX E	<ol style="list-style-type: none"> 1. The title as written could refer to any records and as such is most unhelpful. BE suggest it should be amended to read "CALIBRATION REPORT FORMAT", and the CoP4 Contents should be amended accordingly. 2. Appendix E as presented here was not included in the Shell documents which preceded this draft and has not been considered by the CoP4 Review Group. At first glance, not only does it raise a number of questions (e.g. why have Parts A & B been introduced, what does average age (max and min) mean, what information is expected under reasons for outside limits, for which test point should measured accuracy be reported, are combined or separate 	Actioned. See Ref 62. Actioned. See Ref 62.

Collated Responses to DCP0005

No.	Organisation	Section No.	Section	Comment	BSCCo Response
				<p>statistics required for type B & C calibration, etc.), but it also raises a number of issues in terms of layout and content.</p> <p>3. To address these concerns, BE have prepared an alternative Appendix E for consideration and a draft copy of this is attached.</p>	Actioned. See Ref 62.
278	Chair, CVA MOA Forum	E	Appendix E	<p>This table is confusing and is unclear what data is actually required. For instance the third column appears to want 3 figures but quite what is needed is unknown. Elexon were unable to provide an answer when questioned.</p> <p>Submission also needs space for explanatory text for MOA to provide a narrative on the data they have submitted.</p>	Actioned. See Ref 62. Actioned. See Ref 62.
46	Western Power Distribution	F	P33 F1 2 nd Para	"This Appendix sets out those test and checks, which may .." (delete the ",")	Actioned.
63	Npower Limited, Npower Northern Limited, Npower Northern Supply Limited, Npower Yorkshire Limited, Npower Yorkshire Supply Limited, Npower Direct Limited	F	33	<p>The second paragraph states that it is for guidance only whereas the 3rd paragraph states that they are minimum requirements. The term minimum requirements should be removed.</p> <p>Page 33 – the word 'shall' is included in paragraph 3 but as this is only guidance</p>	Actioned. Removed. Actioned. See Ref 241.

Collated Responses to DCP0005

No.	Organisation	Section No.	Section	Comment	BSCCo Response
				then it should not be a definite requirement.	
64	Npower Limited, Npower Northern Limited, Npower Northern Supply Limited, Npower Yorkshire Limited, Npower Yorkshire Supply Limited, Npower Direct Limited	F	34	Inspection F1.2.1 the 3 rd paragraph contains a typing error and should read 'Check that measurement transformers and Meters have Calibration certificates for the correct Class and serial numbers and include Meter Compensation where appropriate'. Section F1.2.3 title should read Proving Measurement Transformer Ratios.	Actioned. Actioned.
65	Npower Limited, Npower Northern Limited, Npower Northern Supply Limited, Npower Yorkshire Limited, Npower Yorkshire Supply Limited, Npower Direct Limited	F	36	Section F1.2.8 The first paragraph states that these tests shall be performed when the system is first energised. However for SVA this may be delayed until the site gains enough load to carry out a significant test usually at least 10% load. CVA suffers from similar problems when a connection is first energised. The words for SVA should be deleted.	Actioned. Sentence removed.
98	E.ON UK plc	F	Appendix F, F1.2.8	For SVA meters you can wait until the load is 10% of full load to carry out this test, but for CVA meters tests need to be done when the circuit is first energised. For CVA sites prevailing tests are unlikely to be possible as when the circuit is first energised there may be no load. CVA sites, commissioning needs to be carried out before Proving Tests and these	This is a BSC requirement Section L 2.3.1 (a). CVA Metering Systems must be first commissioned and proven before the registration becomes effective. It is therefore not within the scope of CoP4 to address.

Collated Responses to DCP0005

No.	Organisation	Section No.	Section	Comment	BSCCo Response
				<p>then need to be completed before the system is energised. What came first, the chicken or the egg?</p> <p>Suggest that first sentence becomes "carried out when first energised and carrying sufficient load for the tests to provide meaningful results."</p>	
127	Association of Meter Operators	F	Appendix F	<p>I have concerns on principle of including 'guidance' into a CoP. Previous experience has shown that this reduces the clarity of the requirement defined in the CoP. Moving the guidance to a TAA or MOA guidance note allows the guidance to be updated & revised based on experience, without having to reopen the CoP. Worst still is where the practice changes without the 'guidance' within the CoP being updated and confusion ensues.</p>	[E.G. to consider]
133	SAIC Ltd. Response provided on behalf of: ScottishPower Energy Management Ltd. ScottishPower Generation Ltd. ScottishPower Energy Retail Ltd. SP Manweb plc. SP Transmission Ltd.	F	CoP 4, Issue 5, v4.1 Page 35	<p>Section F1.2.5 is referenced as F1.2.6 in 'Detailed Level Changes to CoP4 Issue 5 (v4.0) Requirements' document on page 25.</p> <p>Which is correct?</p>	Noted The draft CoP4 is correct.

Collated Responses to DCP0005

No.	Organisation	Section No.	Section	Comment	BSCCo Response
	SP Distribution Ltd.				
134	SAIC Ltd. Response provided on behalf of: ScottishPower Energy Management Ltd. ScottishPower Generation Ltd. ScottishPower Energy Retail Ltd. SP Manweb plc. SP Transmission Ltd. SP Distribution Ltd.	F	CoP 4, Issue 5, v4.1 Page 36	Section F1.2.6 is referenced as F1.2.7 in 'Detailed Level Changes to CoP4 Issue 5 (v4.0) Requirements' document on page 25. Which is correct?	Noted. The draft CoP4 is correct.
201	Southern Electric Power Distribution; Keadby Generation Ltd; SSE Energy Supply Ltd; SSE Generation Ltd; and Scottish Hydro-Electric Power Distribution Ltd; Medway Power Ltd;	F	Appendix F	F1 – This appendix is for guidance, however in third paragraph the text states that these are "minimum requirements". It should perhaps say they are "guidance on achieving minimum requirements" F1.2 paragraph 2 – wording suggest that for CVA systems, tests 1.2.1 to 1.2.5 are sufficient for commissioning test prior to energisation. Should be extended 1.2.6 F1.2.8 – For SVA meters you can wait until the load is 10% of full load to carry out this test, but for CVA meters tests need to be done when the circuit is first energised. For CVA sites prevailing tests are unlikely to be possible as when the circuit is first energised there may be no load.	Actioned. Actioned. Comment noted. However this is not a matter for CoP4 but the BSC would require modification to address this See also Ref 98

Collated Responses to DCP0005

No.	Organisation	Section No.	Section	Comment	BSCCo Response
				<p>CVA sites, commissioning needs to be carried out before Proving Tests and these then need to be completed before the system is energised.</p> <p>Suggest that first sentence becomes "carried out when first energised and carrying sufficient load for the tests to provide meaningful results."</p> <p>F2 – Refers to 5.5.4 - Should refer to 5.5.3</p>	Actioned.
241	British Energy	F	APPENDIX F	<ol style="list-style-type: none"> 1. Bearing in mind Appendix F is being provided for guidance only the "minimum requirements" text in F1 Paragraph 3 should be amended to remove this apparent obligation for commissioning scope to include all the listed activities. 2. Similarly, the F1 Paragraph 3 text "...which shall include these requirements." should be amended to read "...which may include these requirements as appropriate." 3. In F1.1 the text "...and record the following:" should read "...and record the following as appropriate:" 4. In Paragraph 2 of F1.2, "F1.2.1 to F1.2.5" should be amended to read 	<p>Addressed under Ref 201.</p> <p>Actioned.</p> <p>Actioned.</p> <p>Actioned. See Ref 201.</p>

Collated Responses to DCP0005

No.	Organisation	Section No.	Section	Comment	BSCCo Response
				<p>"F1.2.1 to F1.2.6".</p> <p>5. F1.2.8 : For SVA, tests can be carried out after the load is more than 10% of full load. However, for CVA prevailing load tests may not be possible when the circuit is first energised as there may be no load. To address this, wording for CVA should be amended to recognise the tests may only be carried out when first energised and carrying sufficient load for the tests to provide meaningful results.</p> <p>As a general comment in this context, BE is concerned there appears to be a conflict in the required sequence of activities on new CVA sites. According to the relevant BSCPs, Commissioning needs to be carried out before Proving Tests and these both should be completed before the system is energised. As indicated above, this is unachievable in practice.</p> <p>6. F2 : The reference to "5.5.4" should read "5.5.3".</p>	<p>BSC issue See Ref 98.</p> <p>Noted. The BSC requirement is that activities are to be completed before the registration for the Metering System becomes effective.</p> <p>Actioned See Ref 201.</p>
279	Chair, CVA MOA Forum	F	Appendix F	F1 – This appendix is for guidance, however in third paragraph the text states that these are "minimum requirements". It should perhaps say they are "guidance on achieving minimum requirements"	Actioned.

Collated Responses to DCP0005

No.	Organisation	Section No.	Section	Comment	BSCCo Response
				<p>F1.2 paragraph 2 – wording suggest that for CVA systems, tests 1.2.1 to 1.2.5 are sufficient for commissioning test prior to energisation. Should be extended 1.2.6</p> <p>F1.2.8 – For SVA meters you can wait until the load is 10% of full load to carry out this test, but for CVA meters tests need to be done when the circuit is first energised. For CVA sites prevailing tests are unlikely to be possible as when the circuit is first energised there may be no load.</p> <p>CVA sites, commissioning needs to be carried out before Proving Tests and these then need to be completed before the system is energised. What came first, the chicken or the egg?</p> <p>Suggest that first sentence becomes “carried out when first energised and carrying sufficient load for the tests to provide meaningful results.”</p> <p>F2 – Refers to 5.5.4 - Should refer to 5.5.3</p>	<p>Actioned.</p> <p>BSC issue See Ref 201.</p>
1	Member of Expert Group and ex Consultant to the Association of Meter Operators	Foreword	Page 6, Foreword, 1 st para.	The omission of the reference to “Metering Equipment covered by the BSC” is important. Metering equipment may be installed for the benefit of the Supplier or Customer and have no significance to	<p>Actioned.</p> <p>“for Settlement purposes” added.</p>

Collated Responses to DCP0005

No.	Organisation	Section No.	Section	Comment	BSCCo Response
				Settlements. Such equipment is not covered by CoP4. The reference should be re-instated.	
66	E.ON UK plc	General	Common issues	CoP4 is retrospective, with immediate effect. Some clauses included for cut over of testing but there are huge implications for existing metering schemes which will now be non-compliant.	These have been addressed as a direct result of specific comments received in this consultation.
167	United Utilities	General	[General Comment]	As the MOA relies on the LDSO for accurate CT and VT information can we expect tighter controls on LDSOs? Some do no respond to a D0170 dataflow requesting technical details. The information on the dataflows that are received only mentions ratios. There is no mention of serial numbers, class and rating of the transformers. I think this should be brought in to line to assist the MOA and also to ensure the quality of data entering settlements.	This matter is being considered by ELEXON, LDSOs and MOAs in the near future.
168	Southern Electric Power Distribution; Keadby Generation Ltd; SSE Energy Supply Ltd; SSE Generation Ltd; and Scottish Hydro-Electric Power Distribution Ltd; Medway Power Ltd;	General	Common Issues	CoP4 is retrospective, with immediate effect. Some clauses included for cut over of testing but there are huge implications for existing metering schemes which will now be non-compliant.	These have been addressed as a direct result of specific comments received in this consultation.
242	British Energy	General	GENERAL	1. Use of the term "new" in the context of meter makes & models (e.g. Sections	Noted. ELEXON is to redraft the relevant

Collated Responses to DCP0005

No.	Organisation	Section No.	Section	Comment	BSCCo Response
				<p>5, 5.2, etc.) is open to misinterpretation at a later date. BE suggests these requirements should be linked instead to meter types registered for the first time after the release date of the latest CoP4 issue.</p> <p>2. Subscripts 2 and 3 at the end of Page 23 appear to be very similar. Unless these very slight distinctions are really necessary, BE suggest the "first registered" option should apply. Related text should be amended accordingly.</p> <p>BE consider the requirements which apply here to Calibration equipment for Meters, should also apply to other Certificates.</p> <p>3. The term "test house" is used in various places throughout the Draft CoP4 (e.g. 4.21, 5.1.1, etc.). BE suggest this either needs to be a defined term in Section 3, or it should be removed in favour of defined term Accredited Laboratory.</p>	<p>section. See also Ref 111.</p> <p>See Ref 196</p> <p>Actioned.</p> <p>Actioned. Now a defined term.</p>
243	Chair, CVA MOA Forum	General	Common Issues	CoP4 is retrospective, with immediate effect. Some clauses included for cut over of testing but there are huge implications	These have been addressed as a direct result of specific comments received in this consultation.

Collated Responses to DCP0005

No.	Organisation	Section No.	Section	Comment	BSCCo Response
				for existing metering schemes which will now be non-compliant.	
127a	Association of Meter Operators	Title	Document title	Would be beneficial to shorten title	Actioned. See Ref 202
202	British Energy	Title	TITLE	To highlight the almost total re-write of CoP4 and to reduce the length of the current title, BE suggest this document should be renamed as follows : "Code of Practice for Lifetime Accuracy Verification of Settlement Metering Systems"	Actioned.