Issue 93 Workgroup 5 Summary

## Summary

1. **Meeting Objectives**

The Chair welcomed attendees and presented the following meeting objectives to Work Group (WG) Members:

* Confirm new Change Proposals (CPs) to be raised
* Recommend Subgroup for two aspects of Issue 93
* Confirm the Work group’s views on the proposed migration of the Codes of Practice (CoPs) to the Retail Energy Code (REC)

1. **Update on Sub-group sessions**
   1. Elexon presented a summary of the discussions held at the two Subgroup sessions. Each session was held to discuss the following Aspects:

* A\_17 Minimum burden requirements and CT ratio vs circuit/agreed capacity
* A\_08 Measuring elements on neutral and earth conductors

1. **CoP Consolidation – Threshold and Requirements**
   1. Elexon presented a table, outlining key categories for different Metering System set-ups.
   2. Elexon asked some questions to confirm the WG’s view on the following requirements:
      1. What the accuracy class of a High Voltage (HV) Current Transformer (CT) should be;
      2. If Reactive Energy Meters should be more accurate (i.e. to BS EN/IEC 62053-24[[1]](#footnote-1));
      3. What the Active Energy Meter and CT accuracy class for lower HV CT range should be; and
      4. What the communication pathway requirements should be for the lower HV CT range.
   3. A member flagged a concern mainly around the high cost associated with downgrading an HV supply at legacy sites, however, noting that it should be fine as long as the changes would not be retrospective. Elexon confirmed that it is not expecting any retrospective changes; rather they will be effective after the requirement change is implemented in the relevant Balancing and Settlement Code (BSC) Release. Elexon noted that if there was a material change to Metering Equipment it would have to comply with the latest version of the relevant CoP. If material change to Metering System is carried forward then if CTs or Voltage Transformers are changed (or switchgear containing them) then they would also have to comply with the latest version of the relevant CoP.
   4. Another member agreed with this view on not making changes retrospective noting that the cost impact will be minimal. Further, highlighted the need to understand the impact from the unit cost increase for moving HV CTs to class 0.5S, would be. Two other members agreed with this view with one of them noting the marginal cost for a new installation.
   5. A member mentioned that he had spoken to a few manufacturers to understand the difference in in class 0.5 and 0.5S CTs. The general view was that the cost was minimal; however, pointing out that it may not be the same for Meters.
   6. Elexon suggested that the group should think about ensuring that Meters are used and can be integrated with other communication systems using different protocol. One of the LDSO members agreed with the idea and noted that the general view of LDSOs were about standardising every area of communication ports.
   7. The LDSO member further recommended a subgroup to discuss the idea of standardising communications ports for Meters. Elexon agreed and suggested for it to be addressed under the “Communication Path” aspect of Issue 93. Elexon asked the LDSO member to send an email that outlines the background and requirements for standardising communication ports.
   8. One member raised a point about confirming the cost difference between class 1 and 0.5S CTs. Elexon agreed with this view and took an action to engage with the Meter Manufacturers in the [Issue 97 WG](https://www.elexon.co.uk/smg-issue/issue-97/) about the cost difference.
   9. Another member proposed mandating compensations for current transformer and voltage transformer errors in the upper HV MVA band and being optional for the lower HV MVA band. The WG agreed. Elexon took an action to update the threshold and requirements table presented in 3.1.
   10. The same member provided some MVA levels on recent projects he had been involved. Elexon proposed to lower the threshold to 40MVA to capture sites around 50MVA in the upper level with the tightest accuracy requirements. The WG agreed.
2. **A\_05 De-energised Circuits/Feeders**
   1. Elexon presented the background of the issue for this aspect, outlining the requirements for energisation of Outstation for remote interrogation purposes in CoPs 1 and 2 and CoPs 3, 5 and 10.
   2. CoP1 requires Outstations for each circuit to have an auxiliary supply. CoP2, only where there are multiple circuits. CoPs 3, and 5 require an Outstation for each circuit to be connected such that it is normally energised to facilitate reading of the Meter Register(s) and Local and Remote Interrogation of the Outstation. For Outstation storing data for more than one circuit, and where the Outstation power supply is from these circuits, then a voltage selection relay scheme using each circuit involved shall be provided. CoP3 adds that separate Outstation Systems can be fed from a secure supply or from a measurement VT, with separate fusing for each Outstation, whilst CoPs 5 and 10 simply require separate Outstations to have a separately fused supply for each Outstation.
   3. Elexon presented the options in Appendix E of the CoPs 3 and 5 for keeping Outstations energised for circuits that are not normally energised for significant periods. These options include:
      1. Option 1: Connection of the Metering Equipment to the incoming side of the main switchgear so that it is normally energised even when the switchgear is open;
      2. Option 2: The Installation of Separate Meters and Outstations to facilitate local and remote interrogation. However, the Meters would need to have a permanent Meter register [[2]](#footnote-2) to meet the requirements of clause 5.3 (of CoPs 3 and 5);
      3. Option 3: Utilising integrated products which have separate input terminals to energise the data storage and display functions which could be connected to a normally energised supply, whilst the voltage supply to the Meter is from the relevant circuit; and
      4. Option 4: Connecting the integrated equipment to an appropriate single-phase voltage supply. This option is only suitable for use with CT operated Metering Systems.
   4. Elexon also highlighted the requirements to obtain Meter readings in CoPs 1, 2, 3, 5 and 10.
      1. CoPs 1, 2, 3 and 5 require Meters to include a non-volatile Meter Register of cumulative energy for each measured quantity. CoP10 does not but this is checked for under BSCP601 (along with for Meters for CoPs 1, 2, 3 and 5).
      2. CoPs 1 and 2 require due account to be given for the Central Data Collection Agent (CDCA) or other Data Collectors (DCs) to obtain Meter readings. CoP2 gives an example for a Metering System with multiple circuits suggesting a Voltage Selector Relay or other similar method should be used to maintain the Meter display in the event of a circuit being de-energised, where this is reasonably practical.
      3. CoPs 3 and 5 require due account to be taken (not given) for the CDCA or DCs to obtain Meter readings, even when the circuit is de-energised. Many WG Members were surprised about this and could not recall getting any non-compliances where this requirement was not met.
      4. CoP10 has no requirements in relation to Meters including a non-volatile Meter Register of cumulative energy for each measured quantity; the Meter Register(s) not rolling-over more than once within the normal Meter reading cycle; or, for Meters using electronic displays, due account being taken of the obligations to obtain Meter Readings, (or even when the circuit is de-energised).
   5. Elexon further asked some questions to understand the impact on Settlement of estimation for de-energised circuits assuming data is correctly estimated to zero. These questions include:
      1. When Meter System Identifiers (MSIDs) with multi-feeders, is there an issue with the estimation process if the whole MSID is treated as estimated and not actual data?; and
      2. Should the Boundary Point[[3]](#footnote-3) (BP) MSID data be treated as actual or estimated if the de-energised circuit is embedded in a private network and differenced off the BP MSID?
   6. AH wanted to confirm how Elexon ensure the Technical Audit Agent (TAA) audits contains what is expected, noting that he has not seen a non-compliance raised for using separate Outstations. Elexon commented, stating that TAA issues non-compliance based on their review of the CoPs against the relevant scenario. Further, Elexon welcomed the idea of highlighting AH’s question and view in the Local Work Instruction (LWI) then took an action to speak to TAA about this.
   7. The WG reviewed the proposed options and had the following comments and views:
      1. A member highlighted to the group that there is routine process after a Meter is de-energised where they go out to check the Meter, and if there is a fault, a report is flagged with the relevant parties through a site visit code.
      2. A member asked the Distribution System Operators (DSOs) what area of the Metering System they were responsible for buying. Another member answered and confirmed that they were responsible for what is outside of the cutout. RB’s view was that the panel in the Metering System is owned by the DSOs. However, most members were not convinced on where the voltage supply to CT operated Meters were connected (customer’s or DSO’s end?) so an action was taken by a member representing DSOs to verify this assumption with DSOs.
      3. In conclusion, the WG thought option one was the most feasible amongst the other proposed options. Although, the WG suggested that the practicalities of option one should be confirmed before it is progressed.
3. **A\_07 Consideration on Direct Meter Point (DMP) versus Actual Meter Point (AMP)**
   1. Elexon presented the background of this aspect and summarised the information from [BSCP32’s](https://www.elexon.co.uk/csd/bscp32-metering-dispensations/) redlining.
   2. The key points from the redlining was highlighted to seek the WG’s views and comments. These points were on:
      1. A new concept of “AMP not at DMP Metering Dispensation” will be made available; and
      2. A new Metering Dispensation process to make D/380[[4]](#footnote-4) redundant will be created.
   3. MS’s view was that getting rid of the Metering Dispensation D/380 could accumulate cost from Elexon and Electronic Loss Validation Agent (ELVA);
   4. TC disagreed with the proposition initially, pointing out that the criteria mentioned is too broad. However, Elexon addressed his concerns by pointing out a text in the slide, which relates to the applicable criteria. TC confirmed he was happy the clarification and agreed with the proposal in principle.
   5. TC further asked Elexon to provide some examples to support the process. Elexon took and action to create some examples and share with the WG.
   6. SC agreed with TC’s point on providing examples to support the new process.
4. **Any Other Business (AOB)**
   1. Elexon asked the WG for their view on the paper for the proposed migration of the CoPs to the Retail Energy Code (REC).
      1. One member’s view was that they should remain where they are (i.e. with the BSC) to ensure discussion and scrutiny by a WG.
      2. Another member agreed to the CoPs moving over to the REC as Metering Equipment Managers could raise change proposals under the REC but not the BSC but asked for more time to review the email that was circulated to explain the migration.
      3. Elexon took an action to recirculate the email to the WG for visibility.
   2. Elexon recommended a subgroup for the following aspects:

* A\_03 ‘Duplicate communications paths for Metering Equipment within CoPs 1 and 2’; and
* A\_13 ‘Security of using public IP addresses for Communications to Metering Systems’.
  + 1. The WG agreed. Elexon took an action to schedule and facilitate both sessions.
  1. Elexon presented a potential change that was suggested from [Issue 80](https://www.elexon.co.uk/smg-issue/issue-80/) to the WG, and asked for their views on how it should be progressed.
  2. This change aims to mandate the number of Outstation channels in Supplier Volume Allocation (SVA) and Central Volume Allocation (CVA) sites.
  3. The WG had no push back on the details of the change, rather wanted to understand the impact that it would have on the relevant parties.
  4. TC suggested that Elexon should contact LDSOs, Meter Operator Agents (MOAs) and Data Collectors (DC) to confirm their views on:
     1. What MOAs were currently installing (three or six channels) for Import only sites;
     2. Any perceived overheads from DCs and if they were happy with the mandated six channels; and
     3. If LDSOs wanted six channels of data.
  5. Elexon took an action to contact the relevant parties.

1. **Next Steps**

* Elexon to arrange subgroup sessions for the Communication path aspects.
* Elexon to seek a further six-month extension from the [Imbalance Settlement Group (ISG)](https://www.elexon.co.uk/group/imbalance-settlement-group-isg/) and [Supplier Volume Allocation Group (SVG)](https://www.elexon.co.uk/group/supplier-volume-allocation-group-svg/).
* Elexon to schedule the sixth WG session.

1. **Actions**

* SC to send Elexon an email outlining the background and requirements for standardising communication ports for substations.
* Elexon to update the consolidated CoP thresholds table.
* Elexon to speak Meter Manufacturers about the cost difference between class 1 and 0.5S CTs.
* Elexon to speak to the TAAs about making their LWI most robust on compliance related audits for using separate outstations.
* Speak to LDSOs to validate this assumption “Are voltage supplies to Meters connected to the LDSO’s side or Customer’s side?”.
* A member representing LDSOs to investigate and confirm the practicalities of Option 1 (in section 4.3.1 ‘A\_05 De-energised circuits/feeders’).
* Elexon to create some examples to support the new process proposed in BSCP32’s redlining.
* Elexon to contact LDSOs, MOAs and DCs about the number of Outstation channels to be mandated.

1. ‘Electricity metering equipment. Particular requirements - Static meters for fundamental component reactive energy (classes 0,5S, 1S, 1, 2 and 3)’ [↑](#footnote-ref-1)
2. A Meter register is a device that records the units that are measured by the meter. There are a few different register types. [↑](#footnote-ref-2)
3. A Boundary Point is a point at which any Plant or Apparatus not forming part of the Total System is connected to the Total System. [↑](#footnote-ref-3)
4. [↑](#footnote-ref-4)