

P455 Digital Meeting Etiquette

- Welcome to the P455 Workgroup meeting 3 – we'll start shortly
- No video please to conserve bandwidth
- Please stay on mute unless you need to talk – use IM if you can't break through
- Talk – pause – talk
- Lots of us are working remotely – be mindful of background noise and connection speeds

ELEXION

**P455 'On-Site Aggregation as a method to
facilitate Third Party Access'**

Meeting 3

22 November 2023

Meeting Agenda

Agenda Item	Lead
1. Welcome and meeting objectives	Patrick Matthewson (Elexon) - Chair
2. Is a physical boundary meter required to implement the solution, and should it be?	Reg Platt (Emergent) – Proposer
3. Is it right that the solution is limited to sub-100kW sites?	Reg Platt
4. Is it right that the MSIDs of Customers of a PN should be de-energised instead of logically disconnected?	Reg Platt
5. Is it right that sub-meters should be COP10 compliant?	Christopher Day (Elexon) – Market Design
6. Is there an impact on BSC metering dispensations?	Christopher Day
7. Is it right for the solution not to be captured under the complex site arrangements within BSC?	Christopher Day
8. P455 Next Steps	Cecilia Portabales (Elexon) – Lead Analyst
Meeting close	Patrick Matthewson



IS A PHYSICAL
BOUNDARY METER
REQUIRED TO
IMPLEMENT THE
SOLUTION, AND
SHOULD IT BE?

Is a physical boundary meter required to implement the solution, and should it be?



Recap:

- if an unmetered loads test was required to implement the solution, the test would require all imports/exports to the PN to be metered, and compared against the readings from a boundary meter
- since the WG has agreed an unmetered loads test is not required, raises question on whether a physical boundary meter is needed, since the readings from a physical boundary meter are redundant for the purposes of settlement

Is a physical boundary meter required to implement the solution, and should it be?



Answer:

Having reviewed the BSC and consulted several DNOs,

- a. we don't believe a boundary meter is required
- b. we don't see a reason to require one

Key implementation requirement to just ensure there is a simple and straightforward method for allocating measurement class to the PN aggregation MPAN

Is a physical boundary meter required to implement the solution, and should it be?



Definitions within the BSC appear to allow implementation of the solution without a boundary meter, since each exit/entry from the PN will have a metering point, which will be associated with an MPAN (i.e. for the PN as a whole)

[MSID and MPAN Guidance - Elexon Digital BSC](#)

What are MPANs and MSIDs?

This guidance clarifies the definition of **Meter Point Administration Numbers (MPANs)** and **Metering System Identifiers (MSIDs)**.

Each point of entry and exit onto a Distribution System Operator's Distribution System has an associated Metering Point and each Metering Point has an associated Administration Number (MPAN) and Metering System Identifier (MSID).

MPAN is the term used in the Master Registration Agreement (MRA), while the BSC uses the term **MSID**. However, as the two terms describe the same entity, they can be used interchangeably when referencing a Metering Point/Metering System.

[Glossary Term: Metering Point - Elexon BSC](#)

Glossary Term: Metering Point

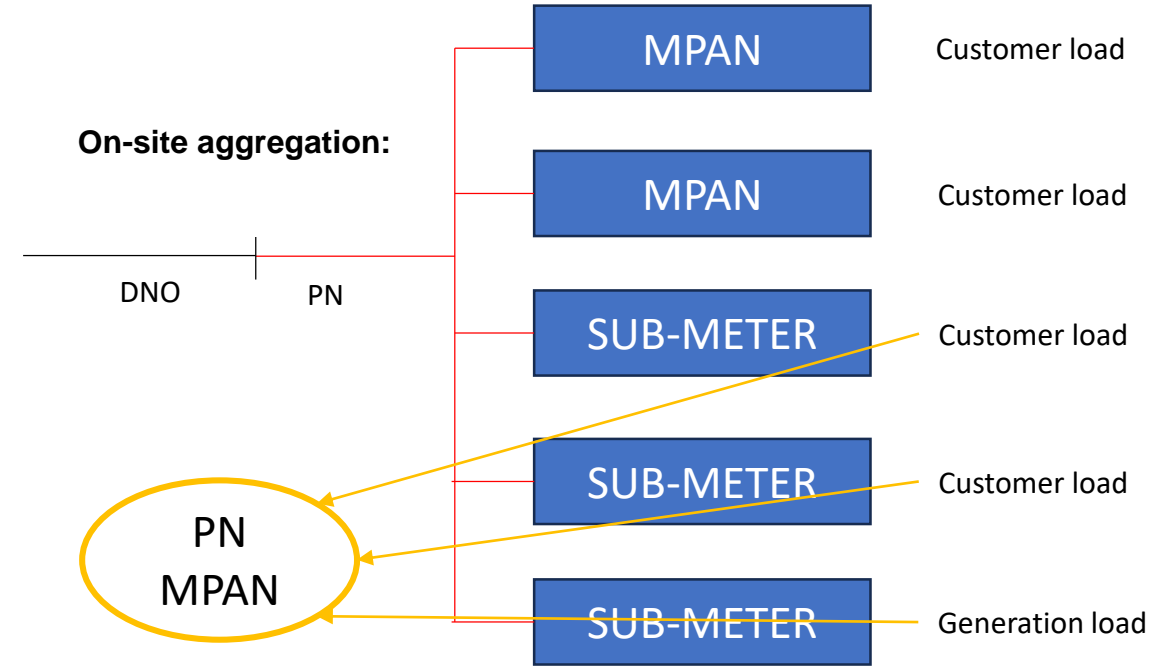
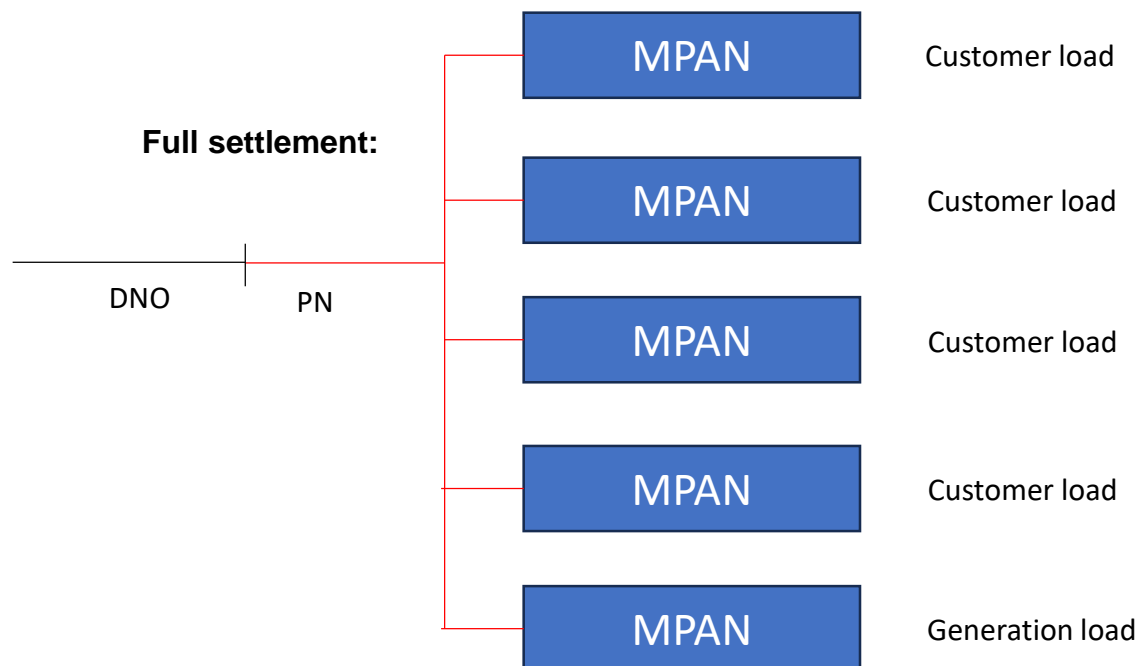


The point at which a supply to (Export) or from (Import) a Distribution System is measured, or should be measured.

Is a physical boundary meter required to implement the solution, and should it be?



- From a DNO perspective, essentially a PN with on-site aggregation applied is metered in the same way as a PN with full settlement applied. The only difference is the sub-meters are aggregated to make the 'PN MPANs' (i.e. import and export)
- If DUoS fixed charges are accurately allocated to the PN MPAN, it avoids the needs for complicated/laborious reconciliations (which require changes to DCUSA)



Is a physical boundary meter required to implement the solution, and should it be?



Key implementation consideration is how to set the measurement class for the 'PN MPANs', which is important primarily for the purposes of DUoS charging. Note, it should apply to the aggregated 'PN MPANs, and not the individual sub-meters.

Analysis:

- A, B and D are irrelevant
- Applicability of F depends on determination of site Customer by supplier (i.e. not a BSC/settlement issue)
- C, E, G are linked to maximum demand capacity, with reference to metering type for E Vs G.
- Methodology for assessment on capacity set out in BSC for 100kW sites (relevant elements shown right)
- Proposed same methodology applied at 69kW for differentiating between E and G sites (i.e. based on whole current meter fuse capacity).
- Measurement class would be determined/allocated/revised as necessary by the supplier/DNO based on submitted data, as would the associated DUoS bandings.

Measurement Class	Description
A	Non Half Hourly Metered
B	Non Half Hourly Unmetered
C	HH metered in 100kW Premises
D	Half Hourly Unmetered
E	Half Hourly Metering Equipment at below 100kW Premises with current transformer
F	Half Hourly Metering Equipment at below 100kW Premises with current transformer or whole current, and at Domestic Premises
G	Half Hourly Metering Equipment at below 100kW Premises with whole current and not at Domestic Premises

100kW Metering System means:

- (i) any Metering System where the average of the maximum monthly electrical demands in the three months of highest maximum demand, either in:
 - (a) the previous twelve months; or
 - (b) the period since the most recent Significant Change of Demand (whichever is the shorter) exceeds 100kW; or
- (ii) any Metering System where the Profile of a Customer's electrical demand implies an average of the maximum monthly electrical demands in the three months of highest maximum demand either in:
 - (a) the previous twelve months; or
 - (b) the period since the most recent Significant Change of Demand (whichever is the shorter) exceeding 100kW; or

...

- (v) any Metering System which is for the time being declared by a Supplier in accordance with the relevant BSC Procedure to have a maximum demand in excess of 100kW.

[Change of Measurement Class and Change of Profile Class - Elexon Digital BSC](#)

Is a physical boundary meter required to implement the solution, and should it be?



Any questions?

Can we resolve this ToR?

If not, what do we need to address?



IS IT RIGHT THAT
THE SOLUTION IS
LIMITED TO SUB-
100KW SITES?

Is it right to limit the solution to 100kW sites?



- Definition recap for 100kW+ sites:

100kW Metering System means:

(i) any Metering System where the average of the maximum monthly electrical demands in the three months of highest maximum demand, either in:

- (a) the previous twelve months; or
- (b) the period since the most recent Significant Change of Demand (whichever is the shorter) exceeds 100kW; or

(ii) any Metering System where the Profile of a Customer's electrical demand implies an average of the maximum monthly electrical demands in the three months of highest maximum demand either in:

- (a) the previous twelve months; or
- (b) the period since the most recent Significant Change of Demand (whichever is the shorter) exceeding 100kW; or

...

(v) any Metering System which is for the time being declared by a Supplier in accordance with the relevant BSC Procedure to have a maximum demand in excess of 100kW.

[Change of Measurement Class and Change of Profile Class - Elexon Digital BSC](#)

- Rules of thumb usage levels if max demand unavailable:

Profile Class	Description	Estimated Minimum Annual Consumption for a 100kW site (kWh)
1	Domestic Unrestricted	380,000
2	Domestic Economy 7	265,000
3	Non-domestic Unrestricted	315,000
4	Non-domestic Economy 7	455,000

Is it right to limit the solution to 100kW sites?



- The P445 proposal was to cap application of the reform to sub-100kW sites, since such sites were assumed not to face the core customer issue the mod seeks to address (i.e. the practical inability of a PN customer to negotiate a third-party supply arrangement using difference metering), since the PN connected customers would typically be larger with greater leverage on terms. Also assumed to limit controversy.
- On reflection, the assumption is probably wrong. It is quite easy to get to a scheme size above 100kW with domestic domestic/small business customers. (Note, depending on aspect of license exemptions used, supply on a single scheme could be possible up to 2.5MW for domestic customers). Nonetheless, the potential for controversy remains.
- From a practical perspective, if we settle on the approach proposed above for determining the PN MPANs measurement class, there is a simple method for identifying a site as 100kW+.
- However, we need to be mindful of implications if we allow this. e.g. we do not currently have a methodology for managing losses on the PN, which will increase as schemes increase in size.
- Also risks. Opening the scheme to large/export I&C PN Customers increases the potential for unforeseen opportunities and gaming. Therefore, perhaps limiting the scheme by end-Customer type is a better approach to a capacity limit?

Is it right to limit the solution to 100kW sites?



Qs for the WG:

- Do you agree that we are likely to see PN MPANs for sites including domestic and small business customers exceed 100kW capacity?
- What risks are involved in opening the scheme up to larger capacities?
- Any proposals for how we manage losses, without negatively impacting smaller schemes? e.g. a 'distribution losses' test for 100kW+ sites only?
- Are implications to consider beyond losses?
- Is it right to seek to exclude large industrial/commercial customers?
- Should/could we seek to practically limit the method to sites that include domestic / small business customers?
- How would this work if a scheme is mixed? (i.e. do all PN connected customers need to be domestic / small business; or just one, who may exist alongside large I&C customers)

Is it right to limit the solution to 100kW sites?



Any questions?

Can we resolve this ToR?

If not, what do we need to address?



IS IT RIGHT THAT
THE MSIDS OF
CUSTOMERS OF A
PN SHOULD BE DE-
ENERGISED
INSTEAD OF
LOGICALLY
DISCONNECTED?

Is it right that the MSIDs of Customers to a PN should be de-energised instead of logically disconnected?



- De-energisation (which can be both physical and logical – i.e. done in industry systems without making physical changes to a meter) implies temporary disconnection of an electrical supply to an MSID, for the purposes of undertaking works. Once complete, the MSID is expected to be re-energised.
- Disconnection (which, again, can be both physical and logical) implies the total removal of an MSID from industry systems, such that it no longer meters flows to/from the distribution system.
- For a Customer with an existing MSID who chooses to be supplied by a PN, the correct process today is a logical disconnection, such that the MSID is removed from industry systems, while the physical electrical connection to Customers property is left intact.
- We had considered whether de-energisation might be better for the Customer, since the MSID would remain within industry systems, and could be reactivated more easily Vs logical disconnection, where the Customer must request creation of a new MPAN.
- However, since we expect the physical meters associated with the MSID to be removed, de-energisation is likely to create confusion within industry, since there is no meter left in place that can simply be de-energised.
- Therefore, remaining with logical disconnection seems best.

Is it right that the MSIDs of Customers to a PN should be de-energised instead of logically disconnected?



Any questions?

Can we resolve this ToR?

If not, what do we need to address?



IS IT RIGHT THAT
SUB-METERS
SHOULD BE COP10
COMPLIANT?

Determining the relevant CoP

- Sub metering used in the on-site aggregation method will be required to be compliant to Code of Practice relevant to that sub metering (I.E not the Boundary Point connection)
- It is expected that the sub metering will be compliant to CoP10 however higher CoPs may need to be allowable dependent on the outcome of other ToRs.
- Whilst CoP11 is used for detailing requirements for Asset Metering Systems, this refers to the metering of Balancing Services and so is not applicable or appropriate for the on-site Aggregation Method.
- There shall be nothing prohibiting the use of DCC adopted SMETS Meters within the on-site Aggregation Metering System. SMETS Meters are deemed compliant to CoP10. However, the HHDC will need to be made aware of which Meters are DCC adopted so that they do not expect to retrieve the raw data for those Meters.
- Code of Practice 1: The Metering of Circuits with a Rated Capacity Exceeding 100 MVA for Settlement Purposes
- Code of Practice 2: The Metering of Circuits with a Rated Capacity not Exceeding 100 MVA for Settlement Purposes
- Code of Practice 3: The Metering of Circuits with a Rated Capacity not Exceeding 10 MVA for Settlement Purposes
- Code of Practice 5: The Metering of Energy Transfers with Maximum Demand of up to (and including) 1MW for Settlement Purposes
- Code of Practice 10: The Metering of Energy via Low Voltage Circuits for Settlement Purposes - This Code of Practice defines the minimum requirements for the metering of energy via low voltage circuits for Settlement purposes. Metering Equipment compliant with this Code of Practice can be traded either Half Hourly where the Metering Systems are not 100kW Metering Systems (Measurement Class E, F or G) or Non-Half Hourly.
- Code of Practice 11: CoP11 defines the minimum BSC requirements for Asset Metering Systems



IS THERE AN IMPACT ON BSC METERING DISPENSATIONS?

On Site Aggregation Method – Metering Dispensations.

- The BSC Settlement CoPs require Metering Equipment to be located at the point of connection to the Total System (Defined Metering Point).
- Currently where Metering Equipment is located away from the DMP then a Metering Dispensation is required; either generic (D/380) or site specific.
- The only method of facilitating Third Party Access that currently requires a Metering Dispensation is difference metering. This is because the Metering Equipment associated with the Third Party Customer's MSID(s) is located away from the DMP at the asset.
- However under the full Settlement solution a Metering Dispensation is not required as all the entry and exits points of the License Exempt Network (i.e. PN) are metered. This effectively moves the DMP to the point of connection to the LEN as opposed to the Total System.
- The on-site aggregation method more closely resembles the full Settlement solution as each aggregated customer is sub-metered and each Third Party Supply customer is also independently metered. For this reason it is suggested that a Metering Dispensation is not required for the MSIDs related to the on-site aggregation method.
- P453 removed the need for a Metering Dispensation where the only non-compliance to the CoP was for location and the Metering System could be retained within Overall Accuracy limits without the need for Compensation. This likely covers a high portion of the Metering Systems which will be under consideration for the on-site aggregation method.



IS IT RIGHT FOR
THE SOLUTION
NOT TO BE
CAPTURED UNDER
THE COMPLEX
SITE
ARRANGEMENTS
WITHIN BSC?

Onsite Aggregation Method – Is it Complex?

- A Metering is System is defined as Complex where the primary Meter Technical Details flow is insufficient to allow the HHDC to correctly interpret and process the metered data for Settlement purposes.
- In almost all cases a Complex Site is concerned with the differencing of one or more Meters from another (X-Y).
- The onsite aggregation method is concerned with the summing of multiple Meters onto one MSID for Settlement purposes. Under BSCP502 this is very similar to a process called off-site totalisation which the BSCP makes explicitly clear should **not** be considered Complex.
- Whilst it is proposed that a supplementary form will be included with the primary MTD flow for MSIDs related to on-site aggregation method this is to make the process more efficient and support the flow of information.
- Therefore it proposed that on-site aggregation for the purposes of facilitating Third Party Supply will not be considered a Complex Site.



NEXT STEPS

Progression plan

Event	Date
Present IWA to Panel	8 June 2023
Workgroup meeting 1 – Background and introduction to the process. Why is a new solution needed?	12 September 2023
Workgroup meeting 2 – Does the new solution work? Evidence from Emergent's Sandbox	31 October 2023
Workgroup meeting 3 – How will the solution work in detail? Validate the proposed solution	22 November 2023
Workgroup meeting 4 – Legal text changes	27 November 2023
Assessment Procedure Consultation (15 WDs)	5 December 2023 – 29 December 2023
Workgroup meeting 6	January 2024
Present Assessment Report to Panel	11 January 2023
Report Phase Consultation	15 January 2024 – 30 January 2024
Present Draft Modification Report to Panel	February 2024
Issue Final Modification Report to Authority	February 2024

MEETING CLOSE

ELEXON

THANK YOU

Cecilia Portabales

Cecilia.portabales@elxon.co.uk

bsc.change@elxon.co.uk

22 November 2023