Designation Request and Initial Written Assessment

‘On-Site Aggregation as a method to facilitate Third Party Access’

This Modification seeks to establish a more cost effective and efficient method for delivering Third Party Access on private networks that include domestic and small business customers. It does so by enabling aggregated meter data from sub meters on private networks to be submitted into Settlement in lieu of data from Settlement meters installed at the Boundary Point.

Elexon recommends Emergent Energy is designated as a Third Party Proposer for the attached Modification Proposal

Elexon recommends that this Modification is progressed to the Assessment Procedure for an assessment by a Workgroup

Elexon does not consider it likely that this Modification will impact the European Electricity Balancing Guideline (EBGL) Article 18 terms and conditions held within the BSC

This Modification is expected to impact:

- Suppliers
- Generators
- Half Hourly Data Collectors (HHDCs)
- Half Hourly Market Operator Agents (HHMOAs)
- Licence Distribution System Operators (LDSOs)

ELEXON

Phase

Initial Written Assessment

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About This Document

You can find the definitions of the terms and acronyms used in this document in the BSC Glossary[1].

This document is an assessment of a request by a non-BSC Party to be designated by the BSC Panel to raise a specific Modification Proposal.

Elexon will present this designation request and the associated Modification Proposal to the Panel on 8 June 2023. The Panel will consider the recommendations and decide whether to designate the Third Party Applicant and if so, this document will form the Modification Proposal's Initial Written Assessment (IWA) and the Panel will agree how to progress the Modification Proposal.

There are 3 parts to this document:

- This is the main document. It provides details of the Designation Request and the associated Modification Proposal, an assessment of the potential impacts and a recommendation of how the Modification should progress, including the Workgroup's proposed membership and Terms of Reference.
- Attachment A contains the Designation Request Form.
- Attachment B contains the Modification Proposal Form.

[1] https://www.elexon.co.uk/glossary/?show=all

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Not sure where to start?

We suggest reading the following sections:

- Have 5 minutes? Read section 1
- Have 15 minutes? Read sections 1, 4, 5 and 6
- Have 30 minutes? Read all sections
- Have longer? Read all sections and the annexes and attachments.

1 Summary

Designation Request

Emergent Energy is requesting Designation to raise this Modification Proposal. They have designed and developed the solution which they are trialling live in the market via the BSC Sandbox. This Modification takes into account the successes and learnings from the Sandbox trial, as well as Emergent Energy's unique data and insights relating to its practical implementation. Emergent is interested and motivated to address the issue in the BSC because it negatively impacts its business.

Why change?

Where one or more customers on a private wire network (henceforth private network) opt for a third party supply, corrective action is required to avoid the double counting of metered volumes in Settlement.
The BSC provides ways to avoid the double counting of metered volumes on private networks via difference metering option and shared SVA metering.

The Proposer believes that these existing options are unsatisfactory when applied to private networks that include domestic and small business (i.e. sub 100kW) customers. This is due to the operational requirements placed on, and the lack of incentive for, Third Party Suppliers (TPSs) to meet such requirements.

Solution

The solution proposes a new 'on-site aggregation' methodology for facilitating Third Party Access on private networks to which domestic and small business (i.e. sub 100kW) customers are connected. This methodology can be used instead of difference metering, but requires the BSC to allow aggregated meter data from sub-meters (relating to customers not opting for third party supply) on private networks to be submitted into Settlement (in lieu of data from Settlement meters installed at the Boundary Point).

Impacts and costs

We expect this Modification to impact BSCCo, Suppliers, Generators, LDSOs, HHDCs and HHMOAs. Costs and further impacts on market participants will be determined as part of the Assessment Procedure.

Implementation

This Modification will need to be implemented prior to the end of the Derogation Period which ends no later than 25 September 2024.

The Proposer and Elexon recommend an Implementation Date of:

- 29 June 2024 as part of the standard June 2024 BSC Release if an Authority decision is received on or before 6 June 2024; or

What is a Private Wire Network?

A private wire network is a term used to describe a Licence Exempt Network (LEN).

A LEN is a network which distributes power without the need for an electricity distribution licence. They can be connected to or stand apart from the public network (comprising the distribution and transmission networks). Operators of these networks (otherwise known as distribution exemption holders) must satisfy themselves that they can operate within the framework provided for by the Electricity (Class Exemptions from the Requirement for a Licence) Order 2001 and appropriate provisions of the Electricity Act 1989, particularly Schedule 2ZA which sets out the duties of distribution exemption holders.

- 5 working days after Authority decision (though no earlier than 4 July 2024), as part of a special BSC Release if an Authority decision is received after 6 June 2024.

Recommendation

The Panel is invited to designate Emergent Energy to raise this Modification and agree that it is submitted to the Assessment Phase for assessment by a Workgroup.

2 Designation Request

How does the designation process work?

This is the third designation request that Elexon has received following the implementation of P370 'Allow the Panel to designate non-BSC Parties to raise Modification' in April 2019. We therefore think that it is beneficial to include a brief summary of the process.

Non-BSC Parties can ask the Panel to designate them to raise a specific Modification Proposal. Industry are notified of a designation request in advance of the Panel meeting where the Panel will decide whether or not to designate. The request is presented to the Panel, along with the proposed Modification.

In considering the application, the Panel may:

- before designating a person as a Third Party Proposer, conduct such consultation with BSC Parties and interested third parties as it considers necessary;
- refuse to accept an application for designation as a Third Party Proposer, in which case we shall provide the Third Party Applicant with the Panel's reasons for such refusal and notify industry of the decision; and
- approve the request, in which case the Third Party Proposer shall be treated as a Proposer under Section F of the BSC, and we shall notify industry of the decision.

BSC Parties and the Third Party Applicant may appeal the Panel decision to Ofgem.

Designation Request

The designation request was submitted by Emergent Energy on 31 May 2023 and can be found in Attachment A.

Rationale for requesting designation as a Third Party Proposer

Emergent Energy believes that it is best placed to raise this Modification Proposal. They have designed and developed the solution which is being trialled live in the market via the BSC Sandbox. Following the trials success, they believe that an enduring change to the BSC is necessary. Emergent Energy has unique data and insights relating to its practical implementation as well as substantial experience of exploring and testing alternative methods and solutions in liaison with Elexon and Ofgem prior to the Sandbox trial.

This includes attempts to apply difference metering and a novel 'feed-through' metering arrangement based on allowable configurations for Complex Sites[2]. They have also explored an option to include provisions within P379 'Multiple Supplier through Meter Splitting' but this Modification was ultimately withdrawn by the Proposer.

[2] A 'Complex Site' means; any site that requires a 'Complex Site Supplementary Information Form' to enable the HHDC to interpret the standing and dynamic Metered Data relating to SVA MSs for Settlement purposes to be provided to the HHDC in addition to the D0268 Half Hourly Meter Technical Details.

Reasons why the Third Party Applicant believes that they have an interest in the Code

The issue that this Modification seeks to address negatively impacts Emergent Energy's business model. In developing private network schemes, their goal is to offer benefits to customers versus competing offers on price and service. They therefore consider it essential that customers on private networks are free to choose whether to be supplied by the Supplier associated with the private network or by an alternative Third Party Supplier of their choice.

As a Private Network Operator (PNO), Emergent Energy has an obligation (discussed below) to facilitate access to Third Party Suppliers (TPSs) on its private network(s). This proposed Modification argues that PNOs (who are non-BSC Parties) should have a greater role to play in delivering arrangements to support Third Party Access within the BSC. Emergent Energy's proposed solution seeks to achieve this in such a way that benefits BSC Parties (i.e. Third Party Suppliers and Supplier Agents) and small business and domestic customers on private networks.

3 Why Change?

What is the issue?

Customers on private networks may be supplied electricity from the Boundary Point Supplier. The Boundary Point Supplier is usually appointed by the PNO.

Customers on private networks also have the right to switch to a Third Party Supplier of their choice. Under the Electricity and Gas (Internal Markets) Regulations 2011 (Statutory Instrument (SI) 2011 No. 2704), PNOs are obligated to facilitate access to TPSs.

Where one or more customers on a private network opt for a third party supply, corrective action is required to avoid the double counting of metered volumes in Settlement. This is because Third Party Meter readings submitted into Settlement by the TPS Agent also contribute to the aggregate Boundary Point Meter reading submitted into Settlement and allocated to the energy account of the Boundary Point Supplier.

The BSC provides ways to avoid the double counting of metered volumes on private network via difference metering and shared SVA metering.

The Proposer believes that these existing options are unsatisfactory when applied to private networks that include domestic and small business customers[3] due to the operational requirements placed on, and the lack of incentive for, TPS to meet such requirements.

Difference Metering

A difference metering approach involves the deduction of the consumption through the Third Party Meter(s) from the Boundary Point Meter. This approach is applicable whenever one or more (but not all) customers on a private network have a Settlement Meter with a TPS[4].

The operational requirements placed on TPSs enabling them to participate in difference metering arrangements are as follows:

a) A TPS on a private network must appoint the same HHMOA and HHDC as the Boundary Point Supplier. This requires coordination between appointed TPSs and the Boundary Point Supplier. It may also result in TPSs having to establish new contractual arrangements with HHMOAs and HHDCs of whom they have not previously appointed.

b) Accurate Settlement requires allocations among Suppliers to be done on a Half-Hourly (HH) basis for difference metering. HH Settlement of domestic and small business customers is not currently mandated or standard practice. TPSs are

What is a Boundary Point?

a point at which any Plant or Apparatus not forming part of the Total System is connected to the Total System.

What is a Boundary Point Supplier?

the Supplier with responsibility for flows of electricity from (or to) the licenced distribution network

What is a Third Party Supplier?

A Supplier appointed by a customer on the private network.

What is a Boundary Point Meter?

A BSC Code of Practice (CoP) compliant Metering System located at the Boundary Point.

What is a Third Party Meter?

a Settlement Meter installed for the customer on the private network.

[3] The Proposer argues that this issue is felt most prominently in new build housing schemes which is the main focus for private network development currently in the market. Notably, customers move into a home which is supplied by the private network by default, and face barriers to switching away.

[4] BSCP502 'Half Hourly Data Collection for SVA Metering Systems Registered in SMRS' (section 4.9.3) and the Retail Energy Code (REC) Metering Operations Schedule recognises this approach as a Complex Site, which allows a differencing algorithm to be implemented in Settlement.

therefore required to establish voluntary, non-standard arrangements to settle their private network customers on a HH basis.

Under the Electricity and Gas (Internal Markets) Regulations 2011, the responsibility for finding a TPS who will participate in difference metering arrangements sits with the customer. This can be very difficult for individual domestic or small business customers to achieve as there is little commercial incentive for Suppliers to establish the bespoke arrangements required, given the relatively low electricity supply volumes that would likely result. It is therefore the Proposer's view that domestic and small business customers face substantial barriers to being able to switch to a Supplier of their choice.

It is also the Proposer's view that inefficiencies arise in the differencing metering approach when there is more than one TPS supplying customers on a private network. For example, where a private network is connected to 100 domestic properties, 50 of which are supplied by a license exempt Supplier appointed by the PNO and 50 of which are supplied by 20 different TPSs, all 20 TPSs must establish the bespoke arrangements mentioned above to facilitate the scheme.

Shared SVA Metering

Suppliers may establish a Shared SVA Metering Arrangement in which Meter readings recorded at the Boundary Point are apportioned between Suppliers (for example, based on readings from non-Settlement Meters on a private network).

Under this arrangement, an Allocation Schedule must be prepared in accordance with BSCP550 'Shared SVA Meter Arrangement' which details how the consumption data is split between Suppliers[5].

The Proposer argues that given the number of potential TPSs involved in the shared arrangement, accurately allocating volumes can be complex. Therefore, the operational requirements placed on TPSs discussed above (which act as a barrier to domestic and small business customers on private networks being able to switch Suppliers) are even more pronounced here.

Full Settlement Metering

Full settlement arrangements are only applicable if every customer on a private network has opted for third party supply. The arrangements involve installing Settlement Meters for all consumption and generation on the private network, and treating each of those metering points as if they were connected to the Total System[6]. It therefore does not create a scenario that risks the double counting of metered volumes.

[5] In line with Section K2.5.4, where the Shared SVA Meter Arrangement is made by two or more Suppliers, the Suppliers shall agree which of them is to act as primary Supplier for the purposes of the Code, failing which the Panel shall nominate one of them to act as primary Supplier. The Primary Supplier shall ensure that an Allocation Schedule and the associated rules for application and maintenance of the Allocation Schedule are established and submitted in accordance with BSCP550.

[6] The BSC refers to a private network with full Settlement arrangements in place as an 'Associated Distribution System'. Metering Systems on an Associated Distribution System are treated in the same way as any other site connected to the Total System and are subject to the normal LDSO Use of System (UoS) charges. This means that customers connected to the private network cannot benefit from netting against on-site (renewable)

Nonetheless, while it is important to note the existence of this arrangement, this Modification is focused primarily on private networks with a mix of customers who have opted for a third party supply and customers who are supplied by the Boundary Point Supplier appointed by the PNO.

Background

Prior to this Modification Proposal, Emergent Energy submitted a Derogation Request to use the BSC Sandbox to trial their proposed solution to the issue outlined above. The request was approved by Ofgem on 26 May 2021 in line with the BSC Panel's recommendation. The Derogation commenced on 29 September 2021 and will end no later than 25 September 2024. This Modification will need to be implemented prior to this end date.

Emergent Energy's proposed solution – which is described in more detail in section 3 – involves a new on-site aggregation methodology for submitting metered data from private networks into Settlement. This methodology is being trialled across several of its sites. In an update provided in February 2023, Emergent Energy highlighted that the new methodology has proven to be successful in delivering equivalent Settlement results to the existing methodology of difference metering.

Emergent Energy has now submitted a Modification Proposal to make an enduring change to the BSC which takes into account learnings from the Sandbox trial. The Modification is being proposed for Assessment by a Workgroup where further evidence from the trial will be presented.

Desired outcomes

To establish a new methodology for facilitating Third Party Access on private networks to which domestic and small business customers (i.e. sub 100kW customers) are connected. The new method will be one that can be used instead of difference metering, which is the current default method for private networks where Third Party Access is required.

The new methodology will be more operationally efficient than difference metering and provide better outcomes for domestic and small business customers who may wish to switch from their Boundary Point Supplier to a Third Party Supplier (and vice versa).

For example, it will not require TPSs to establish new contractual arrangements with HHMOAs and HHDCs of whom they have not previously appointed. Instead it will be delivered by the PNO in collaboration with the Boundary Point Supplier and Supplier Agents.

generation, and would have to pay system charges for that generation even though they are not using the Total System.

What is a Derogation Request?

Innovators may want to trial an activity or arrangement, in a live market environment, that wouldn't normally be allowed by the BSC rules. Through the BSC Sandbox they can seek a temporary BSC Derogation from having to comply with one or more of these rules.

For each application, Elexon assesses the risks and impacts of the requested derogation on behalf of the BSC Panel. The Panel makes a recommendation to Ofgem. Ofgem makes the final decision.

The maximum Derogation Period permitted by the BSC is three years. This comprises two years maximum for the Trial Period where the applicant tests their innovation, and any additional Transition Period during which they exit from the Derogation.

A BSC Modification Proposal to implement a permanent rule change may be submitted during the Transition Period.

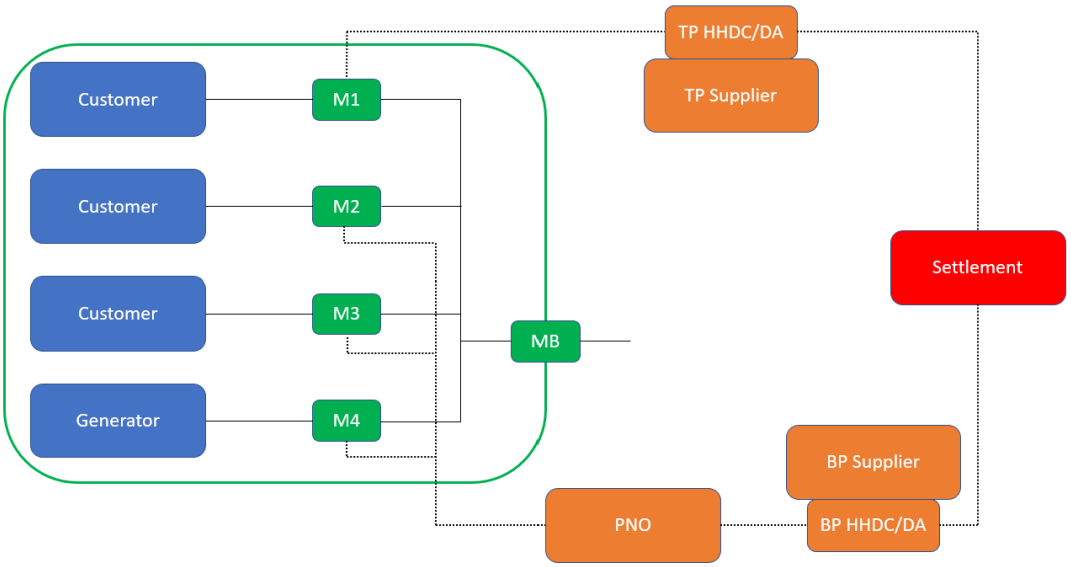
4 Solution

Proposed solution

Each customer supplied by the private network's Boundary Point Supplier has their own non-settlement (sub) meter with HH data available. This data is used for retail billing.

The proposed solution will enable this data to be aggregated and submitted into Settlement in lieu of the reading from the site's Boundary Point Meter. This volume will therefore not include the volumes supplied by the TPSs. Volumes for third party supplied customers on the private network will be settled directly by the TPS (HH or Non-HH as per the discretion of the TPS), avoiding any double counting of Settlement volumes than can result from third party supplied arrangements.

It will also account for on-site generation as per the diagram below.



In this example:

1. Customer 1 (top) is supplied by a TPS. The supplied volumes are metered by Settlement meter M1 and submitted into Settlement by the TPS.

2. Customers 2 and 3 are supplied by the PNO (or an entity associated with the PNO) who uses non-Settlement (sub-meters) M2 and M3 to bill these customers.

3. The PNO supplies electricity from an on-site generation source (e.g. solar PV panels[7]) to customers 2 and 3, as well as electricity imported from the Distribution Network (grid). The generated volumes from the on-site generation source are metered by non-Settlement (sub-meter) M4.

4. The PNO uses this data from M2, M3 and M4 to produce a net import or net export figure for every HH period. For example, M4 – (M2 + M3)[8]. This figure is then submitted into Settlement in place of the readings from the Boundary Point Meter (MB).

[7] i.e. solar photovoltaic panels
[8] the onsite customer will always consume from the on-site generation source before taking demand from the Distribution Network

Operational Requirements

To ensure the above onsite aggregation methodology results in accurate Settlement outcomes for private networks, procedural arrangements will need to be established as part of the solution. The Proposer suggests the following:

1. The private network sub-meters will be required to conform to Code of Practice (CoP) 10: The Metering of Energy via Low Voltage Circuits for Settlement Purposes.

2. The HHDC associated with the PNO will be responsible for retrieving, aggregating and submitting the necessary data and into Settlement. The HHDC may, at their discretion, choose to coordinate with a PNO to fulfil the requirements, so long as the operating standards required of HHDCs are maintained. The standard requirements on HHDC activities (e.g. in relation to data validation and estimation) shall apply.

3. It will be the HHMOA associated with the PNO who is responsible to identifying and fixing faults on the private network sub-meters. The HHMOA may choose to coordinate with a PNO to fulfil the requirements, so long as the operating standards required of HHMOAs are maintained. The standard requirements on HHMOA activities (e.g. in relation to faults and installation) shall apply.

4. For each private network that adopts this approach, a test akin to a Complex Site Validation Test[9] will be required to ensure that the aggregation methodology is being applied correctly. This will require the HHDC and HHMOA to establish the data integrity of the individual meters involved and the overall aggregation methodology that is being applied to these meters. This point is discussed further in section 4).

5. The solution will be restricted to private networks with TPS Metering Systems and that are sub 100kW capacity.

6. Metering System Identifiers (MSIDs)[10] of private network customers supplied by the PNO (or an associate) will be required to be de-energised and not logically disconnected. While logical disconnections typically happen under the current arrangements, this results in customers having to request a new MSID if they wish to switch to a TPS. By leaving the MSID in a de-energised state, the MSID can simply be reinstated when the customer switches to a TPS.

Benefits

This Modification will benefit domestic and small business customers (sub 100kW) on private networks. It will do so by reducing the operational requirements on potential TPSs which enable them to take part in private network arrangements where difference metering is or would be used. It should therefore be easier for these customers to find TPSs willing to supply their energy[11]. It should also be easier for Suppliers to attract new domestic and small business customers who are connected to a private network and are currently being supplied by the Boundary Point Supplier (meaning greater competition which can lead to improved outcomes for the market as a whole).

[9] See BSCP504, paragraph 3.5.6
[10] also known as Metering Point Administration Numbers (MPANs)
[11] This is particularly relevant given today's focus on new build housing, where private networks can be established at the point of construction. Customers who move into new build homes are often a customer of the PNO by default.

It will have environmental benefits as private networks provide a mechanism for locally generated (renewable) electricity to be generated and supplied to customers. On site renewable generation (e.g. solar PV) remains an option for private networks operating under the proposed methodology.
Integrated with other decarbonisation technologies such as heat pumps, electric vehicle chargers and storage, private networks have potential to reduce capacity strains on the Distribution Network and unlock value flexibility for the overall energy system.

Applicable BSC Objectives

The Proposer believes that this Modification will better facilitate Applicable BSC Objectives (c), (d) and (e).

Objective (c) - Promoting effective competition in the generation and supply of electricity and (so far as consistent therewith) promoting such competition in the sale and purchase of electricity

The proposed Modification improves access to TPSs for customers on private networks. Removing this barrier therefore supports increased competition between TPSs. It also improves the overall viability of private networks, increasing market competition from PNOs and Boundary Point Suppliers who may be associated with PNOs.

Objective (d) - Promoting efficiency in the implementation of the balancing and settlement arrangements

As above, the facilitation of TPS arrangements on private networks with domestic and small business customers will no longer require erroneous operational activities to be undertaken by TPSs. Instead, the required activities are undertaken by the Boundary Point Supplier and Supplier Agents, working in coordination with the PNO, who are already accessing and processing the relevant data as part of their day to day activity.

Objective (e) – Compliance with the Electricity Regulation and any relevant legally binding decision of the European Commission and/or the Agency [for the Co-operation of Energy Regulators]

The Proposer believes that, due to a legally binding decision of the European Commission, domestic and small business customers on private networks have the legal right to switch Supplier. Currently, this is not being effectively facilitated by the BSC. The legal right for customers to access a TPS arrangements was established in the UK via Schedule 2ZA to the Electricity Act 1989, which implemented the position as clarified in the EU's Third Package of internal EU electricity market measures in Directive 2009/72/EC (Electricity Directive).

Implementation approach

This Modification will need to be implemented prior to the end of the Derogation Period which occurs no later than 25 September 2024 to avoid Emergent's sandbox arrangements having to revert to the current compliance baseline.

What are the Applicable BSC Objectives?
(a) The efficient discharge by the Transmission Company of the obligations imposed upon it by the Transmission Licence
(b) The efficient, economic and co-ordinated operation of the National Electricity Transmission System
(c) Promoting effective competition in the generation and supply of electricity and (so far as consistent therewith) promoting such competition in the sale and purchase of electricity
(d) Promoting efficiency in the implementation of the balancing and settlement arrangements
(e) Compliance with the Electricity Regulation and any relevant legally binding decision of the European Commission and/or the Agency [for the Co-operation of Energy Regulators]
(f) Implementing and administrating the arrangements for the operation of contracts for difference and arrangements that facilitate the operation of a capacity market pursuant to EMR legislation
(g) Compliance with the Transmission Losses Principle

In light of this, the Proposer and Elexon recommend an Implementation Date of:

- 29 June 2024 as part of the standard June 2024 BSC Release if an Authority decision is received on or before 6 June 2024; or
- 5 working days after Authority decision (though no earlier than 4 July 2024), as part of a special BSC Release if an Authority decision is received after 6 June 2024.

5 Areas to Consider

In this section we highlight areas which we believe the Panel should consider when making its decision on how to progress this Modification Proposal, and which a Workgroup should consider as part of its assessment of this Modification. We recommend that the areas below form the basis of a Workgroup's Terms of Reference, supplemented with any further areas specified by the Panel.

Areas to consider

The table below summarises the areas we believe a Modification Workgroup should consider as part of its assessment of this Modification:

Areas to Consider (specific)
Does the proposed on-site aggregation methodology result in accurate settlement outcomes (particularly in relation to difference metering)?
Should the proposed on-site aggregation methodology be required to conduct unmetered load tests?
Should there be a requirement for Elexon to maintain a central database of sites where on-site aggregation is applied? Do the benefits of maintaining a central register outweigh the costs of creating and maintaining this central register?

Areas to Consider (standard)
How will this Modification impact the BSC Settlement Risks?
What changes are needed to BSC documents, systems and processes to support this Modification and what are the related costs and lead times? When will any required changes to subsidiary documents be developed and consulted on?
Are there any Alternative Modifications?
Should this Modification be progressed as a Self-Governance Modification?
Does this Modification better facilitate the Applicable BSC Objectives than the current baseline?
Does this Modification impact the EBGL provisions held within the BSC, and if so, what is the impact on the EBGL Objectives?

Unmetered Load Tests

The Proposer recommends that for sites where on-site aggregation is in place, the relevant parties will be required to fulfil a test akin to a Complex Site Validation Test. The relevant HHDC and HHMOA will work together to establish the data integrity of the individual meters involved in the aggregation calculations, and the overall aggregation calculations that are being applied to these meters themselves.

Elexon has raised that this approach will fail to capture unmetered loads that may exist on a private network, something which is accounted for by difference metering. Emergent Energy noted that, while the stated purpose of difference metering is to facilitate third party access on private networks, this methodology indirectly captures any unmetered loads of private networks. The unmetered loads are captured within the loads derived from the Boundary Point Meter.

Consequently, Emergent Energy were required to undertake a test to demonstrate that unmetered loads did not exist on the sites enrolled onto their BSC Sandbox trial.

The Proposer's view is that the 'unmetered loads' test should not be an enduring requirement of the solution for the following reasons:

1. While difference metering offers the theoretical benefit of capturing unmetered loads on private networks, it does not occur in practice. This is because, for the reasons outlined above, difference metering is not an effective solution for PNOs or PNO customers. If an unmetered load is present on an existing network, there is little reason for a PNO scheme to be established that would see difference metering applied and the unmetered load captured.

2. The industry should not rely on difference metering, or an alternative solution aimed at facilitating Third Party Access on private networks, to capture unmetered loads. There are standard industry procedures in place for minimising and addressing unmetered loads. The existence or otherwise of such loads on a private network points to the failure of these other processes. If the industry is concerned about unmetered loads, it should re-examine why the existing processes for managing these loads of ineffective.

3. The idea that difference metering captures unmetered loads on a site is unrelated to the relative superiority of the proposed on-site aggregation methodology compared to difference metering for delivering TPS on private networks involving domestic and small business customers.

4. Emergent Energy's Sandbox trial has identified that the costs associated with unmetered load tests on existing private networks with TPS can be very high. This is because the PNO does not have direct access to metered data from the third party supplied customers. On large schemes, the only way to accurately meter third party supplied customers' loads is to install new meter infrastructure, which is cost prohibitive. The only alternative is to temporarily disconnect the electrical supply to these customers while the test is undertaken, which is an unacceptable level of disruption. Further details (and evidence) from the Sandbox trial will be presented to the Workgroup during the Assessment Phase.

Requirement for Elexon to maintain a central database of sites where on-site aggregation is applied

Emergent Energy does not believe that this is necessary, but note that it is something the Workgroup may wish to consider. Discussions could focus on:

- the data that should be included in any notification to Elexon;
- any potential commercial confidentiality or operational issues (e.g. how to keep data up to date on a scheme that may see varying levels of customer switching); and
- whether the costs of creating and maintaining a register outweigh the benefits of having one available.

6 Likely Impacts and costs

Costs will be assessed during the Assessment Procedure. However, for those roles we believe will be impacted, we have indicated in the impacts section whether we believe the costs are likely to be high, medium or low based on the following categories:

- High: >£1 million
- Medium: £100-1000k
- Low: <£100k

Impact on BSC Parties and Party Agents		
Party/Party Agent	Potential Impact	Potential cost
Supplier	Suppliers will need to be aware of the new On-Site Aggregation methodology and be able to support it should they choose to partner with PNOs who implement it.	L
Generator	If an independent generator partners with a PNO offering on Site aggregation they will need to understand the methodology and how it interacts with any other subsidies they may receive. This impact relates primarily to non-BSC (independent) Generators, but due to their interaction with the BSC in this scenario, it is important to capture here.	L
Licensed Distribution System Operator (LDSO)	LDSOs will need to be aware if an on-site aggregation methodology is being used on a particular site as this may impact the DUoS charges levied on Suppliers to the site. The specific charging methodology LDSOs should apply in the event of a scheme being in place is the subject of a second Sandbox trial by Emergent, which is expected to lead to a DCUSA Modification being raised in 2024.The current working assumption is that the BSC Modification and potential DCUSA Modification are independent. If the DCUSA Modification is not implemented, this will not materially impact the BSC Modification.	L

Impact on the NETSO	
Potential Impact	Potential cost
No impact anticipated	

Impact on BSCCo		
Area of Elexon	Potential Impact	Potential cost
No impact anticipated		

Impact on BSC Settlement Risks
Impact on Settlement Risks will be considered during the Assessment Procedure[12]

Impact on BSC Systems and processes	
BSC System/Process	Potential Impact
No impact anticipated	

Impact on BSC Agent/service provider contractual arrangements	
BSC Agent/service provider contract	Potential Impact
HHDCs	HHDCs associated with the PNO's Supplier will be responsible for retrieving, aggregating and submitting the necessary metered data into Settlement for Boundary Point Supplied customers and on-site generation sources. They will also need to work with HHMOAs associated with the PNO's Supplier to establish the data integrity of the individual meters involved and the overall aggregation methodology that is being applied to these meters.
HHMOAs	HHMOAs associated with the PNO's Supplier will be responsible for identifying and fixing faults on private network sub-meters. They will also need to work with associated with the PNO's Supplier to establish the data integrity of the individual meters involved and the overall aggregation methodology that is being applied to these meters.

Impact on Code	
Code Section	Potential Impact
Section L: Metering	Section L will need to be updated to reflect the solution.

Impact on MHHS
The impact on MHHS will be considered during the Assessment Procedure. Elexon's initial view is that the new data service requirements will need to be added to the relevant data service BSCPs.

[12] A risk assessment was previously carried out by Elexon as part of Emergent Energy's derogation request. This can be found here and will be used, in part, to inform the assessment on Settlement Risks and whether these risks apply to the Modification.

Impact on EBGL Article 18 terms and conditions
Elexon believes it is unlikely that this Modification will impact any of the EBGL Article 18 Terms and Conditions held within the BSC, but will assess and verify this with the industry Workgroup as part of the Assessment Phase.

Impact on Code Subsidiary Documents	
CSD	Potential Impact
BSP502 'Half Hourly Data Collection for SVA Metering Systems Registered in SMRS'	BSCP502 will need to be updated to reflect the solution. This will be drafted during the Assessment Procedure.

Impact on other Configurable Items	
Configurable Item	Potential Impact
No impact anticipated.	

Impact on Core Industry Documents and other documents	
Document	Potential Impact
Retail Energy Code (REC)	This Modification proposes to place a requirement on the SVA MOA appointed by the Boundary Point Supplier to rectify any faults found with the sub meters used in the on-site aggregation methodology. As SVA MOAs are governed under the Retail Energy Code (REC), we believe that this SVA MOA specific requirement will need to be delivered as a REC Change.

Impact on a Significant Code Review (SCR) or other significant industry change projects
Elexon requested that Ofgem treat this Modification as a SCR exempt Modification on 1 June 2023.

Impact of the Modification on the environment and consumer benefit areas:	
Consumer benefit area	Identified impact
1) Improved safety and reliability No impact	Neutral
2) Lower bills than would otherwise be the case This Modification should lower bills for customers on private networks who wish to be supplied by TPSs. TPSs will no longer incur costs as a result of establishing bespoke arrangements in these circumstances.	**Positive**
3) Reduced environmental damage This Modification will support growth in the use of private networks to support the financing of decarbonisation technologies for housing and small business customers. Private networks involving storage and other means of demand control will also deliver reductions in grid capacity constraints and unlock value flexibility. This will support the overall transition to a Net Zero emission electricity grid.	**Positive**
4) Improved quality of service This Modification will make switching easier for customers on private networks.	**Positive**
5) Benefits for society as a whole This Modification will result in benefits for society by supporting innovation in the delivery of statutory Net Zero targets and creating jobs.	**Positive**

What are the consumer benefit areas?

1) Will this change mean that the energy system can operate more safely and reliably now and in the future in a way that benefits end consumers?

2) Will this change lower consumers' bills by controlling, reducing, and optimising spend, for example on balancing and operating the system?

3) Will this proposal support:

i) new providers and technologies?

ii) a move to hydrogen or lower greenhouse gases?

iii) the journey toward statutory net-zero targets?

iv) decarbonisation?

4) Will this change improve the quality of service for some or all end consumers. Improved service quality ultimately benefits the end consumer due to interactions in the value chains across the industry being more seamless, efficient and effective.

5) Are there any other identified changes to society, such as jobs or the economy.

7 Proposed Progression

Next steps

Elexon recommend that the Panel designate Emergent Energy as the Third Party Proposer of this Modification.

The Proposer and Elexon recommend that this Modification is progressed to the Assessment Procedure for an assessment by a Workgroup.

We propose the first Workgroup is held in late June 2023, subject to the Panel's agreement to progress this Modification into the Assessment Procedure and forming a quorate Workgroup.

Workgroup membership

Elexon is seeking Workgroup members with expertise in:

- Private distribution networks
- Third Party Access
- Complex site processes and metering operations
- Settlement

Timetable

Proposed Progression Timetable	
Event	Date
Present Initial Written Assessment to Panel	8 June 2023
Workgroup Meeting 1	W/C 19 or 26 June or 3 July 2023
Workgroup 2 – 5	July 2023 – October 2023
Assessment Procedure Consultation (15 WDs)	16 October 2023 – 3 November 2023
Workgroup Meeting 6	W/C 13 November 2023
Present Assessment Report to Panel	14 December 2023
Report Phase Consultation (12 WDs)	18 December 2023 – 5 January 2024
Present Draft Modification Report to Panel – late paper and subject to RC responses	11 January 2024
Issue Final Modification Report to Authority	17 January 2024

8 Recommendations

We invite the Panel to:

- **DESIGNATE** Emergent Energy to raise the attached Modification Proposal;
- **AGREE** that this Modification progresses to the Assessment Procedure;
- **AGREE** the proposed Assessment Procedure timetable;
- **AGREE** the proposed membership for the Modification Workgroup; and
- **AGREE** the Workgroup's Terms of Reference.