Request for Information

Issue 80 'Increase in minimum data storage requirements within the relevant metering CoPs'

Issue 80 seeks to understand whether the minimum data storage requirements within the relevant metering Codes of Practices (CoP) should be increased. The Issue Workgroup will consider whether a consequential Change Proposal should be raised.

This is a Request for Information (RfI) issued on behalf of Issue Workgroup 80.

This RfI closes on **5pm** on **Tuesday, 18 June 2019**

This RfI is intended for:

- Meter Outstation manufacturers
- Meter Operator Agent
- Half Hourly Data Collectors
- the Central Data Collection Agent,
- Suppliers
- Registrants
- Any other interested Parties

ELEXON

Phase

Initial Written Assessment

Definition Procedure

Assessment Procedure

Report Phase

Implementation

© ELEXON Limited 2019

Contents

1 Summary 3

2 Background 4

Appendix 1: Glossary & References 9

About This Document

This Request for Information is to invite Outstation manufacturers, Meter Operator Agents (MOAs), Half Hourly Data Collectors (HHDCs), the Central Data Collection Agent (CDCA), Suppliers, Registrants and other interested parties to provide their views on Issue 80 and the proposed solution. At its meeting scheduled for 24 June 2019 the Issue Workgroup will discuss the RfI responses, before making a recommendation to the BSC Panel on whether or not to raise a Change Proposal to amend the minimum data storage requirements in the metering CoPs.

There are three parts to this document:

- This is the main document. It provides details of the issue raised. It also summarises the Proposer's key views.
- Attachment A contains the Issue 80 proposal form.
- Attachment B contains the specific questions on which the Issue Workgroup seeks your views. Please use this form to provide your response to these questions, and to record any further views or comments you wish the Issue Workgroup to consider.

Contact

Fungai Madzivadondo

020 7380 4341

Fungai.Madzivadondo@elexon.co.uk

© ELEXON Limited 2019

1 Summary

The Issue 80 Workgroup has been established to consider increasing the minimum data storage requirements within the metering Codes of Practice (CoPs). The Proposer (the Association of Meter Operators (AMO)) believes that the minimum data storage requirements for Outstations within the metering Codes of Practice (CoPs) are now 30 years old and reflect the cost of memory and equipment at that time. MOAs regard this requirement as unreasonably low. The Issue Workgroup is to review if the current BSC requirements should be amended.

What is the Issue

The minimum data storage requirements within the metering Codes of Practice (CoPs) are now 30 years old and reflect the cost of memory at that time. MOAs regard this requirement as unreasonably low and, through this Issue, should be reviewed. Outstation[1] memory is now cheaper and it is cost effective to increase Outstation memory. Also, more memory will allow more time to read difficult to access sites.

Solution

The Issue Workgroup will consider the issue raised and responses from this Request for Information to help determine what the suitable minimum data storage capacity for Outstations should be in the CoPs. A period of 60 days (6 channels of 30 minutes Demand Periods) would seem a minimum however, to further futureproof the Metering Equipment then over 100 days may be appropriate.

Depending on stakeholder feedback the Issue Workgroup may propose that a Change Proposal is raised to amend the relevant CoPs to reflect a new minimum data storage capacity for Outstations.

[1] Section X Annex X-1 defines a Meter as a device which measures Active or Reactive Energy (see Section X Annex X-1 definition).
Section X Annex X-1 defines an outstation as an equipment which receives and stores data from a Meter r(s) for the purpose, inter alia, of transfer of that metering data to the CDCA or a Data Collector, as the case may be, and which may perform some processing before such transfer and may be one or more separate units or may be integral with the Meter.

© ELEXON Limited 2019

2 Background

Justification for Examining Issue

An Outstation is an item of Metering Equipment which receives and stores data from a Meter(s). Its other main purpose is to transfer that metered data to a HHDC or CDCA). An Outstation may be integral with a Meter or separate from a Meter(s).

Meter Storage Requirements

Section 5.5.1 'Data storage' of the CoPs set out the minimum data storage requirements for Outstations. The data storage capacity of an Outstation is limited by its memory capacity. The data storage requirements were originally determined within the Pooling and Settlement Agreement, based on the technology available at that time. Since the 1990's the cost of memory has reduced significantly. The Proposer considers it appropriate to increase the minimum data storage capacity requirements to reflect the reduction in memory costs over the past 30 years. This Issue is focused on "conventional" Half Hourly Metering Equipment. It is not seeking to consider Smart Metering Equipment Technical Specifications (SMETS) equipment which is defined elsewhere.

The following table sets out the current minimum data storage capacities for each Demand Value[2], with a 30 minute Demand Period[3]:

Metering Codes of Practice (CoP)	Minimum data storage capacity
CoP1 – exceeding 100MVA	10 days
CoP2 – not exceeding 100MVA	10 days
CoP3 – not exceeding 10MVA	20 days
CoP5 – up to 1MW	20 days
CoP10 – up to 100kW	20 days

Options

Assuming an Outstation is configured to store 6 channels of Demand Values with a Demand Period of 30 minutes - if 15 minute Demand Periods were required, this would halve the number of days storage. The table below gives some example options:

Option	30min Demand Period	15min Demand Period
A	60 days	30 day
B	120 days	60 days
C	200 days	100 days
D	366 days	183 days

[2] Demand Values means, expressed in kW, kvar or kVA, twice the value of kWh, kvarh or kVAh recorded during any Demand Period. The Demand Values are half hour demands and these are identified by the time of the end of the Demand Period.

[3] Demand Period means the period over which Active Energy, Reactive Energy or Apparent Energy are integrated to produce stored energy values. For Settlement purposes, unless the context requires otherwise, each Demand Period shall be of 30 minutes duration, one of which shall finish at 24:00 hours.

© ELEXON Limited 2019

Question 1
Do you believe that the minimum data storage capacity for Outstations should be increased? If so, to what? *Please provide your rationale.*
You are invited to provide your views using the response form in Attachment B.

Question 2
If you are a Outstation manufacturer with a CoP compliant Outstation, what is the data storage capacity for 1, 4 and 6 Demand Values with a 30 minute Demand Period? What is the data storage capacity for 1, 4 and 6 Demand Values with a 15 minute Demand Period? *Please provide your answer*
You are invited to provide your views using the response form in Attachment B.

The Issue 80 Proposer believes the current requirements are perverse as the higher materiality sites have a shorter minimum data storage capacity, although this is to an extent mitigated by the requirement in the metering CoPs to use main/check Meters, primary/secondary Outstations and, at some sites, duplicate communication lines for the metering CoPs applicable to larger sites.

Question 3
Do you believe the minimum data storage capacity should be the same for each metering Code of Practice? *Please provide your rationale.*
You are invited to provide your views using the response form in Attachment B.

Although this Issue is not seeking to consider SMETS, as a comparator the SMETS2 specification (4.6.5.5) requires 14 months of Half Hourly consumption data storage. SMETS will cover the lowest value energy metering but reflects the current cost/benefit for storage vs. cost. This specification was developed in more recent years and imposes a manufacturing cost on some 30 million meters.

Once the memory within an Outstation has been filled, it will overwrite the oldest records with the more recent metered data, known as 'rolling barrel' data storage. If the metered data is not recovered prior to being overwritten then the metered data is completely lost. Where actual metered data is lost then estimates are required. Sections 4.2.1 - 4.2.3 of BSCP502 'Half Hourly Data Collection for SVA Metering Systems Registered in SMRS' and Section 1.7 of BSCP03 'Data Estimation and Substitution for Central Volume Allocation' sets out the estimation methods for use where actual metered data is not available.

For Supplier Volume Allocation (SVA), the BSC also sets performance standards for Suppliers (Registrants of SVA Metering Systems) for the proportion of actual metered data at various Settlement runs. For SVA Export Metering Systems the estimation rules are more restrictive than for SVA Import Metering Systems making it very difficult to apply an estimate other than zero. So where actual metered data is no longer obtainable from a Metering System there is a material impact on the customer/export Supplier billing and Settlement. Inaccurate estimations, including for Central Volume Allocation (CVA)

© ELEXON Limited 2019

Metering Systems, impact all BSC Parties and can have a significant financial impact on Customers & Registrants at specific sites.

Question 4
Do you agree with the Proposer that Outstations are already being sold with considerably more memory than the current minimum BSC requirement? *Please provide your answer and rationale, giving details of costs associated with memory, where possible (please indicate if you would like your response to be treated as confidential)*
You are invited to provide your views using the response form in Attachment B.

Question 5 : Meter Manufacturer Specific Question
If the BSC requirements changed, would you need to seek re-approval for your product range? If so and with whom? How much would it cost to comply with the example options? *Please provide your rationale*
You are invited to provide your views using the response form in Attachment B.

Communications failure

Where communications with a Metering System fail, then a site visit can be initiated to locally interrogate the Outstation and download the metered data, ideally before any actual metered data is lost. There may be delays or an inability to obtain the actual metered data prior to it being overwritten due to:

- Inability to repair Communications Equipment promptly
- Delays associated with transfer of SIM communications equipment is recognised as taking many weeks, or may result in the need to visit site to change SIM cards or even Metering Equipment
- Difficulties accessing a site (adverse weather, remote locations (i.e. onshore or Offshore), etc.)
- Difficulties accessing Metering Equipment (customer unable to provide access, Distributor required to provide access, unmanned, etc.)
- Metering Equipment faults or compatibility between installed equipment and reading equipment preventing local interrogation
- Organisational difficulties, speed of mobilisation of manual meter reading
- Working patterns - Christmas, Easter and summer holidays mean that identification of communication failure, staff availability and access difficulties compound to delay local interrogation.

© ELEXON Limited 2019

Question 6
Have you experienced instances of data being overwritten or lost which additional memory would have resolved? *Please provide examples where possible and whether increasing the memory storage would address these instances.* *Please provide your rationale*
You are invited to provide your views using the response form in Attachment B.

It has been highlighted that although the Outstation may store more data, some data retrieval software or techniques may have further limitations of how much data can be retrieved.

Question 7: Data Collector Specific
When performing data retrieval is there any constraint on the time required or the amount of data to be retrieved, either remotely or locally? *Please provide examples where possible and whether increasing the memory storage would address these instances.* *Please provide your rationale*
You are invited to provide your views using the response form in Attachment B.

Previous Industry Discussions

There were proposals in the last few years to harmonise the Imbalance Settlement Period (ISP) across Europe to 5, 10 or 15 minutes which would increase the number of Demand Periods required to be stored by an Outstation. A change from 48 to 96 Demand Periods of metered data per day would have the effect of halving the days of data storage within existing Metering Equipment (for example the minimum 10 days reduces to 5 days). During several discussions on the impact, the desire to increase the minimum data storage capacity in the CoPs was considered to 'future proof' against a potential future harmonisation requirement. Consideration has been given to a time limited derogation, although any derogation would not necessarily extend for the full economic life of new Metering Equipment. The future requirement is unclear due to the impact of Brexit and/or the future electricity trading arrangements.

Although EU law (including that retained in the event of a no deal Brexit) requires all to move to 15 minute settlement by 18 December 2020, there is the possibility of a delay (formally termed a derogation) until at most 1 January 2025; or an indefinite exemption. The decision on exemption for GB rests entirely with Ofgem.

The original 2016 cost/benefit analysis on moving to 15 minutes showed a strong negative cost/benefit for GB and on this basis the UK Government has strongly argued to retain the exemption provision in subsequent legislation (the Clean Energy Package) which UK may choose to implement as well, even beyond Brexit. Also, the Clean Energy Package includes a requirement for physical smart metering to be to the same time duration as the Settlement period duration. Having a 15 minute Settlement does not necessarily imply 15 minute metering.

If an exemption is granted, then under current EU law (but this obligation is removed in the case of a no deal Brexit) there is then a requirement to do a cost/benefit analysis every three years. The department for Business, Energy & Industrial Strategies (BEIS) has previously said that if the cost/benefit analysis ever went positive it would then be open to moving to 15 minute Settlement.

© ELEXON Limited 2019

MOAs covering SVA & CVA Metering Systems have discussed extending the minimum data storage requirements at BSC and Association of Meter Operators (AMO) meetings over several years and continue to be supportive of implementing these changes.

In September 2017 ELEXON emailed 10 Outstation manufacturers (those with compliant Outstations on the CoP compliance and protocol approval list) and asked them if their existing Outstations would comply with a proposed storage period of 30, or 60 days, of 15 minutes Demand Periods. Only one manufacturer confirmed that their integral Outstation Meter could comply already (6 channels of 15 minute Demand Periods for 60 days). The others either did not respond (eight), or said they would respond (one), but didn't.

Question 8
Do you have further comments on Issue 80?
You are invited to provide your views using the response form in Attachment B

© ELEXON Limited 2019

Appendix 1: Glossary & References

Acronyms

Acronyms used in this document are listed in the table below.

Acronyms	
Acronym	Definition
AMO	Association of Meter Operators
BSC	Balancing & Settlement Code
CDCA	Central Data Collection Agent
CoPs	Metering Codes of Practices
CVA	Central Volume Allocation
HHDC	Half Hourly Data Collector
ISP	Imbalance Settlement Period
MOA	Meter Operator Agent
SVA	Supplier Volume Allocation

External links

A summary of all hyperlinks used in this document are listed in the table below.

All external documents and URL links listed are correct as of the date of this document.

External Links		
Page(s)	Description	URL
1	Issue 80 page on ELEXON Website	https://www.elexon.co.uk/smg-issue/issue-80/
3	Metering Codes of Practice on ELEXON Website	https://www.elexon.co.uk/bsc-and-codes/bsc-related-documents/codes-of-practice/
5	Smart Metering Equipment Technical Specifications	https://assets.publishing.service.gov.uk/government
5	BSCP502 on ELEXON Website	https://www.elexon.co.uk/csd/bscp502-half-hourly-data-collection-for-sva-metering-systems-registered-in-smrs/
5	BSCP03 on ELEXON Website	https://www.elexon.co.uk/csd/bscp03-data-estimation-and-substitution-for-central-volume-allocation/

© ELEXON Limited 2019