



Moving into Smart Metering:

Maintaining Settlement Performance and Compliance with the BSC

This guidance is for Non-Half-Hourly Suppliers and their agents before and during installation of Smart Meters, to maintain compliance with the Balancing and Settlement Code and minimise the impact on performance against the Settlement Risks.

1. Introduction

Non-Half-Hourly (NHH) Suppliers have been installing Smart Meters in limited numbers for some years. This year the government is consulting on the initial set of licence conditions relating to the Smart rollout and technical specifications for Smart Meters. From early 2015 Suppliers will be obliged to install Smart Meters for all domestic premises; these installations will be supported by the services provided by the Data Communications Company (DCC). By 2020 all customers in Profile Classes 1-8 will have Smart (or Advanced Meter Reading) Meters installed, with all domestic (and the potential for non-domestic) Meters using the DCC as part of the Settlement process (Meter to bank).

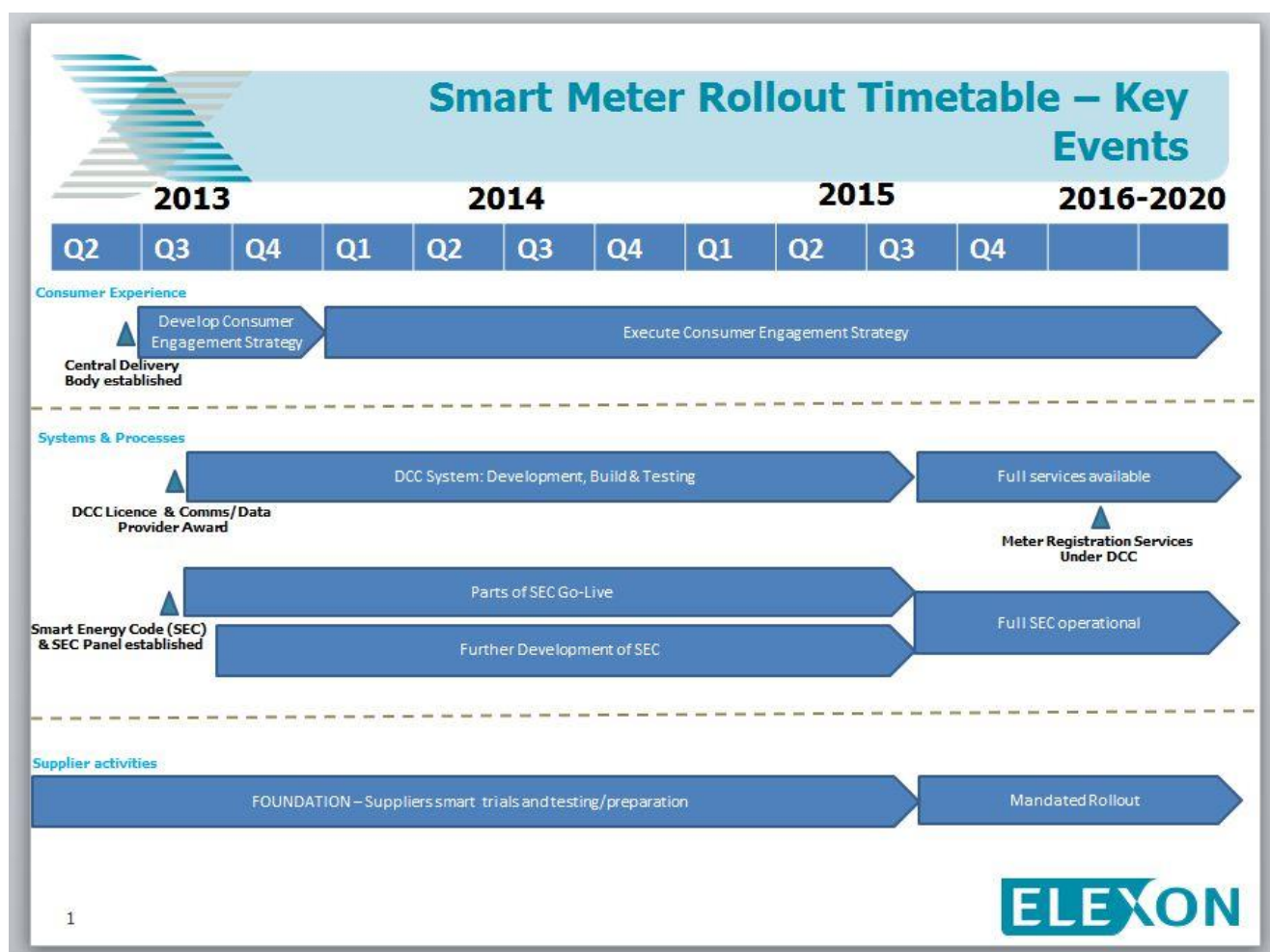
This guidance aims to provide NHH Suppliers and their agents with information and advice about remaining compliant with the [Balancing and Settlement Code](#) (BSC) through the transition to Smart Metering, and to make the most of the improvements in data quality.

Some points will be more relevant for planned bulk changes, others for incremental installations.

We have distinguished between the foundation (now to 2015) and mandated rollout (2015-2020) periods.

This guidance note will be updated as the Smart Metering Implementation Programme (SMIP) arrangements are made public.

SMIP Timetable



2. Guidance Points – Foundation Period

2.1 Before Installation

This section suggests what you need to consider before Smart Meters are installed.

Performing data cleansing

- Are current (dumb) Meter Technical Details (MTD) held for all sites and consistent between Data Collectors (DC) and Meter Operators (MOA) to assist with processing final reads? Some organisations have found a reconciliation process useful.
- Is there enough valid read history to process the final read for the current (dumb) Meter?
- Failure to ensure future reads retrieved from the new Meter are entered into Settlement, regardless of any problems with data from the dumb Meter period, could detract from the benefits of Smart installation.
- Are the MTD and Standard Settlement Configurations (SSC) on the dumb Meter compatible so if the same SSC is to be used on the Smart Meter, the standing data is correct from the outset.
- Reviewing and clearing existing exceptions (primarily D0095s and D0023s) on the Meters to be changed.

Things to consider about the Smart Meter and related systems

- Interoperability – Ofgem is consulting on the interoperability requirements for Foundation.
- Meters must be compliant with the BSC Metering Codes of Practice (as well as the Smart Metering Technical Specification (SMETS)).
- Systems used to communicate with the Meter, including those that could reconfigure it, should be tested to ensure no systematic errors are introduced; these could be hard to spot once live and could impact large volumes of Settlement data that is complex to correct later on.

What to consider when planning the change

Planning is especially important for bulk installations and will be useful preparation for mandated rollout. Key elements for success of mass installations, over and above usual best practice project management include:

- Controls and monitoring (e.g. volume of rejections, late or missing data).
- Ensuring buy-in of all parties with contacts/escalation points for queries and issues.
- Agreeing frequency of read retrieval and frequency of read usage for Settlement purposes.

What to think about if carrying out Change of Agent

Some Suppliers may choose to change MOA and/or DC to install, maintain and read the Smart Meter.

Points to consider here include:

- If the Meter is not installed on the planned date, or not on/before the effective date of the new DC, what provisions are in place for reading the old (dumb) Meter at the required times and appropriate frequency?
- Data cleansing before a change of agent will reduce the risk that the new DC will have to fix issues pre-dating its appointment (but not its period of responsibility).
- There may be increased risks with concurrent change of Meter and Change of Agent. If you chose to do these changes at the same time, plan carefully with both old and new agents to ensure exceptions are managed.
- If you intend to change agent at a rate of more than 20,000 in any distribution area on any day, you will need to apply for Bulk Change of Agent. For more details on this, read BSCP513 'Bulk Change of NHH Supplier Agent'.
- Keeping the whole Supplier Hub informed of appointed agents and escalation routes for queries.

2.2. During Installation

This section contains useful guidance once your programme to install Smart Meters during the foundation period is underway.

Maintaining accuracy of Metering information

- What validation processes are in place to ensure the Metering information data, e.g. Advanced Meter Information, passed from the site to the MOA to the DC is correct and consistent?

- Is the standing data held by all parties correct and consistent, e.g. Meter type, Market Domain Data (MDD) combinations, Supplier Meter Registration Service (SMRS) data?
- Is the data used to link communications addresses and device ids with customers, accurate for the current meter – e.g. address - Meter Serial Number - MSID triangulation.

Some other points to consider

- If installation was not completed, reasons and agreed next steps should be communicated within the hub.
- There will be checks the installer should perform on site, such as confirming the correct Meter is being installed in the correct property and that the communications are fully functioning, but also other attributes could be checked such as whether the Meter set up/MTDs are as expected.
- Communications are tested to ensure the Meter can be read, and that the data retriever is reading the correct Meter. The testing should be performed by the party most appropriate at the time. For instance, the DC may not have sufficient details to perform the test until after installation. Testing on site as well as remotely will give extra assurance.
- Have final reads on old (dumb) Meter and initial reads on Smart Meter been obtained for all installations? As old Meters are likely to be disposed of, what steps are being taken to manage any potential Trading Disputes over final reads, e.g. photo of the Meter display before removal? As noted earlier, it is important that any Trading Disputes do not prevent reads from the new Meter being captured and processed into Settlement. Otherwise the benefit of the Smart Meter will not be realised.
- Keeping the whole hub informed of appointed agents and escalation routes for queries.

2.3 After installation

This section provides suggestions for operating sites once they have had a Smart Meter installed.

What about dealing with data quality issues found after installation?

Suppliers have told ELEXON that installation of Smart Metering is uncovering data quality issues with sites that stretch back years. Historical errors should be fixed as far back as possible within the Settlement timetable so that future reads from the new Meter can be processed in a timely manner.

The usual withdrawal/validation/resubmission of reads process should be followed and/or the processes for agreeing Change of Supplier reads. For very large errors, the Trading Disputes process can be used. We believe existing BSC processes are sufficient to correct scenarios of inaccurate data. We would strongly urge all Suppliers and Supplier Agents to co-operate where there are queries raised by other parties to resolve data errors quickly and efficiently.

If you think another party has been non-compliant in processing Settlement-related information, speak to your [Operational Support Manager](#).

It is likely Suppliers and agents will want to factor in resources to manage historical data quality issues on their current portfolio and where other parties query data from previous appointments.

Considering Change of Measurement Class

Energy volumes collected, customer preference or the availability of more flexible tariffs may lead the Supplier to change from NHH to HH (Measurement Classes C or E). In 2011, the BSC Auditor noted that the Change of Measurement Class process is not straightforward and may be manual and prone to weaknesses/errors.

Suppliers may find it easier to install a Meter with HH capability before changing Measurement Class, as the greater complexity of a concurrent change may risk more issues, particularly if the Meter cannot be installed on the planned date.

2.4. General points

What are the BSC Obligations?

BSC obligations sit with the party (Supplier or agent on behalf of the Supplier) appointed according to SMRS and do not account for commercial arrangements or where contracts are in place with the customer. This includes all data that is due to be passed on through Change of Supplier or Agent. The losing Supplier or Agent must send on MTDs, reads and read history etc. in accordance with the [BSC Procedures](#) (BSCPs).

What about maintaining my Qualified status?

Party Agents must re-Qualify where any material changes to systems, processes and staff have occurred. The re-Qualification process is designed to review those parts of the Settlement-related activities that are being changed for continued compliance with the BSC. Agents' risk and impact assessments should identify such changes, but if there are any queries over what might be classed as material, ELEXON may be able to assist with the agents' decision.

What if I need new Standard Settlement Configurations?

Suppliers may wish to offer services to customers that require new Standard Settlement Configurations (SSC). There is a process, with set timescales, under the BSC for requesting new SSCs and for them to be authorised and published in MDD.

What about reconfiguring Meters?

Regardless of the party that performs (remote) reconfigurations of Smart Meters, the Supplier must ensure that all parts of the Supplier hub hold the correct (according to the physical set up of the Meter) and consistent information. It is highly likely there will be changes to BSC obligations to reflect this, in particular where Suppliers may take action to reconfigure Meters through direct communication with the Smart Meter.

Suppliers should take account of any security regime required for Smart Meters. In particular the control of and access to passwords and encryption keys should be carefully monitored to ensure that Meters are accessed only by those authorised to do so.

What about using data from Smart Meters?

The greater frequency of reads obtained remotely may provide opportunities to improve data quality by performing enhanced validation. But the data may also show a more complex consumption pattern if customer behaviour is changing. There is guidance available on the [BSC Website](#) around enhanced validation if you are considering amending your validation.

Due to the increased frequency of reads available, Suppliers should ensure that reads are passed to the DC at a frequency appropriate to meet the NHH arrangements (e.g. currently 80% standard for energy on Annualised Advances at R3 and 97% at RF). Ideally processing of more regular reads is encouraged as this will improve Supplier and industry Settlement performance/accuracy.

You may wish, when the Meter is read, to check the MTDs held by the MOA, Supplier and DC against what is installed on site. Any inconsistencies should be reported to the Supplier and the relevant agent for correction.

What about resources?

Concerns have been expressed about resources being taken off BSC or business as usual processes for Smart projects, and about field staff knowledge decreasing. We would recommend that your implementation plan considers how the impact on your on-going obligations under the BSC can be limited.

The National Skills Academy has developed a qualification for 'Smart installers'. The Energy Retail Association has proposed that Suppliers adopt this qualification for their Installation agents through the Smart Metering Installation Code of Practice.

Generally, there is very likely to be a greater volume of change and consequently more data flows. There may be unexpected exceptions or data quality issues that need to be investigated and resolved possibly in co-operation with your own or other Supplier hubs. Contact your OSM if you find any issues with Settlement data and your registrations, where you are unsure of the best approach to resolve.

3. Guidance Points – Mandated Rollout

The guidance for the mandated rollout period is similar to that for Foundation above.

Critically the amount of Meter exchanges will increase and be maintained for a sustained period of around five years. The adherence to guidance and best practice is important as Suppliers will be installing mass volumes of Meters whilst still processing requests from standard industry activity (Change of Supplier, Measurement Class, Profile Class or Tenancy etc.) for a mixed Smart and dumb portfolio.

Not only will new processes be required, but extra resource may be needed to manage more and/or new data exceptions and issues. All parties, including Supplier Meter Registration Agents, should take steps to confirm they can process the anticipated volumes of changes and flows.

Suppliers should seek opportunities to get assurance that the correct Meter has been installed at the correct property, particularly important if whole streets are having their Meters changed at the same time.

The arrangements from mandated rollout onwards will bring in more responsibilities for Suppliers which they must comply with so it is important these are understood and prepared for.

Glossary

| Term | Definition |
|--------------------------------|---|
| PAB | The BSC's Performance Assurance Board, responsible for overseeing compliance with the BSC via the Performance Assurance Framework. |
| Smart Meter | A Smart Meter is one that is capable of two-way communication. It measures energy consumption and has a communication capability that allows data to be read remotely and displayed on a device within the home, or transmitted securely externally. The Meter can also receive information remotely or switch from credit to prepayment mode. [From Ofgem factsheet " Smart Metering - what it means for Britain's homes " 31 March 2011] |
| DCC | Data Communications Company |
| AMR | Automatic Meter Reading - a system that provides Meter readings automatically. |
| Foundation | The period within the Smart Metering Implementation Programme up to 2015. When the DCC is live. |
| Mandated rollout | The period within the Smart Metering Implementation Programme from 2015 to 2020. |
| D0313 | Auxiliary Meter Technical Details. |
| Modification P272 | A proposed change to move Meters registered as Profile Class 5-8 into the HH market. |
| Profile Classes 1-4 | ELEXON issued a consultation from the work of the Profiling and Settlement Review Group on the costs/benefits of moving Meters registered as Profile Class 1-4 into the HH Market. |
| Group Correction Factor | GSP Group Correction Factors (GGCFs) are used to ensure that the total energy allocated to Suppliers in each Settlement Period in each GSP Group matches the energy entering the GSP Groups from the transmission system, adjoining GSP Groups and through embedded generation. GGCFs are applied to the energy allocated to Suppliers from NHH Meters. |
| SMIP | The Government's Smart Metering Implementation Programme |
| MTD | Meter Technical Details |
| DC | Data Collector (NHH only in this document) |
| MOA | Meter Operator Agent (NHH only in this document) |
| SSC | Standard Settlement Configuration |
| Exceptions | NHH exceptions relevant to this document include D0095S (Non Half-Hourly Data Aggregation Exception Report from Data Aggregator to Supplier) and D0023S (Failed Instructions from Data Aggregator to Data Collector). See D0095 User Guide Volume 1 and Volume 2. |
| BSC Metering CoPs | Codes of Practice (CoPs) detail the technical requirements for Metering Systems. When Metering Equipment is first registered in Settlement, it must comply with the relevant CoP in place at that time. |

| Term | Definition |
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| SMETS | The Smart Metering Technical Specification that the SMIP is consulting on and Smart Meters will have to comply with. |
| BCoA | The Bulk Change of Agent process is an assurance technique. Suppliers must apply for BCoA if they wish to change more than 20,000 agent appointments with any one SMRA in a single day. It is governed by BSCP513 . |
| MDD | Market Domain Data is the central repository of reference data used by Suppliers, Supplier Agents and distributors. It is produced by the Supplier Volume Allocation Agent (SVAA) on the D0269 (Market Domain Data Complete Set) and D0270 (Market Domain Data Incremental Set) data flows. The MDD change process is governed by BSCP509: Changes to Market Domain Data . |
| SMRS | Supplier Meter Registration Service |
| Change of Supplier | The processes for Change of Supplier (CoS) under the BSC are predominantly laid out in BSCP504 . See sections 3.2.6, 4.4 and 4.5 in particular for information on CoS reads. |
| Trading Disputes | Trading Disputes provide a mechanism for correcting identified Settlement Errors. It allows for energy that was incorrectly calculated to be re-calculated, and the corrected Trading Charges distributed accordingly. The process is governed by BSCP11 . |
| Operational Support Manager | Operational Support Managers (OSMs) offer dedicated operational support to BSC Parties and Party Agents. The OSM role consists of customer relations; operational support; and Error and Failure Resolution. |
| Measurement Class | All SVA Meters are classified in one of 5 Measurement Classes: A – Non Half Hourly Metered B – Non Half Hourly Unmetered C – HH Metered in 100kW Premises D – Half Hourly Unmetered E – HH Metered not 100kW Premises |
| BSCP | Balancing and Settlement Code Procedures define the relationships, timescales and interactions between participants and specify the information or other outputs to be exchanged between them, to complete processes governed by the BSC. |
| Re-Qualification | Qualified Persons also subject to re-Qualification (i.e. not Suppliers) must apply for re-Qualification if they make "material changes". |
| Material Change | BSCP537 describes some events and scenarios that may trigger a Material Change, but the list is not exhaustive, and organisations' own Risk and Impact Assessments should identify if a change is material to their compliance with the BSC. |
| Read Frequency | DCs may receive readings from remotely read Meters on a frequent basis. BSCP504 advises that if reads are available frequently, they are entered into Settlement at intervals of between 1 and 3 months. |
| Enhanced validation | ELEXON developed a Meter reading validation algorithm that delivered a more robust set of NHH validation rules than those required by the BSC. Parties may wish to use some or all of the algorithm within their validation functions. |

| Term | Definition |
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| NHH Settlement performance standards | NHH Suppliers must achieve 80% of energy on Annualised Advances by the Third Reconciliation Run, and 97% by the Final Reconciliation Run. The standards are set out in BSC Section S, Annex S-1 of the BSC. Supplier Guidance on Achieving 97% Gross Volume Correction |
| National Skills Academy (for Power) and Smart Meter Installation Code of Practice | The National Skills Academy has developed a qualification for “Smart installers”. The Energy Retail Association has proposed that Suppliers adopt this qualification for their installation agents through the Smart Metering Installation Code of Practice. National Skills Academy |
| SMRA | The Supplier Meter Registration Agent operates the Supplier Meter Registration Service. The SMRA’s functions under the BSC are predominantly laid out in BSCP501. |

Need more information?

For more information please contact the **BSC Service Desk** at bscservicedesk@cgi.com or call **0370 010 6950**.

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