Smart Meter Technical Details Consultation

1 October 2012

Summary

This consultation paper seeks industry feedback on a set of proposed changes to the BSC and Code Subsidiary Documents in relation to the maintenance and distribution of Meter Technical Details (and associated meters readings) for smart meters.

Executive Summary

One of the features of the developing smart metering arrangements is that Suppliers will be able to configure smart meters remotely. For traditional, non-smart meters, this has required a site visit by the Meter Operator Agent (MOA) to configure the meter locally. The MOA has responsibility for maintaining meter configuration details (such as register mappings) and distributing them to Non Half Hourly Data Collectors (NHHDC), Suppliers and Licenced Distribution System Operators (LDSO), who need them to process the readings and advances from the Meters. Configuration details form part of Meter Technical Details (MTD), along with other information such as the Meter Asset Provider (MAP) Id and Date of Meter Installation, which cannot be obtained remotely (from the meter or the Data and Communications Company (DCC)'s asset inventory).

As such it is proposed that responsibility for the maintenance and distribution of meter configuration details passes to the Supplier. The responsibility for maintaining meter asset details and passing these to the Supplier will remain with the MOA, but the wider circulation of meter asset details (i.e. to the NHHDC and LDSO) will become the responsibility of the Supplier.

The consultation also considers Supplier requests to install, replace or remove smart metering equipment and potential amendments to the Change of Supplier process in relation to the responsibilities for providing MTD and Change of Supplier meter readings.

The objective of the consultation is to obtain feedback on various options for change, before progressing any changes formally as a Modification Proposal / Change Proposal.

You should provide your response to *steve.francis@elexon.co.uk* **by 26 October 2012.**

In addition to BSC Parties and Supplier Agents, Ofgem, DECC, Consumer Focus, other code administrators and any other interested parties are welcome to respond to this consultation.

Any questions or clarifications relating to this document should be directed to Jon Spence (*jon.spence@elexon.co.uk*) on 020 7380 4313) or Steve Francis (*steve.francis@elexon.co.uk*) on 020 7380 4038.

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1. Introduction

1.1 Background

The Department of Energy and Climate Change (DECC)'s Smart Metering Implementation Programme (SMIP) has defined requirements in relation to smart metering arrangements which impact existing electricity and gas codes. These requirements and potential consequential changes to industry codes were documented in the SMIP Business Process Design Group (BPDG) paper - Legacy System Changes (Enduring) v2.0 dated 14 November 2011.

In February 2012, ELEXON was asked by SMRG Working Group 4 to provide an initial assessment of changes required to the BSC in support of changes to MTD under the new smart metering arrangements. Working Group 4 is a subgroup of DECC's Smart Metering Regulation Group (SMRG), looking at 'Consequentials and Legacy System Changes'.

On 27 February ELEXON and Gemserv held a joint workshop in order to inform their respective responses to SMRG Working Group 4. Workshop attendees included representatives from large and small Suppliers, MOAs, Data Collectors, LDSOs and Ofgem. Further workshops were held on 24 May, 31 July and 20 September. The changes proposed in this consultation were developed with the support of workshop attendees.

1.2 Objectives

The objective of this consultation is to obtain feedback from market participants and other interested parties on the proposed solution for maintaining and distributing MTD for smart electricity meters. We are also seeking views on the need for industry-standard installation request/response flows and whether changes should be made to how MTD and readings are processed on Change of Supplier. We also invite initial views on the draft redlined changes shown in Appendix 2 and Attachments B through D.

1.3 Responding to this consultation

This document sets out a number of specific questions that we are seeking stakeholder responses to. The questions are set out at the end of each section. A Word version of the full list of questions, for respondents to complete, is provided in Attachment A.

Please provide your response to *steve.francis@elexon.co.uk* **by 26 October 2012.**

1.4 Next Steps

ELEXON will collate the responses and complete its own analysis. The findings will be presented to a further MTD / Change of Supplier workshop and to the Supplier Volume Allocation Group (SVG) for consideration in November. It is expected that a Change Proposal will be raised in late November to progress those changes on which there is a broad consensus. If the Change Proposal can be approved by the SVG in February 2012 this will allow 16-17 months for participant system changes ahead of the SMIP's end-to-end testing in mid-2014. A Modification Proposal will also be needed in relation to the requirement in Section S 2.2 that MOAs maintain and distribute MTD.

1.5 Scope

The consultation addresses consequential change arising from the mass roll-out of smart meters that relate to the format and distribution of MTD, and associated meter readings, including on Change of Supplier. The potential changes set out in this document are not the only ones that are likely to be needed. For our best view of the wider set of consequential changes, please refer to SVG paper 'Consequential BSC changes resulting from the Smart Programme (SVG139/13).

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1.6 Structure of the document

The remainder of this document is structured as follows:

- Section 2 provides an overview of the proposed new arrangements for the maintenance and distribution of MTD for smart meters;
- Section 3 considers the contents of the proposed new Meter Asset Details and Meter Configuration Details flows;
- Section 4 considers the need for additional information for work management and asset tracking;
- Section 5 explores potential changes to how MTD and readings are processed on Change of Supplier;
- Appendix 1 lists the functional requirements from the SMIP's Legacy System Changes paper;
- Appendix 2 sets out draft formats for the Meter Asset Details and Meter Configuration Details flows;
- Attachment A is a Word version of the consultation questions for completion by respondents to the consultation;
- Attachment B sets out draft redlined changes for BSCP514;
- Attachment C sets out draft redlined changes for BSCP504;
- Attachment D sets out draft redlined changes for BSCP515;
- Attachment E describes the approach taken to the draft redlining.

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2. Maintenance and Distribution of Meter Technical Details

2.1 Background

The role of the MOA will change with the roll-out of smart metering. The MOA will continue to install and maintain meters via site visits, when requested by the relevant Supplier. However, Suppliers will be able to configure smart meters remotely, for example, to set and change the meter's tariff registers to effect a change of Standard Settlement Configuration (SSC). They will achieve this by sending the relevant service request via the DCC's User Gateway, which will result in the appropriate command being sent to the Smart Metering System.

The SMIP has consulted (and not published a decision at the time of writing) on whether MOAs will have direct access to DCC services such as meter configuration.

It is anticipated that where remote configuration is not possible, e.g. due to a local failure of the Wide Area Network (WAN), the MOA may be instructed by the Supplier to update a configuration locally (e.g. using a handheld terminal).

2.2 Change Principle

As part of its smarter energy markets work programme ('Promoting smarter energy markets: a work programme', July 2012), Ofgem will be considering how "centralisation of electricity data processing and aggregation services could help lower industry costs and support a faster change of supplier process". Together with the proposed centralisation of registration data within the DCC systems, this will present the opportunity to review how metering data is held and provided to those who need it.

In considering the changes required as a consequence of the remote configuration of meters by Suppliers, the joint BSC-MRA working group agreed to adopt a principle of 'minimal change'. This allows for the eventuality that further improvements could be made as a result of centralised registration and data processing functions, so the proposed changes could have a limited payback period.

2.3 Proposed Changes

Under the current arrangements, the MOA is responsible for maintaining the MTD and distributing them to the Supplier, NHHDC and LDSO.

For smart (and potentially remotely configurable Automated Meter Reading (AMR) meters), it is proposed that MTD are split into two flows –

- Meter Asset Details – consisting of information that is sourced by the MOA based on the metering asset installed on site;
- Meter Configuration Details – consisting of register mappings and other configuration data that can be set or amended by the Supplier remotely via the DCC.

Responsibility for sourcing and maintaining the Meter Asset Details will remain with the MOA. The MOA will provide the Meter Asset Details to the Supplier when a smart meter is installed, replaced or removed or when any changes are made to the Meter Asset Details.

Responsibility for sourcing and maintaining the Meter Configuration Details will rest with the Supplier. If the MOA configures the smart meter locally (or, remotely, if permitted by the Smart Energy Code (SEC) and requested by

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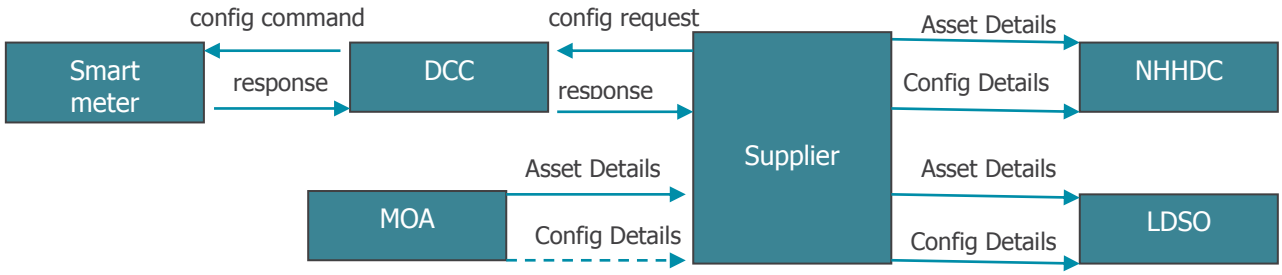
the Supplier), the MOA can send Meter Configuration Details to the Supplier. The smart meter could then be re-configured remotely by the Supplier, if required, once communications have been re-established.

The Supplier will forward the Meter Asset Details and Meter Configuration Details to the NHHDC and LDSO. The Supplier will forward the flows as soon as they are available (i.e. will not send as a pair).



Where a smart meter is serviced by the DCC, it is assumed that security and communications details will remain the responsibility of the DCC and its service providers. Where there is a need to transfer security and communications details, it is assumed that this will be via the DCC User Gateway and that the interface definitions will form part of SEC governance. This would include the transfer of such data to and from the DCC and Smart Metering System Operators (SMSO) on 'opt-in'/'opt-out' of DCC Services (i.e. for Non Domestic, Profile Class 3 and 4 Metering Systems).

2.4 Scope of Changes

Half Hourly Settlement

The Half Hourly Meter Technical Details Flow (D0268) includes password and communications details. If smart meters are serviced by the DCC, but are settled Half Hourly, it will not be necessary to use legacy flows to transfer password and communications details. As such the proposed Meter Asset Details flow may be a better fit for this category of metering than the current D0268.

The workshops considered expanding the scope of the proposed changes to include elective (below 100kW) Half Hourly Metering Systems using the DCC. The conclusion was that the more immediate requirement is for a Non Half Hourly solution and that the additional effort required in order to develop a Half Hourly solution could potentially distract from this. There is also a possible interaction with the outcome of Modification Proposal P280 ('Introduction of a New Measurement Class') which is currently in the report phase. The group agreed that changes for elective Half Hourly were potentially desirable but could be further considered over longer timescales than the NHH changes. A consultation question has been included to obtain wider input on this matter.

AMR

The new processes and flows were conceived in relation to all smart meters (and advanced domestic meters), whether serviced by the DCC or an SMSO.

There is no requirement for AMR meters to be remotely configurable, but it is understood that many have this capability. As such, it is suggested that the new processes and flows could apply to all remotely configurable meters, as identified by the Meter Type. The distinction would be made on the basis of capability, rather than on whether the meter is remotely or locally configured, which would lead to confusion. Moreover, the new processes support the local configuration of meters with remote configuration capability. A consultation question has been included to seek feedback on this approach. Please note that the draft redlining assumes a smart/non-smart distinction pending a decision on remotely configurable AMR.

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2.5 Features of the proposed solution

Features of the proposed solution include –

1) Meter Readings will be taken remotely by the Supplier on installation, change of configuration etc and provided to the NHHDC for validation. MOAs should provide readings taken on site, as a contingency, where required to do so by their Supplier, but this will not be a mandatory requirement.
2) On replacement of a legacy meter by a smart meter, the new Meter Asset Details flow (rather than the 'Non Half-hourly Meter Technical Details' (D0150) flow), will be used to notify the removal of the legacy meter. The MOA will be responsible for providing the final reading on the legacy meter to the NHHDC. The Supplier will be responsible for providing the initial reading on the smart meter.
3) The Supplier will not be required to send the Meter Configuration Details to the MOA, but has the option to do so. MOA representatives on the working group were in favour of receiving the Meter Configuration Details and we welcome views from MOAs on why this data should be received on a mandatory basis rather than by agreement.
4) The timescales for the provision of Meter Asset Details and Meter Configuration Details to the NHHDC and LDSO will initially be the same as those for providing the D0150 and 'Notification of Mapping Details' (D0149) flows (i.e. by the Supply Start Date plus 8 working days on Change of Supplier or otherwise by 10 working days from the effective date). This obligation will be placed on the Supplier, with the transfer of the Meter Asset Details between the MOA and the Supplier subject to contractual agreements.
5) The MOA's responsibility for sending the 'Notification of Meter Operator, Supplier and Metering Assets installed / removed by the MOP to the MAP' (D0303) flow to the MAP will remain unchanged.
6) The MOA's responsibility for sending the 'Notification of Meter Information to ECOES' (D0312) flow will remain unchanged.
7) The energisation/de-energisation processes will remain unchanged. The MOA will continue to send the Energisation Status and associated readings to the Supplier, NHHDC and LDSO. Remotely disabled meters are energised for Settlement purposes (and can still be read). It is not envisaged that Suppliers will need to notify other participants if a meter is disabled as this information can be obtained from the meter.
8) The Smart Metering Equipment Technical Specifications (SMETS) include multiple items that can be configured by the Supplier via the DCC User Gateway, for example pre-payment rates and thresholds, block pricing rules and thresholds for configurable alerts. Where these items are configured locally by the MOA, we are not expecting a mandated industry flow between the Supplier and the MOA.
9) Where a meter is configured more than once on a given day, the Supplier will endeavour to ensure that the latest version for that day is the one that is distributed to the NHHDC and LDSO (along with the relevant readings, in the case of the NHHDC). However, this won't preclude more than one version being sent, so a Configuration Sequence Number has been added to the Meter Configuration Details flow.
10) Changes will be required to the relevant Performance Assurance Reporting and Monitoring System (PARMS) serials to reflect the transfer of some of the MOA's responsibilities to the Supplier.

2.6 Transfer of Data on Change of MOA and Change of NHHDC

MTD are currently transferred from the old MOA to the new MOA on change of MOA, and from the new MOA to the new NHHDC on change of NHHDC. As the Supplier will be responsible for the Meter Configuration Details, it makes more sense for the Supplier to pass these to the new MOA, where required. This leaves two options for the transfer of the Meter Asset Details:

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- The Supplier provides Meter Asset Details (which would require a transfer of the Meter Asset Details between Suppliers on concurrent change of Supplier and MOA); or
- The MOA provides the Meter Asset Details.

On change of NHHDC it is proposed that the Supplier, rather than the MOA, will provide the Meter Asset Details to the new NHHDC.

2.7 NHHDC processing of the Meter Asset Details and Meter Configuration Details flows

The MTD workshop considered whether the NHHDC should be required to validate meter readings on receipt of the Meter Configuration Details from the Supplier or should wait until the Meter Asset Details flow has also been received. Most of the data in the Meter Asset Details flow is required with less urgency than the Meter Configuration Details. However, the NHHDC would need to know the Energisation Status.

Assuming that the meter was energised would reduce the dependency on receiving Meter Asset Details. This would reduce the risk of delays in validating readings obtained in good time from the smart meter. However, it could create issues for the NHHDC in terms of reading validation and the accuracy of its records.

A Meter Configuration Details flow would not be accompanied by a Meter Asset Details flow under all circumstances – for example on change of SSC.

2.8 Draft Redlining

The proposed process changes are described in more detail in the draft redlining in Attachments B, C and D. This is an initial view of the changes required. We would expect these changes to be refined as a result of further MTD workshops, responses to this consultation and the eventual Change Proposal. Only changes relating to the transfer of MTD are shown. It is expected that other changes will need to be made to support smart metering in due course.

The approach taken to the redlining is described in Attachment E.

There are many activities that will remain common to non-smart and smart meters. So, to avoid duplication, we have divided the processes in the BSCPs to show how they would differ depending on the metering involved. However, where the smart and non-smart processes are substantially different, for example Change of Measurement Class, we have produced a separate process version for smart meters.

The working group raised the question of whether a Supplier BSCP should be produced, in which any new requirements on Suppliers could be documented. We considered this approach but found that in order to provide proper context to the Supplier requirements and maintain a clear view of the process, we'd have to duplicate a lot of the detail in the existing agent BSCPs. This could create a significant overhead in terms of managing subsequent change proposals. We also felt that introducing a new BSCP at this stage would create more confusion than amending the documents that industry is already familiar with and which already contain Supplier requirements.

This doesn't rule out the production of a new Supplier BSCP in future, or even a Smart Metering BSCP, which could encompass all the activities relating to the operation of a smart meter in settlement.

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2.9 Questions

No.	Question
2.1	Do you agree with the high level proposal for the maintenance and distribution of Meter Technical Details set out in section 2? Please provide the rationale for your response.
2.2	Do you agree that the proposed changes are required for the start of the mass smart roll-out in 2014?
2.3	Do you agree with the proposal to progress changes in support of Non Half Hourly settled Metering Systems in the shorter term and consider the processes for Half Hourly settled Metering Systems serviced by the DCC as a subsequent change?
2.4	Do you agree that the new processes and flows should apply to all remotely configurable Non Half Hourly Metering Systems? If not, please provide an alternative differentiator together with your rationale.
2.5	Please provide feedback on the features of the proposed solution set out in Section 2.5.
2.6	Please indicate your preferred option for the transfer of data on change of MOA and change of NHHDC, along with the reason for your preference.
2.7	Should the NHHDC be required to wait for the Meter Asset Details, before processing readings? Please provide the rationale for your response.
2.8	Please provide feedback on the draft redlining in Attachments B, C and D. We are particularly interested in the overall approach to the redlining, though detailed comments are also welcome.

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3. Format of Meter Technical Details flows

3.1 Proposal

The MTD workshop considered whether Meter Asset Details and Meter Configuration Details should be sent as modified versions of the D0150 and D0149 flows or as new flows. It was considered that using new flows avoided the need to replace the existing flows with versions that work for both remotely configurable and traditional meters (or to use two versions of the existing flows).

The Auxiliary Meter Technical Details (D0313) flow would continue to be used for AMR meters, but would not be required for smart meters.

Draft contents of the proposed Meter Asset Details and Meter Configuration Details flows are shown in Appendix 2. CT Ratio and VT Ratio are not required for smart meters, but have been included in the Meter Asset Details flow on the basis that they may be needed in future.

Certification Details

A member of the Joint BSC-MRA Working Group has discussed the future use of the Certification Date and Certification Expiry Date items with the UK Metering Forum (UKMF). Certification Date is defined in the Data Transfer Catalogue (DTC) as "Date of certification issued by meter manufacturer or company approved date for a meter indicating fitness for use" and Certification Expiry Date as "Date on which a meter needs to be replaced or routine maintenance required, as manufacturer's certification or company approved date has expired".

As smart meters will be Measuring Instruments Directive (MID)-approved rather than Certified, the initial view of the UKMF (not subject to any agreed minutes) is that more appropriate data items going forward would be –

- Test Date = Date of test at point of manufacturer issued by MID meter manufacturer; and
- Next Test Date = Date on which a MID meter requires testing in accordance with In-Service Testing requirements.

Non-Settlement Registers

Time Pattern Regime and Register Mapping Coefficient are included in the Non Settlement Registers group of the D0149 flow. They have been excluded from the Meter Configuration Details flow on the basis that they are not relevant to Non Settlement Registers.

There is a broader question of whether Non Settlement Register details are needed at all. They are used in the D0149 so that MOAs can inform Suppliers, LDSOs and NHHDCs which registers have been configured for Maximum Demand, reactive energy etc. If the NHHDC is only validating readings, rather than retrieving them from the meter, this information may be redundant. The Supplier should be able to identify the type of readings being sent to the NHHDC on a Meter Readings (D0010) flow (with a change to the valid set for Reading Type).

Non Settlement Registers have been included in the flow for now, but we welcome views on whether they are likely to be needed in future.

3.2 Questions

No.	Question
3.1	Do you agree that Meter Asset Details and Meter Configuration Details should be sent as new flows for remotely configurable meters (with existing D0150, D0149 used for conventional non-smart and non-remotely-configurable AMR meters, and D0313 used for AMR meters)? Please provide the rationale for your response.

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No.	Question
3.2	Do you agree with the proposed contents of the Meter Asset Details and Meter Configuration Details flows? Please provide any suggested changes, along with your rationale.
3.3	Do you agree that Test Date and Next Test Date should be used in place of Certification Date and Certification Expiry Date?
3.4	It has been suggested that the mass roll-out of smart meters offers an opportunity to standardise 'Manufacturers Make & Type' (e.g. via the introduction of a Valid Set or a new item in Market Domain Data (MDD)). Do you agree with this proposal?
3.5	Time Pattern Regime and Register Mapping Coefficient are included in the Non Settlement Registers group of the D0149 flow. They have been excluded from the Meter Configuration Details flow on the basis that they are not relevant to Non Settlement Registers. Do you agree?
3.6	Do you believe that there is still a requirement for NHHDCs to know about Non Settlement Registers if they are not retrieving readings from the meters?
3.7	It may be possible to change a Meter Type (e.g. from SMETS1 to SMETS2) via a firmware upgrade. This would make Meter Type a remotely configurable item. Given that this is the exception rather than the rule in terms of sourcing Meter Type, it appears in the Meter Asset Details flow. Do you have any views on the provision of Meter Type?

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4. Work Management and Asset Tracking

4.1 Background

To request the installation, replacement/reconfiguration or removal of a meter, the Supplier currently sends the MOA a 'Request for Installation or Change to a Metering System Functionality or the Removal of All Meters' (D0142) flow.

The electricity meter will only be one element of the smart metering equipment, which may also include a Communications Hub, gas meter, In-Home display (IHD), Prepayment Interface Device (PPMID) and auxiliary load control device(s). Suppliers will need a mechanism for telling the MOA what needs to be installed at a particular customer premise. There also needs be a mechanism for the MOA to confirm what they have installed. Work management requests and responses won't be limited to smart installations. They will also include replacement of the Communications Hub and other equipment, adding additional equipment to (or removing from) existing installations etc.

Options considered by the MTD workshops were –

Supplementary information exchanged via bilateral agreements

The D0142 and Meter Asset Details flows would only relate to the electricity meter. They would contain the information needed by the NHHDC and LDSO to undertake their responsibilities. Information about other equipment could be provided via bilateral arrangements between the Supplier and MOA. If small Suppliers or independent MOAs preferred standard request/response flows (to avoid developing multiple interfaces), then these could be developed (subject to sufficient demand) as an optional alternative to bilaterally agreed communication flows.

Extend the D0142 and Meter Asset Details flows to include other smart equipment

Whilst an extended version of the Meter Asset Details flow could be used for the MOA to confirm what they have installed, the additional information (such as what type of IHD, if any, has been installed) is of no interest to the NHHDC or LDSO. Consideration would need to be given to what requests will be needed for single visit dual fuel installations and how and where data will be recorded about assets that are not electricity specific – e.g. the Communications Hub and the IHD. For example, if the customer has refused an IHD, should this be communicated and recorded via the electricity arrangements, gas arrangements, both or neither?

There is still uncertainty about a number of factors –

- ownership of and responsibility for the Communications Hub (and other equipment types);
- access to DCC services by MOAs and MAPs;
- what asset information will be available via the DCC;
- how firmware upgrades will be applied to equipment other than the meter, and how the firmware version will be made available to MAPs and other equipment owners.

Extending the Meter Asset Details flow to include additional equipment could, in the light of this uncertainty, result in delays in implementing changes required for the 'core' electricity meter data (the D0150/D0149 equivalent). It may be possible, though, to introduce other smart equipment as a (zero-to-many) group of optional generic items (e.g. Equipment Type, Serial No, Make and Type, Installation Date).

Asset Tracking

Additional information may need to be transferred (on change of MOA or change of Supplier) for the purposes of asset tracking. This information may be required by Suppliers, MOAs and MAPs (and other equipment owners), but

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won't be needed by NHHDCs and LDSOs. As described above, there is still uncertainty about the information that will be available from the DCC and who will have access to it. As such it may not be possible to deliver a solution for asset tracking within the same timescales as the solution for communicating configuration details to NHHDCs and LDSOs.

4.2 Questions

No.	Question
4.1	Would you favour standard industry flows for installation (work management) requests/responses or bi-lateral Supplier-MOA arrangements? Please provide the rationale for your response.
4.2	If you favour standard industry flows for installation (work management) requests/responses, how do you anticipate requests being made for single visit dual fuel smart installations?
4.3	If you favour standard industry flows for installation (work management) responses, do you think other equipment should be included in the Meter Asset Details flow or could this be provided in a separate flow and potentially implemented in longer timescales?
4.4	If you favour standard industry flows for installation (work management) requests/responses, what information do you think should be included in these flows?
4.5	Do you see any distinction between the arrangements for requesting smart installations during the mass roll-out and those for subsequent installations/replacements/removals? If so, what bearing do you think this has on developing a new process (and dataflows) and the timescales for such development?
4.6	Please provide views on how and when asset tracking for smart equipment should be delivered. Please provide any requirements in this area that you consider warrant a standard industry solution.

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5. Meter Technical Details on Change of Supplier

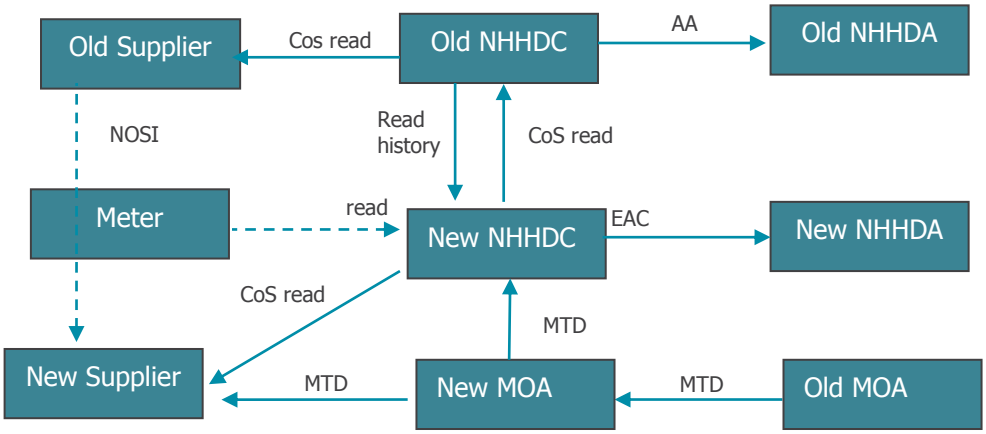
5.1 Background

SMRG Working Group 4 has tasked Central Bodies with looking at potential legacy system changes with regard to change of Supplier issues.

Change of Supplier objection periods were discussed at an MRA workshop on 4 May, whilst the MTD Workshop on 24 May considered potential changes to the Settlement arrangements in relation to the processing of MTD and change of Supplier readings.

5.2 Current Process

A simplified view of the current Non Half Hourly change of Supplier process (excluding Registration) is shown below.



The CoS reading is determined by the New Supplier's NHHDC and then passed to the New Supplier and Old NHHDC (for onward transmission to the Old Supplier). There is unlikely to be a concurrent change of Supplier and meter configuration, so the old MOA passes the MTD to the new MOA and the new MOA passes the MTD to the new NHHDC, Supplier and LDSO.

5.3 Modified to include the DCC

With the advent of the DCC, the Supplier will retrieve the CoS reading from the smart meter via the DCC and pass to the New NHHDC.

In order to process the closing reading on behalf of the Old Supplier, the New Supplier will need to request the Old Supplier's configuration from the meter via the DCC, in addition to (optionally) downloading its own configuration to the meter. The new Supplier may need Final reading(s) for the old configuration and Initial reading(s) for the new configuration. In order to validate the Final and Initial readings, the new NHHDC will need both the old and new configurations.

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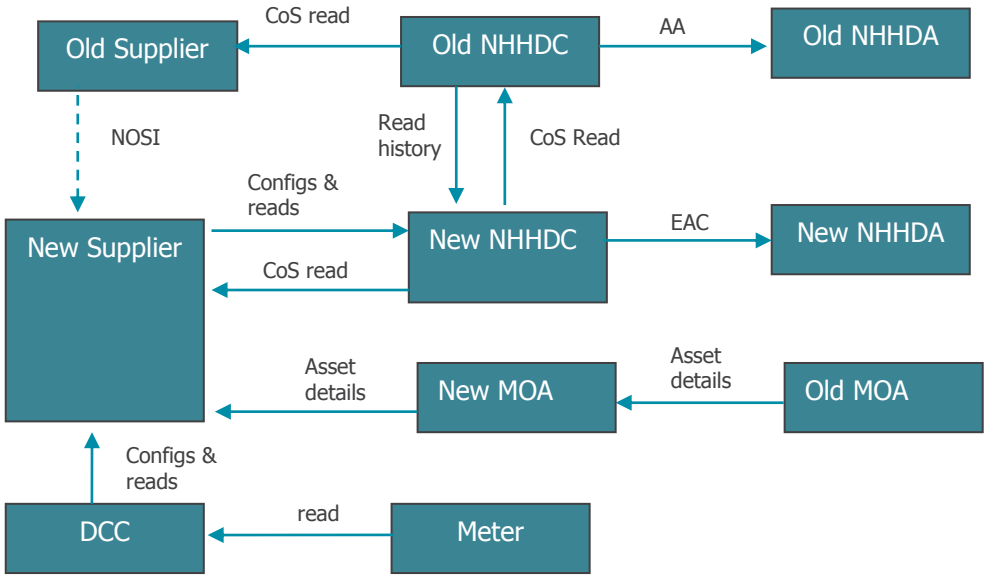
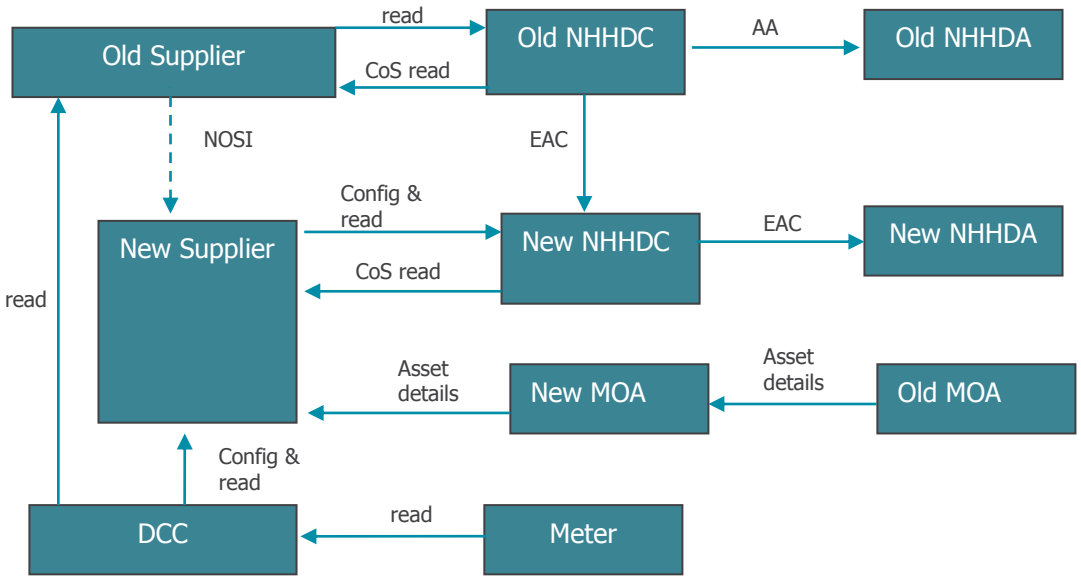


5.4 With separation of Supplier responsibilities

The diagram below illustrates an alternative process, originally suggested by Energy UK. Under this process, the New Supplier would no longer have sole responsibility for determining the Change of Supplier reading. The new Supplier would notify the new configuration (or old configuration, if unchanged) to the new NHHDC for validation. The old Supplier would retrieve a closing reading(s) from the meter via the DCC and this would be validated by the old NHHDC.



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5.5 Assessment of alternative process

Under the proposed alternative process, old and new Suppliers would take responsibility for their own readings. There would be no transfer of reading history (a cause of industry issues) between the old and new NHHDC. The transfer of the latest Estimated Annual Consumption (EAC) between old and new NHHDC would probably still be needed, so that the new NHHDA (where there is a concurrent change of NHHDA) wouldn't have to use a Default EAC pending the processing of a further reading and an Annualised Advance (AA).

If the Supplier reconfigures the meter on the Supply Start Date (which will be clearly easier to do remotely with a smart meter than would be the case locally with a legacy meter), the new NHHDC will not need to receive details of both old and new configurations.

The old MOA would only need to pass Meter Asset Details to the new MOA (see also section 2.6). The dependency on the Meter Asset Details could be removed completely (subject to section 2.7).

In the longer term, any increase in Time of Use Tariffs will mean that opening and closing reads will be different. However, where there is no change of configuration on Change of Supplier, there is a risk that taking the CoS reading(s) independently and validating it independently, could result in gaps or overlaps in consumption.

5.6 Timescales and Dependencies

It is assumed that changes to the distribution of Meter Asset Details and Meter Configuration Details will need to be made in time for the mass roll-out of smart metering in 2014 and this will involve small amendments to the Change of Supplier process.

We are interested in initial views on the benefits and risk of separating Supplier responsibilities for the opening and closing CoS readings. We are also interested in views on whether there are benefits in such a process being available in time for the start of the mass rollout.

Ofgem has announced its intention, in 'Promoting smarter energy markets: a work programme' (July 2012) to consult in Quarter 2 2013 on the potential options for reforming the Change of Supplier process. This would offer an alternative timescale for considering the proposal set out in this section, if not required for 'day one' of the roll out.

5.7 Questions

No.	Question
5.1	Do you consider that there is merit in the proposal to separate responsibility for the closing and opening Change of Supplier readings? Please provide the rationale for your response.
5.2	If such a proposal were to be adopted, how would you view the risk of gaps/overlaps in the volume of energy settled? How could this risk be mitigated?
5.3	What would the implications be of running a new process alongside non-smart processes for legacy metering?
5.4	Are there benefits in a new process being available in time for the mass rollout of smart metering in 2014 or would it be better to consider process revisions as part of Ofgem's smarter energy markets work programme? Would the benefits of early implementation outweigh the additional workload required to implement these changes in addition to the other system changes required for the smart roll-out?

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Appendix 1: Requirements from SMIP Legacy Paper

The list below shows the functional requirements set out in the SMIP BPDG paper - Legacy System Changes (Enduring) v2.0 dated 14 November 2011.

ID	Requirement
LFR039	DTC Definition Change – The D0142 "Request for Installation or Change to a Metering System Functionality or the Removal of All Meters" data flow shall be revised in order to enable suppliers to identify to MOPs the direct requirement to install SMS devices at the customers premise and pass any additional information relating to the SMS installation including which SMS devices to install as part of the SMS set.
LFR041	MRA/BSC Change – The supplier shall have the obligation to forward any new or amended meter technical detail sets in the form of DTC format D0150 "Non Half-hourly Meter Technical Details" and D0149 "Notification of Mapping Details" data flows to any currently authorised users of these flows e.g. distribution businesses, MOPs and NHHDC agents to enable each agent to continue their operate their respective roles related to maintenance and settlement.
LFR042	MRA/BSC Change – For SMS meters, identified by the "meter type" data item, the MOA shall no longer regard the D0150 "Non Half-hourly Meter Technical Details" data flow and the D0149 "Notification of Mapping Details" data flow as a set of flows. These should be split into separate entities and the D0150 data flow can be sent for metered sites without a corresponding D0149 data flow.
LFR043	MRA/BSC Change – For SMS meters, identified by the "meter type" data item, the MOP will remain responsible for sending the D0150 "Non Half-hourly Meter Technical Details" to the supplier to manage physical attributes of the meter for which it is responsible and directly under its influence and control and the MOP shall lose its obligation to create and send the D0149 "Notification of Mapping Details" data flow.
LFR044	MRA/BSC Change – For SMS meters, identified by the "meter type" data item, the Supplier will become the participant responsible for sending all D0149 "Notification of Mapping Details" data flows to other market participants.
LFR045	MRA/BSC Change – Upon installation (or update) of an SMS meter device, the MOP shall be responsible for populating and sending the DTC format D0150 "Non Half-hourly Meter Technical Details" data flow using the physical attributes of the meter for which it is responsible and directly under its influence and control.
LFR046	DTC Definition Change – The DTC D0150 "Non Half-hourly Meter Technical Details" data flow shall add to its existing valid set of sender and receivers the additional combinations of Supplier to NHHDC, Supplier to MOP and Supplier to Distributor.
LFR047	DTC Definition Change – The DTC D0149 "Notification of Mapping Details" data flow shall add to its existing valid set of sender and receivers the additional combinations of Supplier to NHHDC, Supplier to MOP and Supplier to Distributor.

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ID	Requirement
LFR048	BSC Process Change – For all SMS MPANs, on a change of MOP event, the old MOP shall be required to only send a single DTC D0150 "Non Half-hourly Meter Technical Details" data flow to the new MOP. This data flow should only contain a single active import cumulative kWh total consumption register in the group 293 "Meter Register Details" section of the flow. Upon receipt, the new MOP should forward this flow on to the registered supplier.
LFR049	MRA/BSC Change – For all SMS MPANs, on a change of DC event, the new DC shall expect to receive a new set of MTDs (D0149 and D0150 data flows) from the registered supplier.

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Appendix 2: Proposed format of Meter Technical Details flows

Please note that Measurement Class has been excluded from the flow on the basis that it will serve no useful function.

The Supplier-Supplier, MOP-MOP and MOP-NHHDC instances will depend on the question raised in Section 2.6.

Flow Name:	**Meter Asset Details**
Flow Description:	Meter asset details for remotely configurable meters
Flow Ownership:	MRA

From	To	Version
Distributor	MOP	1.0
MOP	MOP	1.0
MOP	NHHDC	1.0
MOP	Supplier	1.0
Supplier	Supplier	1.0
Supplier	NHHDC	1.0
Supplier	Distributor	1.0

Data Items:

Reference	Item Name
J0462	Certification Date
J0463	Certification Expiry Date
J0454	CT Ratio
J0848	Date of Meter Installation
J1269	Date of Meter Removal
J1254	Effective from Settlement Date {MSMTD}
J0080	Energisation Status
J0480	Maintenance Date
J0410	Manufacturers Make & Type
J1677	Meter Asset Provider Id
J0501	Meter Current Rating
J0004	Meter Id (Serial Number)
J0419	Meter Location
J0483	Meter Type
J0003	MPAN Core
J0008	Nature of Maintenance
J0098	Retrieval Method
J0722	Retrieval Method Effective Date
J0455	VT Ratio

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Flow Structure:

Group	Group Description	Range	Condition	L1	L2	L3	L4	L5	L6	L7	L8	Item Name
tbc	MPAN Cores	1-*		G								
					1							MPAN Core
					1							Effective from Settlement Date {MSMTD}
					1							Energisation Status
tbc	Metering Point Maintenance History	0-1			G							
						1						Maintenance Date
						1						Nature of Maintenance
tbc	Meter/Retrieval Method Details	1-*	If meter at metering point		G							
						1						Meter Id (Serial Number)
						1						Meter Current Rating
						1						Meter Location
						1						Manufacturers Make & Type
						1						Meter Asset Provider Id
						O						VT Ratio
						1						Meter Type
						O						Date of Meter Installation
						O						Certification Date
						O						Certification Expiry Date
						1						Retrieval Method
						1						Retrieval Method Effective Date
tbc	CT Ratio	1	If NOT whole current meter			G						
							1					CT Ratio
tbc	Meters Removed	0-*			G							
						1						Meter Id (Serial Number)
						1						Date of Meter Removal
						1						Meter Asset Provider Id

Notes:	CT Ratio and VT Ratio are not required for smart meters, but have been included for the purposes of "future-proofing".

Version History:

Catalogue release change takes effect	CP No.	Brief description of the change and its reason

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Flow Name:	**Meter Configuration Details**
Flow Description:	Notifies how a smart meter is configured.
Flow Ownership:	MRA

From	To	Version
Supplier	Distributor	1.0
Supplier	MOP	1.0
Supplier	NHHDC	1.0
MOP	Supplier	1.0

Data Items:

Reference	Item Name
Jxxx	Configuration Sequence Number
J1254	Effective from Settlement Date {MSMTD}
J1268	Effective From Settlement Date {MSNSFC}
J0300	Effective from Settlement Date {SCON}
J0103	Measurement Quantity Id
J0004	Meter Id (Serial Number)
J0010	Meter Register Id
J0475	Meter Register Multiplier
J0474	Meter Register Type
J1267	Metering System Non Settlement Functionality Code
J0003	MPAN Core
J0478	Number of Register Digits
J0679	Register Mapping Coefficient
J0076	Standard Settlement Configuration Id
J0078	Time Pattern Regime

Flow Structure:

Group	Group Description	Range	Condition	L1	L2	L3	L4	L5	L6	L7	L8	Item Name
tbc	MPAN Cores	1-*		G								
					1							MPAN Core
					1							Effective from Settlement Date {MSMTD}
					1							Configuration Sequence Number
tbc	NHH Mapping Details	1			G							
						1						Standard Settlement Configuration Id
						1						Effective from Settlement Date {SCON}
tbc	Time Pattern Regimes	1-*				G						
							1					Time Pattern Regime
tbc	Meter Details	1-*					G					
								1				Meter Id (Serial Number)
tbc	Meter Register	1-*						G				
									1			Meter Register Id

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Group	Group Description	Range	Condition	L1	L2	L3	L4	L5	L6	L7	L8	Item Name
									1			Register Mapping Coefficient
									1			Meter Register Type
									1			Measurement Quantity Id
									1			Meter Register Multiplier
									1			Number of Register Digits
tbc	Non Settlements Registers	0-1			G							
						1						Metering System Non Settlement Functionality Code
						O						Effective From Settlement Date {MSNSFC}
tbc	Meter Details	1-*				G						
							1					Meter Id (Serial Number)
tbc	Meter Register	1-*					G					
								1				Meter Register Id

Notes:	The Register Mapping Coefficient is required for mapping the difference between 2 or more physical registers' readings to a Settlement Register.

Version History:

Catalogue release change takes effect	CP No.	Brief description of the change and its reason

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