Stage 01: Initial Written Assessment

P302 'Improving the Change of Supplier Meter read process for smart Meters'

This Modification proposal proposes changes to the Code and BSCPs to amend the Change of Supplier process to make use of the enhance functionality that smart Meters will provide.

The Modification takes forward the discussions and suggested way forward considered under Issue 53.

ELEXON recommends P302 is progressed to the Assessment Procedure for assessment by a Workgroup

This Modification is expected to impact:

- Suppliers
- Non Half Hourly Data Collectors (NHHDCs)
- Non Half Hourly Meter Operator Agents (NHHMOAs)

What stage is this document in the process?

01 Initial Written Assessment

02 Definition Procedure

03 Assessment Procedure

04 Report Phase

Contents

About This Document

This document is an Initial Written Assessment (IWA), which ELEXON will present to the Panel on 12 June 2014. The Panel will consider the recommendations and agree how to progress P302.

Any questions?

Contact:
Simon Fox

Simon.fox@elexon.co.uk

020 7380 4299

1 Why Change?

Change of Supplier process

In order to establish the respective Settlement and customer billing liabilities on a Change of Supplier (CoS), Meter readings must be obtained on (or close to) the date and time when the new Supplier takes over responsibility for the customer's electricity supply.

The old Supplier needs a final read from which they will close the account and provide a final bill to the customer for energy consumption up to the point that the electricity supply switches to the new Supplier. An opening read by the customer's chosen new Supplier is used as a starting point for electricity consumption going forwards. Unless there has been a concurrent change of Meter or configuration, the closing and opening CoS reads should be the same.

From a BSC perspective these CoS Meter reads are used in Settlement, to ensure that metered consumption or export for Non Half Hourly (NHH) Metering Systems is allocated accurately to the respective Suppliers.

Current process

Under the current NHH CoS process, the NHH Data Collector (NHHDC) appointed by the new Supplier is responsible for determining the CoS reading for the Supply Start Date[1] (SSD) on behalf of both the new and old Suppliers.

In the situation where the new Supplier's NHHDC and NHH Meter Operator Agent (NHHMOA) are different to those appointed by the old Supplier, the old NHHMOA transfers the Meter Technical Details (MTDs) to the new NHHDC via the new NHHMOA. This transfer of MTDs is required so the new NHHDC can interpret the Meter readings obtained from a customer's Meter correctly.

The old NHHDC transfers a Meter reading and Estimated Annual Consumption (EAC) to the new NHHDC to allow the new NHHDC to validate the CoS readings. The provision of this information by the old NHHDC also enables the new NHHDC to deem a reading in the event that valid actual readings are unavailable and to provide the EAC to the new NHH Data Aggregator (NHHDA) for use until the first Annualised Advance (AA) has been calculated.

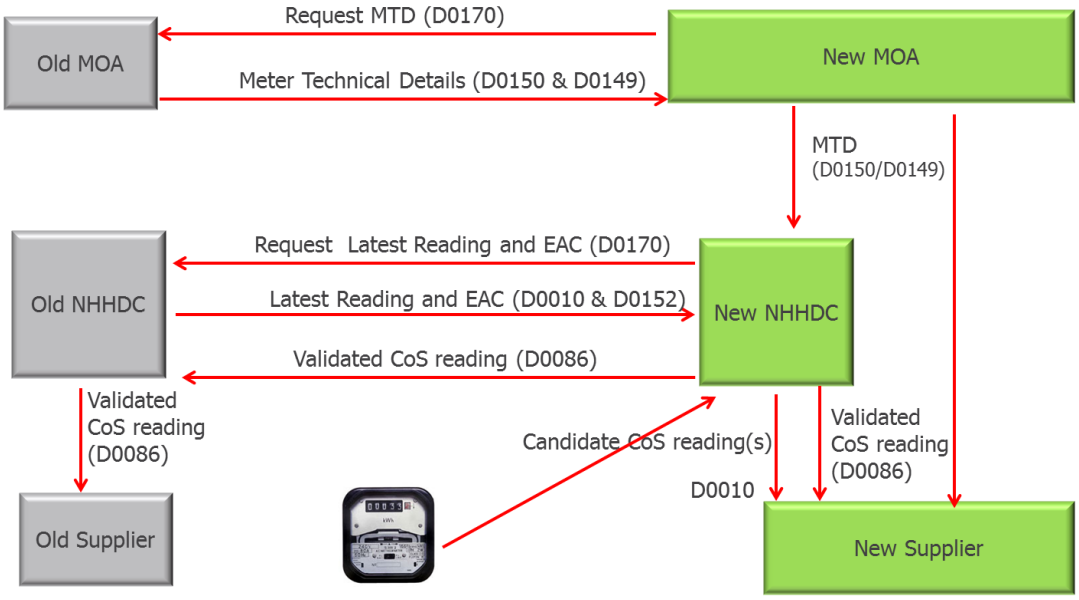
The transfer of MTDs, EACs and Meter readings between the old and new Supplier Agents is dependent on:

- the new Supplier appointing new Supplier Agents;
- the new agents being notified of each other's identities and of the relevant old agents identities by the new Supplier; and
- the relevant data flow requests being sent.

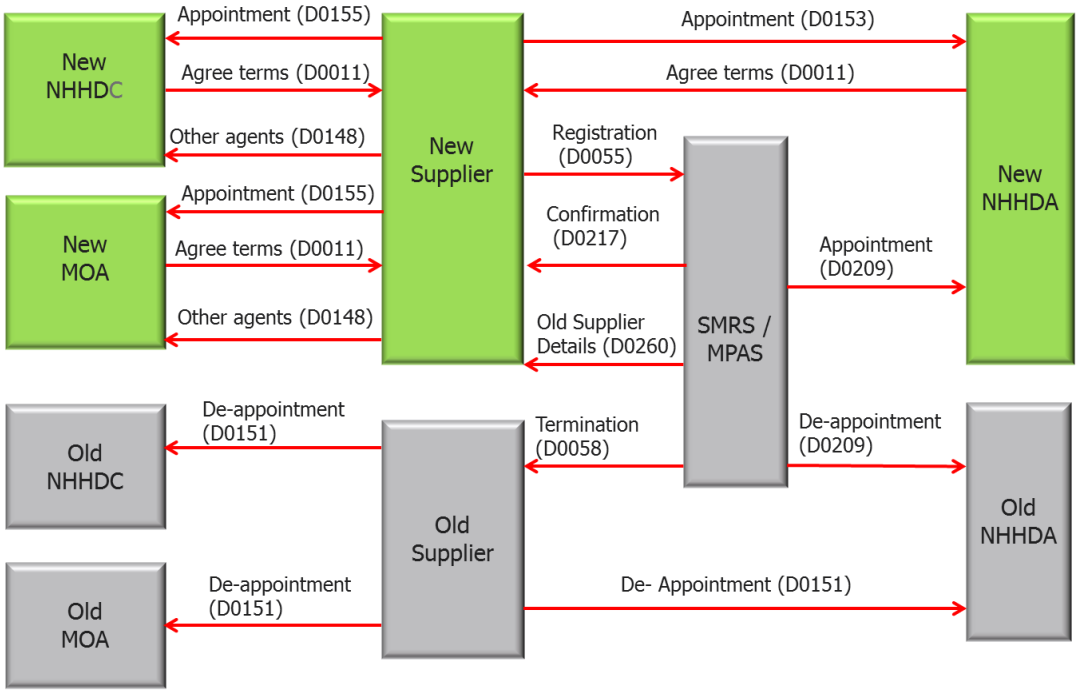
The following two diagrams summarise the current CoS process and the agent appointment and de-appointment processes. The current CoS read process has direct links and dependencies on the agent appointment process.

[1] A new SSD is the point at which a new Supplier starts providing electricity to a customer. This commences at midnight on the day that the Supplier starts providing electricity to that customer. Currently the CoS read used on SSD is derived from candidate reads taken from SSD ±5 Working Days (WDs). Once the CoS reading is confirmed this is then dated as the read on the SSD.

Current CoS process[2]



agent appointment/de-appointment process



A list of the D-flows referenced in these diagrams can be found in Appendix 1.

The current CoS reading process is complicated and is dependent on multiple data flows. As a result the current process is lengthy, and prone to error in the instances when these data flows are not sent or cannot be processed by the recipient. Delays and failures in the process can result in inaccurate data, impacting both Settlement and customer billing. The costs of resolving these delays and failures are borne by Suppliers, agents and ultimately consumers.

[2] Please note that the CoS process diagram shows a simplified version of the process in its current form. Approved CP1395 'Distribution of Configuration Details for Smart Meters' will modify this process when it takes effect on 26 February 2015 as part of the February 2015 Release. The changes will take into account the presence of the DCC, and if a customer has a smart DCC serviced smart Meter the Supplier will obtain a CoS read rather than the new NHHDC. This will be achieved by sending a request to the smart Meter via the DCC

Previous work on a smart CoS read process

In July 2012, Ofgem set out its intention to improve the CoS process by making use of the benefits that smart Meters will provide. Ofgem's ambition is a fast, reliable and cost-effective process that facilitates Supplier competition and builds consumer confidence. Simultaneously, it is important that any reforms maintain or improve the accuracy of Settlement.

Smart Meters are already being rolled out to homes and small businesses, with the large scale roll-out commencing in 2015. The current expectation is that the smart Meter roll-out will be completed by 2020.

To support the 'smart' functionality of these Meters, the Data and Communications Company (DCC) has been created. The DCC has responsibility for linking smart Meters in homes and small businesses with the systems of energy businesses (e.g. Suppliers and Supplier Agents among others). The presence of the DCC should make it easier for Suppliers to access Meter reads remotely and more quickly. This in turn should aid the accuracy of Settlement, as more actual Meter readings will be available. In addition the customer experience should improve as readings needed on instances such as a CoS will be more accurate. Such improvements would only be fully realised if amendments were made to the existing CoS processes to make use of the functionality of smart Meters and the DCC.

Ofgem and the Change of Supplier Expert Group

Ofgem has been engaging with a range of industry participants and undertaken research into making use of smart metering to improve the CoS processes and the customer experience. Part of this has been achieved through discussions at the Change of Supplier Expert Group (COSEG) and supporting sub-groups.

On 6 December 2013 Ofgem issued an open letter[3] welcoming a participant to raise a BSC Issue, to consider what changes should be made to the process by which CoS Meter reads are obtained and processed for smart electricity Meters. Part of this Issue would be consideration of the reform proposals developed at the Ofgem led COSEG meetings.

Issue 53

On 9 December 2013, EDF Energy raised Issue 53 'Reforming the Change of Supplier Meter read process for smart electricity Meters'.

The Issue 53 Group discussed the high level solution, discussed at the Ofgem COSEG meetings and expanded on the detail of the solution. The Issue 53 report covering full details and outcomes of the Issue 53 Group discussions was provided to the BSC Panel on 20 March 2014.

What is the issue?

One of the conclusions of the Issue 53 discussions was that a Modification was required to put in place the necessary BSC and BSC Procedure (BSCP) changes to support a DCC serviced smart Meter CoS read process. This Modification has been raised to progress these changes.

[3] 'Open letter on reforming the change of supplier (CoS) Meter read process for smart electricity Meters'

2 Solution

Proposed solution

The proposed solution seeks to take forward the DCC service smart Meter CoS process discussed under Issue 53. The proposed solution will only apply to smart Meters that are serviced by the DCC.

What is the process?

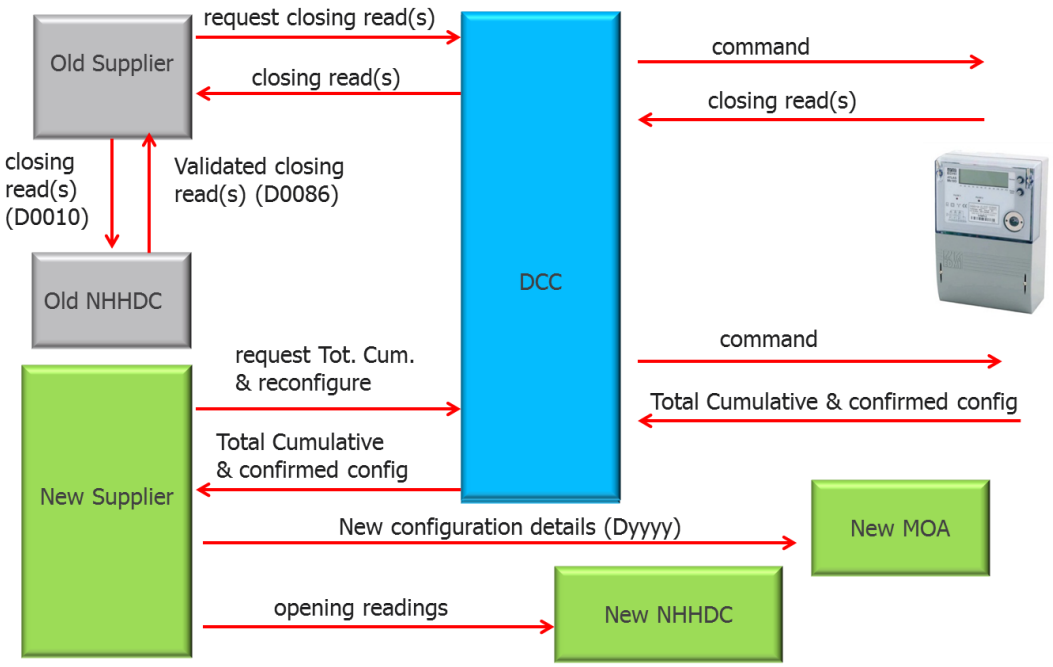
On a CoS event the old Supplier will take a final (closing) reading(s) by obtaining a reading(s) from the smart Meter's 'Daily Read Log' on the SSD. The old Supplier will then send the final CoS readings to its NHHDC (the old NHHDC) for validation.

As part of obtaining the final readings, the old Supplier may be required to take a record of the 'total cumulative reading' from the smart Meter on the SSD (again from the Daily Read Log). This is for use in the event of a disputed CoS read between the old Supplier and customer (or between the two Suppliers).

While it is envisaged that the old Supplier will obtain the closing read on the SSD they will be able to obtain the SSD readings from the Daily Read Log for up to 31 days after the CoS event, before the entry in the rolling log is overwritten.

The new Supplier will take an opening read for each of the relevant time of use registers it will be using, following any re-configuration of the Meter by the Supplier. As per the old Supplier, the new Supplier may be required to take a total cumulative reading from the Daily Read Log on the SSD, in case of disputed reads between the new Supplier and the customer (or between the two Suppliers).

The DCC serviced smart Meter CoS process can be summarised by the following diagram:



What is a 'Daily Read Log'?

A SMETS 2 smart Meter is required to maintain a Daily Read Log – a 31 day rolling record of midnight readings from various registers. These registers include the total cumulative register and each of the 48 time of use registers.

What is the 'total cumulative register'?

This is the record of total consumption over time, since the Meter was first installed. It is similar to the consumption measured on a 'dumb' single rate Meter.

What are 'time of use registers'?

A SMETS 2 smart Meter has 48 time of use registers, which can be used by a Supplier to measure consumption at different points during the day. This enables the Supplier to then apply consumption to the tariff agreed between the Supplier and customer.

Changes required to deliver this solution

To support the proposed smart Meter CoS Read process the following changes are required:

- Amend the deeming requirements in Section S Annex S-2 4.3.13 so that for DCC serviced smart Meters the EAC will be provided by the new Supplier to the new NHHDC.
- Amend BSCP504 'Non-Half Hourly Data Collection for SVA Metering Systems Registered in SMRS' and BSCP514 'SVA Meter Operations for Metering Systems Registered in SMRS' as appropriate to capture the proposed CoS read process changes:
    - The old and new Supplier will obtain CoS readings from the smart Meter at the same point in time. These CoS readings will then be passed to their respective NHHDCs for validation and use in the creation of AAs for Settlement purposes.
    - The new Supplier will confirm the configuration of a smart Meter on a CoS and pass the Standard Settlement Configuration (SSC) and Meter register configuration to the NHHDC and NHHMOA.
    - The new Supplier will notify the NHHDC and NHHMOA of whether the Meter is a smart Meter and whether they need to follow the smart or non-smart CoS read process. This will be achieved through the use of the D0155 'Notification of Meter Operator or Data Collector Appointment and Terms' data flow.

Applicable BSC Objectives

The Proposer believes that P302 will better facilitate:

- **Applicable BSC Objective (c)** as the changes would help reduce the complexity and associated cost of the CoS process for smart Meters, making customer switching a simpler, less onerous and more timely process.
- **Applicable BSC Objective (d)** by ensuring the CoS Meter read process for smart Meters reflects the enhanced functionality that smart Meters will provide. The proposed changes will reduce the amount of data transfers required between NHHDCs, which will improve the efficiency of the process as well as the timeliness and accuracy of the data being used in Settlement for smart Meters service by the DCC.

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]

3 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 P302. 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.

Verifying smart Meter configuration

The proposed solution will involve the Supplier verifying the smart Meter configuration and then passing the details on to the NHHDC and NHHMOA.

Typically the new Supplier will re-configure the Meter to ensure that it aligns with the tariff requirements agreed between the customer and the new Supplier. As part of any re-configuration undertaken by the new Supplier, the Tariff Switching Table will be configured so it corresponds with the relevant SSC.

However the Supplier may not need to re-configure the Meter in the event that the old Supplier's configuration meets the needs of the new Supplier. This would be indicated by the old Supplier's SSC as notified by the Supplier Meter Registration Service (SMRS).

The Workgroup will need to consider if and how the smart Meter verification activities are captured in the Code Subsidiary Documents (CSDs). The Workgroup should also consider whether there are benefits in retaining flexibility in the process (as under the P302 proposed solution) or mandating the Supplier to re-configure the smart Meter on a CoS event irrespective of whether the existing configuration meets the needs of the Supplier and customer.

Impacts on the Data Transfer Catalogue and BSC Configurable Items

BSC Configurable Item impacts

While the proposed solution sets out the key process changes required to introduce the DCC serviced smart Meter CoS read process, the Workgroup will need to consider the extent and detail needed to capture the necessary process step changes in the BSC and CSDs.

Data Transfer Catalogue impacts

Part of the proposed solution involves utilising the D0155 data flow to notify the NHHDC and NHHMOA that a site has a smart Meter and whether they need to follow the smart or non-smart CoS read process. To support this, the D0155 data flow will need amendment to capture this information in an appropriate way.

As noted during the Issue 53 Group discussions an appropriate indicator could be achieved via changes to an existing field within the D0155 data flow or through the creation of a new field.

The Workgroup will need to consider what the most appropriate mechanism is. The outcome of which will result in a change being needed to the Data Transfer Catalogue (DTC) to amend the D0155 data flow to support the P302 solution.

Initiation of non-Smart process in the event of problem

The Issue 53 Group discussed at what point the non-smart CoS read process should be initiated in the event of a problem accessing the Meter via the DCC, such as a communications failure. The Group considered whether a set timescale and process should be captured, with suggestions that if a switch is needed it should occur by SSD +4WDs. This would mean that the process switch occurred within a suitable amount of time to get a CoS reading by SSD +8WDs.

The P302 Workgroup will need to consider if a set timescale is appropriate and what the timescales should be.

Process assurance

The Workgroup will need to consider the appropriate level of process assurance that should be applied to ensure that the new smart Meter CoS read process is followed. This could involve the application of different Performance Assurance Techniques (PATs) from the Performance Assurance Framework (PAF) overseen by the Performance Assurance Board (PAB). This could include specific Technical Assurance (TA) checks, the structure and approach of which would be considered and agreed by the PAB. This would be in addition to the processes being looked at within the scope of the annual BSC Audit.

Disputed read process

Consideration will need to be given as to whether the disputed read process would need amendment as a consequence of the changes proposed by this Modification. Consideration should be given to whether smart Meter Daily Read Log readings should take precedence over other Meter readings in the event of the disputed read process being used.

As the disputed read process is managed under the Master Registration Agreement (MRA) any such changes would need to be progressed via the MRA change processes.

Implementation approach

The Workgroup will need to consider the most appropriate implementation approach.

Due to P302 making use of the DCC functionalities, the Modification could only be implemented on or after the point when Suppliers can start using the DCC. Therefore any implementation approach would need to take into account the DCC 'go-live' date, the point from when Suppliers can start registering with and using the DCC, which is currently targeted at late 2015.

The Workgroup would also need to consider whether there should be a suitable time gap between DCC go-live and when P302 should be implemented.

What is the Performance Assurance Board?

The PAB is appointed by, and reports to the BSC Panel. The PAB conducts and administers activities to provide assurance that all participants in the BSC arrangements are suitably qualified and that the relevant standards are maintained.

What are Performance Assurance Techniques?

The Performance Assurance Framework (PAF) is a complementary set of preventive, detective, incentive and remedial assurance techniques. These techniques are used flexibly to address Settlement Risks.

The techniques must address both risks to Settlement and the impact of actual failures or errors in Settlement.

Areas to consider

The table below summarises the areas we believe a Modification Workgroup should consider as part of its assessment of P302:

Areas to Consider
Should the new process apply to all DCC serviced smart Meters (SMETS1 and SMETS2) or just SMETS2 Meters?
What are the appropriate changes to the D0155 data flow to provide the mechanism to indicate whether: • a site has a smart Meter; and • the smart or non-smart CoS process should be followed?
What is the means by which the Supplier verifies the configuration of the smart Meter and notifies the NHHDC and NHHMOA what the SSC and Meter register configuration is?
What is the appropriate process assurance for the proposed CoS process changes?
In the event of a CoS event and a concurrent communications failure (or DCC opt-out) how quickly should the non-smart process be initiated?
Are there any necessary improvements to the Disputed Read Process?
What is the appropriate implementation approach for the process changes?
What changes are needed to BSC documents, systems and processes to support P302 and what are the related costs and lead times?
Are there any Alternative Modifications?
Does P302 better facilitate the Applicable BSC Objectives than the current baseline?

4 Proposed Progression

Next steps

We recommend that the Modification is progressed to a three month Assessment Procedure for consideration by a Workgroup.

Workgroup membership

We recommend that the P302 Workgroup should comprise of Suppliers and Supplier Agents (specifically NHHDCs and NHHMOAs), supplemented by Issue 53 Group members, relevant assurance experts and other relevant experts and interested parties.

Timetable

We recommend a three month Assessment Procedure, meaning that the Workgroup will submit the Assessment Report to the Panel at its meeting on 11 September 2014.

As part of the Assessment Procedure, the Workgroup will need to develop and consider the merits of the Proposed Modification (and any Alternative). We will issue the solution for industry consultation (15 Working Days duration) for industry to comment on the Proposed (and any Alternative) solution.

Proposed Progression Timetable for P302	
Event	Date
Present Initial Written Assessment to Panel	12 Jun 14
Workgroup Meeting	W/B 23 Jun 14
Workgroup Meeting	W/B 07 Jul 14
Assessment Procedure Consultation	23 Jul 14 – 13 Aug 14
Workgroup Meeting	W/B 18 Aug 14
Present Assessment Report to Panel	11 Sep 14
Report Phase Consultation	12 Sep 14 - 03 Oct 14
Present Draft Modification Report to Panel	13 Nov 14
Issue Final Modification Report to Authority	14 Nov 14

5 Likely Impacts

Impact on BSC Parties and Party Agents	
Party/Party Agent	Potential Impact
Suppliers	Changes to the CoS Meter read process where a site has a DCC serviced smart Meter
NHHDCs	
NHHMOAs	

Impact on Transmission Company
No impact

Impact on BSCCo	
Area of ELEXON	Potential Impact
Change Implementation	Implement document changes

Impact on BSC Systems and processes
No impact

Impact on Code	
Code Section	Potential Impact
Section S Annex S-2	Changes to the deeming requirements for EACs

Impact on Code Subsidiary Documents	
CSD	Potential Impact
BSCP504	Changes to capture the process steps and activities associated with the DCC serviced smart Meter CoS read process
BSCP514	

Impact on Core Industry Documents and other documents	
Document	Potential Impact
Master Registration Agreement	Changes will be needed to the DTC to take forward any necessary amendments to the D0155 data flow Changes may be required to the MRA Disputed Read process

6 Recommendations

We invite the Panel to:

- **AGREE** that P302 progresses to the Assessment Procedure;
- **AGREE** the proposed Assessment Procedure timetable;
- **AGREE** the proposed membership for the P302 Workgroup; and
- **AGREE** the Workgroup's Terms of Reference.

Recommendation

We recommend the Panel submits P302 to a three month Assessment Procedure.

Appendix 1: Glossary & References

Glossary of defined terms

Acronyms and other defined terms used in this document are listed in the table below.

Glossary of Defined Terms	
Acronym	Definition
AA	Annualised Advance
BSC	Balancing and Settlement Code
BSCP	Balancing and Settlement Code Procedure
COSEG	Change of Supplier Expert Group
CoS	Change of Supplier
DCC	Data Communications Company
DTC	Data Transfer Catalogue
EAC	Estimated Annual Consumption
MRA	Master Registration Agreement
MTD	Meter Technical Details
NHH	Non Half Hourly
NHHDA	Non Half Hourly Data Aggregator
NHHDC	Non Half Hourly Data Collector
NHHMOA	Non Half Hourly Meter Operator Agent
PAB	Performance Assurance Board
PAF	Performance Assurance Framework
PAT	Performance Assurance Technique
SMETS	Smart Metering Equipment Technical Specifications
SMRS	Supplier Meter Registration Service
SSC	Standard Settlement Configuration
SSD	Supply Start Date
TA	Technical Assurance

DTC data flows and data items

DTC data flows and data items referenced in this document are listed in the table below.

DTC Data Flows and Data Items	
Number	Name
D0010	Meter Reading
D0011	Agreement of Contractual Terms
D0052	Affirmation of Metering System Settlement Details
D0055	Registration of Supplier to Specified Metering Point
D0058	Notification of Termination of Supply Registration
D0086	Notification of Change of Supplier Readings
D0148	Notification of Change to Other Parties
D0149	Notification of Mapping Details
D0150	Non Half Hourly Meter Technical Details
D0151	Termination of Appointment or Contract by Supplier
D0152	Metering System EAC/AA History
D0153	Notification of Data Aggregator Appointment and Terms
D0155	Notification of Meter Operator or Data Collector Appointment and Terms
D0170	Request for Metering System Related Details
D0209	Instruction(s) to Non Half Hourly or Half Hourly Data Aggregator
D0217	Confirmation of the Registration of a Metering Point
D0260	Notification from MPAS of Old Supplier Registration Details
D0311	Notification of Old Supplier Information

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
4	Link to CP1395 webpage	http://www.elexon.co.uk/change-proposal/cp1395/
5	Ofgem open letter on reforming the CoS read process to make use of the benefits of smart Meters	https://www.ofgem.gov.uk/publications-and-updates/open-letter-reforming-change-supplier-cos-meter-read-process-smart-electricity-meters
5	Link to Issue 53 webpage	http://www.elexon.co.uk/smg-issue/issue-53/