Report on Issue 41: Improving the Quality and Accuracy of Data Flows

Meeting Name	BSC Panel
Meeting Date	13 October 2011
Purpose of paper	For information
Summary	E.ON raised Issue 41 to examine potential ideas for improving the quality, accuracy and timeliness of a number of data flows, particularly associated with the Change of Supplier Process following internal analysis carried out by its team that resolve data quality issues. This paper summarises the Issue 41 Group's conclusions and Appendix 1 contains its full discussions. We invite you to note these and close Issue 41.

1. What are the BSC's current arrangements on Data Quality and Accuracy in D-flows?

1.1 Who has responsibility for the sending and receiving of D-flows?

1.1.1 The ultimate responsibility for the obtaining and processing of data that enters Settlement, sits with the current appointed agent. In the case of NHHDAs and NHHMOAs, this goes back to the effective from date (EFD) of the appointment. In the case of NHHDCs the responsibility goes back to the EFD of the last Change of Supplier (CoS).

1.1.2 Balancing and Settlement Code Procedure (BSCP)504[1] makes provisions for the new agent and/or Supplier to request data (such as Meter Read History or Meter Technical Details) from the old agents utilising necessary Data-flows (D-flows) and other methods.

1.1.3 When a Supplier or agent requests data from the old agent, the old agent should respond, within the specified timescales.

1.2 How do we know if D-flows are not being sent and how are Suppliers/Supplier Agent held to account for any failures?

1.2.1 Performance Monitoring via the Performance Assurance Reporting and Monitoring System (PARMS)

1.2.2 Currently ELEXON monitors the performance against certain obligations of Suppliers and Suppler Agents through performance data submitted to ELEXON on a monthly basis via number of serials which are processed and stored in the PARMS database. The data in PARMS is used to track performance on a monthly or quarterly basis, enabling ELEXON and the PAB to see when a Supplier or Agent is performing well or badly in relation to a specific area or process (e.g. PARMS Serial NC02 – NHHDC to NHHDC Meter Reads and History). The monthly monitoring is reported to the PAB.

[1] Non Half Hourly Data Collection for SVA Metering Systems Registered in SMRS.

1.2.3 Repeated poor performance may result in the application of Performance Assurance Techniques (primarily Error and Failure Resolution (EFR), to identify what is causing the poor performance and identify, and then action, resolutions to the problem.

1.2.4 Annual BSC Audit

1.2.5 The annual BSC Audit, checks that most of the main Balancing and Settlement Code (BSC) requirements and Balancing and Settlement Code Procedures (BSCPs) are being met and followed by those Parties and Party Agents in scope and selected to be audited for each audit year (which runs 01 April -31 March).

1.2.6 Any failures in compliance result in an Audit Issue being raised against that organisation for that failure. The Audit Issues are then assigned an impact rating of high, medium or low. Resolution of high and medium rated issues are tracked and monitored via EFR. Low impact issues are not specifically tracked by ELEXON but the respective Party and Party Agents should resolve the problem so that the issue can be closed in a subsequent year by the BSC Auditor.

2. What is the Issue?

2.1 Issue 41 was raised by E.ON over concerns that the quality of the data sent on certain data flows (D0149[2], D0150[3], D0086[4], D0152[5], D0010[6], D0170[7] and D0300[8]) was not good enough and to consider the means by which the data could be improved.

2.2 The Proposer highlighted the idea of having an incentive regime to encourage good quality data to be sent in a timely manner to help ensure Settlement accuracy and for the end customer to find the process of changing Supplier straight forward, preventing situations that are currently happening where by the Customer gives up and takes their custom elsewhere.

3. What did the Group discuss?

3.1 The Group overall believed that the existing processes of sending and receiving data during the Change of Supplier (add associated change of agent) generally work. However, the minority of cases where the process does not work effectively, require a disproportionate amount of effort and resource to investigate and fix.

3.2 Two attendees (one large Supplier and one small) indicated that they have 500 and eight full time employees respectively, chasing, investigating and attempting to resolve data issues.

3.3 The Group agreed that there can be issues around data quality in the data flows highlighted by the original Issue 41 form. However, more often, the major problem is getting the data in the first place. Failure to receive data on time from the correct source can lead to degradation in the quality of the data over time.

[2] D0149 - Notification of Mapping Details
[3] D0150 - Non Half Hourly Meter Technical Details
[4] D0086 - Notification of Change of Supplier Readings
[5] D0152 - Metering System EAC/AA Historical Data
[6] D0010 - Meter Readings
[7] D0170 - Request for Metering System Related Details
[8] D0300 - Disputed Readings or Missing Readings on Change of Supplier

3.4 During the Group's discussions of Issue 41 a number of areas were covered that feed into or exacerbate the problem cases. The areas discussed were:

- Bulk Change of Agent
- Meter Technical Details
- Loss of appointment and responsibility for data
- D0170 'Request for Metering System related Details' data flow
- Data flow timeliness and quality
- Data issues and the rollout of Smart metering
- The Change of Supplier process

3.5 Full details of the discussion on each of these areas are covered in Appendix 1.

4. What are the potential solutions?

4.1 The Group discussed a number of potential solutions that they believe would help to primarily rectify issues with data quality after they occurred. One of these solutions (Query process) could with time help Suppliers and Agents to prevent the data issue happening in the first place as it would aid root cause analysis and in turn help fix the problem.

4.2 The solutions considered, whether they should be progressed, and the means by which they would need to be raised to take them forward, are summarised on the following table:

Solution	Type of change required	Group's view on whether to progress
Query process for resolution of data issues (similar to the Query process introduced into the Gas Market in 2007 via the independent Gas Transport (iGT) Uniform Network Code (UNC))	Modification Proposal to put in required framework involving Code section changes and potential new BSCP(s)	**Yes** – would help resolve existing data issues and may deliver guidance in the long term on best practice to avoid such data issues.
Central Contacts store for data issue resolution contacts	No Change required for a voluntary contact list on ELEXON website. Modification or CP would be required to mandate provision of contact details	**Yes** – would provide a central place to refer to for each organisation's key contact on specific data issues. Could easily support the Query process if both taken forward.
Forum for discussing specific industry issues	No formal Mod or CP required.	**Yes** – The Supplier Agent Forum (SAF) could provide the necessary forum for such discussions and the role and Terms of Reference are currently being review by the Supplier Volume Allocation Group (SVG) Issue Groups discussions on the issue

Solution	Type of change required	Group's view on whether to progress
		have been included in the SVG's discussions on the role of the SAF.
Mandating a Meter read on a Change of Supplier	No CP required to update BSCPs as a CoS reading is already required during the BSCP504 CoS process.	**No** – Change not required. Smart rollout will provide a means to get regular accurate Meter reads anyway.
Review of the Change of Supplier Process	No Change required, however outcome of review may result in changes being raised	Possibly – A review should occur, if it happens promptly, so to assist and not hinder changes that the E.U Third Package may bring and the smart impact on the CoS process.
Central Meter Technical Details (MTD) store through expansion of the Electricity Central Online Enquiry Service (ECOES) database	Meter Registration Agreement (MRA) Change Proposal as ECOES is governed by the MRA	*Nice to have*: Cost and limited/short term benefit due to Smart rollout and the introduction of the Data Communications Company (DCC) likely to deliver this
Rejection flows for the D0170, D149 and D0150	MRA Change Proposal to introduce new rejection D-flows to the Data Transfer Catalogue (DTN). BSC Change Proposal to amend relevant BSCPs to capture the use of the rejection flows	*Nice to have*, but could be costly and limited benefit
Changing the Meter at a Problem Site	No change required as processes already in place to enable a change of a meter	Only to be used as a last resort. Could be a resolution of a problem taken through the Query Process

4.3 Full details of the solutions and the Group's views on the positives and negatives of each solution are set out in Appendix 1 Section 2.

5. What areas would need further assessment as part of a change?

5.1 All the solutions considered by the Group require further analysis and development work to finalise the format and business case for each. The areas that need further considerations are set out for each solution in Appendix 1.

6. Next Steps

6.1 The Group agreed that the next steps should be the progression of the changes, by a BSC Party, it believes will help improve the situation identified by Issue 41 through the appropriate means as set out above. The Group agreed that no further work is required under Issue 41.

7. Recommendations

7.1 We invite you to:

a) **NOTE** the Issue 41 Group's discussions and conclusions;

b) **NOTE** the Group recommends that the Query process is taken forward by a BSC Party via a Modification;

c) **NOTE** that the Group recommends that the contact database is progressed;

d) **NOTE** that the Group believes that the SAF can be utilised to discuss more specific issues and has fed into the SVG's review of the SAF function and Terms of Reference; and

e) **NOTE** Issue 41 is closed.

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List of appendices

Appendix 1 – Issues 41 Group's detailed discussions
Appendix 2 – Issues 42 Group's membership

Appendix 1 – Issue 41 Group's detailed discussions

1. What is the issue?

1.1 The majority of the time data is sent and received without major issues. However the Group agreed that often for the minority of cases there are issues around data quality and accuracy. Additionally and possibly a more substantial issue is that in these minority cases the data may not be sent or not sent within the required timescales. If the data is not sent, more risky workarounds may be used to obtain the data through other investigation techniques which are more costly to use. In the case of the data being sent late, it may be hard to determine the accuracy of the data and in turn correct it if it is inaccurate.

1.2 An example provided by the Proposer was a 9 month period it took to obtain the correct MTDs from a MOA during a Change of Supplier, which involved a high amount of chasing on the part of the Proposer's organisation.

1.3 All subsequent discussions around the issue looked at improving the timeliness of receiving the data which in turn prompted discussion around having the means to ensure that data is correct once it is received.

1.4 The Group specifically discussed a number of areas that related to the problems that Issue 41 identified. These areas are as follows:

1.5 Bulk Change of Agent (BCoA)

1.5.1 The Group discussed the Bulk Change of Agent (BCoA[9]) Performance Assurance Technique (PAT) that forms part of the Performance Assurance Framework (PAF). Group members commented that the process works as there are clear terms and process steps for the Supplier, new and old agents to follow, in order to ensure the data is correct. When issues do occur there are clear contingency plans in place to resolve them. If there are any issues or concerns these are also highlighted to the PAB, who can stop the process if it becomes apparent that there is a risk to settlement if Bulk Change is allowed to continue.

1.5.2 The Group discussed concerns around data cleansing actions carried out by the 'losing' agent during a BCoA, and that this does not always occur at the end of an appointment or contract, resulting in the Supplier looking to the new agent to carry out the data cleansing and resolve any issues that arise instead. Concerns over responsibility around data were discussed further in 'Loss of Appointment and Data responsibility' below.

1.5.3 The Group agreed that the BCoA process works. However the process only applies when a Supplier is transferring 20,000+ MPANs a day. Any less than that volume and the process is voluntary.

1.5.4 Issues tend to occur during a normal Change of Agent (CoA), as these do not have the rigorous processes and contingency plans that a BCoA has. A few members of the Group then suggested that between 5 and 10% of normal CoAs could involve a data flow fallout, which may stem from the fact that some Party or Party Agent systems cannot send data flows after the end of an appointment.

[9] The Bulk Change of Agent Process is used to provide the BSC Panel and Performance Assurance Board (PAB) assurance that when responsibilities for large volumes of Non Half Hourly (NHH) Metering Systems change, it's done in a controlled way. It's about checking that the Supplier, Supplier Agent(s) and Supplier Metering Registration Agents (SMRAs) involved perform the necessary procedures appropriately so they don't impact other Suppliers. This helps protect the integrity of settlement.

1.6 Meter Technical Details (MTDs)

1.6.1 The Group discussed the sending and receiving of MTDs, and some of the issues that may occur. A Group member highlighted that missing MTD data, while highly problematic, has a lesser impact on a party than receiving incorrect MTDs. A Group member noted that MOAs frequently see incorrect data items on MTDs, especially the MTD effective from date (EFD). Also mismatches occur between the D0149 and D0150 with Time Pattern Regime (TPR) and Standard Settlement Configuration (SSC) data combinations which are not valid.

1.6.2 In some cases on a change of MOA, a newly appointed MOA may charge the Supplier to do a site visit in order to obtain the MTDs, if the old MOA does not provide them when it is required to during the respective processes. However, not all the MTD data can be obtained from a site visits (including certification dates) which means some errors cannot be identified.

1.6.3 The Group briefly considered having a valid data set for Meter serial numbers. However this would prove difficult as it would involve manufacturer co-operation and it would not prevent typographical errors which could give rise to the same meter serial number showing up for multiple installations.

1.6.4 The Group discussed that if NHHDCs knew when work was due to be carried out on a meter (e.g. exchange of meter) they would know when to expect new data to be sent through and could chase accordingly if it was not sent. This is however reliant on effective communication between the NHHMOA and the NHHDC, and in theory should occur anyway through good communication via the Supplier Hub.

1.6.5 The Group's discussions on problems with MTDs helped feed into the discussions around changing the meter at a problem site, to 'draw a line' under the issues and start again with new correct data (including MTDs) going forward **(Section 2.6).**

1.7 Loss of appointment and data responsibility

1.7.1 The Group discussed that there is currently little incentive on a losing Supplier or agent to rectify issues or co-operate with the new Supplier or agent to carry out and complete the sometimes complex analysis to resolve data issues that may span many years and/or many changes of Supplier and agent.

> *An example provided by a Group member was that during a change of Supplier, the final CoS read for the Old Supplier and the first CoS read for the new Supplier did not align. The reason for the misalignment was that the old Supplier was taking reads on the basis the meter was a 5 dial meter, whereas during the CoS process the new supplier discovered that the meter was in fact a 6 dial meter, so it was not possible to ratify the readings between the old and new Supplier. Unfortunately the Old Supplier did not see this as 'their problem' as they were no longer the Supplier for the site.*

1.7.2 With this in mind the Group agreed that there are longer term benefits for Suppliers and agents to work together to resolve data issues, as this would help avoid compounding the issue further. The Group also commented that a losing Supplier or agent may 'wash their hands' of a problem without resolving it for it to become their problem again in the future if they were appointed as an agent or chosen as a Supplier again in the future.

1.7.3 The Issue 41 form covered the idea of having an incentive regime for data issues to be resolved, discussions on data responsibility and the possibility of having an incentive to resolve Data issues was contributed to the potential solution of having a Query Process.

1.7.4 Discussions around data responsibility between old and new Suppliers and agents fed into the discussions around having a query process and a contact list. These may help and encourage organisations to work together more closely to fix all data problems (other than those that directly affect them).

1.7.5 If the Query process was not taken forward however, some Group members raised whether the rules around data responsibility should be changed so that Suppliers and agents remain responsible for the accuracy of any data during the respective appointment periods. This would mitigate the risk of old Suppliers and agents not investing time in resolving problems that occurred during their appointment (i.e. washing their hands of the problem). A CP or Mod would need to be raised to put such requirements in place.

1.8 D0170 - Request for Metering System Related Details

1.8.1 The Group discussed issues concerning the sending of and responding to certain D-flows, particularly the D0170. Group members discussed that usually the receipt of the flow automatically triggers the requested flow (D0010/D0152) to be sent in response. When the flow cannot be responded to automatically (in situations when the required data is not held or is incomplete etc.) the request will be added to a list of requests that require manual resolution. This may involve resolving missing or invalid data, which may be difficult if effective relationships are not in place between agents and Suppliers.

1.8.2 Some Group members asked why the D0170 was needed in the first place, when the majority of time (with the exception of the initial request), a D0170 is sent repeatedly to obtain data that should have already been sent. E.g. a change of agent notification should trigger the read history/MTDs to go from the old to the new agent.

1.8.3 Further issues around the D0170 include incorrect completion of the flow, particularly during high volume migrations, and the flow being sent in incorrect circumstances.

1.8.4 Discussion around the sending of and responding to the D0170, contributed to the solution discussions of having a rejection flow for D0170, D0149 and D0150 **(Section 2.3).**

1.9 Data flow timeliness and data quality

1.9.1 Too many opportunities to provide the data

1.9.2 The current Balancing and Settlement Code Procedures (BSCP) described processes give too many opportunities to send the requested data. The Proposer highlighted their concerns that the existing Change of Supplier (and Change of Agent) process allows many opportunities to respond to data requests, with requests being resent if the original request is not responded too, followed by the agent escalating the situation to the Supplier who would send a request. If that fails the information is then requested and obtained in the Notification of Supplier Information (NOSI) flow.

For example as set out in BSCP504[10] during the Change Of Supplier process, where there is a concurrent change of NHHDC, the old NHHDC should send the Meter Read history prior to Supplier Start Date (SSD) + 8 following a request by the new NHHDC via a D0170 flow. However if the Meter read history is not received within 10 WDs of a request of SSD+8 the new NHHDC will send a further request.

1.9.3 The Group agreed that the data should be sent first time, or if incorrect should be corrected on the first attempt, without the permitted repeated requests, within the timescales and as soon as it is available rather than waiting until the very last moment of the response window.

1.9.4 The Group also discussed that an old agent may fail to send the data because it never received the data from the previous old agent. In the case of the D0150[11] the old MOA may send a blank flow as it never received a populated flow from the previous MOA. It is situations like this that could be resolved through the use of the Query Process solution **(Section 2.1)**.

1.9.5 Meter Reads

1.9.6 The whole Group agreed with the underlying importance of the value of good quality meter reads. A Group member suggested that the bi-annual site safety visit provides a great opportunity to physically check both the meter attributes and to get a Meter reading.

1.9.7 The Group considered how initial reads on a new connection can be a problem. Also initial and final reads during a meter exchange can appear to be for the same meter, even though the meter has been changed.

1.9.8 Discussions around problematic Meter sites and Meters helped feed the discussion around changing a meter at a problem sites to 'draw a line' under the issues and start again with clean data going forwards **(See section 2.6).**

1.9.9 Data cleansing

1.9.10 The Group expanded on the discussion around data cleansing under BCoA, by commenting on the lack of clarity around who should or is best placed to fix data quality issues. Following a change of agent the responsibility of the data sits with the new appointed agent from the date of appointment, with the exception of change of NHHDC, where the responsibility for the data extends back to the current Supplier Start Date. The current agent should request any required data from the old agent, however the agent may not be able to get the data from the old agent leading to data being 'guessed' due to the lack of access to the original source data.

1.9.11 Flow timeliness and data quality

1.9.12 The Group noted that a majority of data flows go through automatically, on time and accurately. However when things do not go according to planned process/timescales there is a potential reliance on escalation of the issue via the Performance Assurance Framework (e.g. via the Error Failure Resolution and BSC Audit techniques) to flag problems before they are resolved. The Group agree that having a means to resolve issues without resorting to the fall back position of the PAF, would be useful.

[10] Non Half Hourly Data Collection for SVA Metering Systems Registered in SMRS
[11] Non Half Hourly Meter Technical Details

1.9.13 This also contributed to discussions around having a formal query process to resolve data issues **(section 2.1)** and consideration of introducing a rejection flow for the D0170, D0149 and D0150, to enable the old NHHDC or NHHMOA to inform the new NHHDC or NHHMOA that the data is missing or incomplete **(Section 2.3).**

1.10 Change of Supplier process

1.10.1 The Group discussed the current CoS process and issues that may occur during the process.

1.10.2 As already mentioned the CoS process generally works most of the time with the required quality of data being sent promptly, however it is the minority situations that will take the time and effort to resolve as highlighted in the Issue 41 form.

1.10.3 Agreed read process

1.10.4 A particular area the Group discussed were disputed CoS reads that are resolved through the agreed read process.

1.10.5 The Group noted that information such as meter exchanges can come to light after a CoS read has been generated. This causes problems as it invariably would mean the CoS read is wrong. The Group considered whether NHHDCs are in a better position to trigger a dispute over a CoS read than the Suppliers themselves in certain circumstances. Particularly as mentioned above (Section 1.6) where they know about Meter work that will/has occurred at a site.

1.10.6 The Group noted that an accurate meter read history is important if the agreed meter read process is used. The Group also noted that to go through the agreed read process can cost approximately £30-£50 each time. In situations when an accurate meter read history is not available the agreed read process can take a long time to resolve.

1.10.7 A Group member wondered if it was feasible for the CoS process to be put on hold, until all the right information had been passed around from the old to new Supplier, NHHDC etc. However as the time it would take could be quite lengthy, it could have an impact on Settlement and billing.

1.10.8 Change of Supplier process and timescales

1.10.9 The Group went on to discuss whether the timescales within the current process are correct to effectively support the necessary data flows. The Group considered how the process and timescales have not changed considerably since they were originally put in place, when a lot of organisations used manual processes and required more time to process data requests. Since then most of the process have become automated, therefore there could be scope to review and change the process and timescales, to better reflect how the process and data works now.

1.10.10 However the Group did discuss that due to the introduction of changes via the EU Third Package work the CoS process is likely to be changing or at the very least reviewed soon anyway, particularly if the time window for CoS is reduced from 28 days to 15 as currently suggested.

1.10.11 Also the rollout of smart is likely to change the CoS process as well, so investing time in a full review now may be unnecessary and hard to get 'buy in' across the industry. However if a review did occur, it could be

an opportunity to look at the both the EU Third Package and smart rollout impacts, and see if any changes could be introduced to ensure the new processes work in practice prior to any mandatory rollout.

1.10.12 Other items raised on the CoS process

1.10.13 Group members reported on how quite a few meter exchanges occur shortly before a CoS, potentially due to the customer being aware that the new Supplier's agents cannot support the existing type of meter installed and request it to be replaced.

1.10.14 It was noted by the Group that problems with the CoS process can be made worse by a concurrent change of measurement class.

1.10.15 Discussion on this area contributed to the Group considering the benefits of a review of the CoS process **(section 2.5).**

1.11 Performance Assurance Framework and data issues

1.11.1 Existing processes

1.11.2 During the discussions around the Issue 41, the Group questioned what action is taken against Suppliers and agents who underperform against the BSC requirements and procedures. ELEXON explained that certain areas and processes are monitored via the PARMS serials, Material Error Monitoring (MEM), BSC Audit and all other PATs with EFR being applied for repeated poor performance, particularly against the top Settlement Risks.

1.11.3 PAB Strategy work

1.11.4 ELEXON also highlighted the work that is underway as part of the PAB strategy work, to identify improvements in known problem areas. One such piece of work is the MTD project which is making sure the Settlement Risks associated with MTDs are correct and the associated controls identified have sufficient impact to help mitigate the risk.

1.11.5 Another project under the PAB strategy is agent performance monitoring, which seeks to put monitoring in place for key process failure points involving agents, in a similar manner the monitoring on Suppliers. By putting in place agent performance monitoring, detective/corrective PATs can be applied to specific agents.

1.11.6 PAF engagement

1.11.7 The Group commented that participants can struggle to have the time to engage in the PAF (e.g. the Risk Evaluation Register (RER) Consultation). ELEXON noted that extra support can be provided to participants to talk them through the PAF and the related changes that occur annually.

1.11.8 Based on the feedback from the Group, during the July 2011 RER review consultation, an open forum was held to give interested participants an opportunity to raise any questions, discuss concerns and any issues they had prior to submitting their formal response. The efforts taken by ELEXON to be more engaged with participants during the RER review was positively received by the PAB, when the outcomes of the RER review were presented in August 2011.

1.12 Smart rollout and data timeliness and quality

1.12.1 The Group discussed an issue that relates to the Smart metering rollout, which has been highlighted through other means, including the BSC Audit and by the PAB previously. As the rollout of Smart metering occurs over the next few years, it should help to improve data timeliness and quality going forward providing the correct meter is dialled.

1.12.2 However, the existing data issues with current meters are still present and need resolving. Also during the Smart metering rollout, large volumes of meter installations will be occurring, which are likely to uncover historical issues that are currently not visible. Such data issues, as with existing data issues, will take time and effort to fix. The Group emphasised the importance of resolving existing data issues and cleansing data prior to the Smart rollout as the issues that may be identified during the rollout will only make matters worse.

1.12.3 Discussions around data quality and the Smart rollout resulted in the Group discussing the potential for the resolution of the data issues to be included in the Smart rollout. That way, the smart metering implementation work could identify, resolve any data issues and carry out data cleansing activities as it progresses.

1.12.4 While the Group thought there was benefit in the data cleanse activity being part of the smart rollout the Group did not think this was a solution in relation to Issue 41, due the complex range of activities already involved in the smart rollout. It did prompt them to highlight concerns and ideas that could help make things run more smoothly.

1.12.5 It was noted that the NHHDC may get varied data during the rollout, where the metering being replaced does not line up with the MTDs held. This may mean a data-matching exercise between Suppliers and agents, particularly on critical flows, is required across the whole industry to make sure the right information is being passed on. Such a data matching exercise would need to factor in D0095 and D0023 exceptions as these cause problems

1.12.6 Another point raised was that the Smart meter rollout will impact customer behaviour, potentially increasing the level of 'churn' as customers may change Supplier/tariffs in order to get the best deal. So Suppliers and agents would need to be prepared for such an increase in activity, during and after the large scale rollout of smart meters.

1.12.7 The Group discussed that the smart rollout needs to clarify:

- The need for a clear continuity between the old dumb and new smart meters. The Group had concerns that the Smart meter installers may treat the provision of paperwork with less importance during the rollout due to the sheer volume of meters they will need to install.
- What should be sent between parties when the majority of meter reads will be carried out remotely.
- Responsibilities, so the Supplier, agents know what is expected of them and when

1.12.8 A concern was raised around the new D0313[12] data flow, and it going live in November 2011. A Group member highlighted their concerns that the new flow may cause problems at the moment as we are in a transitional period where it is unknown whether a meter is 'dumb' or smart. The Group member asked if there was a means for open discussion between Suppliers and agents on any issues they may be having on being ready to use the flow. The Group discussed that a discussion forum would be a good place to do this.

1.12.9 This led to the Group suggesting a forum to discuss more specific issues and common themes on any problems that have or may have occurred (such as the D0313). Rather than creating a new forum for this purpose, a Group member noted that the existence of the Supplier Agent Forum (SAF) which is an appropriate place to discuss such issues. The Proposer highlighted that the roll and terms of reference for the SAF is currently under review by the Supplier Volume Allocation Group (SVG) Panel Committee. Using the SAF in the manner discussed by the Group could be included in the SVGs discussions, which the Group agreed should happen. The positives and negatives of the discussion forum can be seen in **Section 2.8.**

[12]D0313 - Auxiliary Meter Technical Details (which will provide Communications and security information to accompany NHH Meter Technical Details for AMR Meter Types).

2. What are the solutions?

2.1 Query Management Process for resolution of data issues

2.1.1 Of all the potential solutions that the Group discussed, the option most supported was a similar query management process, similar to that utilised in the Gas markets by Shippers and independent Gas Transports (iGTs), to help resolve data issues[13]. The solution meets the requirements of the Issue 41 proposer by having a means to resolve issues in a formal and efficient manner with the option of including an incentive/penalty against those that do not resolve a query in the associated timescales.

2.1.2 When considering extending ECOES (covered below) the Group briefly considered making use of ECOES as the platform from which to base the query process. However, the Group concluded that it would be easier or more straight forward to have a separate process and framework.

2.1.3 The following table summarising the Group's high level views on the positives and negatives of developing and implementing such a query management solution.

Benefit	Drawback

• It would resolve data issues that have not been resolved from the normal escalation methods within the CoS/A processes.
• Would resolve the issues identified by Issue 41. Ultimate outcome would be that the 'incentive' would be to never end up in the query process, by getting the data right.
• Aids focus on prioritisation of issues.
• If linked up with PAF, particularly the BSC Audit, it could aid the focus on getting the data right first time.
  ○ Process itself could be audited.
• Formalise some of the existing unofficial processes used by individual Suppliers.
• Process could increase the visibility of common problems, helping to then identify the root causes.
  ○ Allow issue tracking across CoS/CoA processes and provide history of comments on actions taken, which could then produce guidance on how to address/prevent the problems occurring.
	• Using the Gas Code model may be problematic, due to the differences in the Gas and Electricity markets governance structure (e.g. no central Electricity body).
	  ○ Potentially costly to setup and operate
	• Needs central repository of data to keep costs down
	• Would replace individual organisations' internal escalation processes, which may already work well much of the time
	• May not always provide a solution/resolution.
	• Could be huge volume of queries – difficult to manage.
	• Suppliers may be the last to know of problems; queries could be raised more promptly if agents could submit them as well?
	• Problems that the query process would look to help are raised with ELEXON via OSMs already.

[13] The document that set out the details of this Query management process is available on the independent Gas Transporter (iGT) Uniform Network Code (UNC) website via the following link: http://www.igt-unc.co.uk/ewcommon/tools/download.ashx?docId=1161.

Benefit	Drawback
• Process would initially be corrective, then potentially be preventative as organisations resolve problems within normal timescales to avoid the consequences that the query process may hold. • The Cost of the process could possibly replace the individual Party/agent costs of chasing missing or poor data. • The process would introduce a clear consequence (penalty/incentive) for getting the data right within the query process timescales, Then potentially within the normal processes without needed to use the query process. • Visibility of poor performers – could provide information for assessing Settlement Risks and the Risk probability in the RER. • Could provide information to individual parties on performance (low number of queries raised/open good vs. high volume/unresolved queries poor) • Increased accountability, due to agents/Suppliers having to work with other organisations to resolve problems. • Replaces reliance on good will to resolve problems.	

2.1.4 What needs further consideration?

2.1.5 Due to the potential complexity of developing and implementing a formalised query process for the effective and efficient resolution of data issues, the Group set out a list of items that need careful consideration if taken forward via a Modification proposal. The areas/items that require further consideration are set out below:

Area/Item	To be considered:
Background analysis	• Analysis on current issues and their resolution in order to guide development of query process (e.g. Number of parties involved, data types and volumes, and the methods of communication).
Responsibilities	• Who would manage the process? e.g. ELEXON oversee process as a whole, but leave resolution to respective Suppliers/Agents unless query process timescales

Area/Item	To be considered:
	are breached? • Should responsibility for taking the query through the process initially sit with the associated Supplier/agents, with ELEXON and BSC Panel/Panel committees stepping in if timescales are breached? This may help with potential large volumes of queries.
Query process	• Structure and process steps (use Gas code process structure?).
Query process start point	• Process only used when Suppliers/Agents have worked through standard CoA/CoS escalation.
Who can raise queries?	• The current Supplier only or current appointed agents as well? or, • Current and Previous Suppliers and or agents?
Query Process system	• Format of query logging process (e.g. online database for submission and management of queries?) • Link up to/make use of an existing system (if available)?
Query progression	• How would you ensure co-operation between agents that a Supplier does not have existing appointments or contract relationships with?
Query resolution	• The acceptable extent of resolution would need to be discussed, e.g. data is 100% correct or an agreement is reached between current and old Supplier/Agents. • Is there a need for a correction mechanism if the agreed data (value) caused other issues at a later time? • Historic resolution: How far back a query can go regarding the history of the query. ○ Limit any data correction while the data is 'fluid' i.e. within 14 month Settlement window; or ○ allow correction of data that has 'crystallised' i.e. older than the 14 month Settlement window, which cannot currently enter Settlement without an approved Trading Dispute.
Query escalation	• What should happen if the number of open unresolved quires exceeds a set limit? Could we include the process in the BSC Audit with issue documents raised for non-compliances; or monitor compliance, with escalation of underperforming Suppliers/agents to PAB? Could there be a PARMS Serial on treatment of queries?
Penalty/incentives	• Further consideration should be given to having a penalty (for exceeding query process timescales). The scope and management/settlement of a penalty system would need to be considered.
Smart Meter considerations:	• Can the process be in place before full smart rollout? • How it would fit into in the smart arrangements?

Area/Item	To be considered:
Cost/Benefit Analysis	• A cost benefit analysis would be required to determine the long term cost savings to Parties (by being able to resolve data issues) versus the cost of implementing and operating it.
Code, CSD changes?	• Would a new BSC section be required, or would it fit within existing sections e.g. W (Trading Disputes) or Z (Performance Assurance)? • Would new BSCPs be required?
Governance changes outside the BSC	• Would there be a need to raised other non-BSC related changes to take this solution forward?

2.2 Central contact list for data issues

2.2.1 During the discussion of potential solutions that may help address issues around receiving data and its quality, a suggestion was made for there to be a means to contact other organisations' respective expert/lead on data issues (e.g. D-flow responses or Underpinning issues):

2.2.2 The table below provides a summary of the Group's views on the positives and negatives of having a central contact list for each organisation:

Benefit	Drawback
• It would provide a central more readily available source of relevant contacts. Some organisations already have their own contact lists, this change would centralise it. • Not too hard to put in place/inexpensive if kept simple (i.e. list or spreadsheet rather than a database). • Existing frameworks available to support it, e.g. the ELEXON website or Portal. • Proven to work in other codes and in other formats (DCUSA and BSC Signatories list and the UMSO contact list on the ELEXON website) • Encourages communication between parties • Single point of responsibility around resolving data issues and Suppliers/agents will know who to contact • Standalone solution, but could easily fit in to the query process.	• Need buy in from whole industry to work (change required to mandate provision of the contact details) if not a voluntary contact list. • Privacy/confidentiality could prevent full use • Could quickly become out of date if not actively maintained. • If only generic contact details were provided, request for assistance on a problem could be left unresolved. • No consequence for not responding to email/telephone request for information/data • Does not give you answer/fix to the problem only a means to contact the relevant parties about it. • Organisations may decline to provide the contact information • Difficult to mandate the provision of the contact info.

2.2.3 What needs further consideration?

2.2.4 The Group identified the following items that would need to be considered or actioned, to take this solution forward:

Area/Item	To be considered:

Content and Structure	• The format of the contact list – e.g. similar to the BSC Signatories list?
	• Granularity – more detail would maximise the benefit of the list, e.g. a small organisation may have one contact for all data issues, while a larger organisation may have a contact for specific D-flows, underpinning etc.
	• What contact information should the list contain? E.g.
	  ○ Generic email box
	  ○ Name and phone number to call for follow up purposes
	  ○ OSM details to contact if no response is received

Guidance	• Guidance on use of contact list, for resolving issues.
Initial Trial	• Having an initial voluntary trial, to see if it would prove useful.
Full rollout	• Mandating provision/maintenance of contacts? • Frequency of review for accuracy (e.g. twice a year in a similar manner to the BSC Signatories list)? • Security – should the list be stored securely on the ELEXON website for uploading and/or viewing purposes, e.g. on the ELEXON Portal?

Related solutions	• If put in place along with query process, use the list for:
	  ○ initial contact to attempt to resolve the problem, with the query process only being used if no response is provided? or
	  ○ the first point of contact once a query is raised?

2.3 Rejection Flow for the D0170, D0149 and D0150 data flows

2.3.1 The Group considered introducing new rejection D-flows, for use in response to D0170, D0149 and D0150. While the Group agreed that it would provide visibility around data issues, where data is missing or incomplete, it would not help resolve the problem set out in the Issue, only just highlight there is a problem.

2.3.2 The table below summarises the Groups views on the positives and negatives of introducing rejection flows to the D0170, D0149 and D0150:

Benefit	Drawback
• Provides visibility of issues by specifying the reason why a response has not been received, so a resolution may more easily be found. • Could provide a prompt to explore other means of getting the data, if the normal process cannot provide it • Could reduce the time period for resolving problems as the new Supplier/agents will	• No formal process in place as to what to do with rejection flow if introduced. So it may become superfluous (unless a response process was included in the change). • Could receive the rejection flow for spurious/vague reasons. • Rejection flows could be used as an excuse. Rather than responding with the correct data,

Benefit	Drawback
know more quickly when the old agents do not have the data or it is incomplete. • Rejection reasons/volumes can be tracked, checked and audited centrally. • Cost saving as fewer D-flows are sent over the gateway as the request flow wouldn't need to be sent multiple times.	an agent could respond with the rejection flow adding to the problem over data provision. • Parties already have own system/processes of communicating when flows cannot be dealt with. • The problem does not get resolved with the rejection flow, Suppliers would still need to obtain the data somehow. • Any benefit could be outweighed by the cost to implement, due to the extent of the role out involving Suppliers, agents, ELEXON and MRA.

2.3.3 What needs further consideration

2.3.4 If the rejection flow solution was taken forward the Group identified the following areas that would need to be considered:

Area/Item	To be considered:
Analysis	• Consider experiences from other existing rejection flows (e.g. D0310) and the benefits they provide.
D-flow requirements	• What rejection fields/info is required/could be provided? (e.g. incomplete history/no history, avoid free text fields) • Should the rejection flows provide contact info – someone to get back to following receipt of rejection flow, to aid in following it up. • Who would the recipients be (new agent only or new agent and Supplier).
BSC changes	• BSCP504 processes would need to be amended to capture the use of the rejection flows
Monitoring	• Trigger to track number of instances where there is a missing/incomplete data issue to aid follow up investigations.

2.4 Central MTD database – through extension of the Electricity Central Online Enquiry Service (ECOES)

2.4.1 The Group initially considered creating a database to centrally hold MTD information. Due to the likely high cost of putting a new database in place, this quickly evolved into extending the existing ECOES system, which assists Suppliers in the customer transfer process by allowing the triangulation of data and to provide benefits to MRA parties in other key areas. The Group considered the benefits of extending ECOES to include a complete set of MTD information.

2.4.2 The Groups views on the positives and negatives of the extending ECOES to hold more MTD information are summarised below:

Benefit	Drawback
• Would provide a facility to access a full set of MTD information • It would provide an interim solution until the Data Communications Company is in place as part of the smart implementation programme. • Could improve data accuracy (partly) as MTD data would be from a single source, which would be particularly useful to NHHDCs. • Opportunity for data validation by MOAs, as the data should be entered and correctly maintained. • Would assist in resolving number of D0095s • Especially useful on a change of meter – as the old MTDs are readily visible to check at the point the meter is changed. • Potentially cheaper to do than a specific new system.	• Perception that there may be little appetite to change it (particularly from the MRA MDB Group). • ECOES is not currently seen as an undisputable source of information, as it may not be completely accurate (i.e. matches the physical site set up). • It won't prevent the data issues happening in the first place. • It will not solve all problems (only some problems associated with obtaining MTDs) • Doesn't address all of Issue 41 concerns. • Costs could outweigh the benefit. • Would involve additional effort by the MOAs to ensure MTD information is up to date. • Lifespan is limited as it is likely to be superseded by the DCC.

2.4.3 If this change was taken forward, it would need to be progressed under the MRA change process, as the responsibility and maintenance of ECOES is not under the remit of ELEXON.

2.4.4 What needs further consideration?

2.4.5 The Group identified the following areas that would need further consideration if the MTD database solution, through the extension of ECOES, was taken forward:

Area/Item	To be considered:
Analysis	• Why ECOES has not been extended previously • A clear business case for doing so (there has been some degree of hesitance over extending ECOES from MDB, so any change would need to be supported by a clear rationale). • Can it be done in a cost effective manner to make it worthwhile
Requirements	• Limit access to who can update MTD information, e.g. write access for MOAs, read only access for NHHDCs and Suppliers • The level of MTD history ECOES would need to store, to provide an accurate record of information to refer to. • Have a system to 'flag' or highlight mismatches when updates are entered. • A means for the Supplier or MOA to receive a rejection notification if data entered is incorrect; also a requirement for the data to be kept up to date. Consideration would need to be given to how this would be judged?

2.5 Review Change of Supplier process and timescales

2.5.1 As explained above, the Group considered whether there were any benefits in carrying out a review of the CoS process, on the grounds that a lot of the issues around the receiving and quality of data, occur during the CoS process.

2.5.2 The following table summarises the Groups views on the positives and negatives of a complete review of the CoS process:

Benefit	Drawback
• Clarify responsibilities • Chance for greater understanding of timescales and what is possible to be done in the timescales (e.g. process allows 10 days to do a step, but can be completed sooner). • Aid in identifying disjointed or contradictory timescales in relation to the sending and receiving of data flows. • Opportunity to introduce all or some of the smart CoS process/EU Third Package changes earlier. • EU Third Package changes will require a review anyway to ensure compliance • Opportunity to describe or mandate what should be done if a process step goes wrong (i.e. doesn't work according to BSCP). • Could encompass a review of the underpinning process to improve it and formalise what should happen and when. • A review would be cheap and quick to carry out. • Some similar work is already underway or due, e.g. Smart rollout and Gemserv's process mapping work, which in turn could help make the review easier. • Opportunity to look at the loss side of the process, which has not had much focus to date. • Enough time (years) before the full smart rollout to see the benefits of a review and any solutions that could be put in place.	• Limited benefit when CoS is likely to change as a result of the smart rollout. • Could be expensive to deliver a comprehensive review of the process • Hard to define the scope of the review, as there are many processes and elements that contribute to the process. • Solutions could take a long time to define and implement (Mod/CP and MRA changes). • Smart may negate the benefits of any potential changes/improvements by either providing the solution and/or removing the problem • Reviewing the process and potentially changing the timescales may not improve compliance, which may in fact worsen if timescales are reduced. • Will not fix all the concerns raised via Issue 41.

2.5.3 What needs further considerations?

2.5.4 The Group identified the following items that would require further consideration during the review:

Area/Item	To be considered:
Review Scope	• Limit any timescales review only to processes that are now automated or reduce timescales associated with manual processes as well. • Limit to CoS process or included any/all CoA processes as well.

Analysis	• Root course analysis of:
	  ○ any current problems with the process; and
	  ○ determining the knock on procedural impact of any process step changes, both to BSCP504 and any associated MRA processes
	• Review any failures that occur with the automated process.
	• What are the associated D-flow timescales during the CoS process, and can these be better aligned to avoid any clashes that can lead to delays.
	• What will the CoS process look like under Smart and from changes from the EU Third Package? Can any of the changes be introduced earlier?

Solution	• Determine what CoS timescales should be • Consider better aligning D-flow response timescales with the CoS process to resolve any existing clashes. • Provision of guidelines on areas such as underpinning including the trigger for it, which could better facilitate those CoS that need manual intervention.

2.6 Changing the meter at a problem site

2.6.1 The Group considered whether there was benefit in simply changing the meter (physically or via a dummy change) when a site is found to have a problematic history that cannot be corrected. It is worth noting that out of the two types of change it is less likely to be a physical meter change, but a dummy change to enable incorrect history that cannot be unpicked to be resolved.

2.6.2 Doing so requires no change to existing processes as it is an option already available to use. However the Group did discuss the positives and negatives of doing so, as summarised in the following table:

Benefit	Drawback
• Good as a last resort • Draws a line under the problems and should provide good quality data going forwards - End dates the inaccurate data. • No change required as already a BSC process • Changing of the meter can be controlled by the Supplier • If old meter cannot be relied on to provide an	• For a physical meter change it costs money to do (meter cost, installation cost and time cost to sort out final read on old meter and starting read on new meter). • Does not fix the historical problem that would still require resolution. A way of agreeing a resolution would be needed between all parties (Suppliers and agents) involved

Benefit	Drawback
appropriate final read, one can be deemed	• Most NHH meters will be replaced by advanced (smart/AMR) meters within 10 years anyway. • The new meter could go wrong as well, or the associated information (e.g. MTDs, reads, etc.) could become corrupted further compounding the data problems. • Changing the meter can cause billing issues, as previous reads would relate to the old meter, and time would be needed to build up a new meter read history.

2.6.3 What needs further consideration?

2.6.4 No further work would be required as a Meter can already be exchanged, with the procedures already existing allowing it to occur. The Group discussions highlighted that it is an existing option. If the Query process solution was taken forward and implemented the outcome of a issue going through the Query process may be to exchange the meter at the problem site.

2.7 Mandating a meter read whenever a change of circumstance occurs

2.7.1 When discussing the issues around the receiving and quality of data, the Group discussed that all good meter reads were useful, with the more the better to increase the accuracy of settlement and from an end customer point of view their bills.

2.7.2 The Group discussed whether a Change of Supplier occurs, that a Change of Supplier read (involving a site visit to take the meter reading) should be mandated rather than relying on the customer reading.

2.7.3 The Group's view on the Positives and negatives of mandating a Change of Supplier read are set out below:

Benefit	Drawback

• Opportunity to check meter details at same time as the CoS read is taken.
• Reduces frequency of estimated CoS reads
• Provides actual opening read for validating future reads against.
• Chance to identify meter exchanges or inaccurate data.
• Reduces the requirement for the Agree Read Process (ARP)
	• Costs:
	  ○ Additional costs to collect reads outside of the planned walk order and if no access to meter it could fall in to must-be-read which also has cost attached
	  ○ Logistics, reading needs to be validated
	• Doesn't resolve historical data quality/timeliness issues
	• Suppliers do try to get Point of Sale (PoS) reads anyway
	• Cooling off periods during the CoS process would mean you may not get a read on/close to the CoS date anyway
	• Smart rollout should substantially resolve this anyway, as getting an accurate CoS read would only involve dialling the meter (as long as interoperability is successful and

Benefit	Drawback
	doesn't take longer to arrange than the time available to access a reads for the required CoS date).

2.7.4 What needs further consideration?

2.7.5 No further work is required as the Group concluded that this change is not required. Additionally the smart rollout will help resolve this any way as when a CoS read is needed the Old and New Suppliers will be able to obtain final and initial reads remotely by dialling the meter.

2.8 Forum to discuss issues, share best practice and ideas to resolve them

2.8.1 As explained above, the Group agreed there was benefit in having a forum to discuss specific issues, and share ideas on best practice and means to resolve problems in an open manner. Rather than creating a new forum the Group agree that their ideas on this should be considered during the SVGs discussions on the role of the SAF.

2.8.2 The Group's views on having an open forum for discussing issues are summarised below:

Benefit	Drawback
• Open means for Suppliers and Supplier Agents to discuss specific issues or concerns (e.g. the new D313 flow that is going live in November 2011). • A medium to come up with ideas to resolve problems or share best practice • If the SAF is used, the SVG could set out specific areas for the SAF to talk through and report back on its findings	• Getting the right balance of Suppliers and agents at the forum, if extended to include both Suppliers and Agents.

2.8.3 What needs further work

2.8.4 No further work is required to develop this solution, other than the SVG completing its review of the role and terms of reference of the SAF, with the Group's thoughts on the use of the SAF feeding into these discussions and considerations.

3. Conclusions

3.1 Having discussed the issues and the associated concerns around the Issue 41 points, including the approaching smart rollout, the Group concluded that solutions to improving receipt and quality of data are important for all participants and warrant time invested to resolve.

3.2 The Group considered each of the potentials solutions and made the following recommendations on whether they should be taken forward:

- **Query Process** – Yes, this should be taken forward. A Modification would be required to fully develop and consider necessary framework, clear requirements, including any penalty/incentive system to resolve queries within set timescales and the costs/benefits of having the process.
- **Contact database** – Yes, this should be taken forward (with a potential voluntary trial it first). A change would be needed to put in place a requirement to provide/maintain the contacts. Would go hand in hand with query process but can stand on its own as a separate change/solution.
- **Issue discussion forum** (using the Supplier Agent Forum (SAF)) to discuss specific issues around D-flows (e.g. D313)/underpinning etc – Yes, this should be taken forward and the Issue 41 discussions on this will be considered as part of the review of the role and terms of reference of the SAF.
- **Mandate a Meter read on a CoS** – No, as it is too costly and Smart Meters will enable accurate CoS reads to be obtained anyway.
- **Review CoS process** - Possibly, would need to be started promptly so that sufficient benefits are recouped before the full smart rollout. It would need to consider the potential mandated EU Third package changes, the smart implementation programs work on the CoS process and the MRA Development Board (MDB's) process mapping work.
- **Extend ECOES (MTD store)** – Nice to have, but due to the smart rollout it could be expensive and have a short lifespan due to the introduction of the DCC. It would need to be taken forward via the MRA change process.
- **Rejection Flows (for D0170, D0149 and D0150)** – Nice to have (would need Change Proposals to go through both the BSC and MRA change processes); likely to be expensive. Would not resolve data quality, and could discourage parties from making the effort to source and send the correct data.
- **Change Meter at Problem Site** – This is not a solution and processes are in place for this to happen already. However it is a potential resolution option at the end of the query process.

Appendix 2 – Issue 41 Group's membership

Member	Organisation	10/06/11	19/07/11	18/08/11
David Barber	ELEXON (Chair/Lead Analyst)	Y	Y	Y
Colette Baldwin	Proposer (E.ON)	Y	Y	Y
Andrew Neves	Central Networks	☎	Y	N
David Hackett	Siemens	Y	Y	☎
Lorraine Smith	IMServ	Y	Y	Y
Martin McDonald	IBM (Scottish Power)	Y	Y	Y
Pete Butcher	SSE	Y	Y	N
Richard Vernon	npower	Y	N	N
Stacey Deakin	GTC	Y	☎	N
Tony Savka	ENWL	Y	Y	Y
Sunny Vara	First Utility	N	N	Y
Attendee	**Organisation**	**10/06/11**	**19/07/11**	**18/08/11**
Beth Brown	ELEXON (support)	Y	Y	Y
Zaahir Ghanty	ELEXON (support)	Y	Y	Y
Anita Moffatt	E.ON	N	Y	Y
Dave Smith	Npower alternate	N	Y	Y
Adam Walker	IMserv	N	Y	Y
Nik Wills	Stark Software International Ltd	N	☎	N
Gary Cooper	Stark Software International Ltd	N	☎	Y
Daniel Johnson	First Utility	N	N	Y