

SMART METER ROLLOUT INDUSTRY DAY WORKSHOP

EXECUTIVE SUMMARY

As part of ELEXON's smart Meter rollout assurance activities, we hosted two industry days on 23rd and 30th April 2018. Both days were well attended – 65 attendees in total from 25 different Supplier organisations and 13 non-Supplier organisations (Meter operators, Data Collectors, other regulatory bodies etc.). Each day consisted of educational sessions on BSC processes related to the smart Meter rollout followed by a workshop.

During the workshop, participants discussed their issues and concerns related to the rollout and the extent to which they had the potential to impact the accuracy of Settlement under the BSC. The key themes from the workshops can be summarised as follows:

DCC user interface – the most widely reported concern was related to participant interfaces with the Data Communications Company (DCC). With these processes being new and not yet used at scale, there are concerns regarding the knock on impact if there are any issues.

SMETS1 interoperability – participants noted on-going issues with retaining smart functionality on a change of Supplier for Smart Metering Equipment Technical Specification (SMETS) v1.0 Meters.

Data transfer and quality – an increase in Meter install and change of Supplier and/or agent activity due to the rollout will result in an increased volume of data transferred between participants. There were concerns raised regarding whether that data will be received in a timely and correct manner.

Managing exceptions – there are concerns that high numbers of legacy metering errors will be identified when attending site to install smart Meters, particularly for sites that may not have been visited for a while.

Reading legacy Meters – as the number of non-smart legacy Meters diminish and become more sparsely populated, there are concerns that obtaining physical Meter reads will become more challenging. Some participants noted that this is already becoming an issue.

Each of the above areas is discussed in more detail below. For each area of concern that had the potential to impact the accuracy of Settlement under the BSC, participants discussed what activities ELEXON could support (in its capacity as BSCCo.) to mitigate these impacts. Following these discussions, we will be progressing the following:

Future industry events

The overwhelming feedback from both days was that industry participants find such events useful to understand and overcome common issues. Therefore, we plan to run further industry days over the course of the smart Meter rollout. Whilst the scope of the industry days was BSC processes, participants noted that a session covering end-to-end smart activities in terms of processes and regulations outside the BSC would be helpful. Therefore, we will endeavour to liaise with the relevant bodies to support such a collaborative event.

It was noted that a follow up session would be most useful once participants had more experience with the processes for DCC serviced smart Meters. Therefore, we feel the next session should be towards the end of 2018, but we will liaise with participants to validate this.

Varied engagement approach

It was noted that whilst some participants preferred in person process walkthroughs and workshops, other participants (particularly those from smaller organisations) may not be able to set aside the time to attend in person. Therefore, participants would welcome receiving educational material and inputting into discussions through other means. To support this, we plan to undertake future engagement through varied means such as: webinars, training videos, FAQs and online surveys.

We plan to progress this activity in the coming months in-line with a review of our existing guidance and website content related to the smart Meter rollout.

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WORKSHOP DETAILS

During the first part of the workshop, we requested participants discuss their issues and concerns related to the smart Meter rollout. When discussing each item, we asked participants to consider the impact (or the extent to which it has a potential impact) on the accuracy of Settlement under the BSC, as this is the scope of the Performance Assurance Framework (PAF).

DCC user interface

Workshop members noted concerns in regards to their interface with the DCC when remotely configuring, re-configuring and reading smart Meters serviced by the DCC – currently SMETS2 Meters only. When the industry days were held, a number of participants had undertaken limited trials of installing DCC serviced smart Meters with varied amounts of success. The concerns raised were as follows:

Communication issues – some participants noted issues related to the Wide Area Network (WAN) and stability of communications during their trials. There were general concerns regarding the possibility of such issues when SMETS2 Meters are being installed at scale.

Forecasting service requests – a number of participants noted issues with forecasting future installs and therefore DCC service request volumes. The participants noted that these issues have been in part due to delays with DCC services going live. Any inaccuracies in these forecasts could result in DCC service requests being delayed and therefore delaying subsequent processes.

Firmware upgrades – participants noted concerns surrounding future changes to technical specifications and ensuring that Meters stay up-to-date with the latest firmware upgrades. The potential volume of such firmware upgrades was of concern in addition to how efficient the processes will be.

Process workarounds – participants noted outstanding process issues/defects that have caused the need for multiple workarounds to be in place. For example, the 'Meter Serial Number not on DCC Inventory' issue currently being considered under the Master Registration Agreement (MIF257). These workarounds result in inconsistent approaches which have the potential to create problems later.

DCC adapters – it was noted that if Suppliers decide not to develop their own adapters to interface with the DCC, there are various to choose from on the market. However, a number of participants noted issues when testing adapters.

In regards to Settlement impact as a result of the concerns discussed above, it was noted that delays or errors in DCC processes will result in delays or errors in the following BSC Settlement processes. We note that the majority of concerns raised relate to uncertainty surrounding processes that remain largely untested at scale.

When the Issue 69 workgroup met back in 2017 to identify and assess risks associated with the smart Meter rollout, it considered risks related to DCC user interfaces and communications. At the time, it was the consensus of the Issue group that these risks presented a low impact on Settlement and that there were appropriate mitigations in place under the Smart Energy Code (SEC). Therefore, no additional assurance activity was deemed necessary under the BSC. However, it is clear that we need to be mindful of such risks and the impact on Settlement as we enter into the mass rollout. Due to the cross code nature of the smart Meter rollout, we also need to ensure the process hand-offs are clearly understood.

SMETS1 interoperability

The most common issue raised regarding SMETS1 Meters was interoperability on a change of Supplier. The majority of Suppliers in attendance noted loss of remote functionality for the SMETS1 Meters they gain resulting in the need to obtain physical Meter reads. The main contributing factors discussed were commercial issues between Suppliers and Smart Metering System Operators (SMSOs) – the participants that provide remote services for SMETS1 Meters.

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Enrolment and adoption – whilst the enrolment and adoption of SMETS1 Meters by the DCC is seen as mitigating the issues related to interoperability in future, concerns were raised around this activity. Participants noted uncertainty surrounding the timescales and the coverage of the migration. It was noted that as the technical details surrounding enrolment and adoption of SMETS1 Meters is still to be determined, the process could take longer than anticipated and the coverage lower than expected. This would ultimately result in more of these Meters that will lose remote functionality in the interim and a yet to be determined proportion that could always be subject to interoperability issues.

Participants noted that the impact on Settlement as a result of losing remote functionality of SMETS1 Meters on a change of Supplier is that regular remote Meter readings will cease. This will result in Suppliers reverting to physical Meters reads to achieve compliance with Non-Half Hourly (NHH) Settlement performance standards. Impacts outside the BSC were noted regarding negative consumer experience with the rollout as they are requested to provide reads or access for reads to be taken.

At the end of 2017, ELEXON undertook an investigation into the SMETS1 interoperability issue discussed. As the process to retain remote functionality for a SMETS1 Meter on a change of Supplier sits outside the BSC (i.e. it is governed by the Foundation Interim Operating Model), the Performance Assurance Board (PAB) referred the findings from this investigation in regards to the potential impact on Settlement to the Panel in March 2018 ([276/09](#)). The Panel subsequently raised the PAB's concerns with the relevant industry body. As we have already undertaken the route available under the BSC for non-BSC processes that have the potential to impact Settlement, we do not propose any further action in regards to this issue.

Data transfer and quality

We are already observing an unprecedented number of smart Meter installations – approximately 230k on average per month in the first quarter of 2018 as per the [smart Meter Technical Detail \(MTD\) report](#). And this level of activity could increase by up to three times to meet rollout deadlines. It was also noted that the rollout will result in a higher number of Supplier hub changes, i.e. change of Supplier and/or agent. With this increased level of activity in the market, more data is required to be captured and transferred between participants.

Supplier hub changes – participants noted concerns related to delayed or missing data during the change of Supplier hub process, especially for the new change of Supplier process for smart Meters introduced through [P302](#)¹. This can result in participants being unable to retrieve or validate change of Supplier reads.

Another issue discussed was when a participant believes it is gaining a smart Meter but it's actually a legacy Meter and vice versa. This has the potential to cause issues when different agents are used for smart and non-smart Meters.

Field activities – it was noted that pressures on Meter installers to meet targets could result in metering issues being introduced during the installation process. In addition, Meter installers are required to accurately capture details from installations for transfer to other participants. If robust processes and controls aren't in place for this activity, participants could hold old or incorrect data.

New MTD processes – there were concerns surrounding the new MTD processes for smart Meters, in particular the new responsibilities on Suppliers to confirm Smart Meter Configuration Details (D0367s) to its Meter operator. As these processes and responsibilities are new, more complex and yet to be undertaken in earnest, there were concerns about material errors and omissions.

¹ "Improve the Change of Supplier Meter read and Settlement process for smart Meters" – implemented 30 June 2016

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MTD data quality – participants noted general concerns related to the accuracy of MTDs. These concerns included Meter register mismatches, incorrect Meter serial numbers and different interpretations of register naming conventions. Whilst it was noted that these data quality issues have existed for some time, it is perceived that the increased activity over the rollout will cause additional errors to be introduced.

Missing or incorrect data as outlined above can result in erroneous consumption values entering Settlement or unnecessary estimation of data. There was a general concern that pressures to meet rollout targets could give rise to a higher proportion of data quality issues.

The risk associated with the new MTD processes for smart Meters was considered the highest risk to Settlement by the Issue 69 workgroup, hence the development of the smart MTD report. Other risk areas related to the transfer and quality data were captured within the smart section of the [Risk Evaluation Register \(RER\)](#). On-going assessment and mitigation of these risks is planned over the rollout, as the PAB has deemed assuring Settlement Risks associated with the rollout of smart Meters to be one of its key strategic priorities in the coming years.

Managing exceptions

The electricity supply licence requires that Suppliers must take all reasonable steps to ensure that a smart Metering System is installed at their domestic and smaller non-domestic customers by the end of 2020. To meet these licence conditions, the number of site visits will increase in the coming years. When gaining access to sites, particularly those that may not have been visited for a while, it is envisaged that data quality issues with the legacy Meter will be identified. Such issues may have presented a material impact on Settlement which would require retrospective correction as appropriate. Whilst it was acknowledged that the rollout presents an opportunity to identify and correct issues with legacy Meters, the impacts on resource is a general concern with participants.

Planning resource – whilst concerns related to legacy metering exceptions identified during the rollout have been known for some time, there is uncertainty regarding the volume of exceptions that may occur. During the installation of SMETS1 Meters as part of the foundation phase of the rollout, participants did note increases in the number of exception related to the legacy metering. However, it is still unclear how many of these issues will manifest during mass rollout activities. Also, participants expect the enrolment and adoption of SMETS1 Meters to result in exceptions that may require manual working. Due to these uncertainties, participants noted difficulties in planning future resource.

There was also a concern related to the volume of faults that may arise with smart Meters and the resource required to resolve them.

Responsibilities – due to various new processes bedding in for smart Meters, participants noted the potential for confusion in regards to who is responsible for resolving issues. This could ultimately result in issues being overlooked and not resolved.

Applying corrections – it was generally agreed that correcting legacy metering issues is likely to be a complex task. There were concerns around a lack of skilled staff to undertake corrections. It was also noted that other issues (such as energy theft) may be prioritised over legacy data quality issues.

Identifying and correcting legacy data quality issues will be of benefit to Settlement; and it is important that appropriate attention is given to progressing corrections in a timely and correct manner.

Reading legacy Meters

Participants raised concerns around servicing the remaining proportion of legacy Meter, in particular obtaining physical Meter reads. There is uncertainty surrounding the volume of legacy Meters that will remain after the rollout as consumers opt out of the process and where Suppliers are unable to install after taking all reasonable steps. It was noted that it could become increasingly costly to obtain physical Meter reads as the remaining legacy Meters become sparsely populated and field forces are reduced.

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This issue could result in degradation of NHH Settlement performance, particularly at the later Reconciliation Settlement Runs. We have already observed a drop in NHH Settlement performance at the Final Reconciliation (RF) Settlement Run whereby the 97% standard is not being met at an industry level – on the latest RF Settlement Day available, 10 April 2017, industry performance was 96.52%.

Other concerns

Other concerns discussed during the workshop were as follows:

Customer engagement and access – concerns were raised with the level of engagement end consumers have with the rollout programme, and the impact this may have on gaining permission and access to install smart Meters. Participants also discussed the potential for site safety issues (e.g. asbestos) preventing the installation from occurring. As these concerns would result in failure to install the smart Meter, no negative impacts on Settlement were identified, as Settlement would be no worse off than before. The main impacts discussed related to negative consumer experiences and meeting licence conditions.

Install resources and stock – there were general concerns around readiness and availability of smart Meters to meet installation targets. It was noted that there are long lead times on SMETS2 Meters such that participants have to forecast installs and order Meters several months in advance. The transition from SMETS1 to SMETS2 Meters will also present challenges in terms of Meter stock. A related concern was raised in regards to the availability of legacy Meters after the rollout. Participants questioned whether it would be commercially viable for manufacturers to continue making legacy Meters in a smart Meter world.

There were also concerns regarding the availability of Meter installers during the rollout and how the workforce will be used after the activity is complete. As with the concerns regarding customer engagement and access, if these issues were to occur they would result in the smart Meter not being installed and therefore no negative Settlement impacts were identified.

Parallel processes – participants noted challenges with running parallel processes for legacy, SMETS1 and SMETS2 Meters. It is perceived that smart processes will be given higher priority which could lead to legacy processes being neglected and participants holding less knowledge in relation to them.

Uncertainty or lack of clarity – there were some comments raised regarding uncertainty or lack of clarity. For example, due to the Significant Code Review on market wide Half Hourly (HH) Settlement, the future of NHH Settlement is uncertain. Participants also noted lack of clarity around definitions and specific install deadlines for certain Meter types.

What could be done to help?

During the second part of the workshop, participants considered the key issues and concerns that had the potential to impact Settlement and what could be done to help. As with the first session, we requested participants discuss activities that were within ELEXON's ability (in its capacity as BSCCo.) to support.

Training and guidance – participants identified the need for on-going training and guidance on BSC processes for smart Meters over the rollout. Raising awareness of these processes is seen as important to ensure they are not overlooked at a time of unprecedented levels of activity.

Best practice – with numerous new process bedding in, participants noted that publishing best practice would help when setting expectations and ensuring consistent approaches.

Industry days – participants called for future industry days during the smart Meter rollout. Future events were requested to include process walkthroughs and workshops to provide the opportunity for participants to share issues. It was suggested that such sessions could be targeted around particular market issues, if required.

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Cross code coordination – the cross code nature of the smart Meter rollout was discussed. Participants noted that it would be useful for future events to cover end-to-end smart Meter rollout obligations and processes. This would provide efficiencies and clearly highlight the hand-off between codes. The other main code body noted was the SEC and the associated DCC processes.

Communication – as resources are stretched over the rollout, participants noted that more targeted communications would help draw out the items most relevant to them. Participants noted that the existence of training and guidance materials should be advertised more, and plain English used wherever possible.

Engagement – it was requested that future engagement be undertaken through varied means. Some participants noted preferences for in person meetings whilst others noted preferences for remote meetings. It was also noted that visual representations of processes would support engagement.

Reporting – it was noted that reporting that separates legacy/smart NHH Settlement performance or that provides insights into performance at a process level would be beneficial.

Next steps

As change of Supplier events are at their highest numbers in almost a decade, there is a shared interest in Settlement processes occurring in a timely and correct manner to ensure the gaining participants can operate the Metering Systems effectively. Furthermore, with many new BSC processes related to the rollout bedding in, new challenges and issues are likely to emerge in the coming years.

The main theme from the workshop discussions was the need for on-going engagement with participants over the rollout. And it is clear that not one size fits all in terms of engagement method, so we plan to take a varied approach in future.

To support BSC processes related to the rollout, we are planning to review and update the advice and guidance available on our website in the coming months. We also acknowledge the potential for confusion as a result of the cross code nature of the smart Meter rollout. Therefore, we will be seeking to support a collaborative event that covers end-to-end smart Meter rollout processes before the end of 2018. Finally, the feedback received regarding the reporting aspects will be considered during our on-going assurance activities related to Settlement Risks associated with the smart Meter rollout.