Minutes

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Design Advisory Board – Meeting 4

From: George Huang	Date:12/06/2018 Time:10:00-16:00	Location:Ofgem, 10 South Colonnade, Canary Wharf London E14 9PU

Session 1 – Welcome and Introduction, Business Case Presentation and TOM update

1. Welcome and Administrative Matters (slides 1 -3) Anna Stacey

1.1. The Ofgem Chair, Anna Stacey (AS - Chair), opened the Design Advisory Board (DAB) meeting and set out the day's objectives:

- to get the DAB views on the commercial drivers for market-participants to progress to market-wide half-hourly settlement (HHS)
- to update the DAB on the progress of the TOM design work and the forward work plan for stage 2, and
- to go through the stakeholder responses to the skeleton TOM consultation and seek DAB responses on implications for stage 2 design work.

2. Business Case – Commercial Drivers for Settlement Slides 4-10 Abid Sheikh

2.1. Abid Sheikh (ASh) gave the DAB a presentation on the commercial drivers for proceeding with market-wide HHS. The context for this was to support the business case assessment. ASh gave an overview of the Treasury 5 case model approach on which the business case is based and explained the three iterations of the business case. Ofgem was working on the second iteration of the business case, the Outline Business Case.

2.2. ASh gave an overview of the initial thinking on commercial drivers, setting out the 'push' and 'pull' factors that could influence whether or not a market participant would want to progress to market-wide HHS. ASh then asked the DAB for their views on why market participants would (or would not) want to progress half-hourly settlement (HHS) e.g. code changes, systems implementation, transitioning customers to HHS.

DAB comments:

- A DAB member commented that this was a comprehensive list but asked if Ofgem would use these factors to determine the accuracy of the cost information that we receive. ASh agreed it can be challenging to determine the accuracy of cost information. We will need to compare and benchmark against

what different stakeholders are providing us and we will need to challenge their numbers to get the best estimate we can.

- The DAB asked about how the benefits of HHS would be modelled. ASh explained the BEIS Dynamic Dispatch Model (DDM) would be used to model the benefits of HHS based on different levels of load shifting. This would be compared against costs of HHS, derived from stakeholder cost estimates. It was noted that other factors such as innovation and technology are hard to estimate but still need to be incorporated into the economic case. BEIS agreed to follow up any questions DAB members had about the DDM **(Action item 1).**
- ELEXON noted that for P272 stakeholders provided a broad range of quantitative information and it may be worthwhile reviewing the approach used by the P272 expert group to assess the cost information provided by stakeholders for that code modification.
- DAB members agreed that there are more innovative technologies and products to take advantage of HHS available now to consumers compared to what was available during P272.
- ELEXON mentioned a negative consequence of not moving to market-wide HHS is that some of the arrangements supporting the existing settlement arrangements are coming to an end. For example, radio teleswitch services, which is used for collect data for profiling, will be discontinued. Furthermore, current profiling arrangements will not be able to accurately profile new loads such electric vehicles (EVs).
- It was highlighted that market-wide HHS could make supplier wholesale costs more volatile as it will expose suppliers to the true cost of their customers' consumption. A few DAB members commented that this volatility creates incentives for market innovations which can benefit consumers. Conversely, it was noted that suppliers may have to add a risk premium to address volatility and these costs will be passed to consumers. Another DAB member stated that the risk/volatility has always been there. Market-wide HHS is making this volatility visible and allowing it be addressed. DAB members agreed with this statement.
- The DAB discussed the need to increase consumer participation to achieve the benefits of HHS. The Chair noted that for low income customers this may depend on the extent the market comes forward with community solutions (such as shared batteries). A DAB member noted that it would be wrong to assume that low income customers cannot individually shift demand and benefit from HHS. For example a 'smart plug' is a low cost device that could be attached to household appliances to automatically switch then on and off.
- The DAB discussed how to unlock Peer-to-Peer (P2P) trading and one member emphasized the importance of HHS to allow models like P2P to capture value. They explained that HHS can 'enable' the price signals (such as time of use

tariffs) necessary for enabling P2P and other innovative products and/or models to trade energy at times when the price signal is high.

- A DAB member asked how the Business Case is going to consider how the costs for the implementation of HHS will go back to consumers. Ofgem agreed it is important for us to consider the costs and would consider how this could be done.
- George Huang (GH) asked what key lessons could be learned from the P272 transition for HHS. A DAB member replied that the P272 transition required a highly manual intensive change of measurement process, which was a significant upfront cost for suppliers. Additionally, communication with customers regarding the P272 transition could have been better. ELEXON noted that HHS transition should be different because the metering infrastructure required for HHS will already be in place (due to smart meter rollout) and the SCR was thinking about transitional issues already. Another member noted that Ofgem need to be more firm with transition deadlines as the deadline for P272 was moved back several times and this may have affected industry attitudes to the P272 transition.

3. ELEXON White Paper **ELEXON**

3.1. Minute ELEXON gave a brief summary of the recent white paper on enabling multiple providers they published and agreed to send Ofgem a link to the webinar they had about it to circulate to the DAB **(Action item 2).**

4. Update on TOM Design Work (slides 10-20) **George Huang**

4.1. GH gave an update to the DAB on the TOM design work, covering an update on action items from the previous meeting, next steps for the TOM design work and the Smart Meters Act.

Review of action items (slide 14)

4.2. GH discussed the first action item set out in the slide, the DAB RAID log. The purpose of the RAID log is to record policy interactions and other project dependencies with the TOM design work and had been requested by the DAB. The DAB made the following comments on the RAID log which Ofgem agreed to action **(Action item 3)**:

- More information should be added to the smart meter rollout dependency, such as the SMETS1/2 enrolment and any relevant BEIS consultations
- The access to half-hourly data policy decision dependency should have a definition of settlement purposes
- There should be an additional dependency covering the transition to DSOs.

4.3. For the second action item on the slide, GH noted BEIS would be presenting on export settlement later today.

4.4. For the third action item on the slide, GH handed over to ELEXON. ELEXON gave a brief summary of the work they undertook as part of the previous Settlement Reform Advisory Group (SRAG) in 2015 to model the spill onto the network of unmetered micro-generation registered under the FIT scheme. ELEXON updated the modelling work with 2016 FIT data. The modelling estimated that there is around 1 terawatt of export spill in 2016 across distribution networks in total. However the spill in each distribution network varied. ELEXON noted this added to the settlement error and while this was small now, would continue to increase. The DAB discussed ELEXON's findings and noted that further work on understanding the impacts of unmetered export spill on the system and consumers needed to be done.

4.5. ELEXON agreed to provide the DAB with updated FIT export spill estimates once the 2017 FIT data is available. **(Action item 4)**

4.6. On the last action item, ELEXON outlined the data items which would be extracted from a smart meter for settlement and agreed to circulate this list with the DAB. **(Action item 5)**

TOM Design Work Next Steps and interaction with broader SCR (slides 15-18)

4.7. ELEXON provided an update for the forward work plan for stage two of the TOM design work. The Chair proposed the next few DAB meeting dates to fit with this forward work plan, with the next DAB meeting scheduled for the 6th September. The DAB agreed are to send their availability to Ofgem for further DAB meeting dates towards the end of 2018. **(Action item 6)**

4.8. The DAB next discussed the TOM's interaction with the rest of the Significant Code Review (SCR). The DAB emphasized the importance of making sure they are kept up to date on the progress of policy considerations on access to half-hourly data and agent functions by Ofgem. This will ensure they have the most up to date knowledge when considering TOM design issues.

Smart Meters Act (slides 19-20)

4.9. GH updated the DAB on the Smart Meters Act, outlining the powers given to Ofgem under the legislation to introduce market-wide HHS. GH emphasized that Ofgem is still using its SCR powers to proceed with the market-wide HHS project and did not plan to use these powers until after a decision on whether or not to proceed with market-wide HHS had been made in the second half of 2019.

Session 2: – FIT Export and Consultation Responses

5. BEIS Presentation on Export and FITS **Chris Kukla**

5.1. Christopher Kukla (CK) from BEIS gave an update on BEIS's thinking on export and the FITs scheme. CK was keen to understand the DAB's views on if mandating export settlement should be included in the scope of the Settlement Reform project.

DAB comments:

- The DAB noted that the settlement reform is looking at cost reflectivity and the FIT scheme does not take this into account. The FIT scheme is non-market based solution which does not look at cost reflexivity whereas the electricity market is inherently cost reflective. A DAB member clarified that having export settled half-hourly would help drive market based solutions (e.g. smart plugs which could work with automation).
- The DAB were keen for BEIS to give timelines for an announcement and what the next steps were whilst keeping in mind stakeholder views.
- KS gave a presentation on ELEXONs estimation of unmetered export (spill) calculations from 2016. The analysis showed that there is an estimated total 1 terawatt of export spill in Great Britain that is unaccounted for and in the South West at certain times up to 20% of electricity in that distribution network is from spill. ELEXON said that they will update export spill estimates when 2017 FIT data becomes available.
- The DAB were keen to understand what the impacts were of export spill on consumers and whether this was regional. A DAB member noted that the distributional impact was important to think about as the customers on the FIT scheme tend to be middle class customers and the people who subsidise them tend to be less well-off customers.
- There was a discussion between DAB members on whether the impacts of export spill were limited to suppliers that only operated regionally in a few GSP groups.
- The DAB members noted that not settling export would create settlement error and put more cost on the system in the long term. It was anecdotally mentioned that networks have had to spend money to introduce more voltage regulation as a result of export being unmetered. It was noted that this is an example of the cost keeping the status quo of not metering export.
- The DAB and ELEXON agreed that export settlement had broader implications outside of settlement, particularly for innovation. Some DAB members commented that not settling export would mean that innovative products may not commercially viable.
- The Chair asked the DAB if export settlement should be included in the scope of the project. The majority of the DAB agreed that further consideration should be given to this, and that it does not seem like a side issue. One DAB member stated that there may be additional investment needed to enable smart meters to settle export. Ofgem noted, and ELEXON agreed that SMETS meters are all capable of recording export so this should not be the case.

- DAB members also raised the need to coordinate with BEIS about what happens to the deemed export payments if customers start to be settled. The DAB agreed that Ofgem should return to them with potential options for including mandating half-hourly export settlement in the SCR (Action item 7).

5.2. Ofgem asked what type of additional assessment they thought might needed to be done to consider whether or not to include export settlement. The DAB highlighted the following:

- A privacy assessment on half-hourly export data collected for settlement
- Refining some of the existing analysis by ELEXON to understand the existing impact of spill on suppliers and their customers, and how this is likely to change if mandatory export settlement is introduced

6. Review of stakeholder feedback on DWG Target Operating Model Consultation (slides 35 – 54) George Huang

6.1. To start the session, GH gave the DAB a brief overview on the five skeleton TOMs (see slides 21 – 34).

6.2. The DAB reviewed the stakeholder responses to the 12 questions in the DWG TOM consultation document. ELEXON highlighted that 19 responses were received, none of which are confidential. ELEXON took the DAB through stakeholder responses questions 1 to 5 and 8 to 12 and Kate Mogg (KM) took the DAB through questions 6 and 7.

Key DAB comments on the stakeholder responses were:

- DAB members agreed that none of the responses seemed to raise detailed design issues to consider in stage two of the TOM design work. However, the DAB asked ELEXON to follow up with some of the stakeholders with responses where further clarity was needed **(Action item 8).**
- When discussing responses to questions 6 and 7 around innovation and technology the topic of blockchain was discussed. ELEXON noted that they have done a proof of concept to show its settlement systems can work with blockchain and agreed to provide a presentation of this in the next DAB meeting **(Action item 9)** Ofgem also agreed to look into organising a presentation on blockchain for the DAB in a future meeting **(Action item 10).**
- DAB members agreed the responses were largely reflective of the DWG and DAB assessment of the skeleton TOMs. The DAB agreed that none of the stakeholder responses fundamentally changed or added any new skeleton TOM options.
- The DAB members also highlighted that the responses did not identify a single TOM which was preferred or favoured by stakeholders above other TOMs.

Action items

Actions agreed by the DAB:

1) BEIS to follow up any DAB member questions on the DDM
2) ELEXON to send Ofgem link to webinar on multiple provider white paper to circulate to DAB members
3) Ofgem to update DAB RAID log to incorporate DAB feedback
4) ELEXON provide the DAB with updated FIT export spill estimates once the 2017 FIT data is available
5) ELEXON to outline the data items which would be extracted from a smart meter for settlement
6) DAB to send Ofgem availability for proposed DAB meeting date for remainder of 2018
7) Ofgem to provide update to DAB on options for mandating half-hourly export settlement
8) ELEXON to follow up with certain stakeholders to clarify some of their responses to the TOM consultation questions
9) ELEXON to provide a presentation to the DAB on their proof of concept work on blockchain
10) Ofgem to organise presentation on blockchain for a future DAB meeting

Atendees

Abid Sheikh – Ofgem (session 1, Business case discussion about commercial drivers for MHHS)

Anna Stacey – Ofgem (Chair)

Cathryn Scott – Ofgem (attended BEIS presentation on export settlement and session 2)

Chris King – Siemens

Christopher Kukla – BEIS (Session 2, BEIS presentation on FIT policy & export settlement)

David Crossman – Cornwall Energy

George Huang – Ofgem

Graham Oakes – Upside Energy

Jess Britton (Cat– Exeter University (session 1) (alternate for Catherine Mitchell)

Jim Cardwell – Northern Powergrid (alternate for Chris Allanson)

Judith Ward – Sustainability First

Justin Andrews – ELEXON

Kate Mogg – Ofgem

Kathryn Coffin - ELEXON
Kevin Spencer – ELEXON
Sara Bell – Tempus Energy
Sabiha Padhani – Ofgem
Stew Horne – Citizens Advice
Will Broad - BEIS