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Action:	**For Decision**

Market-Wide Half Hourly Settlements Survey Results

1. Purpose

The purpose of this paper is to allow the TABASC to review the responses to the survey on the end-to-end impacts of Market Wide Half Hourly Settlements (MHHS) issued to Parties in January 2021. The TABASC is requested to agree the proposed actions to address the key issues identified in the responses to the survey.

2. Background

The scope of the TABASC sponsored project to assess the impacts of MHHS on the Smart metering architecture, and identify any changes required, focused on the DCC Total System and did not consider all the impacts on the end-to-end business processes which Users will rely on to settle the data provided by Smart meters on a HH basis. Impacts which occur outside of the Smart metering ecosystem will be considered and addressed by Ofgem as part of its Electricity Settlement Reform Significant Code Review (SCR).

During its discussions around the impacts of MHHS, the TABASC raised concerns regarding whether Parties will be able to successfully configure and operate all the Devices comprising a Smart Metering System to provide HH data to Settlements without detrimentally impacting their ability to bill consumers accurately or provide any other services which SMETS metering systems support.

In January 2021, the TABASC agreed that a survey should be issued to Parties to gain a better understanding of the scale and nature of any issues they expect to arise because of MHHS. The resulting survey was issued on 2 February 2021 and closed on 1 March 2021.

SECAS received two responses from Large Supplier Parties. One respondent highlighted that it is not currently able to answer most of the questions in the survey because the design of the MHHS arrangements is still relatively immature. They did however agree that several of the areas highlighted in the survey will need discussing further as the MHHS programme progresses, and will need some form of cross-code coordination because the impacts span the BSC, the DCUSA and the REC, as well as the SEC. A summary of the responses to each of the individual questions asked is provided in Annex A to this paper.

SECAS has reviewed the responses received and identified three key themes which result in specific actions which can be taken to start addressing the issues raised. The key themes are discussed in section 3 of this paper and the proposed next steps are set out in section 4.

3. Key themes

The responses received provide a lot of information across a range of topics, but there are three key themes which SECAS considers should form the basis of the next steps to be taken. The key themes are:

1. **Configuration and operation of Smart Metering Systems:** Energy suppliers do not currently know how to set up or operate meters and Devices on the Home Area Network (HAN) to support a model of using HH profile data for billing purposes. They are also unclear on what the impact of doing so would be in terms of:

    a) Generating a Settlement gap which cannot be reconciled.

    b) Providing inaccurate information to consumers (including prepayment and Export consumers), either via meter displays or display Devices attached to the HAN.

    c) The accurate operation of Devices such as a (HC)ALCS and (S)APC.

    d) Any potential impact on obligations placed on Parties by other Codes and agreements, in particular the Distribution Connection Use of System Agreement (DCUSA), the Balancing and Settlement Code (BSC) and the Retail Energy Code (REC).

    Additional clarity around these points has been requested, along with a review of the Business Architecture Document (BAD) and the Business Architecture Model (BAM) to ensure they reflect any impacts on the business architecture which arise from the implementation of MHHS.

2. **Change of Supplier (CoS):** All respondents raised significant concerns regarding the impact that MHHS will have on the switching process, along with how it will be ensured that consumers with a Smart meter are able to switch quickly and accurately under MHHS. It was highlighted that some limited discussions regarding how CoS meter readings might work under MHHS have taken place under Elexon's Code Change Development Group (CCDG), but it is not yet clear how customers will be accurately billed, or whether billing and settlement can be aligned during the CoS process. Four main scenarios were provided which need to be considered:

    a) Meters settled using Register Reads (non-smart/Smart with no HH data available).

    b) Smart Meters settled using HH Data – where both suppliers bill to register reads.

    c) Smart Meters settled using HH Data – where one supplier bills to register reads and the other to HH data.

    d) Smart Meters settled using HH Data – where both suppliers bill to HH data.

    Whilst it was acknowledged that Elexon and Ofgem have started to look the impact CoS reads, it was highlighted that a lot more consideration needs to be given to the wider impacts that MHHS will have on switching. Similar concerns were raised in relation to the Change of Tenancy (CoT) process.

3. **No integrated test facility:** Whilst testing of Smart Metering Systems and the HAN will be possible using the Testing Services provided under the SEC, this will not allow Users to undertake testing of the end-to-end MHHS processes. The ability for Users to test end-to-end operational and business processes is essential to help them understand how they will need to operate meters and adjust their operational/business processes to support the

implementation of MHHS. The ability to undertake comprehensive testing is also required to ensure that any detrimental impacts on consumers are known and appropriately mitigated.

4. Next steps

The table below sets out the proposed approach to addressing each of the issues associated with the key themes, along with the specific actions which have been identified to start making progress.

Key theme	Proposed approach	Proposed actions
1. Configuration and operation of Smart Metering Systems	SECAS should provide clarification of how Smart meters can be configured and operated to provide both HH and NHH data for billing whilst settling using HH data. This work should also make it clear what the impacts of doing so are in terms of the potential to generate a Settlement gap, or to provide inaccurate information to consumers.	1. **SECAS:** Describe the business processes that can be used to configure meters and other Devices on the HAN to support a model of using HH profile data for billing purposes. This must include: a) ESME b) IHD c) PPMID d) A (HC)ALCS e) (S)APC **2. SECAS:** Undertake an impact assessment on Devices configured using the business processes identified under action 1 to assess: a) Whether this configuration results in a Settlement gap, and if so what the magnitude of any gap is likely to be. b) Whether there are any mechanisms available for measuring or reconciling any Settlement gap that arises because of this configuration. c) Whether this configuration would provide inaccurate information to consumers (including prepayment and Export consumers), either via meter displays or other display Devices attached to the HAN. d) Whether this configuration would impair the accurate operation of a (HC)ALCS or (S)APC.

		3. **SECAS:** Review the BAD and the BAM to ensure that they reflect the final MHHS design and provide as much guidance around how business processes may operate to support MHHS as possible. This should be done once the MHHS design has been developed in sufficient detail to allow a detailed review.
4. Change of Supplier (CoS)	Some discussions have started within Elexon's CCDG about how CoS reads might work under MHHS, but the CoS process should fall under the governance of the REC with input from SECAS, Elexon and market participants.	4. **SECAS:** Discuss and agree an approach with Ofgem and Elexon at a programme level and if agreed, this should be raised as a programme issue referred to the REC Code Administrator for it to establish a working group with Elexon, SECAS and market participants to ensure that the appropriate processes are incorporated into the REC. The following CoS reading scenarios need to be considered: a) Meters settled using Register Reads (non-smart/Smart with no HH data available). b) Smart Meters settled using HH Data – where both suppliers bill to register reads. c) Smart Meters settled using HH Data – where one supplier bills to register reads and the other to HH data. d) Smart Meters settled using HH Data – where both suppliers bill to HH data.
5. No integrated test facility	The MHHS programme System Integrator (Elexon) to consider how end-to-end testing may be carried out by Users prior to the implementation of MHHS.	**5. SECAS:** Discuss and agree an approach with Ofgem and Elexon at a programme level and if they agree, raise a programme issue for the MHHS SI to consider how end-to-end testing may be carried out by Users prior to the implementation of MHHS, working with the DCC and its SI where required.

5. Recommendations

The TABASC is requested to:

- **NOTE** the summary of MHHS survey responses provided in this paper; and
- **AGREE** that SECAS should undertake the actions set out in section 4 of this paper.

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SECAS Team

29 April 2021

ANNEX A - summary of responses

The table below provides details of each of the questions asked using the survey issued to Parties, along with a summary of the responses received.

Responses to questions 1 – 4 provided confidential information or Personal Data and have been omitted from this summary.

Question		Summary of responses
Q4.	When using a SMETS compliant meter to record and submit HH granularity data to Settlements, do you intend to: a) Use the Half Hourly profile log ('Active Import Profile Data'). b) Configure the Billing registers to record HH granularity data.	N/A
Q5.	Please provide details of any operational, commercial, or regulatory issues you anticipate arising due to the potential difference between billing based on register reads and Settlement based on Half Hourly (HH) profile data.	See below
5a)	Please provide details of any operational issues you anticipate.	1. Concerns were highlighted regarding potential differences between the way meters will be used for billing and the way they will be settled in terms of how they are configured and operated. 2. The absence of an integrated Smart/MHHS testing environment means that market participants will be unable to undertake end-to-end User testing to help them understand how they will need to operate meters and adjust their operational/business processes to support the implementation of MHHS. 3. Processes for the Change of Measurement Class and Supplier Agents need to be developed to ensure that all Parties take a consistent approach. [**RESPONSE:** This issue should be referred to Elexon for resolution]. 4. It is currently not clear how the Change of Supplier (CoS) process will operate under MHHS to ensure that consumers are accurately billed. It is essential that under MHHS the CoS process does not result in consumers being billed twice for the same energy, or in any gaps in

		settlement volume. Similar concerns were highlighted in relation to the Change of Tenancy (CoT) process.
5b)	Please provide details of any commercial issues you anticipate.	1. A degree of disjoint between the energy settled to the energy billed is anticipated. It is unclear how any reconciliation will be carried out, e.g. similar to that undertaken by the HHDC for the current HH market. Further work needs to be done to make it clear whether/how such a reconciliation will be possible under MHHS. 2. Concerns were raised regarding whether issues will arise because of new agents being required to operate Smart meters via the DCC and having to understand both the specifications and the overall SEC solution. HH agents have never come across this sector and will be expected to carry out the new duties required of them under the BSC yet will be dealing with commercial arrangements outside of that. Further detail around the end-to-end arrangements is required to allow energy suppliers and their agents to understand what new/amended commercial arrangements will be needed to support the implementation of MHHS. [**RESPONSE:** The MHHS Target Operating Model may change the way that supplier agents operate commercially. The guidance that SECAS intends to produce should be used in conjunction with the MHHS design to identify any gaps, which should then be highlighted to Elexon for resolution.]
5c)	Please provide details of any regulatory issues you anticipate.	1. The BSC and the MRA/REC do not cover how an appointed Supplier Agent will interact with a Smart meter via the DCC. 2. There are elements of the DCUSA which do not appear to have been considered, e.g. it is not clear what the expectation is with regard to the requirement to provide a randomised offset. [**RESPONSE:** The additional information to be provided to SECAS may be used to request clarification from ElectraLink.]

		3. The BAD and the BAM should be reviewed to ensure that they adequately cover the operation of Devices in different modes and scenarios and should make it as clear as possible how a SMS should be operated under MHHS.
Q6.	Do you intend to move to a model of using HH profile data for billing purposes to mitigate any issues which may arise due to potential differences between billing and Settlement data?	Energy suppliers do not currently intend to move to a model of using HH profile data for billing purposes, with the reason provided being that they do not know how to set up or operate the meter and HAN to support such a model.
Q7.	If you intend to move to a model of using HH profile data for billing credit consumers, how would you configure registers to ensure the following Devices display and operate correctly?	See below
7a)	Electricity Smart Meter (meter display):	Some responses indicated that energy suppliers do not know how to do this and are not sure this is possible with a SMETS2 meter. Further detail should be provided so they can assess whether this will be a viable option.
7b)	The In Home Display or Pre-Payment Meter Interface Device (PPMID):	1. Further detail was requested regarding what this would look like in practice, including what would be posted on the HAN, and how the IHD would translate that into information for consumers. 2. Concerns were raised regarding potential impacts on HAN performance. 3. It was highlighted that this needs to be tested to find out whether it is viable, and impact this could have on information provided to consumers.
7c)	Q7c) The Auxiliary Load Control Switch (ALCS) or Home Area Network Connected Auxiliary Load Control Switch (HCALCS):	Further guidance was requested to help energy suppliers understand how to set this up and what the consequences of doing so would be.
7d)	Q7d) The Auxiliary Proportional Controller (APC) or Standalone Auxiliary Proportional Controller (SAPC):	Further detail was requested regarding whether will be possible to identify usage recorded via the APC or SAPC separately.
Q8.	Smart meters switch between registers on a randomised-offset basis whilst the Half Hourly profile log records interval consumption on the hour and half hour. If you intend to move to a model of using HH profile data for billing credit consumers, do you anticipate this	1. Some respondents requested further detail regarding how compliance with DCUSA Schedule 8 will be managed if energy suppliers choose to move to more granular pricing. 2. There is an expectation that DNOs will update their pricing models to realise

	resulting in compliance issues in relation to section 3A of Schedule 8 of the Distribution Connection and Use of System Agreement (DCUSA), which requires Users to use reasonable endeavours to ensure that Smart Metering Systems are configured to provide a Randomised Offset? Please explain your answer.	benefits from the implementation of MHHS, and that this will prompt energy suppliers to want to move to a HH billing methodology. Further information was requested regarding how this is possible and what the potential impacts could be. 3. Some respondents highlighted that DNOs need to either exercise control of load in some areas (e.g. Load Managed Areas), or need have good visibility of factors which could result in unexpected load patterns (e.g. if an energy supplier employs a HH billing regime with prices that vary to encourage specific demand patterns for commercial reasons). Further detail was requested regarding how load control will interact with Smart metering. [**RESPONSE:** The interaction between Smart metering and Load Control is being looked at in a separate piece of work in response to Market Domain Data changes made in response to DCP 326.]
Q9.	If you intend to move to a model of using HH profile data for prepayment consumers, please set out any additional considerations with respect to meter configuration.	Further detail was requested regarding how this can be achieved and what the impacts could be.
Q10.	If you intend to move to a model of using HH profile data for Export MPANs, including making payments to consumers under the Smart Export Guarantee (SEG), please set out any additional considerations with respect to meter configuration.	Further detail was requested regarding how this can be achieved and what the impacts could be.
Q11.	Do you expect new rules or guidance to be published to explain how you should configure SMETS compliant meters under MWHHS? If Yes, please provide details of what you think is required.	Guidance was requested to help Users to understand how the following Devices can be configured and operated to provide HH data for billing, along with what the impact of doing so will be: 1. An electricity Smart meter display 2. An IHD 3. A PPMID 4. A (H)CALCS 5. A (S)APC
Q12.	Please provide details of any other issues with operating SMETS compliant meters using DCC Systems to participate in	The responses to this question have already been covered in responses to previous questions.

	MWHHS which you would like to highlight to the TABASC.	