

ELEXON

CODE CHANGE AND DEVELOPMENT GROUP TRANSITION CONSULTATION ON MARKET-WIDE HALF HOURLY SETTLEMENT

Transition

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Ofgem Foreword

Ofgem welcomes this consultation from the Code Change and Development Group (CCDG) on the transitional arrangements for moving to Market-Wide Half-Hourly Settlement (MHHS).

In April 2021 we published our Decision and Full Business Case on when and how to move to MHHS¹. Amongst other decisions we set out a high-level transition timetable, which included the main milestones, activities and critical path².

This consultation is an important step towards providing a greater level of detail and understanding of what needs to be done, in order to effectively transition to MHHS. It represents an important opportunity for industry to directly influence how that transitional work is carried out. As we move to an industry-led implementation approach, it is important that industry takes responsibility for setting out the plans for transition, and then delivering against those plans.

Market-wide Half-Hourly Settlement represents a fundamental market reform which will impact both existing and future participants in the energy market. It is important that stakeholders who have not been directly involved in this work are provided with the opportunity to review the plans and to provide input at key stages. I would therefore encourage all stakeholders to take the opportunity to read and respond to the consultation document, and to attend the associated webinar being organised by Elexon.

Further information on the Settlement Reform project and the recent Decision and Full Business Case, including information relating to the implementation of MHHS, can be found at the Ofgem website³.

We would like to thank Elexon and all of the members of the CCDG and supporting working groups for providing their time, experience and expertise to the development work on the Target Operating Model (TOM) and the transitional deliverable.

Thank you for your interest in this important market reform. We look forward to your responses to this consultation on the CCDG transitional arrangements.

Anna Stacey
Head of Settlement Reform

¹ [MHHS Full Business Case and Decision Document](#)

² [Chapter 5 of the MHHS Decision Document](#)

³ [MHHS Full Business Case and Decision Document](#)

EXECUTIVE SUMMARY

Purpose of this consultation

This consultation sets out the CCDG's recommendations for the key stages of the MHHS Transition, covering essential pre-migration and migration activities, and is seeking industry views on the substance of those recommendations. The aim of the recommendations in this consultation is to ensure that the transition to MHHS happens as efficiently and smoothly as possible.

These recommendations are in support of to the timeline that Ofgem has set out in the **MHHS Decision Document** and the defined milestones in the **associated MHHS Transition Timeline** document. Where possible, the CCDG has referenced the relevant MHHS Programme milestone or provided an indicative target date or date range when setting out its recommendations.

The CCDG notes that Transition activities should start as early as possible; the industry will have to bear the cost of supporting dual settlement processes for longer if migrations run beyond **October 2025** (milestone M15). The work to begin the transition to MHHS starts now, and with only a year to migrate between October 2024 and October 2025, the CCDG has set out a recommended approach to spread the work for industry between now and 2024 to mitigate risk.

CCDG recommendations for the transition to MHHS

The CCDG recommendations are summarised below in the order that they are set out in the consultation, details can be found later in this document:

1. Enabling Registration data and process changes to support the MHHS transition

The CCDG notes that all the required Registration Service data items that will be needed for MHHS will be part of the Design Baseline published in **April 2022** (milestone M6). However, it recommends that a subset of these are introduced before migration commences in October 2024. This is because these items are so critical to the MHHS rules and processes that going live with poor quality data would lead to avoidable time and effort being spent trying to fix issues during the twelve month migration period.

The CCDG therefore proposes that this subset of items are introduced into the existing SMRS systems, in the period between **November 2022** and **February 2023**. These data items can be split into three groups: Distributor mastered, Supplier mastered and Meter Operator Agent (MOA) mastered data items. Some of these items can be initially populated by rule using other existing data items and others can be populated and maintained through modified existing interfaces supported by new processes.

2. Data Cleanse activity for newly introduced Registration Service (SMRS) data items

Once the new registration data items and supporting interfaces and processes have been introduced, the CCDG recommends a period of managed data cleanse activity running from **February 2023** to **October 2024**. This will ensure that the data items that are critical to a successful migration and used in the target state will be as accurate as possible when migration starts in October 2024. This data cleanse activity can run in parallel with other enabling activities where the updating of the items in Recommendation 1 reveals inconsistencies or inaccuracies.

The successful data cleanse of the **Connection Type** and **Meter Type** data items will allow the early mapping of MPANs to a destination MHHS market segment prior to migration. The CCDG believes it would be beneficial to all parties involved to have certainty as to which market segment each MPAN will be migrating to, which will help with the development and monitoring of migration plans. Market Segment could be pre-assigned at a defined point between **October 2023** and **October 2024** when the source data items have been sufficiently cleansed.

3. Obligations to facilitate early HH settlement in the Advanced segment

The CCDG believes that a key enabler of an effective transition for the Advanced segment will be to align the BSC definition of an Advanced Meter with that in the Electricity Supply Licence and to set explicit **HH Settlement and remote communications obligations for CT Advanced Meters** ahead of the migration to MHHS. This would result in an estimated 50,000 CT Meters moving to HH Settlement and mean that all CT metered MPANs will be settled HH before migration for the Advanced segment starts in **October 2024**.

The benefit of this approach will be to spread work which would otherwise have to be carried out alongside migration over a period longer than a year, making it more manageable and reducing the risk of missed migration deadlines. This would leave time to resolve 'problem' sites where issues would otherwise delay migration start.

4. Early introduction of a 'one way gate' to prevent reverse migration in all market segments

The CCDG believes that it would be optimal to remove the possibility of 'reverse migration' (returning MPANs back from MHHS to the current arrangements) by making MPANs in all market segments subject to a 'one-way gate' once migration begins. This would require shortening the Qualification window for Suppliers and Smart and Non-Smart Services such that it completes by **November 2024 (M12)**. The CCDG understood that reverse migration was not intended to be available to MPANs in the Advanced and Unmetered segments, and therefore recommends that the 'one way gate' should apply to all market segments at the point migration starts.

5. Recommendations for the registration of unregistered export MPANs

The Decision Document notes "Ofgem expects industry to develop a proposal for how best to include mandating the settlement of export in MHHS, and how this can be implemented as part of the industry-led delivery phase. If the proposed solution requires changes to the standard licence conditions, industry can recommend that Ofgem make these changes." The CCDG recognises the need to register currently unregistered export for settlement and, where such export is not currently registered, recommends a flexible approach where the export MPAN can be registered before or after the import MPAN is migrated.

The CCDG considered the order in which import/export MPANs need to be migrated. Given that an export supplier needs to appoint the same MOA/metering service as the import supplier, the CCDG expects that the import MPAN will be migrated first. If the import MPAN is migrated prior to registration of the export MPAN then the export MPAN would be set up under the new arrangements without the need to settle on an interim basis in the current settlement arrangements. The import/export association should be set at the time the export MPAN is registered.

Where an export MPAN exists in settlement, the CCDG recommends that the export Supplier will be notified that the import MPAN has been migrated and will be required to migrate the associated export MPAN within 10 WD.

Where an export MPAN is not currently registered for settlement and the customer is registered with a Supplier for the export energy (e.g. FiT), then an export MPAN should be registered in the new trading arrangements within 30 WD of the import MPAN migrating. The CCDG recognises the benefit to improved settlement accuracy where the supplier chooses to register export MPANs sooner and notes that nothing in its recommendation prevents the early registration of an export MPAN.

6. Recommendations for coordinating the migration to MHHS

The CCDG recommends that an overall migration plan is set at market level and coordinated centrally, working within the known capacity constraints of MHHS services and systems. In addition to critical Registration (SMRS) and BSC central systems, this will need to consider how many appointments current and MHHS service providers can process and any new contractual agreements that will need to be in place ahead of migration.

Suppliers should have a degree of flexibility to develop migration plans within these constraints, although the plans will need to ensure that available bandwidth is used as efficiently as possible. To achieve this, the CCDG suggests setting a volume 'band' within which a Supplier can flex its quantity of MPANs migrated within a given time period provided that it does not exceed the upper bound or fall below the minimum needed to keep migration on track.

7. Recommendations for the runoff of current settlement arrangements

The CCDG believes that the runoff arrangements should identify where reconciliation runs can be truncated to minimise the need to keep legacy systems running where settlement is sufficiently accurate or where making corrections at later runs is not cost effective. The CCDG believes that a logical end point could be **February 2026**, which is the R2 run for the last date of migration in **October 2025**, subject to a suitable Trading Disputes process being in place to be able to accommodate the need to make essential corrections during the runoff 'tail'.

This approach will allow Suppliers a sufficient window in which to address migration errors and correct these under the old arrangements, but set a point after which data is effectively 'frozen' in the current arrangements so that the current settlement processes can be closed down as soon as possible after migration. Running two sets of parallel arrangements with supporting systems will add unwanted cost and complexity and should be kept to a minimum.

8. A period of mandatory CoMC activity for all NHH UMS MPANs running from October 2023 to October 2024

The CCDG recommends moving NHH UMS MPANs to settle HH between October 2023 and October 2024 to mitigate the risk of not meeting the Transition Timetable set out by Ofgem in its Full Business Case. Early migration will allow time for Suppliers and UMSOs to address any customer or contractual relationship issues that may arise.

Once migration plans have been completed the Supplier will need to start the CoMC process (subject to the approach being consulted on in Question 8) for the NHH MPANs. Alternatively, the Supplier will need to request new HH MPANs for all (or part) of portfolio, as per the agreed plan.

9. CCDG recommendations for performance assurance

The CCDG recommends that the registration item data cleanse activity set out in Recommendations 1 and 2 and the early CoMC activity set out in Recommendations 3 and 8 are subject to assurance and monitoring by the Performance Assurance Board (PAB), as it should be seen as an initial stage of a Supplier's migration plan.

The CCDG notes the need to review additional data sources to monitor performance at an industry and party level, to ensure no detrimental impact on data quality. Discussions have noted that the assurance framework developed should not discourage migration to the TOM. There will be a need to monitor the progress of Recommendation 6 to ensure migration is progressed in a timely and co-ordinated manner and settlement errors are minimised

The CCDG believes that an incremental approach to Qualification should be considered, and to utilise (where possible) evidence from the System Integration Testing (reference **TE2**) and Security Framework requirements (reference **TE12**) within the Qualification process to mitigate any duplication of effort. The CCDG notes that some existing roles will be changing more than others (some will be high impact, others medium impact and others low impact) and therefore recommends that the Qualification process for new entrants and Requalification of existing participants during the transitional period is proportional to the identified settlement risks.

INTRODUCTION

This is the Code Change and Development Group's (CCDG) consultation on its recommendations for the Transition Approach to the Market-wide Half Hourly Settlement (MHHS) Target Operating Model (TOM). Elexon chairs the CCDG and provides it with technical leadership to support **Ofgem's Significant Code Review on Electricity Settlement Reform**.

CCDG Transition Approach

This consultation sets out the Transition and Migration approach developed by the CCDG and covers:

- Transition Overview and Recommendations;
- Market Segment Specific Considerations; and
- Performance Assurance for MHHS.

The consultation questions are presented throughout this document and a consolidated set of questions is provided in the accompanying response template.

Scope of the Transition Approach deliverable

Ofgem set the scope of the Transition Approach deliverable as follows:

- Logical ordering of milestones for transition planning and not a detailed implementation plan;
- Understand and agree the industry processes and prerequisites to move each meter type to its target market segment;
- Understand what the constraints and dependencies are and where they occur;
- Scope to include all impacted code processes;
- To include Qualification, Migration and runoff;
- Understand what prerequisites need to be in place to transition registration services to the new arrangements; Pre-migration activities.

Following this consultation a final Transition Approach report will be prepared by CCDG for Ofgem.

Background

Ofgem Full Business Case Decision

Ofgem has published the **MHHS Full Business Case**. Their Final Decision, supported by the Full Business Case and Final Impact assessment, is to introduce half hourly settlement (HHS) on a market-wide basis.

Ofgem confirmed the following decisions in order to achieve this and realise the full benefits of settlement reform:

- MHHS should be introduced on the basis of the Design Working Group's (DWG) TOM;
- MHHS will be introduced for export-related as well as import-related MPANs, and that the transition period to the new settlement arrangements should be the same for import- and export-related MPANs;
- The DWG proposed Settlement and Post Final Settlement Timetable will be implemented; and
- Industry should develop a proposal for how best to include mandating the settlement of export in MHHS.

It should be noted that the transition to the new Settlement Timetable will occur after all migration of the Metering Systems has been completed.

Code Change and Development Group

The CCDG has built on the Target Operating Model (TOM) for Market-wide Half Hourly Settlement, as recommended by the Design Working Group (DWG) in August 2019, by:

- Developing further detailed areas of the TOM design; and
- Identifying, and overseeing drafting of, the changes needed to Industry Codes and subsidiary documents to enable the TOM.

The CCDG held a **Detailed Design Consultation** on the detailed design areas in December 2020 to further refine the requirements for the TOM. Following the consultation, the CCDG has updated the requirements for the Target Operating Model.

Architecture Working Group

The other industry group, supporting Ofgem's Significant Code Review on Electricity Settlement Reform, is the Architecture Working Group (AWG). Following its **Reference Architecture Consultation**, the AWG has reviewed its proposal and submitted a **Consultation Response Summary** to Ofgem detailing a final recommendation on the architecture style for MHHS. This reference architecture sets the framework for subsequent IT system design architecture to support the DWG's TOM.

Design Advisory Board

The work of the CCDG and AWG is overseen by the Design Advisory Board (DAB). The Design Advisory Board (DAB) is an industry steering group that provides strategic advice to Ofgem on the TOM to deliver MHHS. The DAB provides expert advice on areas of the project outside the TOM including (i) the business case and (ii) the MHHS data access framework. DAB members have expertise in the energy industry, energy regulation and policy (GB and international), consumer issues and innovation. The DAB last met on 25 February 2021 to discuss the AWG's recommended reference architecture.

The MHHS Implementation Programme

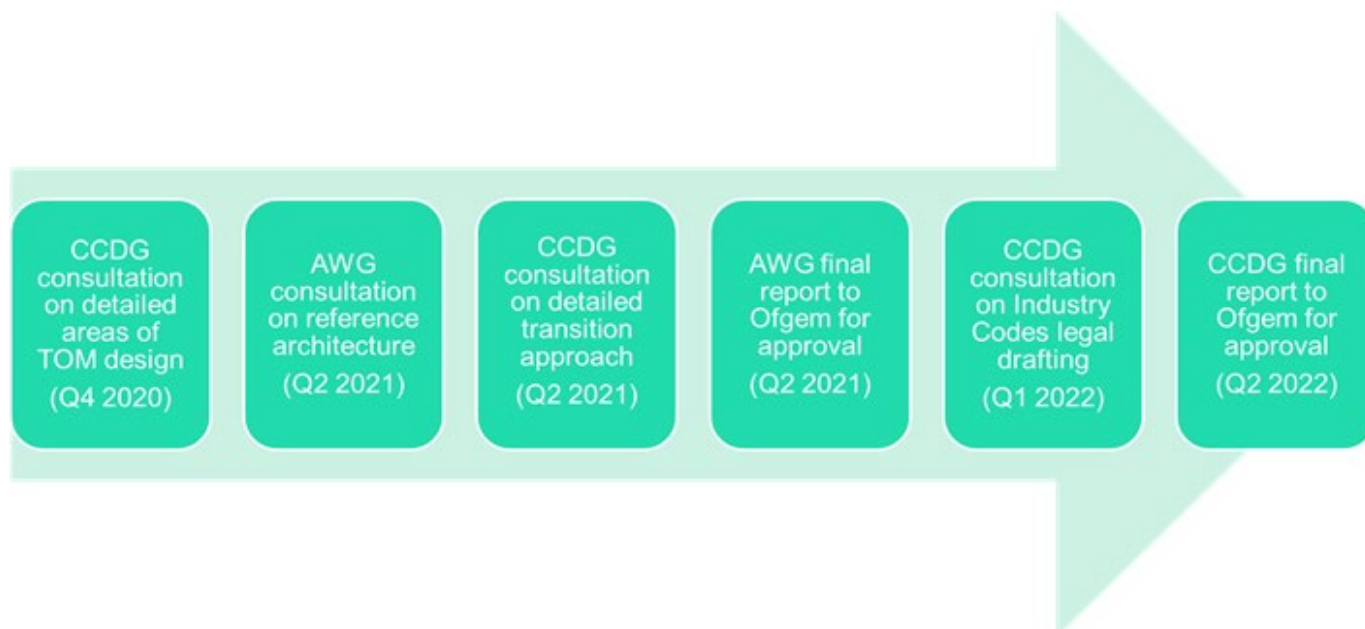
Ofgem has selected Elexon (as BSCCo) to provide Market-wide Half Hourly Settlement (MHHS) implementation management services as Senior Responsible Owner (SRO) for the programme. Elexon is currently mobilising the programme and the CCDG and AWG work will feed into the end to end design for MHHS.

CCDG and AWG Timeline

This CCDG consultation on the Transition Approach is the second step in the CCDG timeline. The CCDG will issue further consultations on Industry Codes legal drafting (Q1 2022) before providing a final report to Ofgem in Q2 2022.

Ofgem intends to make the majority of Industry Code changes using its SCR or Smart Meters Act powers, therefore these changes will not go through the standard industry change processes. However, the DCC has been requested to raise a **SEC Modification** to implement the changes needed to deliver MHHS.

The CCDG and AWG Timeline is as follows:



HOW TO RESPOND AND WHAT HAPPENS NEXT

Please:

- Email your response to CCDGsecretary@elexon.co.uk by **08:00** on **Monday 2 August** using the subject line '**CCDG Transition Consultation on MHHS**';
- Use the attached Word response form where possible to make it easier for the CCDG to identify and summarise views;
- Provide supporting reasons for your answers to help the CCDG understand your response;
- Identify clearly which, if any, aspects of your response are confidential. Elexon will not publish any information marked as confidential, or share this with the CCDG. However, Ofgem will see all responses in full. We encourage you to provide non-confidential responses where possible, to inform the CCDG's discussions; and
- Email Elexon's MHHS team at CCDGsecretary@elexon.co.uk with any questions.

The CCDG will consider your responses and deliver its final report to Ofgem in **Q2 of 2022**.

More information can be found on the **CCDG webpage**.

Next steps following this CCDG consultation

The CCDG will review and consider all responses and feedback, and decide whether to modify its recommendations. Responses before providing a transition approach report to Ofgem in Q3 2021. The MHHS Programme will develop the detailed design and drafting of the changes to code documents. The Design Baseline will be published in Q2 2022.

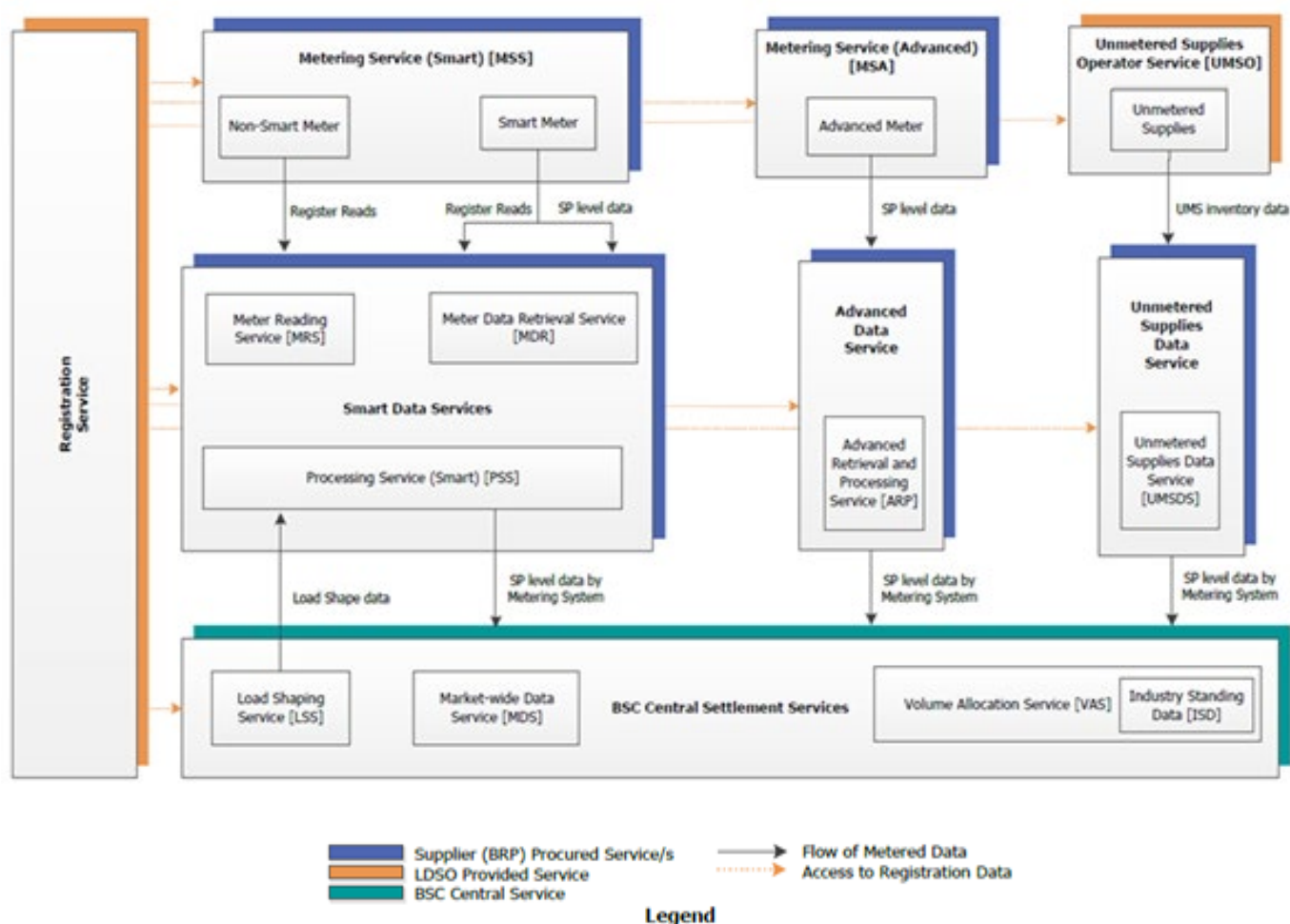
A review of the Assurance requirements to support MHHS will commence shortly, running through to December 2021. This will be developed by a new dedicated workgroup, including members from the BSC PAB and the CCDG. This review is expected to make recommendations where assurance sits under different codes.

OVERVIEW OF THE MHHS TARGET OPERATING MODEL

The DWG's preferred MHHS TOM sets out the end-to-end ('Meter to bank') Settlement design for the target end state when the majority of Meters will be smart Meters. Advanced Meters in the NHH sector will be settled in the Advanced Market Segment. Over time some Advanced Meters are expected to be replaced with smart Meters.

The TOM's key features are the three Data Services that collect Meter data and supporting information then submit Settlement Period (SP) level data to the BSC Central Settlement Services. These are the Smart Data Services, the Advanced Data Service and the Unmetered Supplies Data Service. Although these services are defined separately in the TOM design, this does not seek to restrict or prescribe any commercial arrangements that the responsible party may wish to use in delivering them.

1. TOM Diagram



NOTE: The Registration Service is the Supplier Registration Service (SMRS) under the BSC. This is not the Central Switching Service.

Details of the DWG preferred TOM and its high level requirements can be found in the **DWG preferred TOM report**.

SECTION A – RECOMMENDED PRE-MIGRATION ACTIVITIES

The CCDG supports Ofgem’s proposed timeline in their Decision document, and believes that it would benefit from an enabling phase of activities in the period from **November 2022** to **October 2024**. This phase would allow time while new systems and processes are being developed to be used for data cleanse and site based activities. This in turn will minimise underlying data quality issues being revealed during the 12 month migration window and causing delays.

The first such activity is the early introduction of critical Registration Service data items into the existing SMRS systems to allow data to be populated and cleansed without unduly impacting the migration process. The CCDG believes that introducing the essential data items that are the ‘building blocks’ of the MHHS design in advance will reduce the risk of data inconsistencies being revealed at the point of migration when time is critical. Firstly, to allow sufficient time for data population and cleansing activity to be carried out, and secondly because they will allow every MPAN to be assigned to a market segment in the target state and enable migration plans to be developed on this basis.

The CCDG recommends introducing obligations to require early HH settlement for all Non Half Hourly (NHH) settled MPANs in the CT Advanced and Unmetered segments. Where CT sites are currently being settled NHH, migration can be substantially de-risked by moving these sites to settle HH using the existing Change of Measurement Class (CoMC) process first and then migrating to the MHHS arrangements. In the Unmetered segment there is a need to rationalise MPANs from the current NHH arrangements, and this would be better done using a CoMC process ahead of migration to allow MPANs to be properly tracked through the migration process.

1. Enabling Registration data and process changes to support the MHHS transition

Recommendation 1: Early introduction of new data items into existing SMRS systems, along with supporting processes between November 2022 and February 2023.

The CCDG notes that all the required Registration Service data items that will be needed for MHHS will be part of the Design Baseline published in **April 2022**. However, it recommends that a subset of these are introduced before migration commences in October 2024. Having these critical data items go live with poor quality data would lead to avoidable time and effort being spent trying to fix issues during the twelve month migration period. The CCDG therefore proposes that a subset of these items are introduced early into the existing SMRS systems, in the period between **November 2022** and **February 2023**.

Some of the new data items proposed for early introduction can be initially populated by a rule that derives a value from existing data items, and the new processes for maintaining them will only be needed to update and make amendments to data items where the currently held value is wrong. Other data items have no existing source to derive values from, and so will require the data item master to populate these values over a period of time. The recommended approach to cleansing this data has been set out in Recommendation 2.

The new data items can broadly be split into Distributor mastered, Supplier mastered and Meter Operator Agent (MOA) mastered items, as set out below. Each of these data masters already uses an existing interface to update data into the SMRS systems, and so the CCDG recommends that these additional data items are integrated into those interfaces.

Distributor mastered data items and processes

The following data items will be mastered by the Distributor and set at the point of connection or following site activity:

Connection Type and Effective From Date (EFD)

These items determine the physical connection: Whole Current (W), LV Current Transformer (L), HV Current Transformer (H) or EHV Current Transformer (E) and the date/time which that connection type is effective from. It is envisaged that the Connection Type will be initially populated by a rule (e.g. using other items such as Measurement Class) before being updated and cleansed as better information becomes available.

Metered Indicator

This data item already exists to differentiate between metered and unmetered MPANs. However, it has not been integrated into standard BSC processes, which currently use Measurement Class (MC).

Import/Export Relationship MPAN

This will create a relationship between the respective import MPAN and export MPAN at a particular site.

Import/Export Indicator

This is currently derived from the assigned Line Loss Factor Class (LLFC), but should be mastered by the Distributor as an item in its own right. The CSS will consume this data item as 'meteringPointEnergyFlow', and so any impacts on that system must be considered.

These data items could be initially populated for existing MPANs by rule, derived from data items like Measurement Class, Profile Class and LLFC. The data will then be subject to cleansing (see Recommendation 2 below).

The above data items used in combination with the existing **Meter Type** field in SMRS will enable the **Market Segment Id** (and its EFD) to be derived. This will remove the ongoing dependency on Measurement Class and Profile Class to segment the market. However, the CCDG does not believe that any new interface is required for this purpose, as Distributors can use their existing interface to update SMRS to populate and maintain these new items.

Meter Operator Agent / Metering Service mastered data items and processes

For smart meters the Registration Service will be the source of meter technical details in MHHS therefore the data items above need to be added and populated prior to migration.

Some of the following data items are already in use, however for MHHS they will be held in the Registration Service and will be mastered by the Meter Operator Agent (MOA) and then by the Metering Service:

Smart Device Id (a.k.a. DCC GUID)

This is the Id that DCC uses to recognise the electricity meter. It is essential that the Device Id and the Meter Serial number are accurately aligned. Misalignment leads to a new raft of crossed meters scenarios. The installing Meter Operator is key to getting this information correct at the time of installation. The GUID of any other device, gas meter, communications hub, etc. is not relevant as these can be found from DCC. The GUID of other smart metering equipment is out of scope of MHHS.

Effective from Settlement Date {MSMTD}

Important to determine date (and time) of when MTD updates are applicable from.

Meter Equipment/Service Location (J1025)

This is the existing CHAR(30) data item used to give textual information about meter equipment location. Currently used in the HH market to provide information on meter location.

Meter Location (J0419)

This is the existing CHAR(1) indicator of meter location using defined set of codes defined in the DTC.

Number of Register Digits (J0478)

The industry has defined a convention of setting this to 5 for single phase smart meters. However, it will be necessary to use 6 digits for three phase smart meters. By including the data item, it allows the number of digits to be reported. The number of digits should refer to the 'total advance' of the meter display.

The CCDG recommends modifying the existing D0312 'Notification of Meter Information to MPAS' flow to enable MOAs to populate and maintain these data items for new installations and meter exchanges and to enable the data cleanse activity for ~10m smart meters already installed as set out in Recommendation 2.

Supplier mastered data items and processes

Domestic Premises Indicator and EFD

This is the same as set by the Supplier in CSS, together with an EFD.

Consent Granularity and EFD

This item is used to reflect domestic customer preference on access to its Settlement data. This will be either populated by the supplier (for domestic import), or by rule, to indicate the granularity of Meter data which the customer has consented to the collection of, under the Ofgem MHHS data access framework.

Maintaining these items will remain an enduring process under MHHS arrangements but the CCDG expects that an interim process could be implemented under the existing arrangements by amending the D0205 'Update Registration Details' process to allow Suppliers to update their customers' consent preferences into existing SMRS systems.

Question 1. Do you agree with the CCDG's recommendation for early introduction of the new Registration Data Items and processes using existing interfaces to support migration?

Yes/ No or Response:

Rationale:

2. Data Cleanse activity for newly introduced Registration Service (SMRS) data items

Recommendation 2: A period of data cleanse activity of registration data items running from February 2023 to October 2024.

Once the new registration data items and supporting interfaces and processes have been introduced, the CCDG recommends a period of data cleanse activity running from **February 2023** to **October 2024**, with a priority on cleansing the data items required for Market Segment allocation by **October 2023**. This will ensure that the data items that are most critical to a successful migration, and used in the target state, will be as accurate as possible when migration starts in October 2024. This data cleanse activity can run in parallel with 'business as usual' and other enabling activities where the updating of the items in Recommendation 1 reveals inconsistencies or inaccuracies.

For example, cleansing and updating of the Meter Type will be required as meter exchange activity occurs or site visits reveal different information to what is in SMRS. MOAs will also need to populate the additional 'Smart MTD' data items for new installations, meter exchanges, and backfill for the ~10m smart meters already installed ahead of migration.

Data population and cleanse activity should be monitored as part of the Transitional Assurance set out in **Section D**. This will ensure all industry participants actively resolve missing data and data anomalies.

Updating of the Market Segment Id in advance of migration following successful data cleanse

The successful data cleanse of the **Connection Type** and **Meter Type** data items will allow the early mapping of these items to a destination MHHS market segment before migration starts. The CCDG believes this would be beneficial to all parties involved with migration to have certainty as to which market segment each MPAN will be migrating to, which will help with the development and monitoring of migration plans. A Market Segment Id should be provisionally assigned as soon as possible after **October 2023** once the relevant source data items have been sufficiently cleansed, even if it is only formally set for the enduring target state at the point of migration.

The mapping of data items to Market Segments for metered supplies is set out in the table below:

Connection Type	Meter Type(s)	Destination Market Segment
CT (LV CT, HV CT and EHV CT)	All	Advanced
WC	H	
	NCAMR, RCAMR, RCAMY	Smart & Non-Smart
	SMETS	
	All other Meter Types	
WC	Not applicable*	Unmetered

*The Metered Indicator data item will be used to separate Metered from Unmetered MPANs under MHHS.

Question 2. Do you agree with the CCDG's recommendation for a period of data cleanse activity of registration data items running from February 2023 to October 2024?

Yes/ No or Response:

Rationale:

3. Mandating early HH settlement for CT Meters in the Advanced segment

Recommendation 3: A period of mandatory CoMC activity for all NHH settled CT Advanced Meters running from October 2022 to October 2023.

The CCDG believes that a key enabler of an effective transition for the Advanced segment will be to align the BSC definition of an Advanced Meter with that in the Electricity Supply Licence and to set explicit HH settlement and remote communications obligations for CT Metering Systems ahead of the migration to MHHS. In July 2020, the Association of Meter Operators (AMO) identified that this would result in approximately 50,000 CT Meters moving to HH Settlement.

The CCDG also notes that early movement to HH settlement of whole current Advanced Meters would support their eventual migration to the MHHS arrangements. However, this would require further work to understand the impact on Supplier billing and HH agent systems, and may require an interim solution to manage opt-out domestic Advanced customers. Suppliers may also prefer to replace some of these meters with Smart meters, which will then be migrated into the Smart and Non-Smart segment, and therefore the CCDG has concluded that early CoMC for WC Advanced Meters should not be a mandatory requirement prior to migration.

The benefit of this phased approach would be to spread work, which would otherwise have to be carried out alongside migration, out over a period longer than a year reducing the risk of missed migration deadlines. This would leave more time to resolve 'problem' sites where issues (physical or data) could delay migration completion. CT Advanced sites are also the larger consuming sites, so early HH settlement additionally will provide benefits to settlement accuracy.

The CCDG therefore recommends:

- For CT Advanced Meters settling NHH, a period of mandatory CoMC activity running from **October 2022 to October 2023**;
- Where possible, WC Advanced Meters settling NHH are moved to settle HH via CoMC by **October 2024**. This will simplify the migration process but should not be mandated; and
- For all Advanced Meters (CT and WC) settling NHH, the mandatory CoMC activity should be supported by an obligation to ensure that remote communications are fitted and working, for CT Metered MPANs by **October 2023**, and for all Advanced Meters by **October 2024**.

The CCDG has also set out its recommendation for how these CoMC activities should be planned and monitored under its recommendations for Transitional Assurance set out in **Section D**.

Question 3. Do you agree with the CCDG's recommendation to mandate the moving of CT Advanced Meters settling NHH to Half Hourly Settlement using the existing Change of Measurement Class (CoMC) process?

Yes/ No or Response:

Rationale:

SECTION B - RECOMMENDATIONS FOR THE MIGRATION TO MHHS

4. Introduce the 'one way gate' from the start of migration to prevent reverse migration

Recommendation 4: Introduce a 'one way gate' from the start of migration to prevent MPANs in any segment moving back to current arrangements once migrated.

Ofgem's Transition Timeline in the MHHS Full Business Case document allows an extra three months for BSC Qualification of Smart Data Services and Suppliers (reference MT6b) ending in January 2025. The migration period for this Market Segment also starts later than the other Market Segments, in November 2024 (reference MT10). The consequence is that there is a three month period where the Central Systems will be ready for migration but some Suppliers, for smart and non-smart Meters, might not have the systems and services in place to accept MPANs under the new TOM. This leads to a three month period where MPANs in the Smart and Non-Smart Market Segment could need to 'reverse migrate' back to the current arrangements (e.g. on Change of Supplier).

The Decision Document refers to a 'one way gate' as applying specifically to the Smart and Non-Smart segment, and considers 'reverse migration' as meaning an MPAN moving back to settle under today's NHH arrangements. The CCDG has deemed that this option is not available at all to MPANs in the Advanced and Unmetered segments, as a portion of these will already be settled HH at the point of migration. However, for the avoidance of doubt, the CCDG is recommending that no segment can revert back to the current settlement arrangements once an MPAN has migrated.

The CCDG recommend that migrated MPANs should not be permitted to revert to the legacy arrangements due to a number of issues:

- The cost of designing and building a potentially complex 'reverse migration' process that will only be used for up to three months, such as;
 - The need to back out registration data changes from the BSC Central Systems to avoid double counting (data would be defaulted if data not received where the BSC Systems hold a registration for an MPAN);
 - Issue with identifying and populating the registration data for reverse migrated MPANs (e.g. old SSC, Measurement Class);
 - The process by which Meter Technical Details (MTDs) would be exchanged when reverse migrating a smart Meter would need to be agreed; as existing agent roles will not support the MHHS process.
- Accessing appropriate opening and closing reading (HH does not use the same data as NHH); and
- Allowing excess reverse migration would slow down and potentially delay migrations to the TOM.

The CCDG believes it would be optimal to align the 'one-way gate' with the start of migration in **October 2024** and therefore remove the need to create a reverse migration process. This can be achieved by bringing forward the last Qualification date for Suppliers and Smart and Non-Smart segment Supplier Agents to **November 2024**, which would ensure that customers changing Supplier would not need to revert to legacy arrangements from the start of migration.

At this point, all newly registered Metering Systems should be under the new arrangements. From **October 2024**, Suppliers should only be able to on-board new customers under the new arrangements. This will avoid Suppliers who are not yet ready from gaining these customers under the old arrangements (adding significant complexity and risk).

The CCDG therefore recommends:

- The migration 'one-way gate' is aligned with the start of migration in **October 2024** for all segments; and
- From the start of migration all newly registered Metering Systems should be registered under the new arrangements.

Question 4. Do you agree with the CCDG's recommendation to introduce the "one way gate" from the start of migration (milestone M11 / M12) to prevent MPANs moving back to current arrangements once migrated?

Yes/ No or Response:

Rationale:

5. Recommendations for the registration and migration of export MPANs

Recommendation 5: Where an export MPAN has already been registered for settlement, the export Supplier will be informed when its associated import MPAN has been migrated and will be required to migrate the export MPAN within 10 WD.

Where an export MPAN is not currently registered and a Supplier is paying the customer for export energy, then an export MPAN should be registered no later than 30 WD after the import MPAN migrates.

The Ofgem Final Business Case decision confirms that MHHS will be introduced for export as well as import MPANs. Subject to Ofgem's consultation on implementation and governance arrangements, this will form part of suppliers' migration plans that will be monitored as part of Transitional Assurance.

The CCDG noted that the obligation on a Supplier to register export related MPANs can only apply where a Supplier already has a relationship with the exporting customer either as their Feed-in-tariff (FiT) export Supplier or if they were the tariff provider under the Smart Export Guarantee (SEG). Where customers have a tariff under the SEG then the Supplier is already obliged to settle the export. However, under the FiT scheme there has not been a requirement to settle smaller exporting customers. There are some 870,000 registered FiT schemes of which it is believed only a few thousand are currently within settlement. The CCDG noted that if an export MPAN is registered before migration then there will be a period when the export is settled on a NHH or elective HH basis prior to migration, in which case the CCDG suggests settling these using the elective HH arrangements wherever possible due to the higher levels of accuracy associated with HH settlement.

The Ofgem decision is that the transition period to the new settlement arrangements should be the same for import and export-related MPANs. However, this does not mean that both import and export for a customer have to be migrated concurrently.

Where an export MPAN associated with a CT Advanced meter, then this will be registered and settled as part of the CT Advanced mandate described in Section A.

The CCDG detailed design introduces a new Registration data item "Import Export Relationship MPAN" which identifies where a metering point is part of an import/export pair, and identifies the associated import or export MPAN.

The CCDG discussed the order in which import/export MPANs will need to be migrated. Noting that the export supplier needs to appoint the same MOA/metering service as the import supplier, the CCDG considered if the import MPAN should be migrated first. If the import MPAN is migrated prior to registration of the export MPAN then the export MPAN would only be set up under the new arrangements without the need to settle on an interim basis in the current settlement arrangements. The import/export association should be set at the time the export MPAN is first registered.

The CCDG expects that Suppliers may wish to register export MPANs in the current arrangements to gain the benefit of accurate settlement and mitigate the migration risks, nothing in these proposals stops the early registration of an export MPAN.

The CCDG therefore recommends:

- The import supplier will trigger the migration of an import MPAN. Where an export MPAN exists in settlement, the export Supplier will be notified that the import MPAN has been migrated and will be required to migrate the associated export MPAN within 10 WD.
- Where an export MPAN is not currently registered for settlement and the customer is registered with a Supplier for the export energy (e.g. FiT), then an export MPAN should be registered in the new trading arrangements within 30 WD of the import MPAN migrating. This option should be seen as a 'last chance' backstop, and the CCDG recognises the benefit to improved settlement accuracy should Suppliers choose to register export MPANs sooner.

The CCDG acknowledges potential gaps where MPANs may not be captured by either of these recommendations, such as:

- Where an export MPAN is not currently registered and the customer is not being paid for the energy. The CCDG is of the view that this is unlikely to be material as there is a commercial incentive for the customer to be paid for their export if the volume is material.

The CCDG notes that BEIS has begun work on improving the registration of small scale energy assets (including rooftop solar, battery storage, heat pumps and electric vehicle charging points), in order to increase compliance notifications to network companies and to improve the quality of asset data. It is hoped that, in time, this will help reduce the number of exporting assets invisible to the settlement system.

Question 5. Do you agree with the CCDG's recommendations for the registration and migration of export MPANs?

Yes/ No or Response:

Rationale:

6. Recommendations for coordinating the migration to MHHS

Recommendation 6: Migration should be coordinated at a market level, to ensure that MHHS services and systems are not overloaded, but should allow some flexibility for parties to plan their own migration within those constraints.

The CCDG recommends that an overall migration plan is set at market level and coordinated centrally, working within the known capacity constraints of all MHHS services and systems. In addition to Registration (SMRS) and BSC Central Services, this will need to consider how many appointments current and MHHS service providers can process and any new contractual agreements that will need to be in place ahead of migration.

Suppliers should have a degree of flexibility to develop migration plans within these constraints, although the plans will need to ensure that available bandwidth is used as efficiently as possible. To achieve this, the CCDG suggests setting a volume 'band' within which a Supplier can flex its quantity of MPANs migrated within a given time period, provided that it does not exceed the upper bound or fall below the minimum needed to keep migration on track.

The CCDG has suggested some guiding principles to ensure migration is managed proportionately:

Migration will need to balance speed and settlement accuracy because delays to migration will impose a cost on industry. There should be incentives to encourage early migration and potentially also penalties for failing to hit agreed migration targets.

Migration should follow a “controlled start >> ramp up >> volume migration >> ramp down” sequence.

The controlled start should focus on migrating ‘working’ MPANs, i.e. those where meters have working communications, registration data is up to date and accurate, and where a recent valid meter reading has been obtained. The timing of this sequence may differ across segments.

Migration should not leave a “rump” of broken MPANs to be migrated at the end of the 12 month period.

Migration exceptions should be resolved as they occur and be tracked as part of the migrated volumes that Suppliers have committed to in their migration plans. A decision could be made to implement a ‘hard cutover’ date when anything not yet migrated is settled under the new arrangements using default data, but this should not be incentivised.

The challenge in the migration phase will be to successfully migrate over 31.5 million import MPANs in a twelve month period. This averages out to about 140,000 MPANs per working day, assuming an even migration profile. As a result, cleansing and correction of relevant data should occur before the commencement of migration.

Any delay to the end of migration will incur costs to the industry for maintaining all the associated legacy and migration systems and processes. It is therefore important that the migration timetable is adhered to. Any extension may result in costs to the parties that cause the delay under the migration assurance framework.

One proposal with the CCDG considered, but not sufficiently to form a recommendation, is for the 12 month migration period to be subdivided into fixed ‘slots’ (e.g. of one week in length) which can then be allocated among Suppliers and spread out over the migration period to ensure an even distribution. Suppliers could then select or be allocated ‘slots’, and the central coordination function could ensure that ‘slots’ are efficiently and fairly allocated across Suppliers. Preference in allocating slots could e.g. be given to Suppliers who have planned their migrations early, and there could be penalties if a slot is not sufficiently utilised, as this will then require extra migration activity later to catch up.

The CCDG believes that the Implementation Group (one of the industry groups proposed under the Programme) would be well suited to further developing this approach, which will provide a framework around which Supplier migration plans can be developed. For example, it could consider the benefits of ‘front loading’ migration activity in the Advanced and Unmetered segments and develop this approach to be consulted on at a later date. And though this approach may specify broadly which segments should migrate at which times and the quantities of MPANs that should be migrated, it could leave the choice of which MPANs are migrated within a slot or series of slots to be determined by Suppliers.

Indicative numbers of import MPANs with a smart or legacy NHH Meter installed

MPAN Type	Domestic	Non-Domestic	Total
Legacy NHH	16,000,000 – 17,000,000	~1,200,000	17,200,000 – 18,200,000
Smart Elective HH	40,000 – 50,000	<100	40,000 – 50,000
Smart NHH	12,000,000 – 13,000,000	100,000 – 200,000	12,100,000 – 13,200,000
Total	28,040,000 – 30,050,000	1,300,000 – 1,400,000	30,000,000 – 31,000,000

Indicative numbers of import MPANs with an Advanced or AMR meter installed

MPAN Type	Domestic	Non-Domestic	Total
CT HH	<100	~250,000	~250,000
CT NHH AMR	20,000 – 30,000	30,000 – 40,000	50,000 – 70,000
WC HH	~1000	~60,000	~61,000
WC NHH AMR	80,000 – 90,000	800,000 – 900,000	900,000 – 1,000,000
Total	100,000 – 120,000	1,100,000 – 1,300,000	1,200,000 – 1,500,000

Indicative numbers of export MPANs already registered for settlement

MPAN Type	Total
NHH export	~8,000
HH export	~17,000

In addition, there are some 870,000 FiT metering systems which are expected to require an export MPAN to be registered.

Question 6. Do you agree with the CCDG's recommendations for coordinating the migration to MHHS?**Yes/ No or Response:****Rationale:****7. Recommendations for the runoff of current settlement arrangements**

Recommendation 7: Runoff should identify where reconciliation runs could be truncated to minimise the need to keep legacy systems running where settlement is sufficiently accurate or where making corrections at later runs is not cost effective. The CCDG believes that this date should be February 2026, the R2 run for the last date of migration.

What is Settlement Runoff and when does it start?

Runoff refers to the period of time during which an MPAN has migrated to MHHS arrangements but is still subject to outstanding legacy settlement runs for settlement dates prior to the migration.

MPAN Runoff (i.e. for a metering system) commences once it has been successfully migrated to the TOM.

Participant Runoff (e.g. for a Data Collector or Data Aggregator) commences once all the MPANs to which it was appointed have been migrated to the TOM. A Data Aggregator can only commence its runoff once it has certainty that the Data Collector for MPANs that it is appointed to will not submit changes to settlement data.

Market Runoff covers the period from when the first MPAN enters its runoff phase to when the last MPAN completes its runoff phase. Market runoff will therefore overlap with migration as early movers are starting runoff while later movers are still migrating. When migration is complete, there will be no overlap where a settlement date is subject to MHHS arrangements and also runoff under the outgoing arrangements.

In each case, migration sets the last settlement date to be reconciled under the old arrangements (for a participant, the day before the last metering system has successfully migrated to the TOM). The CCDG's preference is for as many MPANs as possible to be reconciled through to RF (14 months) and for all migrated MPANs to be reconciled through to at least the current R2 run, with Trading Disputes handled by the most appropriate method. The Trading Disputes process should seek to avoid unnecessary re-running of settlement runs to correct low value, long run errors. Truncation of settlement runs at R2 should be supported by a robust analysis of data quality.

The CCDG's recommended approach for Settlement Runoff

The CCDG believes that runoff should identify where reconciliation runs could be truncated to minimise the need to keep legacy systems running where settlement is sufficiently accurate or where making corrections at later runs is not cost effective. The CCDG believes that this date should be **February 2026**, the R2 run for the last date of migration.

This approach will allow Suppliers a sufficient window in which to address migration errors and correct these under the old arrangements, but set a point after which data is effectively 'frozen' in the current arrangements so that the current settlement processes can be closed down as soon as possible after completing migration. Running two sets of parallel arrangements with supporting systems adds unwanted industry cost and complexity and should be kept to a minimum.

What about Trading Disputes during the runoff period?

One area of CCDG concern is how to deal with potential Trading Disputes during the runoff period where making changes to migrated MPANs will be more restricted. Solutions initially explored to make corrections outside the normal SVA Volume Allocation Run (VAR) process could have impacts on Distributor's ability to recover DUoS, as well as lacking the level of transparency currently provided by the Disputes Process. This issue is being considered in more detail by the Trading Disputes Expert Group (TDEG) as part of the **Trading Disputes Technique Review** and the CCDG encourages the development of new techniques that could be used to manage disputes during the runoff 'tail'.

Half Hourly runoff recommendations

The runoff for Half Hourly should be more accurate than for NHH as there will be a clear midnight cutover date for each MPAN from the old to the new arrangements prior to which consumption data is submitted by Half Hourly Data Aggregators to BSC Central systems. In the HH market, this Supplier Purchase Matrix (SPM) data is typically based ~99% on actual metered consumption by the R1 run. Truncation of later reconciliation runs to R2 should not impact this part of the market excessively, subject to an appropriate Trading Disputes process being in place.

The CCDG notes that HHDA's currently submit data at later reconciliation runs for other non-settlement purposes. Any contraction of the settlement timetable to R2 should consider the impact on these other processes. However, today's HH MPANs will be among the first to migrate, and so the majority of MPANs are likely to be reconciled through to RF.

Runoff Completion and Discontinuation of legacy processes

Once Data Aggregator processes have been fully run off, it will allow the BSCCo supported software applications for NHHDA and EAC/AA to be retired, along with participants' NHHDC applications and their supporting reference data. Similarly, HHDC/HHDA software and any BSC processes and supporting settlement parameters required to support Data Aggregation can be decommissioned once there is no longer a need to maintain data for submission into BSC central systems. At this point, market participant role data in ISD/MDD for 'old world' agents can be end-dated.

Whilst systems are being retired, data retention may still be required beyond this date.

MHHS settlement runoff arrangements

Further detail on the options considered for different parts of the SVA market are set out in the next section.

Question 7. Do you agree with the CCDG's recommendations for the runoff of current settlement arrangements?

Yes/ No or Response:

Rationale:

SECTION C - TRANSITION APPROACH FOR UNMETERED SUPPLIES

This section sets out the specific requirements for Unmetered Supplies (UMS) under the Transition Approach and the approach to migration of UMS MPANs into the Target Operating Model (TOM).

What are Unmetered Supplies?

An Unmetered Supply (UMS) means a supply of electricity to a particular inventory of equipment in respect of which a Licensed Distribution System Operator (LDSO) has issued an Unmetered Supply Certificate. For example, this equipment could be any electrical equipment that draws a current and is connected to the Distribution Network without a meter, i.e., there is no meter recording its energy consumption, e.g., street lights, traffic signs, zebra crossings, etc.

How will Unmetered Supplies be settled under the MHHS Target Operating Model?

The UMSO role will remain similar to the existing role for HH UMS supplies in receiving inventories from customers, validating and passing to the UMDS. The current UMSO activity to determine NHH Estimated Annual Consumptions (EACs) and the associated processes will cease.

The Settlement Period level data will be calculated by the Unmetered Supplies Data Service (UMSDS). This service will be responsible for:

- Receiving inventory data associated with unmetered supplies from UMSOs;
- Validating the inventory data and responding to the UMSO, as appropriate;
- Accessing other dynamic information relating to the operation of Unmetered Supplies;
- Accessing standing data relating to Unmetered Supplies;
- Calculating Settlement Period level data for Unmetered Supplies; and
- Providing access to the calculated Settlement Period level data to the Market-wide Data Service (MDS) and other market participants.

The UMDS will be an adapted version of the existing Settlement Market Role of Meter Administrator (MA).

Why is HH Settlement more accurate than NHH Settlement for UMS?

The HH Settlement calculation for UMS is more accurate as it models the behaviour of each piece of inventory data provided by the customer. For example, if a street light is switched off for a period during the night this behaviour will be modelled using the Charge Code which indicate the Circuit Watts for the street light and the Switch Regime which shows the pattern of behaviour. Likewise, if the street light dimmed to another light-out put the energy calculation will reflect the behaviour.

In the NHH calculation EACs are calculated across the customer's inventory which is then applied to a static profile. These profiles are based on Profile Class 1 (the domestic profile) or Profile Class 8 (the flattest non-domestic profile) which do not reflect the pattern of actual UMS. The NHH calculation does not take account of the fact that days are longer in summer or shorter in winter. Whereas the HH calculation uses actual sunrise and sunset times or derives them from the Astronomical Almanac.

The Unmetered Supplies Segment at a glance:

- 80% of unmetered energy volume, ~350 MPANs already HH;
- Remaining 20% of unmetered volume, ~32k MPANs currently NHH;
- NHH profiling requires, on average 1.7 MPANs per inventory, so total MPANs will reduce to under 20k; and
- Most existing NHH MPANs are small energy volume, all UMS over 100kW were required to move to HH by April 2021.

The Unmetered Supplies Market Segment

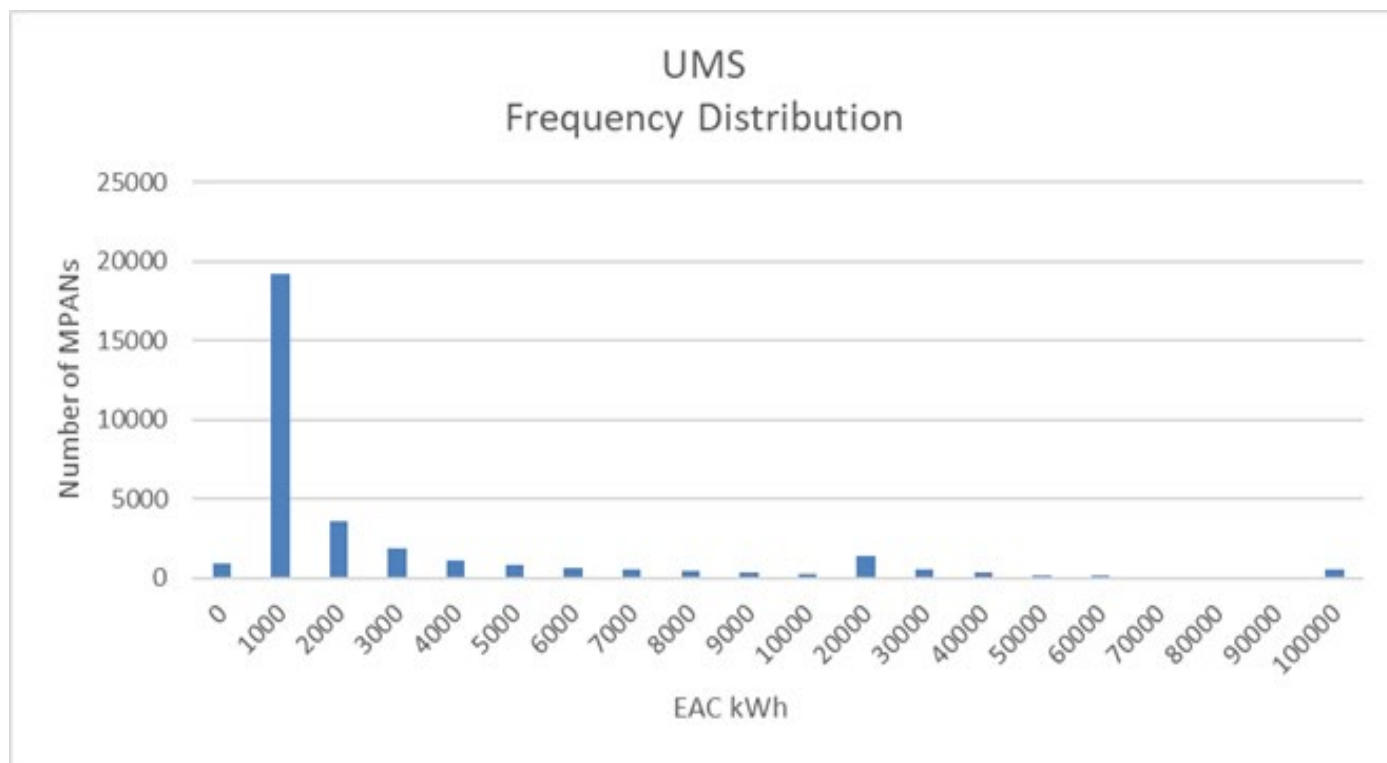
The Unmetered Supplies segment will transition progressively, allowing the evolution of the Meter Administrator (MA) role into the Unmetered Supplies Data Service (UMDS) under the TOM. This will be enabled through governance changes and will require all currently NHH settled UMS energy to be settled HH in the existing arrangements via the MA, HHDC and HHDA.

The Registration Service will need to be updated with the new data items and they will need to be populated appropriately to identify MPANs to the Unmetered Segment.

Once integration testing can be undertaken the MA will need to qualify/ requalify as a UMDS.

Once the new BSC Central Settlement Services are able to accept disaggregated MPAN and SP level data, the UMSDS will provide this directly into Settlement and the HHDC and HHDA roles can be withdrawn from involvement.

The intention of the transition approach is to disturb this segment of the market as little as possible, by spreading the industry effort over several years minimising the risk to customers, industry participants and settlement accuracy.



What Data Flows will be used for UMS Transition

A new Summary Inventory and CMS Control file is being progressed to allow this data to be passed over the DTN from the UMSO to the MA (and for the UMSO to UMSDS once qualified). As from Feb 2021 the HH consumption (and potentially export) data is passed from the MA to the HHDC using the D0379 'Half Hourly Advances UTC'.

The HH data is passed between the HHDC and HHDA using the D0380 'Half Hourly Advances for Inclusion in Aggregated Supplier Matrix' which is the clock time version of the data.

Once the UMSDS can interface with the BSC Central Systems the data will be presented in Coordinated Universal Time (UTC) to the MDS and other industry participants over the new MHHS architecture (which is being developed).

Tranches of MPANs

Suppliers will need to identify tranches of UMS customers to move to HH Settlement. Most NHH MPANs have an annual consumption of <1000 kWh. Ideally the Supplier should move the larger NHH UMS customers first considering the fact that NHH UMS customers have up to 4 MPANs. The EACS for all the NHH MPANs need to be combined to get a view of the size of the UMS customer overall.

What is the approach to consolidating UMS MPANs for MHHS?

As part of the MHHS there is the need to move all the existing NHH UMS MPANs into HH MPANs. The existing BSCP520 Change of Measurement Class (CoMC) process requires a new HH MPAN to be created. The number of NHH UMS MPANs is around 32k which is expected to reduce to under 20k when settled on a single HH MPAN.

There are two potential approaches to this change:

1. Follow the current BSCP520 CoMC process as requiring a new MPAN to be established with HH measurement class. To enable the CoMC the new HH MPAN is energised and the old NHH MPANs are de-energised on the day of change, and then subsequently disconnected. Some UMSOs also set the NHH MPANs to a zero EAC to further assure accurate settlement, or
2. Change the CoMC process so that one of the existing NHH MPANs is changed to HH and the remaining MPANs are de-energised/disconnected.

The number of Customers with portfolio MPAN counts per LDSO are approximately as follows:

LDSO	NHH Portfolio MPAN Number	Number of MPANS in each Portfolio	Number of MPANS
UKPN	With 1 MPAN	1,702	1,702
	With 2 MPANs	1,995	3,990
	With 3 MPANs	335	1,005
	With 4 MPANs	62	248
	Total	4,094	6,945
SPEN	With 1 MPAN	4,222	4,222
	With 2 MPANs	619	1,238
	With 3 MPANs	33	99
	With 4 MPANs	5	20
	Total	4,879	5,579
SSEN-HYDE	With 1 MPAN	769	769
	With 2 MPANs	29	58
	With 3 MPANs	7	21
	With 4 MPANs	0	0
	Total	805	848
SSEN-SOUT	With 1 MPAN	889	889
	With 2 MPANs	1,716	3,432
	With 3 MPANs	81	243
	With 4 MPANs	2	8
	Total	2,688	4,572
NPG	With 1 MPAN	440	440
	With 2 MPANs	709	1,418
	With 3 MPANs	58	174
	With 4 MPANs	15	60
	Total	1,222	2,092
WPD (EMEB&MIDE)	With 1 MPAN	1,158	1,158
	With 2 MPANs	2,380	4,760
	With 3 MPANs	288	864
	With 4 MPANs	22	88
	Total	3,848	6,870
WPD (SWAE&SWEB)	With 1 MPAN	1,558	1,558
	With 2 MPANs	1,499	2,998
	With 3 MPANs	48	144
	With 4 MPANs	0	0
	Total	1,547	4,700

ENWL	With 1 MPAN	100	100
	With 2 MPANs	53	106
	With 3 MPANs	26	78
	With 5 MPANs	7	35
	With 6 MPANs	2	12
	With 7 MPANs	2	14
	With 8 MPANs	2	16
	Total	192	361
	Total*	19,275	31,967

*Counts for IDNO MPIDs are not available.

Consultation with the existing UMSOs tend to prefer the second option of using an existing NHH MPAN. The respondents noted a number of pros and cons of the approach:

Pros of using one of the existing NHH MPANs:

- No dependency on Suppliers registering the new MPAN;
- No need for the UMSO to establish and agree new connection agreements with customers;
- No need for Supplier to agree a new Supply contract with the customer;
- By retaining the first profile category MPAN displayed on the current NHH Certificate and changing this to a HH profile, it would still allow a customer to arrange for any change of Supplier they may wish to carry out;
- For UMSOs the existing inventory could be retained under the existing customer's portfolio, making it easier to locate historical documentation;
- Less manual activity required by the UMSO;
- No need for UMSOs to monitor the registration of new MPANs and disconnect all the NHH MPANs; and
- Fewer customer service issues in relation to the change of the MPAN/billing.

Cons of using one of the existing NHH MPANs:

- It requires the existing CoMC process to be changed;
- The Supplier will need to remove the Related MPAN Flag before the change can be implemented due to Faster Switching requirements;
- An UMSO felt that creating a new HH MPAN would be a cleaner solution;
- Stakeholders (Supplier and UMSOs) will need to confirm if their systems can support the option 2 CoMC process for NHH UMS MPANs;
- A concern is that the UMSO systems may need to change. Currently when you set up an MPAN in the system you have to specify whether it is HH or NHH as there are different elements of the system that are used dependent on how the MPAN is traded. The UMSOs are not sure if their systems could currently support using the same MPAN or if a system change/modification would be required and the cost associated for the change;
- Where there are multiple MPANs for an Inventory the Supplier and UMSO will need to agree which MPAN to retain and which to disconnect; and
- At the point of CoMC any remaining NHH MPANs will need to be de-energised and/or have a zero EAC set.

Question 8. We would like to know Supplier views on the UMSO preferred approach to using one of the existing NHH MPANs. We would like to understand UMSO views on the system implications of either option.

Response:

Rationale:

What new Registration Data Items are required to move UMS MPANs to the Target End State?

There is nothing to prevent Suppliers from using the existing CoMC process to move MPANs under the existing arrangements from NHH to HH. Under the Target End State the design is adding a number of new data items and business processes into the Registration Service. The UMSDS and UMSO will interact with the Registration Service to obtain and update these data items.

Recommendation 8: A period of mandatory CoMC activity for all NHH Unmetered MPANs running from October 2023 to October 2024.

Mandating Change of Measurement Class activity for NHH UMS MPANs

The CCDG recommends migrating NHH UMS MPANs early to mitigate the risk of not meeting the Transition Timetable set out by Ofgem in its Full Business Case. Early migration would provide plenty of time for Suppliers and UMSOs to address any customer or contractual relationship issues that may arise.

Once migration plans have been completed the Supplier will need to start the CoMC process (subject to the approach being consulted on in Question 8) for the NHH MPANs. Firstly, the Supplier will need to request new HH MPANs for all (or part) of portfolio, as per the agreed plan.

When the skeleton MPANs have been set up the Supplier will need to register themselves as Supplier for the new HH (or adapted NHH) UMS MPANs. The MPANs need to be identified as de-energised.

Once the Supplier is registered against the MPAN the Supplier will need to appoint the MA, HHDC and HHDA. This will then trigger the sending of the Summary Inventory and Control file data by the UMSO to the MA. The MA will then validate the data and advise the UMSO if any issues are identified.

When the Inventory has been agreed the Supplier needs to advise the parties of the date for energisation of new UMS MPAN and de-energisation of NHH MPANs.

Once the HH MPANs have been energised the Supplier will need to disconnect the associated NHH MPANs.

The detailed CoMC processes are set out in **BSCP520 - Unmetered Supplies Registered in SMRS**.

Planning and Preparation for the Adoption of HH MPANs

The industry will need to agree a future date when all new UMS MPANs are to be traded immediately as HH. Qualification/ Requalification of the UMSO and UMSDS cannot begin until both the BSC Central System changes and the new Registration Data items are deployed. The expectation is that these will be available from April 2023 (Ofgem milestones: DB1 and DB3). Once deployed the UMSO and UMSDS can commence interfacing and undergo the testing required for the Qualification processes.

Transition and Migration Approach

The following sets out the logical ordering of steps and milestones for UMS Migration.

Key dates:

- **Feb 2022 (or Jun 2022)** new DTN data flows between UMSO & MA for Summary and Control files implemented
- **From Oct 2022 (or earlier) to Oct 2023** – commercial arrangements agreed between Suppliers and organisations acting as Meter Administrator and UMSDS
- **From Oct 2023 (or earlier) to Sept 2024** – complete NHH to HH CoMC for all UMS MPAN
- **From Oct 2023** all new UMS connections shall be HH from date of connection
- **From Oct 2024 to Sept 2025 (or earlier)** migration of all UMS MPANs to UMSDS under TOM

Data Cleanse and Planning

This step can start at any time now that Ofgem has published the Full Business Case for the MHHS TOM. The UMSO will need to work with the Suppliers to cleanse erroneous or non-existent UMS MPANs. The UMSO will need to logically disconnect where UMS no longer physically exist in consultation with the Supplier.

Once the data cleanse is complete the Supplier will need develop a migration plan in conjunction with the UMSO, MA and HHDC to migrate portfolio of NHH UMS MPANs to HH.

Qualification

The Qualification will be undertaken against the new processes that will have been set out in the new Unmetered Supplies proposed BSCP700. Qualification will need to be completed by the end of September 2024 (Ofgem milestone: **MT5B**). The existing UMSO services will only require a 'low impact' re-qualification as their HH processes are largely unchanged under the new TOM.

The Adoption Process

The Adoption process for unmetered supplies is where the UMSDS takes on the HH MPANs already registered to it as an MA. The Supplier will need to update the registration data to remove the MA MPID from the Meter Operator field within the Registration Systems. The Measurement Class will either be set to NULL or another agreed value (to be decided). The Supplier will also need to de-appoint the HHDC and HHDA using the existing process and update the registration data. The Supplier will then need to register the UMSDS MPID and EFD in the new Data Service and Data Service EFD fields and set the Market Segment Indicator field ('U' for unmetered supplies). The update to the Data Service field should trigger an appointment event to the UMSDS. At this point the UMSDS will use the new infrastructure to send the HH data direct to BSC Central Systems and other interested parties.

HH Trading

Once the agreed industry date is reached all new UMS MPANs, from that date, to be traded immediately in the new arrangements.

Question 9. Do you agree with the CCDG's recommended approach for the Unmetered segment?

Yes/ No or Response:

Rationale:

SECTION D - PERFORMANCE ASSURANCE FOR MHHS

Transitional Assurance and Monitoring

The transitional performance assurance framework is being developed with engagement from the Performance Assurance Board (PAB) to agree an approach that aligns to the principles within the **Performance Assurance Framework Review**. The PAB have agreed to be proactively involved over the next 6 months via a sub group, with input from CCDG delegates.

CCDG discussions to date recognise that Assurance is likely to be split into three key phases:

- **Assurance prior to commencement of migration.** This should consider parties readiness plans, qualification requirements and migration plans, monitor the progress of registration data item population and data cleanse set out in Recommendations 1 and 2, and monitor the CoMC activity in Recommendations 3 and 8;
- **Assurance during migration.** The CCDG notes the need to review additional data sources to monitor performance at an industry and party level, to ensure no detrimental impact on data quality. Discussions have noted that the assurance framework developed should not discourage migration to the TOM. There is a need to monitor the progress of Recommendation 6 to ensure migration is progressed in a timely and co-ordinated manner and settlement errors are minimised; and
- **Assurance post migration.** The enduring Performance Assurance Framework will require development during the programme. This will offer an opportunity for industry to work collaboratively to derive new, and revise or decommission existing techniques.

The CCDG has identified that the following areas will be explored during further stages of the MHHS Programme:

- Performance Standards and Liquidated Damages;
- Data Provision and Market Insight; and
- Technical Assurance and Audit.

Transition Re-Qualification and Participant Testing

The CCDG believes that an incremental approach to Qualification should be considered, and to utilise (where possible) evidence from the System Integration Testing (reference **TE2**) and Security Framework requirements (reference **TE12**) within the Qualification process to mitigate any duplication of effort.

The CCDG note that some existing roles are changing more than others and this can be illustrated by the following:

- **High Impact Participants** (e.g. Supplier, Registration Service, Smart Data Service): New interfaces involved and specific obligations pending under the MHHS Programme.
- **Medium Impact Participants** (e.g. Advanced Data Service, Unmetered Supplies Data Service): New registration interfaces and security implications of new methods of consumption data transfer/sharing.
- **Low Impact Participants** (e.g. Metering Service, UMSO): Largely an evolution of existing market role, but with a new or enhanced interface with the Registration Service.

It is recommended that the Qualification process for new entrants during the transitional period is proportional to the identified settlement risks.

Question 10. Are there any additional areas that should be considered as part of the next phase of Assurance activities?

Yes/ No or Response:

Rationale:

Question 11. Is there anything else that you think the CCDG should consider for transition?

Yes/ No or Response:

Rationale:

APPENDIX A – ASSOCIATED DOCUMENTS

Document Name	Publication Date
AMO Modification Proposal	16/06/2020
AWG Consultation Response Summary	02/06/2021
AWG Reference Architecture Consultation	26/04/2021
AWG Webpage	n/a
BSC Section S	n/a
BSCP520 - Unmetered Supplies Registered in SMRS	n/a
CCDG Detailed Design Consultation	17/12/2020
CCDG Webpage	n/a
Central Management Systems	n/a
Confirmation of DCC's role in raising a SEC modification for MHHS implementation	28/04/2021
Design Advisory Board (DAB) Webpage	n/a
DWG preferred TOM report	15/02/2019
DWG Transition Consultation	07/09/2019
Feed-in Tariffs: Quarterly statistics	30/06/2021
HH Settlement and remote communication obligations for CT Advanced Meters	02/07/2020
MHHS: Ofgem Decision and Full Business Case <ul style="list-style-type: none"> a. MHHS Decision Document b. MHHS Full Business Case c. MHHS Transition Timetable 	20/04/2021
Ofgem's Significant Code Review on Electricity Settlement Reform.	24/07/2017
Open letter on DWG final report and proposed new governance structure	01/10/2019
Operational Information Document (OID)	n/a
Performance Assurance Framework Review	n/a
SEC Modification	28/04/2021
Trading Disputes Technique Review	n/a