

Market-Wide Half Hourly Settlement: Design Working Group Final Report: Stage 2

Target Operating Model and Transition
Approach

ELEXON
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MARKET-WIDE HALF HOURLY SETTLEMENT

CONTENTS

EXECUTIVE SUMMARY	4
About this report	4
Reason for Ofgem's SCR	4
Scope of DWG's work.....	4
Interaction with the wider SCR on Settlement Reform	4
The DWG's recommended TOM	4
TOM Diagram	5
Outcome of consultation on the DWG's preferred TOM.....	5
Transition Approach methodology	5
Summary of Transition Approach	6
Outcome of consultation on DWG's Transition Approach	6
Next steps.....	6
INTRODUCTION.....	7
Purpose of this report in the context of Ofgem's Significant Code Review	7
What is a Target Operating Model (TOM) for MHHS?	7
What were the objectives for Stage 1 of the DWG's work?	7
What were the objectives for Stage 2 of the DWG's work?	7
How to navigate this report.....	8
OTHER SCR WORK STREAMS AND FURTHER WORK REQUIRED.....	9
Further TOM work required	9
DWG timeline	9
SUMMARY OF THE DWG'S PREFERRED TARGET OPERATING MODEL.....	10
Summary of the TOM services	11
Code and governance changes	11
DWG'S DISCUSSION OF THE CONSULTATION RESPONSES ON ITS PREFERRED TOM	12
Clarifications arising from the consultation	12
Consultation outcomes.....	12
SUMMARY OF THE DWG'S RECOMMENDED TRANSITION APPROACH.....	14
Summary of approach.....	14
Transition pre-requisites.....	14
Transition end point.....	15
Interaction with elective Half Hourly Settlement (HHS).....	15
Interaction with Performance Assurance Framework	15
Transition to a shorter Settlement timetable	15
DWG'S DISCUSSION OF THE CONSULTATION RESPONSES ON ITS TRANSITION APPROACH	17

MARKET-WIDE HALF HOURLY SETTLEMENT

DWG’s discussion of the responses 17

Clarifications arising from the consultation 18

Consultation outcomes..... 19

POTENTIAL ‘QUICK WIN’ CHANGES AND AREAS FOR FURTHER CONSIDERATION.....20

Quick wins 20

Areas for further consideration 20

Other non-Settlement issues for further consideration..... 21

Acknowledgments..... 21

APPENDIX A: DWG TIMELINE22



MARKET-WIDE HALF HOURLY SETTLEMENT

EXECUTIVE SUMMARY

About this report

This is the Design Working Group's (DWG's) final report to Ofgem on its preferred Target Operating Model (TOM) and Transition Approach for Market-wide Half Hourly Settlement (MHHS). This report has been developed by ELEXON. Ofgem will use this report to make the final decision on the TOM, transition and the wider Business Case for MHHS, as part of its [Significant Code Review \(SCR\) on Electricity Settlement Reform](#).

Reason for Ofgem's SCR

Smart and Advanced Meters can record a customer's usage in each half hour period. This enables Suppliers' contractual purchases of electricity to be reconciled against their customers' actual usage. MHHS will expose Suppliers to the true cost of their customers' usage and incentivise them to help their customers move consumption to times of the day when electricity is cheaper to generate and transport. It builds on the platform provided by smart Meters to enable a smarter, more flexible energy system that lowers bills, reduces carbon emissions and enhances security of supply.

Scope of DWG's work

The DWG is an Ofgem industry group, led by ELEXON. Its remit, as set out in its [Terms of Reference](#), is to develop a TOM covering the 'Meter to Bank' process for all Supplier Volume Allocation (SVA) Settlement Meters. The DWG was also tasked with developing the Transition Approach for moving from the current Settlement arrangements to the new TOM.

Interaction with the wider SCR on Settlement Reform

The DWG's outputs (TOM design and Transition Approach) form only one of several work streams in Ofgem's wider SCR on Electricity Settlement Reform. Ofgem will make the final decision on the TOM and Transition Approach. Ofgem has developed related policy, with decisions on [access to Half Hourly \(HH\) data for Settlement purposes](#) and [Supplier Agent functions](#). It has also considered consumer impacts and is developing the Full Business Case for MHHS.

The DWG's recommended TOM

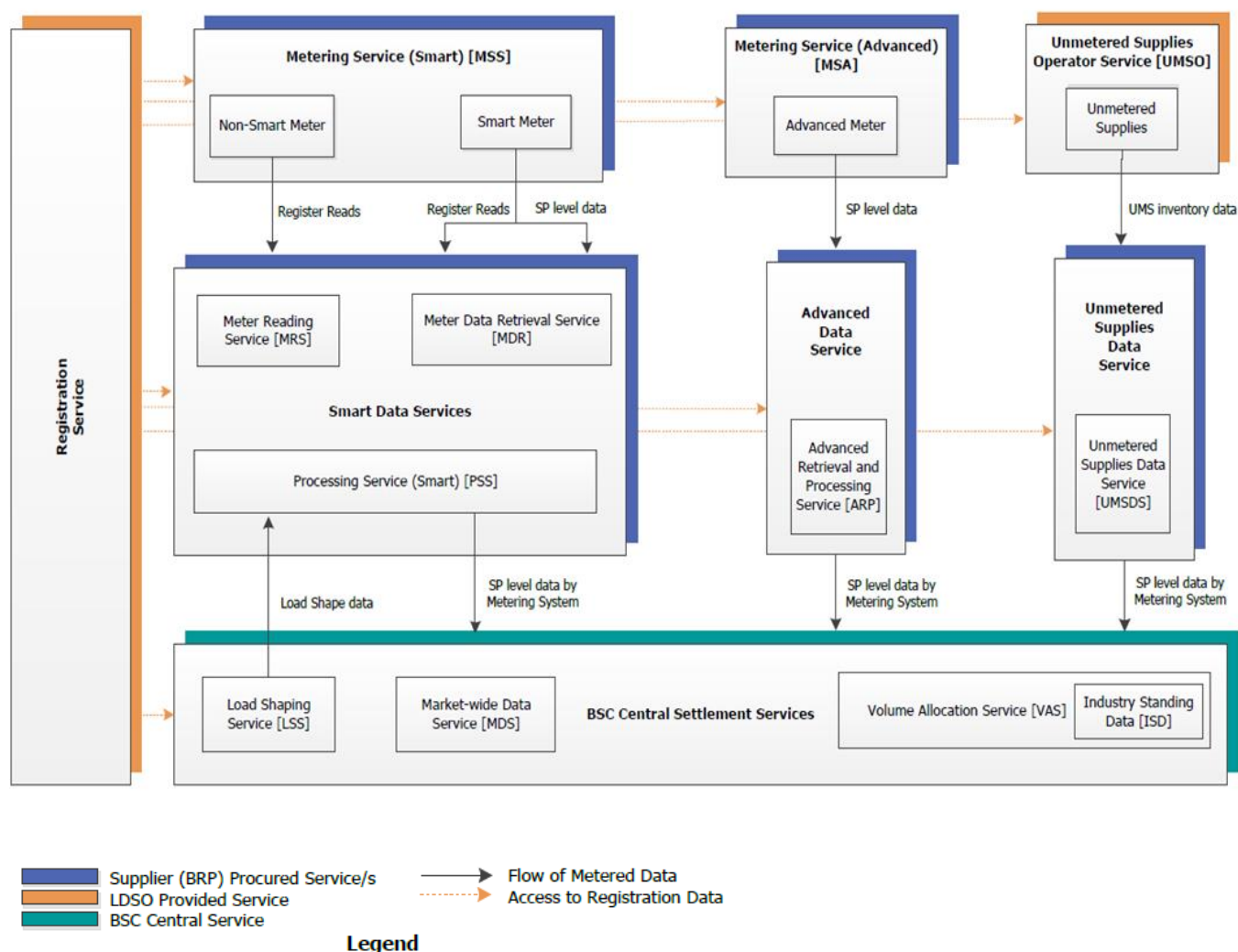
The TOM sets out the end-to-end ('Meter to bank') Settlement design for the target end state, when the majority of Meters will be smart Meters. Most Advanced Meters in the NHH sector will be settled in the Advanced Market Segment. Over time some Advanced Meters are expected to be replaced with smart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

The diagram below shows the TOM recommended by a majority of DWG members. Its key features are the three Data Services that collect data, and supporting information, and 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 as separately defined services 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.

The DWG's preferred TOM is presented in full detail in its [Preferred TOM report for Stage 2 of the SCR](#). There was a minority DWG view that a different TOM, with aggregation outside the BSC Central Settlement Services, should be recommended.

MARKET-WIDE HALF HOURLY SETTLEMENT

TOM Diagram



Outcome of consultation on the DWG's preferred TOM

The TOM consultation positively affirmed the DWG's market segment approach to the TOM design. It validated that the recommended TOM captures all essential Settlement data and processes. It also confirmed that (based on the DWG's current view), the TOM is not a barrier to future market innovation.

Transition Approach methodology

The DWG's Transition Approach is a high-level methodology. It focuses on the key transition milestones and the logical order in which they need to happen. This enables identification of the overall transition 'critical path'. It intentionally excludes consideration of costs and timescales, which will form part of Ofgem's separate RfI and Impact Assessment. Further industry work will be needed, after Ofgem's Full Business Case decision, to turn the approach into a more detailed implementation plan. The detailed Transition Approach is in Attachment B.

MARKET-WIDE HALF HOURLY SETTLEMENT

Summary of Transition Approach

The existing Supplier Volume Allocation (SVA) arrangements separate Settlement processes and data according to whether a Metering System is settled HH or Non Half Hourly (NHH). The Transition Approach is incremental, using a series of phases under which different market segments (or Meters within a market segment) can transition at different times. The BSC System changes are likely to begin once any go-ahead decision is made following the outcome of the Full Business Case. These interim states can be summarised as:

- Governance and Code changes;
- Qualification of new TOM services;
- Initiation of the migration and/or adoption of Metering Point Administration Numbers (MPANs) by the new TOM services;
- A period of parallel running with new TOM services and existing agent functions;
- Cutover to the TOM; and
- Cutover to the new Settlement timetable once certain preconditions are met.

The DWG's aim is not a 'big bang' implementation of the TOM but rather a phased Transition Approach from the existing arrangements. This gives parties a window within which to transition to the TOM arrangements. Not all Market Segments need to be in the same interim state at the same time.

Outcome of consultation on DWG's Transition Approach

The consultation positively affirmed the DWG's approach to the TOM transition. There was no consensus among respondents on whether the elective HHS process should be a formal stepping stone to the TOM under the SCR. The DWG recommends that improvements to the elective HHS process are progressed under the existing change process as a quick win, without waiting for the SCR Full Business Case decision. The consultation raised a variety of non-Settlement points for consideration by Ofgem under its wider SCR. It also raised some useful Settlement questions and points for consideration when developing the more detailed TOM design and transition plan.

Next steps

The DWG has identified a number of potential [quick wins and areas for further consideration](#). In addition to elective HHS improvements, other potential quick wins that could be progressed as 'business as usual' activities (i.e. under the existing change process without waiting for the SCR Full Business Case decision) include moving NHH MPANs with Advanced (CT) Meters to HHS and amending the NHH Export defaulting arrangements. However, there is no consensus within the DWG on whether the benefits of these would outweigh the costs, and therefore on whether these should be progressed. The DWG notes that these could be considered in more detail by any further SCR workgroup(s).

The DWG has also identified a non-exhaustive list of areas of the TOM design that will require further, more detailed, consideration. These include rationalisation of industry data items, identification of appropriate interfaces to Data Services and Registration systems and the detailed approach to the Settlement Run 'run-off' arrangements under the new TOM. The DWG notes that these could also be considered in more detail by any further SCR workgroup(s).

MARKET-WIDE HALF HOURLY SETTLEMENT

INTRODUCTION

Purpose of this report in the context of Ofgem's Significant Code Review

This is the final Stage 2 report from the ELEXON-led Design Working Group (DWG) for Market-wide Half Hourly Settlement (MHHS). It sets out the DWG's preferred Target Operating Model (TOM) and its recommended approach for transitioning from the current Settlement arrangements to the TOM.

The TOM development work forms part of [Ofgem's Significant Code Review \(SCR\) on Electricity Settlement Reform](#). Ofgem's main objective is to develop an enduring MHHS process that delivers consumer benefits, by maximising the opportunities provided by smart metering to enable a smart, flexible, energy system. Appendix 2 of Ofgem's SCR Launch Statement sets out its project objectives, strategic objectives, Design Principles, measures of success and Terms of Reference for the DWG. The DWG's work has been supported by the Design Advisory Board (DAB) which has reviewed and provided steers on the DWG's outputs. The DWG makes recommendations for Ofgem's approval.

What is a Target Operating Model (TOM) for MHHS?

A TOM for MHHS is a set of services required to deliver Settlement Period (SP) level data from a Meter to a central Settlement body, to enable the calculation of the amount of energy a Supplier's customers have consumed (or exported) in each Settlement Period for each Settlement Day (SD). This calculation is then used in the Imbalance Settlement process which compares the Supplier's contracted purchases of energy to the amounts deemed to have been consumed (sales) by each of the Supplier's customers (and recognises any amounts of energy contracted by National Grid under the Balancing Mechanism). Settlement Data is also provided for network charging.

Additionally, part of Ofgem's strategic objectives and Design Principles is that the TOM should reduce the time taken to complete Settlement. This applies to both the first set of Settlement payments (to reduce Credit Cover requirements for Parties) and the final closing off of any financial liabilities. The smart Meter roll-out enables more frequent collection of consumption data and thereby a reduction from the current 14-month Settlement reconciliation window.

The DWG has designed the TOM to be neutral, and not dependent, on any particular systems architecture. In the absence of any Ofgem decision on target architecture, the TOM and Transition Approach remain architecture-neutral. The DWG notes that during subsequent, more detailed, implementation planning, decisions on the architecture may determine the specific timing of activities

What were the objectives for Stage 1 of the DWG's work?

In Stage 1, the DWG developed five potential 'skeleton' TOMs for the Target End State when most customers will have a Meter capable of delivering Settlement Period level data for Settlement purposes. All the TOMs were evaluated against the Design Principles set out by Ofgem. Ofgem approved the [DWG's Stage 1 report in April 2018](#).

The DWG then [consulted on these five skeleton TOMs](#) in April-May 2018. The consultation responses showed all five TOMs to be viable options and that the DWG had not missed any other TOM or significant aspects of design. There was no consensus on an overall preferred TOM. The DWG therefore took all of the TOMs forward for further detailed design and evaluation in Stage 2.

What were the objectives for Stage 2 of the DWG's work?

During Stage 2, the DWG developed more detailed service requirements for the TOMs, evaluated the different TOMs in light of Ofgem's Design Principles and policy steers, and identified a preferred TOM. This work was supported by four workgroups reporting to the DWG. [The DWG delivered its report setting out its preferred TOM in January 2019](#). There was a minority DWG view that different TOM with aggregation outside BSC Central Settlement Services should be recommended.

MARKET-WIDE HALF HOURLY SETTLEMENT

The DWG held a [consultation on its preferred TOM](#) in February 2019, which reaffirmed its views. Following the consultation the DWG split into three work streams to develop the Transition Approach for each Market Segment in the TOM, before collectively agreeing the overall Transition Approach and 'critical path'. The DWG held a [consultation on the Transition Approach](#) in June 2019, which resulted in minor clarifications but no significant changes to the approach.

The DWG has now provided this report to fulfil its Terms of Reference under the SCR.

How to navigate this report

This is the main report. It contains:

- Overviews of the DWG's recommended (preferred) TOM and recommended Transition Approach;
- The DWG's discussion of the responses to its consultations on the TOM and Transition Approach; and
- Areas that the DWG recommends for further consideration.

This report also has three attachments as follows:

- Attachment A summarises the responses received to the DWG's consultation on its preferred TOM;
- Attachment B provides more detail on the DWG's recommended Transition Approach, including a summary of the responses to its consultation on this approach; and
- Attachment C contains a glossary of terms and acronyms used in this report.

This report should be read in conjunction with the [DWG's January 2019 report to Ofgem on its preferred TOM](#), which sets out the full TOM service requirements.

MARKET-WIDE HALF HOURLY SETTLEMENT

OTHER SCR WORK STREAMS AND FURTHER WORK REQUIRED

Ofgem is currently minded to use its powers under the Smart Meters Act 2018 (rather than its alternative SCR powers) to make required changes to Industry Codes and Licences. The DWG therefore assumes that this will be the primary mechanism for making the necessary governance changes, and that Ofgem will make these changes following its Full Business Case decision. However, this approach does not necessarily rule out other changes being progressed through the normal Code change processes, either before or after this point.

Ofgem has a number of parallel work streams under the SCR. These are:

- Development of related policy, with decisions on:
 - [Access to Half Hourly \(HH\) data for Settlement purposes](#); and
 - [Supplier Agent functions](#);
- Consideration of consumer impacts; and
- Development of the Business Case for MHHS, including:
 - A Request for Information (RfI) to gather information on participants' impacts, costs and timescales to inform the economic case and Impact Assessment.

Ofgem will bring the outputs of all the SCR work streams together in its Full Business Case and use this to make a decision on how and when to proceed with MHHS. You can find links to more information about its SCR on the [Ofgem website](#) and in particular Ofgem's [Outline Business Case](#).

Prior to releasing the policy decisions, Ofgem had instructed the DWG to work to the '[least-regrets' steer](#) it provided in November 2018. Ofgem has since published its [decision on Supplier Agent functions](#) and [decision on Access to HH data](#), which are both consistent with the previous least-regrets steer.

Further TOM work required

Further work will be needed, before and/or after Ofgem's Full Business Case decision, in order to:

- Develop the lower-level detail of the TOM design, including the outstanding areas identified in this report; and
- Turn the Transition Approach into a more detailed implementation plan with timescales.

Ofgem has indicated that it will undertake the further work, under SCR governance, to oversee development of the outstanding TOM detail and production of legal drafting for impacted Industry Codes. Where appropriate, the DWG has therefore recommended [areas for consideration](#) by any successor workgroup(s).

DWG timeline

The DWG held 20 meetings over two years and undertook three consultations with supporting stakeholder events. A timeline showing the overall process followed by the DWG can be found in [Appendix A](#).

MARKET-WIDE HALF HOURLY SETTLEMENT

SUMMARY OF THE DWG'S PREFERRED TARGET OPERATING MODEL

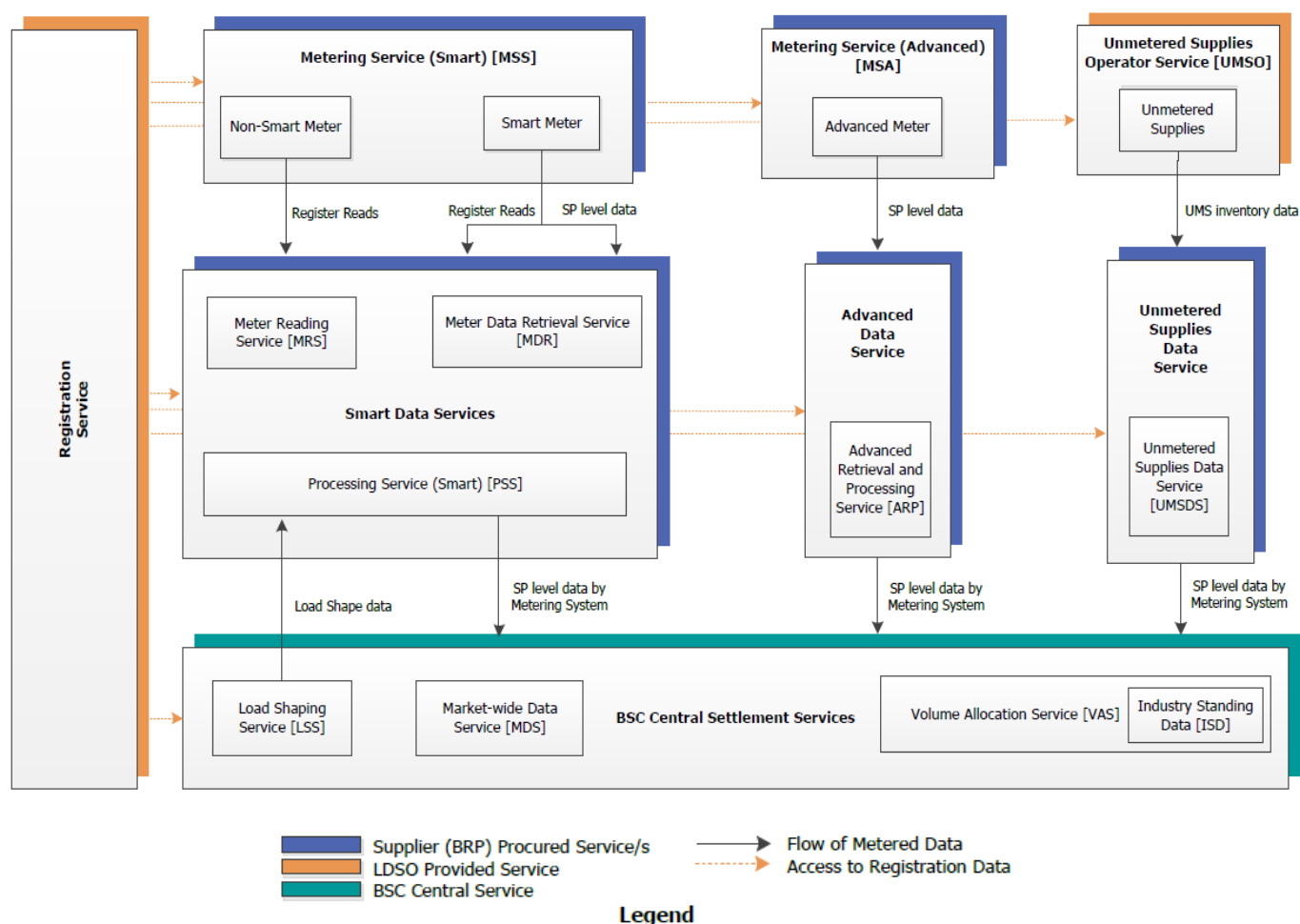
The key features of the DWG's preferred TOM are the three Data Services that collect data and supporting information, then output validated/estimated, disaggregated Settlement Period (SP) level data to BSC Central Settlement Services.

These are:

- The Smart Data Services;
- The Advanced Data Service; and
- The Unmetered Supplies Data Service.

The SP level data from smart Meters received by BSC Central Settlement Services will be used by the Load Shaping Service (LSS) to derive Load Shapes for use where SP level data is not available directly from smart or non-smart Meters. The BSC Central Settlement Services will use the SP level data from Meters and UMS MPANs, or SP level data derived using the load shapes, or estimation in the Settlement calculations.

Two types of Metering Services have been defined - one for smart and non-smart Meters and one for the Advanced Meters.



MARKET-WIDE HALF HOURLY SETTLEMENT

Summary of the TOM services

The TOM Services and corresponding Service Ids are outlined below to aid navigation of the requirements.

Market Segment/Service	Service Id	Service Name
Advanced Market Segment and Advanced Data Service (ADS)	MSA	Metering Service (Advanced)
	ARP	Advanced Retrieval and Processing Service
Smart and non-smart Market Segment and Smart Data Services (SDS)	MSS	Metering Service (smart)
	MDR	Meter Data Retrieval Service
	MRS	Meter Reading Service
	PSS	Processing Service (smart)
Unmetered Supplies Market Segment and Unmetered Supplies Data Service (UMSDS)	UMSO	Unmetered Supplies Operator Service
	UMSDS	Unmetered Supplies Data Service
BSC Central Settlement Services	MDS	Market-wide Data Service
	LSS	Load Shaping Service
	VAS	Volume Allocation Service

More detail on the DWG's preferred TOM and the TOM Service requirements can be found in the [DWG's report to Ofgem](#) delivered in January 2019. There was a minority DWG view that a TOM with aggregation outside BSC Central Settlement Services should be recommended.

Code and governance changes

The DWG assumes that Ofgem will make the bulk of any required Code and governance changes after the final decision on MHHS, using Ofgem's powers under the Smart Meters Act 2018. Changes are likely to be required to the:

- Balancing and Settlement Code (BSC);
- Smart Energy Code (SEC);
- Master Registration Agreement (MRA) / Retail Energy Code (REC);
- Distribution Connection and Use of System Agreement (DCUSA); and
- National Terms of Connection.

The DWG notes that this does not necessarily prevent changes being progressed through the normal Code change processes before or after the Ofgem's Full Business Case decision.

Other consequential changes may also be required which fall outside Ofgem's remit. For example, the Low Carbon Contracts Company (LCCC) may need changes for their timetable which aligns with the BSC's Settlement timetable. In this case, the Department of Business Energy and Industrial Strategy (BEIS) may need to amend secondary legislation.

MARKET-WIDE HALF HOURLY SETTLEMENT

DWG'S DISCUSSION OF THE CONSULTATION RESPONSES ON ITS PREFERRED TOM

The DWG held a [consultation on its preferred TOM](#) in February 2019. The full non-confidential consultation responses can be found on the [DWG webpage](#). A summary of the responses and key themes can be found in Attachment A to this report.

The DWG's discussion of the responses focused on identifying the key messages and on whether there were any new arguments that it had not already considered in its [report to Ofgem on its preferred TOM](#).

Clarifications arising from the consultation

The DWG clarified the following points during the discussion:

- BSC Central Settlement Services performing aggregation for Settlement purposes does not prevent aggregation occurring outside Settlement for other purposes, including in order to support Suppliers in checking their bills;
- The response from the Data and Communications Company (DCC) highlights that it is preferable to pull Half Hourly (HH) data daily for all 30 million smart Meters;
- A new or amended DCC User role and any associated Smart Energy Code obligations will be needed so that any competitively-provided Meter Data Retrieval (MDR) Service can access data from the DCC – while this is already part of the TOM design, implementing the DCC changes for this will need to be an early transition milestone;
- The MDR will not access Time of Use register data from the DCC;
- If the Supplier is already accessing Settlement Period level data from the DCC then it may pass this to the Smart Data Service (SDS) and vice versa;
- As noted in the [DWG's Risks, Assumptions, Issues and Dependencies \(RAID\) Log under Assumption 11](#) (Attachment C), the TOM itself does not cover the Settlement of 'behind the Meter' metering or changes relating to multiple Supplier processes, because this is being looked at separately by two in-progress BSC Modification Proposals. However, the TOM is not seen as a barrier to these changes; and
- There may also be other Modification Proposals implemented between now and MHHS that the TOM will need to accommodate.

The DWG discussed whether discontinuing Standard Settlement Configurations (SSCs), as proposed under the TOM, could result in customers who choose not to have a smart Meter (or who opt-out of sharing their smart Meter data) being billed on a single, flat-rate tariff. ELEXON suggested that this could be addressed by creating specific Load Shape Categories, for example an Economy 7 Load Shape Category. ELEXON noted that, while the TOM included a set of initial minimum Categories, it did not preclude extra Categories being determined during implementation. You can find further DWG discussion on this [here](#).

Consultation outcomes

Overall, the DWG agreed that the responses:

- Positively affirm its market segment approach to the TOM design;
- Validate that the TOM captures all essential Settlement data and processes (noting the clarification about 'behind the meter' metering above);
- Confirm that, subject to respondents' views on aggregation and based on current knowledge, the TOM is not a barrier to future market innovation;

MARKET-WIDE HALF HOURLY SETTLEMENT

- Mirror the majority/minority DWG views on the preferred TOM, with a minority of respondents in favour of an alternative TOM where Settlement aggregation of Meter data continues to be a competitively-provided service outside of BSC Central Settlement Services;
- Highlight the importance of a managed transition to the reduced Settlement timetable that minimises Settlement risk, given current uncertainty over the smart rollout penetration, data quality under MHHS and the intended performance targets;
- Affirm the DWG's view that a Trading Disputes process / window is still required;
- Confirm that the DWG's proposed transition principles are appropriate, with a small change to Principle 7 from 'for a single Meter' to 'for a single Metering System ID (MSID)'; and
- Raise a variety of other relevant points and suggestions for consideration when developing the Transition Approach.

The DWG noted that a number of respondents had commented on areas that fall outside of its control and will be a matter for Ofgem's policy decisions, RfI and Business Case under the wider SCR. It also recognised the challenges for participants in identifying costs and benefits without knowledge of the target architecture, but noted that Ofgem had tasked it with developing an architecture-neutral TOM. The DWG agreed that the TOM, as designed, can work with any architecture.

MARKET-WIDE HALF HOURLY SETTLEMENT

SUMMARY OF THE DWG'S RECOMMENDED TRANSITION APPROACH

Summary of approach

Below is a summary of the transition Approach. Attachment B contains the detailed Transition Approach.

The existing Supplier Volume Allocation (SVA) arrangements separate Settlement processes and data according to whether a Metering System is settled HH or Non Half Hourly (NHH). Advanced Meters in the current NHH arrangements will either be replaced with a smart Meter, or settled in the Advanced Meter segment. Unmetered Supplies can transition independently of the other segments.

The Transition Approach uses a series of phases under which different market segments (or Meters within a market segment) can transition at different times. These interim states can be summarised as:

- Governance and Code changes;
- Qualification of new TOM services;
- Initiation of the migration and/or adoption of Metering Point Administration Numbers (MPANs) by the new TOM services;
- A period of parallel running with new TOM services and existing agent functions;
- Cutover to the TOM; and
- Cutover to the new Settlement timetable once certain preconditions are met.

The DWG's aim is not a 'big bang' implementation of the TOM but rather a phased Transition Approach from the existing arrangements. This gives parties a window within which to transition to the TOM arrangements. Not all segments need to be in the same phase at the same time. Each Market Participant wishing to provide a Data Service may move through the phases for its Market Segment at different rates. However, it is envisaged that there will be a defined date by which Balancing Responsible Parties (BRPs) have to be able to engage with the Data Service (contractually or provide its own service in-house). At this point MPANs migrated to the new Services will not be allowed to revert to NHH arrangements.

While ideally the migration of an MPAN from NHH to HH would be a 'one-way gate' to prevent it subsequently moving back to NHH, the DWG recognises that in some segments this could be a barrier to customers changing Supplier. The DWG believes this can be addressed by ensuring that a sufficient number of Suppliers and TOM service providers are ready before a 'one-way gate' is put in place.

For a large proportion of the market (specifically Advanced Meters), in consumption terms, this allows for 'evolution not revolution'. Participants could provide old-style NHH/HH services and new MHHS TOM services at the same time. This would enable migration between the two operating models more easily and without unnecessary transfer of data.

The Smart and Non-smart Market segment represents the biggest change from the current NHH arrangements, due to new roles and interface with the Data Communications Company (DCC).

The DWG's Transition Approach recognises that some parties will need to [Qualify/Re-Qualify](#) in order to undertake the TOM Services but will only need to adapt their existing systems to the new requirements.

Transition pre-requisites

The DWG discussed whether there are any external events, outside the Significant Code Review (SCR), that need to have occurred before the transition to the TOM can begin.

MARKET-WIDE HALF HOURLY SETTLEMENT

The DWG concluded the following as a minimum would be required:

- Implementation of the Faster Switching arrangements. Version 2 of the Retail Energy Code (REC) will need to be implemented for Faster Switching before the MHHS transition can begin. However, it is considered that some elements of transition could start before full implementation of Faster Switching arrangements;
- Enrolment of SMETS1 Meters by the Data and Communications Company (DCC);
- A reasonable percentage of smart Meters rolled out; and
- Clarity on network charging requirements for Settlement data;

Transition end point

The DWG agreed that the end point for transition, when the TOM is considered to be fully implemented, shall be the first Settlement Day that all Meters are settled using the TOM.

Interaction with elective Half Hourly Settlement (HHS)

The elective HHS arrangements allow Suppliers to voluntarily collect HH data from smart Meters (with customer consent) and pass it into Settlement via existing HH Agents. Ofgem asked the DWG to consider whether greater use can be made of the elective arrangements, as an interim step in obtaining the benefits of HHS, whilst awaiting full implementation of the TOM.

The DWG believes that the elective arrangements in their current form, are sub-optimal as an enduring solution compared with the TOM, in which existing elective issues are 'designed out'. As an example elective HHS is currently unable to handle Meters from which only register reads are available for Settlement (these would remain in or revert to NHH Settlement). The TOM enables HHS for these MPANs using load shapes.

Despite its limitations, the DWG considers that the elective HHS process could have a role to play as an interim step in the transition to the TOM. You can find more detail later in this report [here](#).

Interaction with Performance Assurance Framework

In 2017 the BSC Panel initiated a review of the Performance Assurance Framework (PAF) to ensure that it remains fit for purpose in a changing industry. The revised PAF provides a high-level assurance framework and a set of principles, which the Performance Assurance Board (PAB) can apply flexibly, to assess any risks to Settlement associated with MHHS.

The PAB has advised the DWG that no further PAF changes are needed. As the industry moves towards the TOM, the PAB can deploy/adjust any PAF techniques as appropriate as part of the evolution not revolution Transition Approach. While performance targets will be set nearer the time, the DWG recommends a set of underpinning principles for these, which you can find in Attachment B.

Transition to a shorter Settlement timetable

The TOM design enables more timely Settlement due to the increased frequency of collection of meter readings.

The DWG proposes reducing the timing of the Initial Settlement (SF) Run from its current 16 working days to **5-7 Working Days** and the timing of the Final Reconciliation (RF) Run from 14 months to **4 months**. This reduces the number of reconciliation runs required. To address concerns about recovery of material errors affecting Settlement, the DWG recommends a timing of **20 months**, from the Settlement Date, for the Dispute Final (DF) Run.

The DWG proposes transition to a new Settlement timetable and associated Trading Disputes criteria will occur once the full TOM is in place and would be based on an assessment of the data available, rather than on a hard target date. This will allow the move to earlier final Settlement without adversely impacting the accuracy of Settlement data.

MARKET-WIDE HALF HOURLY SETTLEMENT

The DWG believes that the qualifying materiality for Trading Disputes should be set significantly higher than today. In developing the new DF Run timing, the DWG recommends that this is paired with more stringent materiality criteria which increase with the age of the error. This means that lower-value errors will only qualify for correction if detected quickly after RF. The later part of the Trading Disputes window will be reserved for errors where significant misallocation of energy has occurred.

The availability of MPAN level consumption and export data centrally also has the potential to improve the disputes process. Access to the central data would enable analysis of the impact of potential disputes. The impacts of disputes can be analysed at any time as meter data would be readily available to those assessing the materiality of the dispute.

You can find more information on the DWG's recommendations in Attachment B.

MARKET-WIDE HALF HOURLY SETTLEMENT

DWG'S DISCUSSION OF THE CONSULTATION RESPONSES ON ITS TRANSITION APPROACH

The DWG held a [consultation on the Transition Approach for the TOM](#) in June 2019.

The full non-confidential consultation responses can be found on the [DWG webpage](#). A summary of the responses and key themes can be found in Appendix D of Attachment B to this report.

DWG's discussion of the responses

The DWG's discussion of the responses focused on identifying the key messages and on whether there were any new arguments.

Comments outside DWG's remit

The DWG agreed that the following aspects of the responses fell outside the scope of its deliverables under its Terms of Reference and should be considered elsewhere:

For consideration by Ofgem under its wider SCR:

- Comments on the plan/process for implementing MHHS after Ofgem makes its Full Business Case decision;
- Comments on the customer experience, including billing and customer education;
- Comments on architecture; and
- Comments on commercial and contractual considerations.

For consideration by the Performance Assurance Board (PAB) and Trading Disputes Committee (TDC):

- Comments on setting performance targets during transition and under the enduring TOM;
- Comments on Qualification / Re-Qualification;
- Comments on market monitoring to support the move to a shorter Settlement timetable; and
- Comments on Disputes process and materiality threshold(s).

Qualification

The DWG agreed that:

- Qualification and Re-Qualification requirements should be proportionate; and
- The appropriate requirements should be considered further by the PAB and any further appropriate SCR workgroup(s).

Elective HHS

The DWG discussed the mixed responses on using the existing elective process to migrate significant numbers of MPANs to HHS as an interim step in the transition process. It agreed that:

- There may be improvements that can be made to the existing elective HHS process, particularly around customers reverting to NHH on a Change of Supplier;
- Any improvements should not have to wait for the SCR to conclude but should be progressed as business as usual under the normal BSC change process, initially through an Issue Group;
- The main barriers to mass take-up of elective are commercial ones - while an Issue Group could discuss these, it may not be able to resolve them;
- Processes for reverting from HH to NHH Settlement were implemented when the elective arrangements were developed. However, Suppliers choosing not to participate in elective HHS have not implemented

MARKET-WIDE HALF HOURLY SETTLEMENT

any changes to on-board MPANs that were enrolled in the elective arrangements. This means the onus is on the losing Supplier to revert customers to NHH processes;

- Concerns have been raised by respondents about incurring costs to adopt the elective HHS process in the interim, only for it then to be replaced by the enduring TOM processes with their own implementation activities and costs;
- Use of the existing elective HHS process should remain voluntary rather than becoming a mandatory stepping stone to the TOM (noting that Ofgem can consider this further through its RfI, Impact Assessment and Full Business Case); and
- The pros and cons of using the elective process as an interim step in the Transition Approach will depend in part on the timescales for implementing the TOM, which are currently unknown.

Transition timescales

A minority of DWG members suggested that the DWG's Transition Approach should give an indication of timescales, noting the suggested Gantt chart provided by one respondent.

The DWG was unable to agree on any proposed timescales, with some members commenting that any timescales could only be very indicative at this point and that publishing these part-way through Ofgem's RfI process could be unhelpful. It agreed that consideration of timescales will need to form part of any further transition design work under the SCR.

Comments on transition principles

The DWG noted that transition principle (f) states that:

'The Transition Approach needs to balance the efficiencies of making HHS a 'one-way gate' (i.e. preventing HH customers switching back to NHH arrangements during the transition) with not creating undue barriers to customers switching BRP (Supplier).'

The DWG discussed how the balance would be achieved under the principle above. It noted that customers could potentially switch back to NHH on a CoS to a Supplier not yet supporting the new arrangements. The DWG agreed that:

- There may need to be a defined 'one-way gate' point during transition, after which all Suppliers must be able to support the new arrangements or could be prevented from taking on customers until they can. This point could potentially be different for different market segments; and
- Some respondents had found it difficult to say whether the Transition Approach delivered all principles, due to the further detail that would need to be defined as part of future work. The DWG agreed that any further work should continue to use these principles.

Non-Settlement services

The DWG reiterated that the TOM does not prescribe or block options for non-Settlement services, for example aggregating data for non-Settlement purposes or enabling third parties to access Settlement data. These fall outside the TOM and the appropriate governance and access rules would need to be developed separately.

Clarifications arising from the consultation

The DWG agreed a number of areas where the responses highlighted the need for clarification in its report. These include:

- That customers with Advanced Whole Current Meters will not be forced to have a smart Meter and move to the Smart & non-Smart Market Segment (although they may choose to have one, e.g. for commercial or interoperability reasons) – customers wanting to keep their Advanced Meter and stay in the Advanced Market Segment will be allowed to do so;

MARKET-WIDE HALF HOURLY SETTLEMENT

- That HHDCs will have a commercial choice about whether they wish to support data to three decimal places (i.e. to the nearest Wh) – they will not be required to do this, but if they choose not to they will be unable to service smaller unmetered customers during the transition or participate in the elective HHS arrangements;
- Smaller Unmetered Supplies (UMS) customers will not be required to have Photo Electric Control Units (PECUs);
- Clarifying the 'phases' for the BSC and Registration Systems (e.g. that the Design – Build – Test – Deploy activities fall within one of the phases); and
- That there will be no route for correcting Settlement data outside of a Trading Dispute – for example, there will be no equivalent to the existing NHH Gross Volume Correction process under the TOM.

The DWG has made these clarifications as part of the Transition Approach in Attachment B.

Consultation outcomes

Overall, the DWG agreed that the responses:

- Positively affirm its approach to the TOM transition;
- Require no changes to its Transition Approach, transition principles and PAF assumptions/principles, only some clarifications and presentational changes made in this final report;
- Highlight that, while there is no consensus on whether the elective HHS process should be a formal stepping stone to the TOM under the SCR, any possible improvements to the elective HHS process should be considered and progressed through the existing BSC change process;
- Raise a variety of non-Settlement points for consideration by Ofgem under its wider SCR; and
- Raise a variety of useful Settlement questions and points for consideration when developing the more detailed TOM design and transition plan.

MARKET-WIDE HALF HOURLY SETTLEMENT

POTENTIAL 'QUICK WIN' CHANGES AND AREAS FOR FURTHER CONSIDERATION

Quick wins

The DWG has considered whether to recommend that any 'quick wins' should be progressed under the normal industry Code change processes rather than waiting to be directed by Ofgem after its Full Business Case decision.

The DWG notes Ofgem's advice that a 'quick win' in this context would be a change that benefits the current Settlement arrangements and also facilitates MHHS. If the change would have no benefit to current Settlement and would only be progressed for MHHS, then this would be dependent on the Full Business Case and would need to wait for that decision under SCR governance. The DWG notes that there is nothing to prevent industry Parties from raising changes under the normal change process, but that Ofgem has the ability to subsume changes into its SCR if there is a dependency.

A 'quick win' is therefore something that is progressed before Ofgem makes its Full Business Case decision. This is distinct from activities that may be prioritised early during transition, but which would only take place after the Full Business Case decision.

The DWG has discussed the following potential quick wins:

- Improving the elective HHS arrangements, providing guidance or changes to support areas that are causing issues for Suppliers not electing to use the arrangements;
- Asking the TDC to look at introducing a ratcheted materiality threshold for Trading Disputes now, rather than waiting for MHHS;
- Moving NHH MPANs with Advanced (CT) Meters (Circa 50K meters) into the existing HH arrangements;
- Introducing a consumption threshold above which UMS customers would be required to be settled HH;
- Requiring Suppliers to collect smart Meter readings at least monthly for Settlement purposes (or alternatively asking the PAB to consider how this could be incentivised);
- Increasing the GSP Group Correction Factor Scaling Weights on estimated values, to encourage more frequent reads into Settlement; and
- Amending the NHH Export defaulting arrangements to estimate a zero advance where no Meter readings are available (to align with the HH arrangements).

The DWG agrees that the first two meet the criteria for a quick win and recommends that these are progressed. However, it has not been able to agree whether the remaining areas meet the criteria. The DWG consider that they may benefit current Settlement arrangements, but that it is difficult to say whether this benefit would outweigh the implementation costs to participants. The DWG notes that they could be assessed by any further SCR workgroup(s). However, some members are concerned that the effort involved could be a distraction from the work needed on the detailed TOM design.

Areas for further consideration

During Stage 2, the DWG identified a non-exhaustive list of areas of the detailed TOM design that will need further consideration and development. This is before legal drafting can be produced for the impacted Industry Codes.

Some areas are being progressed by the PAB and TDC. Others could be developed by any further SCR workgroup(s), which could also potentially monitor and co-ordinate the PAB and TDC outputs.

The list of areas are:

- Rationalisation of existing industry data items (e.g. Measurement Classes, Consumption Component Classes) and what is needed or can be removed or simplified for MHHS;

MARKET-WIDE HALF HOURLY SETTLEMENT

- Exception reporting detail for Data Services under the TOM. What can be removed, simplified or additional reporting that is required;
- Identification of appropriate Interfaces to BSC Central Services, Data Services and Registration systems.
- Options for transfer or access to Settlement or Registration data;
- The approach to calculating and applying GSP Group Correction Factors and GSP Group scaling weights. This would ensure appropriate incentives are in place for timely submission of accurate meter data into MHHS (as well reflecting the impact of errors on the relevant settlement quantities);
- Identification of issues and solutions relating to the Settlement of Export. This area would consider what the impact of export and spill is on settlement accuracy and place the correct incentives on Suppliers (recognising interaction with BEIS's direction on metering export);
- Detailed approach to the Settlement Run 'run-off' arrangements under the new TOM. Further work is required to set out the activities to transition from the current Settlement arrangements (including NHH) to the MHHS TOM;
- Development of PAB and TDC's approach to performance targets and the detailed Trading Disputes process. To ensure the right incentives, monitoring and standards are in place on maintaining Settlement accuracy and the obligations on Suppliers; and
- Identification of impacted sections of all relevant Industry Codes (BSC, DCUSA, MRA/REC, SEC) and Code Subsidiary Documents (CSDs).

Other non-Settlement issues for further consideration

There may be other non-Settlement areas that need to be considered. In relation to industry data items, some DWG members remain concerned over the tariff impacts of removing Standard Settlement Configurations (SSCs). Other members consider that this is not a Settlement issue and may be better resolved outside the BSC. However, any further SCR workgroup(s) taking a cross-code perspective on the detailed TOM design could consider the best solution, even if it does not become a TOM requirement.

Acknowledgments

We wish to extend our thanks and appreciation to all the DWG members for their efforts and expertise in the successful and timely delivery of the TOM and Transition Approach over the last two years. We would also like to thank members of the DAB for their valuable insights and inputs. Thanks is extended to all of those who contributed to the requirements work groups and the respondents to our consultations.

APPENDIX A: DWG TIMELINE

Design Working Group: Process Followed																						
2017			2018												2019							
O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A
Stage 1: Development of skeleton TOMs																						
Initial development																						
DWG01																						
	DWG02																					
		DWG03																				
			Agreement/evaluation																			
			DWG04																			
				DWG05																		
					DWG06																	
						Report	Stage 2: Development of preferred TOM and transition approach															
						DWG07																
							Consultation															
							Development of solution requirements by four workgroups															
								DWG08														
									DWG09													
										DWG10												
											TOM evaluation/selection											
											DWG11											
												DWG12										
													DWG13									
															DWG14							
																Report						
																	DWG15					
																		Consultation				
																		Transition development				
																	DWG16					
																				DWG17		
													PAB development of PAF recommendations									
																				DWG18		
																					Consultation	
																					DWG19	
																					DWG20	
																					Report	