










BSC Modification Proposal Form		At what stage is this document in the process?
<h1>P432</h1> <h2>Mod Title: 'Half Hourly Settlement for CT Advanced Metering Systems'</h2>		<div style="display: flex; flex-direction: column; gap: 5px;"> <div style="border: 1px solid green; background-color: #28a745; color: white; padding: 2px; display: flex; align-items: center; justify-content: center;">01 Modification</div> <div style="border: 1px solid #17aebc; padding: 2px; display: flex; align-items: center; justify-content: center;">02 Workgroup Report</div> <div style="border: 1px solid #ffc107; padding: 2px; display: flex; align-items: center; justify-content: center;">03 Draft Modification Report</div> <div style="border: 1px solid #dc3545; padding: 2px; display: flex; align-items: center; justify-content: center;">04 Final Modification Report</div> </div>
<p>Purpose of Modification:</p> <p>This Modification will amend the BSC requirements for Advanced Meters to align with the Electricity Supply Standard Licence Conditions and to require Half Hourly (HH) Settlement for all CT Meters by October 2023. It will deliver Recommendation 3 by the CCDG as set out in its Consultation on the Transition Approach For Market Wide Half Hourly Settlement (MHHS).</p>		
<p>Is this Modification likely to impact any of the European Electricity Balancing Guideline (EBGL) Article 18 Terms and Conditions held within the BSC?</p> <p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>		
	<p>The Proposer recommends that this Modification should:</p> <ul style="list-style-type: none"> • Be assessed by a Workgroup and submitted into the Assessment Procedure • not be a Self-Governance Modification Proposal <p>This Modification will be presented by the Proposer to the BSC Panel on 9 December 2021. The Panel will consider the Proposer's recommendation and determine how best to progress the Modification.</p>	
	<p>High Impact:</p> <ul style="list-style-type: none"> • Suppliers 	
	<p>Medium Impact:</p> <ul style="list-style-type: none"> • SVA Meter Operator Agents (MOAs) • Half Hourly Data Collectors (HHDCs) • Non-Half Hourly Data Collectors (NHHDCs) 	
	<p>Low Impact:</p> <ul style="list-style-type: none"> • Licensed Distribution System Operators (LDSOs) • Generators 	

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Timetable		Proposer: Npower Commercial Gas Limited
The Proposer recommends the following timetable:		Proposer's representative: Lee Stone
Workgroup meeting 1	W/C 17 January 2022	
Workgroup meeting 2	W/C 7 February 2022	
Assessment Procedure Consultation	28 February 2022 - 18 March 2022	 Lee.Stone@eonenergy.com
Workgroup meeting 3	W/C 28 March 2022	
Workgroup Report presented to Panel	14 April 2022	 07971474426
Report Phase Consultation	19 April 2022 - 03 May 2022	
Draft Modification Report presented to Panel	12 May 2022	
Final Modification Report submitted to Authority	18 May 2022	

1 Why Change?

What is the issue?

As a result of [P272](#)¹, [P300](#)² and [P322](#)³ the BSC introduced the definition of an Advanced Meter and required former Profile Class (PC) 5-8 Metering Systems to be settled on a HH basis. This definition is constrained to only one aspect of the Advanced Meter definition within the standard clauses of the Electricity Supply Standard Licence Conditions ([SLC](#)). As a result, although the SLC requires Advanced Meters to be fitted to all CT Meters by the end of 2021, the BSC definition of Advanced Meters does not require these to be settled on a HH basis.

This Modification seeks to align the BSC and SLC requirements on the basis that using actual HH data will always lead to more accurate settlement than using an NHH profile. Currently, there are several thousand sites where a meter capable of recording HH data has been fitted under an SLC other than SLC 12.18 but there is no automatic obligation under the BSC to use that data in Settlement.

The PC 5-8 requirement follows from the SLC 12.18 requirements but has the additional challenge that over time the knowledge of whether a Metering System was formerly NHH PC 5-8 is lost. This makes the requirement difficult to comply with (or enforce) following repeated change of Supplier events. There is no robust method of knowing which Metering Systems were formerly PC 5-8, making enforcement of the BSC obligations difficult and resource intensive. As result, former PC 5-8 Metering Systems could revert to NHH settlement with the associated detrimental impact on Settlement accuracy.

Obligations to facilitate early HH settlement in the Advanced segment

The Code Change and Development Group (CCDG) believes that a key enabler of an effective transition for the Advanced segment to the MHHS Target Operating Model (TOM) will be to align the BSC definition of an Advanced Meter with that in the Electricity Supply Licence and to set explicit HH Settlement obligations for CT Advanced Meters ahead of the migration to MHHS.

This will result in an estimated 50,000 CT Meters accounting for approximately 800 – 1,500 GWh⁴ per year [1-2% of the total SVA import volume] moving to HH Settlement via the existing Change of Measurement Class (CoMC) process, such that all CT Metering Systems will be settled HH before migration for the Advanced segment to MHHS starts in **October 2024**. In addition, any new CT connections beyond **October 2022** should be HH settled to ensure that subsequent CoMC activity is not required.

This approach will help spread out work which would otherwise have to be carried out alongside migration over a longer period, making it more manageable and reducing the risk of missed MHHS migration deadlines. This will maximise the time to resolve 'problem' sites where issues would otherwise delay migration. It will be significantly less risky to migrate Meters that are already settling HH where the Meter has working communications to MHHS, rather than try to switch from NHH at the point of migration.

¹ P272 'Mandatory Half Hourly Settlement for Profile Classes 5-8'

² P300 'Introduction of new Measurement Classes to support Half Hourly DCUSA Tariff Changes (DCP179)'

³ P322 'Revised Implementation Arrangements for Mandatory Half Hourly Settlement for Profile Classes 5-8'

⁴ Based on [Gross Supplier Market Share Data reports](#)

Desired outcomes

The CCDG has made the following recommendations in respect of Advanced Meters:

- For CT Advanced Meters settling NHH, CoMC process carried out from **March 2023** to **October 2023**;
- New CT connections beyond **October 2022** should be HH settled to ensure that subsequent CoMC activity is not required; and
- Where possible, whole current 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.

The Modification will place an obligation on Suppliers to settle all CT Metering Systems on a HH basis by **October 2023**. Monitoring of compliance by the Performance Assurance Board (PAB) and the drafting of this obligation should take account of the fact that the relevant SLC clauses have the condition 'where reasonably practical'.

Although this Modification will not mandate the HH Settlement of whole current CT Meters, the Workgroup is invited to consider what barriers currently exist that prevent Suppliers from moving these to settle HH.

2 Solution

Proposed Solution

The definition of the Advanced Meter in the BSC differs from that in the SLC. This Modification seeks to align the definitions to expand the existing requirements to settle PC 5-8 sites HH to include CT Metering Systems to ensure clarity for all stakeholders and customers.

The current definition of Advanced Meter in Annex X-1 of the BSC was constrained by the scope of P272 to refer only to SLC 12.18 as follows:

“Advanced Meter”: means Metering Equipment installed in accordance with the obligation set out in condition 12.18 of the Standard Conditions of each Supply Licence;

This made sense at the time of P272 because that Modification was focused on MSIDs in PC 5-8, but this prevented the future expansion of the HH Settlement obligation to include Advanced Meters installed under other SLCs where these Meters are capable of providing HH data into Settlement.

It is proposed to remove this limitation so that the BSC definition includes Advanced Meters installed as a result of any of the SLC obligations, notably 12.17 to 12.29, and condition 39.5 to 39.22. In practice extending the definition will include within scope an estimated additional 50,000 CT Metering Systems⁵. The exact wording of the BSC legal text can be subject to legal advice and Workgroup scrutiny.

As the existing SLC requirements require all CT Metering Systems to have Advanced Meters fitted, it follows that there is a similar rationale for these to be settled on an HH basis. Extending the BSC obligation to all CT Metering Systems would include all ‘over 100kW’ sites and any CT MSIDs in PC 5-8 remaining from P272 that are not yet settling HH. In addition, any new CT connections beyond October 2022 should be HH settled to ensure that subsequent CoMC activity is not required.

Consideration should be given to monitoring the compliance of Suppliers with these obligations by the PAB and whether this can be simplified by replacing previous references to PC 5-8 or 100 kW with a single reference to CT metering systems. With that in mind, this Modification may facilitate removal of redundant references to the ‘P272 go live date’ and associated text in Section S to ensure the BSC remains clear and fit for purpose. The Workgroup should also consider what reporting may be required to support the assurance of this obligation and any associated data cleanse activity.

For the avoidance of doubt, it is recommended not to commence the BSC CoMC process until March 2023 because of the impact on network ‘Use of System’ charging outlined under the Potential Impacts section of this Modification. The intention is to allow Suppliers an appropriate period of time to gather information to enable a smooth path for their CT metered customers ahead of the actual CoMC activity, such as obtaining Maximum Demand data from CT meters so that customers can be informed of their capacity requirements ahead of setting up connection agreements prior to becoming HH settled.

All CT Metering Systems to be settled HH by October 2023

The current BSC obligation requires HH Settlement of:

- all over 100kW Metering Systems; and
- formerly NHH PC 5-8 Metering Systems.

⁵ Based on LDSO provided data in 2018.

It is understood that the 100kW requirement is an arbitrary number included in the Electricity Act in 1989 to support the gradual opening of the electricity market to competition. As the whole market is now open to competition, the linkage between the 100kW threshold in the Act and the BSC should no longer be relevant, although it is still referred to in documents like the BSC Metering Codes of Practice (CoPs).

The over 100kW definition has always required some interpretation, including determinations by Ofgem. Currently a judgment is made whether a site is over/under 100kW determined in the BSC, triggered in accordance with [BSCP504](#) section 3.4.1.8 by the Supplier and NHHDC. A Supplier Charge (SP04) encourages compliance by reporting the number of qualifying NHH metering systems not settled HH (although [P429](#) 'Switching off Participant-Reported PARMS Serials' proposes to remove this).

Smart meters are designed to be installed on whole current Metering Systems and their roll-out is subject to a separate requirement in SLC 39.1. SLC 39.3 recognises CT Metering Systems as a valid exemption from this obligation and refers instead to SLC 12.27 which requires all CT sites, whether domestic or non-domestic, to have an Advanced Meter fitted by the end of 2021.

The SLC allows exceptions under condition 12.19 where a Supplier has taken "all reasonable steps". These conditions were introduced in 2009, allowing stakeholders over ten years notice to comply. Information from Distributors provided through the Distribution Charging Methodologies Development Group ([DCMDG](#)) indicates that about 50,000 CT Metering Systems are being settled NHH yet at the time of this Modification being raised should have an HH capable Advanced Meter already installed.

The Association of Meter Operators (AMO) has produced guidance, [Advanced Metering for CT Metering Systems](#) on the issues surrounding the application of CT metering.

Benefits

This Change is an enabling step that forms part of the move to MHHS. Ofgem's [MHHS Full Business Case](#) sets out the benefits of implementing MHHS. Ofgem estimates that MHHS will save consumers about £300m per year, with anticipated £4bn-£5bn consumer savings in total over the period to 2040.

P272, P300 and P322 were implemented to ensure that where an Advanced Meter was fitted as a result of the SLC for a PC 5-8 site it was then used to provide HH data for Settlement. It was recognised by stakeholders that the use of HH data results in more accurate and consequently more equitable Settlement than the NHH profiling arrangements.

This Modification also supports the reforms to Distribution Use of System (DUoS) charging, as DUoS charging arrangements differ between Whole Current and CT Metering Systems. Ensuring that all CT meters are settled on an HH basis will enable more accurate DUoS charging for those Metering Systems.

There should also be no environmental impacts resulting from this Proposed Modification, although the Ofgem Significant Code Review (SCR) considering [Settlement Reform](#) identifies that use of accurate HH Settlement data ensures the correct cost allocation which in turn encourages energy use to be optimised.

3 Relevant Objectives

Impact of the Modification on the Relevant Objectives:	
Relevant Objective	Identified impact
a) The efficient discharge by the Transmission Company of the obligations imposed upon it by the Transmission Licence	Neutral
(b) The efficient, economic and co-ordinated operation of the National Electricity Transmission System	Neutral
(c) Promoting effective competition in the generation and supply of electricity and (so far as consistent therewith) promoting such competition in the sale and purchase of electricity	Positive
(d) Promoting efficiency in the implementation of the balancing and settlement arrangements	Positive
(e) Compliance with the Electricity Regulation and any relevant legally binding decision of the European Commission and/or the Agency [for the Co-operation of Energy Regulators]	Neutral
(f) Implementing and administrating the arrangements for the operation of contracts for difference and arrangements that facilitate the operation of a capacity market pursuant to EMR legislation	Neutral
(g) Compliance with the Transmission Losses Principle	Neutral

(c) Larger consuming electricity sites have the largest impact on Settlement accuracy. CT Metering Systems have the capability to consume more energy than whole current Metering Systems, using the actual data available in the already installed Advanced Meter is a minimal additional cost. It enables a smooth transition to the MHHS TOM for advanced meters (subject to SCR progression). The Modification will promote effective competition in the generation and supply of electricity because the data will be more accurate and granular which will enable innovation and competition.

(d) Identification of “100kW metering systems” is not robust and is a legacy from the Electricity Act. Correct identification of previously NHH PC5-8 Metering Systems is difficult and becomes impossible after successive Change of Supplier (CoS) events. Identification of CT vs. whole current Metering Systems is a clear physical differentiator visible at the site. Delineation by CT vs. whole current Metering Systems could allow future rationalisation of Measurement Classes and/or consolidation of the Metering CoPs. This Modification will therefore simplify and clarify the BSC arrangements and consequently better facilitates efficiency in the implementation and operation of the BSC.

4 Potential Impacts

Impacts on Core Industry Documents

Impacted Core Industry Documents			
<input type="checkbox"/> Ancillary Services Document	<input type="checkbox"/> Connection and Use of System Code	<input type="checkbox"/> Data Transfer Services Agreement	<input type="checkbox"/> Use of Interconnector Agreement
<input type="checkbox"/> REC	<input type="checkbox"/> Distribution Connection and Use of System Agreement	<input type="checkbox"/> System Operator Transmission Owner Code	<input type="checkbox"/> Supplemental Agreements
<input type="checkbox"/> Distribution Code	<input type="checkbox"/> Grid Code	<input type="checkbox"/> Transmission License	<input type="checkbox"/> Other (please specify)

It is not anticipated there is any impact on the other Codes.

The CCDG considered whether there may need to be a consequential change to the Connection and Use of System Code (CUSC) to avoid unwanted double charging of TNUoS for Metering Systems that move from NHH to HH during a charging year. It concluded that because the actual CoMC will become effective on or after March 2023, by that point the critical elements of the Targeted Charging Review (TCR) will be in place and there will not be any adverse impacts on TNUoS and a CUSC Modification is not needed.

Impacts on DUoS charging and cost recovery have been considered as the c.50,000 CT metering systems will move into site specific DUoS charging upon a CoMC into Measurement Class “E”. As the excess capacity charging regime will be in effect in the DCUSA, customers need to set an agreed supply capacity via a site-specific connection agreement with their LDSO in advance of moving to HH Settlement, otherwise they will become liable for the penal excess capacity charge. This Modification aims to mitigate this by presenting Suppliers with the opportunity to use the winter 2022-23 season to obtain the customer maximum demand data so that customers are informed of the capacity levels they need to agree with their host LDSO, as such a DCUSA Modification is also not necessary.

A separate Retail Energy Code (REC) change [R0015 'Remote communication obligations for Advanced Meters'](#) has been raised in support of this Modification to require remote communications to be fitted and working for all CT Metering Systems prior to CoMC activities starting. However, this Modification in itself will not directly impact this Modification and both changes can be progressed independently.

Impacts on BSC Systems

Impacted Systems				
<input type="checkbox"/> CRA	<input type="checkbox"/> CDCA	<input type="checkbox"/> PARMS	<input type="checkbox"/> SAA	<input type="checkbox"/> BMRS
<input type="checkbox"/> EAC/AA	<input type="checkbox"/> FAA	<input type="checkbox"/> TAAMT	<input type="checkbox"/> NHHDA	<input type="checkbox"/> SVAA
<input type="checkbox"/> ECVAA	<input type="checkbox"/> ECVAA Web Service	<input type="checkbox"/> ELEXON Portal	<input type="checkbox"/> Other (Please specify)	

None expected – all existing systems expected to be able to accommodate this small change in activity.

Impacts on BSC Parties

Impacted Parties			
<input checked="" type="checkbox"/> Supplier	<input type="checkbox"/> Interconnector User	<input type="checkbox"/> Non Physical Trader	<input checked="" type="checkbox"/> Generator
<input checked="" type="checkbox"/> Licensed Distribution System Operator	<input checked="" type="checkbox"/> National Electricity Transmission System Operator	<input type="checkbox"/> Virtual Lead Party	<input checked="" type="checkbox"/> Other (Please specify) SVA Meter Operators & Data Collectors

Suppliers have an obligation to comply with the relevant SLC requirements for the provision of Advanced Meters including remote communications for CT Metered customers under SLC 12.27. This Modification does not seek to duplicate the SLC requirement to ensure that an Advanced Meter is installed, only to ensure that, where that has occurred under the SLC, the Metering System is settled using HH data.

Suppliers may need to modify their billing arrangements for CT metered customers currently settled NHH. This in turn may alter the charges that Suppliers seek to recover from customers. However, the proposed implementation date should mitigate the majority of unwanted impacts on network charging. For that reason, the impact on LDSOs and the NETSO has been highlighted but is expected to be minimal.

The SLC already requires the installation and maintenance of an Advanced Meters by the end of 2021 so any additional cost to Suppliers to enable HH Settlement from those meters is expected to be limited to the cost of carrying out the CoMC process as set out in the BSCPs and complying with HH standards.

Impacts on consumers and the environment

Impact of the Modification on consumer benefit areas:	
Consumer benefit area	Identified impact
Improved safety and reliability	Neutral
Lower bills than would otherwise be the case	Neutral
Reduced environmental damage	Neutral
Improved quality of service The use of HH data results in more accurate Settlement than the NHH profiling arrangements.	Positive
Benefits for society as a whole	Neutral

Legal Text Changes

The exact wording is subject to legal advice and the views of the Workgroup. The expected changes will include:

- [BSCP516 'Allocation of Profile Classes and SSC's for Non Half Hourly SVA Metering Systems Registered in SMRS'](#).
- [Section S 'Supplier Volume Allocation'](#)- The opportunity could be used to remove unnecessary text in 2.6.1A & 2.6.1B with the associated references to the P272 Implementation Date, which has now passed. Or the approach used for P272 could be used to implement this change.
- [Section X, Annex X-1 'General Glossary'](#) - The definition of Advanced Meter will require amendment to include a distinction between whole current and CT Metering Equipment. For this purpose, utilising the same definitions used in the SLC would seem most appropriate.

5 Governance

Self-Governance

<input checked="" type="checkbox"/> Not Self-Governance – A Modification that, if implemented materially impacts:	
<input type="checkbox"/> the Code’s governance or modification procedures	<input type="checkbox"/> sustainable development, safety or security of supply, or management of market or network emergencies
<input checked="" type="checkbox"/> competition	<input checked="" type="checkbox"/> existing or future electricity consumers
<input type="checkbox"/> the operation of national electricity Transmission System	<input type="checkbox"/> likely to discriminate between different classes of Parties
<input type="checkbox"/> Self-Governance – A Modification that, if implemented:	
Does not materially impact on any of the Self-Governance criteria provided above	

This Modification materially affects existing or future electricity consumers because it will require CT Advanced Meters to be settled HH earlier than would otherwise be the case, which may result in different Supplier billing and charging arrangements for the end consumer.

Progression route

<input checked="" type="checkbox"/> Submit to assessment by a Workgroup –:A Modification Proposal which:	
does not meet any criteria to progress via any other route.	
<input type="checkbox"/> Direct to Report Phase – A Modification Proposal whose solution is typically:	
<input type="checkbox"/> of a minor or inconsequential nature	<input type="checkbox"/> deemed self-evident
<input type="checkbox"/> Fast Track Self-Governance – A Modification Proposal which meets the Self-Governance Criteria and:	
is required to correct an error in the Code as a result of a factual change including but not limited to:	
<input type="checkbox"/> updating names or addresses listed in the Code	<input type="checkbox"/> correcting minor typographical errors
<input type="checkbox"/> correcting formatting and consistency errors, such as paragraph numbering	<input type="checkbox"/> updating out of date references to other documents or paragraphs
<input type="checkbox"/> Urgent – A Modification Proposal which is linked to an imminent issue or current issue that if not urgently addressed may cause:	
<input type="checkbox"/> a significant commercial impact on Parties, Consumers or stakeholder(s)	<input type="checkbox"/> a Party to be in breach of any relevant legal requirements.
<input type="checkbox"/> a significant impact on the safety and security of the electricity and/or gas systems	

Given the significant nature of this Modification proposal, it is appropriate for it to be assessed by a Workgroup. While the solution and design have been thoroughly considered and thought through by the CCDG, there are a small number of matters that would benefit from a limited Workgroup assessment.

Does this modification impact a Significant Code Review (SCR) or other significant industry change projects, if so, how?

The Ofgem Significant Code Review (SCR) considering [Settlement Reform](#), also known as Market Wide Half Hourly Settlement (MHHS) was launched in July 2017. Under the SCR, the CCDG was convened to develop the MHHS Target Operating Model recommended by the Design Working Group (DWG).

The CCDG has [recommended](#) that a number of enabling changes are progressed before the full MHHS Design is baselined in 2022. The CCDG believed these changes would need to be raised before the end of 2021 to allow the required lead time to implement and comply.

They are to give effect to the CCDG's recommendations 1, 3 and 8.

Recommendation 1 will require changes to the BSC and REC to introduce new SMRS registration data items and supporting processes to be implemented between November 2022 and February 2023.

A BSC Change Proposal is expected to be raised in Q1 2022 to progress Recommendation 1.

Recommendation 3 will require the introduction as soon as possible of an obligation on Suppliers to ensure that all MSIDS with NHH settled CT Advanced Meters are moved to settle HH via the CoMC process by October 2023.

The CCDG initially considered whether there may need to be a consequential change under the REC and CUSC, however this is no longer the case because the Modification doesn't have a direct impact on the REC, but a complimentary REC Change has been raised ([R0015 "Remote communication obligations for Advanced Meters"](#)). Also due to the timing of the CoMC activity a CUSC Change is no longer required.

This Modification is in support of Recommendation 3.

Recommendation 8 will require the introduction as soon as possible of an obligation on Suppliers to ensure that all Unmetered MSIDs are settled HH by October 2024. This will require changes to the BSC. The CCDG initially considered whether there may need to be a consequential change under the CUSC, however this is no longer the case due to the timing of the CoMC activity.

Following the raising of this Modification Proposal, a separate Modification is expected to be raised to progress Recommendation 8. We plan to progress the two Modifications together for efficiency.

The CCDG sought direction from Ofgem on how to progress their recommendations. [In response](#), Ofgem requested that these enabling changes are progressed through the existing code governance framework, with oversight by the MHHS Programme. The Programme and Ofgem fully endorse the progression of this Modification and the early migration of CT Meters to HH settlement.

Does this Modification impact any of the EBGL Article 18 Terms and Conditions held within the BSC?

The proposed Modification is not expected to impact or extend any of the EBGL Article 18 Terms and Conditions held within the BSC.

Implementation approach

The CCDG has recommended this change to be implemented as soon as possible to ensure that all MSIDs with NHH settled CT Advanced Meters are moved to settle HH via the CoMC process by October 2023.

The Proposer agrees and we therefore recommend this Modification is **implemented via a special release, five Working Days after Authority approval**. This will provide the maximum lead time to meet the migration timescales that will be set by this Modification.