Send Back Consultation

P432 'Half Hourly Settlement for CT Advanced Metering Systems'

This Modification will amend the BSC requirements for CT Advanced Meters to align with the Electricity Supply Standard Licence Conditions and to require Half Hourly (HH) Settlement for all CT Meters by Market-wide Half Hourly Settlement (MHHS) Milestone M14. It will also require all new connections for CT Advanced Meters to settle HH from 29 June 2023, the standard June 2023 BSC Release date. It will deliver Recommendation 3 by the Code Change and Development Group (CCDG) as set out in its Consultation on the Transition Approach For Market Wide Half Hourly Settlement (MHHS).

The P432 Workgroup initially recommends **approval** of P432

The P432 Workgroup **does not** believe P432 impacts the European Electricity Balancing Guideline (EBGL) Article 18 terms and conditions held within the BSC

This Modification is expected to impact:

- Suppliers
- SVA Meter Operator Agents (MOAs)
- Half Hourly Data Collectors (HHDCs)
- Non-Half Hourly Data Collectors (NHHDCs)
- Non-Half Hourly Data Aggregators (NHHDAs)
- Half Hourly Data Aggregators (HHDAs)
- Licensed Distribution System Operators (LDSOs)
- Generators

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Phase

Proposal

Consultation

Draft Report

Final Report

Implementation

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About This Document

Not sure where to start? We suggest reading the following sections:

- Have 5 mins? Read section 1
- Have 15 mins? Read sections 1, 11
- Have 30 mins? Read all except section 6
- Have longer? Read all sections and the annexes and attachments
- *You can find the definitions of the terms and acronyms used in this document in the BSC Glossary*

This is the P432 Send Back Consultation, which Elexon is issuing for industry consultation on behalf of the P432 Workgroup. The purpose of this consultation is to invite BSC Parties and other interested parties to provide their views on the merits of P432, which has been amended to address Ofgem's P432 Send Back direction. The P432 Workgroup will then discuss the consultation responses, before making a recommendation to the BSC Panel at its meeting on 10 November 2022 on whether or not to approve P432. The Panel will then make a recommendation to the Authority on whether P432 should be approved or not.

There are seven parts to this document:

- This is the main document. It provides details of the solution, impacts, costs, benefits/drawbacks and proposed implementation approach. It also summarises the Workgroup's key views on the areas set by the Panel in its Terms of Reference, and contains details of the Workgroup's membership and full Terms of Reference.
- Attachment A contains the redlined changes to the BSC and its subsidiary documents for P432.

Contact
Aylin Ocak
020 7380 4064
BSC.change@elexon.co.uk
Aylin.ocak@elexon.co.uk

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- Attachment B contains the cost analysis exercises conducted by a Workgroup Member (this includes the analysis received and considered by the Workgroup as part of its Send Back considerations) and the Proposer's views on the costs. Please note that there are two versions of this document: public and confidential. We have included the public version for this report.

- Attachment C contains the full responses received to the Workgroup's Assessment Procedure Consultation. Please note that there are two versions of this document: public and confidential. We have included the public version for this report.

- Attachment D contains the full responses received to the Panel's Report Phase Consultation. Please note that there are two versions of this document: public and confidential. We have included the public version for this report.

- Attachment E contains the Send Back Direction issued by Ofgem and the Send Back Process detailing how this should be addressed

- Attachment F contains the specific questions on which the Workgroup seeks your views. Please use this form to provide your response to these questions, and to record any further views or comments you wish the Workgroup to consider.

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1 Summary

What's changed since the first Modification Report?

The first P432 Final Modification Report was sent to Ofgem for decision on 20 July 2022. Ofgem issued a Send Back Direction for P432 on 26 August 2022. Ofgem requested Elexon to take additional steps to enable Ofgem to make a fully informed decision on the proposal. Ofgem have requested P432 is re-submitted for Ofgem decision by 30 November 2022.

Ofgem requested a revised implementation timeframe for P432, which takes appropriate account of the difficulties faced by suppliers in the current market context (which have changed since P432's conception) but ensures that CT migration is completed sufficiently ahead of the end of MHHS migration to retain the benefit created by de-risking the wider MHHS Programme. Ofgem noted that also stated that it agrees with the CCDG recommendation to migrate CT Advanced Meters ahead of MHHS migration.

This work should also take account of the desirability of a DCUSA modification being raised as soon as possible to resolve issues surrounding excess capacity charging. The purpose of such a modification would be to ensure that the end consumer has the opportunity to discuss their appropriate capacity charging before/when they are migrated to HH. They consider that this DCUSA modification should come into force before the start of migration under P432.The Workgroup reconvened on 29 September 2022 to agree on a new implementation timeframe for P432. The legal text has been updated accordingly and we are re-issuing P432 for consultation to seek industry views and impacts on the revised solution.

The Sections of this Send Back Consultation that have changed since P432 was first submitted to Ofgem in July 2022 are Section 3 'Solution', Section 4 'Impacts & Costs', Section 5 'Implementation' and Section 11 'Send Back Process'.

Why Change?

Market-wide Half-Hourly Settlement (MHHS) requires that all Metering System Identifiers (MSIDs) are settled on a Half Hourly (HH) basis and moved to the MHHS Target Operating Model (TOM). The Code Change and Development Group (CCDG)[1] has recommended moving Current Transformer (CT) Advanced Meters to settle HH by October 2023 in its consultation on the Transition Approach for MHHS.[2] This recommendation was endorsed by Ofgem.[3] If this recommendation is not implemented, the risk that there will be insufficient time for Customers, Suppliers and their Agents to address issues that may arise will be increased especially against the backdrop of the larger MHHS migration activities that will be needed for smart Meters.

This Modification seeks to address the following issues related to CT Advanced Meters:

- Inconsistent definitions of Advanced meter in the BSC versus Electricity Supply Standard Licence Conditions (SLC)[4]; and

[1] https://www.elexon.co.uk/group/code-change-and-development-group-ccdg/
[2] CCDG Consultation on Transition Approach For MHHS - Elexon BSC
[3] https://www.ofgem.gov.uk/sites/default/files/2021-10/Ofgem%20response%20to%20CCDG%20recommendations%20on%20the%20MHHS%20Transition%20Approach.pdf
[4] https://www.ofgem.gov.uk/industry-licensing/licences-and-licence-conditions

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- The risk of not meeting MHHS Transition Timetable.

Solution

This Modification seeks to align the BSC definition of an Advanced Meter with that in the SLC and to set explicit HH Settlement obligations for CT Advanced Meters ahead of the migration to the MHHS TOM. Existing CT Advanced Meters settling NHH are required to move using the Change of Measurement Class (CoMC) process to settle HH by MHHS Milestone M14 (in the MHHS Transition Timetable[5], currently February 2025 based on the latest MHHS re-plan documents) and all new connections for CT Advanced Meters will be required to settle HH from 29 June 2023. Any opt-out/in rights for customers under the SLC are reflected in the P432 solution.

How has the solution changed since we last consulted?

The dates by which CT Advanced Meters must settle HH have been amended. These are defined in the P432 legal text. The legal text has been updated to reflect these changes, alongside a new Implementation Date of 29 June 2023. See section 11 for the Workgroup's rationale for these changes:

Compliance Deadlines to settle HH		
New or existing connections	Original compliance deadline	New compliance deadline
New CT Advanced Meter connections	1 October 2022	29 June 2023
Existing CT Advanced Meter connections	October 2024	M14 (currently Feb 25)

Impacts & Costs

Costs Estimates			
Organisation	Implementation (£k)	On-going (£k)	Impacts
Elexon	<1	0.25 to 0.5 FTE until CoMC activity is complete, ~2k to 4k per month	Costs associated with drafting and implementing Sections X-1, L, S, Z and BSCP516. There may be on-going costs for Elexon for monitoring the CoMC activities as part of its existing operations.
NGESO	0	0	No impacts identified.

[5] https://www.ofgem.gov.uk/publications/electricity-retail-market-wide-half-hourly-settlement-decision-and-full-business-case

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Costs Estimates			
Organisation	Implementation (£k)	On-going (£k)	Impacts
Suppliers, SVA MOAs, NHHDCs, HHDCs, Generators, Distributors, NHHDAs, HHDAs	Low to medium	Low	The majority of consultation responses indicated that costs for industry are expected to be low (<£100k) to medium (<£100-£1000k). It is understood that the bulk of the implementation costs are expected to be for the CoMC activity and extra resources required for customer engagement. Ongoing costs are expected to be low.
Total	Low to medium	Low	

We seek validation of these costs and impacts, given the material change to the compliance deadlines specified in the P432 solution.

Benefits

The main benefit of P432 is to de-risk the migration to the MHHS TOM and improve Settlement accuracy. CT Advanced Meters present a disproportionate risk in migration and that is why they are being drawn out earlier. Other Meters do not present the same complexities.

Implementation

This Modification is proposed to be implemented on 29 June 2023, as part of the standard June 2023 BSC Release. This has changed from five Working Days after the Authority's decision.

Recommendation

The Workgroup recommends by majority that P432 should be approved as they believe it better facilitates Applicable BSC Objectives (c) and (d). The Workgroup do not believe the impacts on EBGL or Self-Governance have changed because of the revised solution. The Workgroup believe P432 does not impact the EBGL provisions in the BSC and that P432 should be sent to Ofgem for decision (not Self-Governance).

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2 Why Change?

What is the issue?

As a result of P272 'Mandatory Half Hourly Settlement for Profile Classes 5-8'[6], P300 'Introduction of new Measurement Classes to support Half Hourly DCUSA Tariff Changes (DCP179)'[7] and P322 'Revised Implementation Arrangements for Mandatory Half Hourly Settlement for Profile Classes 5-8'[8] the BSC introduced the definition of an Advanced Meter and required former PC 5-8 Metering Systems to be settled on a HH basis. At the time, this definition was deliberately constrained to only condition 12.18 of the SLC. The SLC later required Advanced Meters to be fitted to all CT connections by the end of 2021. This constraint is no longer necessary or appropriate, rather it is inconsistent.

This Modification seeks to align the BSC and SLC requirements for consistency across the two documents. Currently, there are 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.

There is therefore an opportunity to maximise the benefits of these HH capable Meters by requiring them to be settled HH. Moreover, the primary benefit of this Modification is to mitigate the risk of not meeting the MHHS Transition Timetable[9] by moving NHH CT Advanced Meters to HH via CoMC earlier, as these have the potential to have a disproportionate number of issues.

CCDG recommendation to obligate early HH settlement in the Advanced segment

The CCDG believes that a key enabler of an effective migration for Advanced Metering Systems 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 GWh[10] per year [1-2% of the total SVA import volume] moving to HH Settlement via the existing CoMC process. The CCDG recommendation, which was originally adopted by the P432 Workgroup was that existing CT Advanced Meters should be settled HH by October 2024. In addition, any new CT connections from 1 October 2023 should be HH settled to ensure that subsequent CoMC activity is not required. The Workgroup has now amended these dates to address the Ofgem Send Back, whilst still meeting the intent of the CCDG recommendation, which Ofgem supports.

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

What is a Profile Class?

A Profile Class is a classification of profiles which represents an exclusive category of customers whose Consumption can be reasonably approximated to a common profile for Settlement purposes. There are eight generic Profile Classes, chosen as they represent large populations of similar customers. Profile Classes 1 and 2 are for domestic premises and Profile Classes 3 to 8 are for non-domestic premises.

SLC 12.18

If paragraph 12.17 applies, the Electricity Meter installed at the relevant premises must be an Advanced Meter.

Paragraph 12.17: This paragraph has effect on and after 6 April 2009 and applies where the licensee installs or arranges for the installation of an Electricity Meter at Non-Domestic Premises where the metering point falls within profile class 5, 6, 7 or 8 as defined in the Balancing and Settlement Code (for this condition only, "relevant premises").

[6] https://www.elexon.co.uk/mod-proposal/p272-mandatory-half-hourly-settlement-for-profile-classes-5-8/
[7] https://www.elexon.co.uk/mod-proposal/p300/
[8] https://www.elexon.co.uk/mod-proposal/p322/
[9] https://www.ofgem.gov.uk/publications/electricity-retail-market-wide-half-hourly-settlement-decision-and-full-business-case
[10] Based on Gross Supplier Market Share Data reports.

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migration. Further, CT Advanced sites are also the larger consuming sites, so early HH Settlement additionally will provide benefits to Settlement accuracy.

MHHS Transition Timetable

Ofgem's decision is that the transition to MHHS should take place over 4 years and 6 months, with the transition beginning on the publication of its Full Business Case in April 2021 and ending in October 2025.

However, the MHHS Programme are currently consulting on a revised MHHS Transition Timetable.

Background

CCDG Recommendations

The Ofgem Significant Code Review (SCR) considering Settlement Reform[11], also known as MHHS was launched in July 2017. Under the SCR, the CCDG was convened to develop the MHHS TOM 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, 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 Retail Energy Code (REC) to introduce new SMRS registration data items and supporting processes to be implemented between November 2022 and February 2023.

  BSC Change Proposals CP1558[12]/CP1568[13]and REC Change Proposal R0032[14]/R0066[15] were raised in February 2022/September 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 recommended that where possible, WC Advanced Meters settling NHH are moved to settle HH via CoMC by 2024. However, they noted that this should not be mandated.

  The CCDG initially considered whether there may need to be a consequential change under the REC and Connection and Use of System Code (CUSC), however this is no longer the case because the Modification does not have a direct impact on the REC, but a complimentary REC Change has been raised (R0015 ''Remote communication obligations for Advanced Meters'')[16]. 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 to prevent NHH UMS MSIDs being double charged during the year in which they are

[11] https://www.ofgem.gov.uk/energy-policy-and-regulation/policy-and-regulatory-programmes/electricity-settlement-reform
[12] https://www.elexon.co.uk/change-proposal/cp1558/
[13] https://www.elexon.co.uk/change-proposal/cp1568/
[14] https://recportal.co.uk/group/guest/-/new-registration-data-items-and-processes-to-support-the-transition-to-market-wide-half-hourly-settlement-mhhs-
[15] https://recportal.co.uk/group/guest/-/inclusion-of-new-dno-mastered-smrs-data-items-in-the-ees.
[16] https://recmanagerb2c.b2clogin.com/recmanagerb2c.onmicrosoft.com/B2C_1A_signup_signin_saml/samlp/sso/login

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migrated, however this is no longer the case due to the timing of the CoMC activity.

P434[17] was raised on 3 February 2022 to progress Recommendation 8.

The CCDG sought direction from Ofgem on how to progress their recommendations. In response[3], 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 move of CT Advanced Meters to HH via CoMC.

NHH CT Meters

The SLC allows exceptions under condition 12.29 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)[18] 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. It is likely that the pandemic has delayed the installation of Advanced Meters for some CT Metering.

The Association of Meter Operators (AMO) has produced guidance, Advanced Metering for CT Metering Systems[19], on the issues surrounding the application of CT Metering.

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

P272 mandated Half Hourly Settlement for all SVA Metering Systems within PC 5-8, in order to enable a Supplier's volume allocation to accurately reflect their customers' consumption and avoid the smearing effects of profiling NHH meter data. P272 was implemented on 1 April 2017.

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

P300 introduced new Measurement Classes for aggregated Half Hourly-settled customers (for current transformer and Whole Current (WC) metered domestic; and WC non-domestic markets). P300 was implemented on 5 November 2015.

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

P322 proposed new arrangements to migrate sites, classed as PC 5-8 with Advanced Meters installed, to HH Settlement under the P272 obligations. P322 had the following features:

- Required start and end dates to facilitate a phased approach to implementation;

[17] https://www.elexon.co.uk/mod-proposal/p434/
[18] https://www.dcusa.co.uk/group/dcmdg/
[19] https://meteroperators.org.uk/stakeholder-information/technical-information/

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- Performance Monitoring, most likely through the existing Performance Assurance Framework; and
- An implementation approach, which considers approved Modification P272 and possible amendment to the P272 Implementation Date by the Authority.

P322 was implemented on 3 August 2015.

MHHS Target Operating Model (TOM)

The Elexon-led Design Working Group (DWG)[20] has designed the TOM for MHHS as well as the approach for transitioning from the current Settlement arrangements to the TOM. The TOM is a key output of Ofgem's SCR on Electricity Settlement Reform.

The MHHS TOM is a set of Services required to deliver Settlement Period (SP) level data (currently a Half Hour period) 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 SP for each Settlement Day. 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).

The DWG's TOM was presented in full detail in its preferred TOM report for Stage 2 of the SCR.[21]

CCDG

The CCDG is a working group that developed detailed design areas of the DWG's TOM, following the initial work done by the DWG. The group also further developed the transition approach, also accounting for run-off of the existing NHH arrangements. CCDG was initially responsible for the code changes (including subsidiary documents), however this is now the responsibility of the MHHS Programme's Cross Code Advisory Group.[22]

Advanced Meters, Current Transformer Meters and Whole Current Meters

An Advanced Meter is defined in the SLC as an electricity Meter, either on its own or with an ancillary device, and in compliance with the requirements of any relevant Industry Code:

- provides measured electricity consumption data for multiple time periods, and is able to provide such data for at least half-hourly time periods; and
- is able to provide the licensee with remote access to such data.

A CT Meter is an electricity Meter which uses a current transformer as part of the mechanism for measuring the electric current. A WC Meter is an electricity Meter where the electricity supply passes through the Meter itself.

[20] https://www.elexon.co.uk/group/design-working-group/
[21] https://www.ofgem.gov.uk/publications/design-working-group-preferred-tom-report
[22] https://www.mhhsprogramme.co.uk/governance/

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Desired outcomes

P432 seeks to:

- For CT Advanced Meters settling NHH, CoMC process carried out before the MHHS TOM migration; and
- New CT Advanced Meters should be HH settled to ensure that subsequent CoMC activity is not required as soon as is practicable.

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Proposed solution

The existing definition of an 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 all CT Advanced Metering Systems.

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 of an Advanced Meter is in accordance of SLC 12.19. In practice, changing the definition will include within scope an estimated additional 50,000 CT Metering Systems[23].

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 a HH basis.

In addition, any new CT connections from 29 June 2023 should be HH settled to ensure that subsequent CoMC activity is not required and HH customers will be prevented to CoMC back to NHH (unless they have data access opt-out rights under the SLC).

This Modification will also facilitate the removal of redundant references to the 'P272 go live date' as well as P272 monitoring, reporting and Supplier Migration Plan requirements as these references are obsolete.

All CT Metering Systems to be settled HH

The current BSC obligation requires HH Settlement of:

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

Ofgem has decided to move all SVA Metering Systems to the MHHS TOM by 2025 (subject to any MHHS re-plan approvals). This requires two high level steps:

1. CoMC activity to get the Advanced Metering Systems to settle HH; and
2. MHHS migration activity to move the Metering Systems to the MHHS TOM.

P432 will bring forward the first step, requiring all CT Advanced Metering Systems to be settled HH by MHHS Milestone M14 (currently February 2025). In addition to CT Metering Systems, the CCDG's transition consultation also encouraged Suppliers to move existing whole current Advanced meters to HH via CoMC prior to migration. This will simplify the

SLC 12.19

For the purposes of this condition, an advanced meter is an Electricity Meter that, either on its own or with an ancillary device, and in compliance with the requirements of any relevant Industry Code:

(a) provides measured electricity consumption data for multiple time periods, and is able to provide such data for at least half-hourly time periods; and

(b) is able to provide the licensee with remote access to such data.

[23] Based on LDSO provided data in 2018.

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migration process as the required technical activities such as meter reconfiguration could be done as part of the CoMC process rather than done during the migration period.

Supplier Charges

Supplier Charges were switched off in March 2020 to alleviate the pressures faced by Suppliers during the Pandemic. They were reinstated in September 2022, so the potential impact of P432 on NHH performance was considered as part of conversations regarding the switch on. However, there is no proposal to change the NHH performance targets as part of P432. The assurance team will consider the performance targets as part of the wider piece of MHHS migrations, working closely with the PAB and the MHHS Programme.

Assurance – monitoring, reporting and enforcement

No new BSC obligations are proposed for assurance. Elexon will monitor the CoMC activity using new data, which will be made available by CP1558/CP1568 and R0032/R0066 (which are due to be implemented in June 2023). Once the P432 compliance deadline passes, Elexon and the PAB may take any necessary steps under the existing Performance Assurance Framework (PAF) processes, such as Error and Failure Resolution, for any non-compliance or risk to Settlement.

50,000 NHH CT Advanced Meters

There is a challenge of accurately identifying the number of NHH CT Advanced Meters in the market as it is difficult to determine CT Meters from existing industry data flows. The 50,000 figure was obtained by the AMO from Distributors in 2018. The same request was also made back in 2016 and the number of Meters had not changed significantly, so it is unlikely that the figure has changed considerably since 2018.

The outcome the MHHS Programme is looking for with P432 is to minimise the number of CT Advanced Meters not already Settling HH by the time of migration to the MHHS TOM. If the number of NHH CT Advanced Meters are less than the reported 50,000 by Distributors, this would not change the desired outcome. CT Advanced Meters present a disproportionate risk in migration and that is why they are being drawn out earlier. Other Meters do not present the same complexities.

Non-domestic and microbusiness customers

Currently under the SLC47 requirements domestic consumers' HH consumption data can only be accessed for Settlement if they have given opt-in consent, and Suppliers can only access HH data from microbusinesses for Settlement if they have not opted-out. However, Ofgem have recently published their decision to modify SLC47[24] to introduce a new framework for sharing customers' consumption data under MHHS.

The data sharing framework will distinguish between 'old system' and 'new system' customers. Old system customers are those who had their smart or advanced Meters installed before the new MHHS data sharing framework comes into force and have not decided to change Supplier or contract since then. New system customers will be those

[24] https://www.ofgem.gov.uk/publications/mhhs-decision-statutory-consultation-proposals-modify-standard-licence-condition-47

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who have their smart or advanced meters installed or decided to change supplier or contract (excluding deemed contracts) after the new MHHS data sharing framework comes into effect on 3 November 2022.

Under the new framework, the default position will be that old system domestic customers continue to provide daily data but can opt in to provide HH data. Old system microbusiness customers will continue by default to share HH data. Both domestic and microbusiness customers will be able to opt out to monthly data sharing. Under the new framework, new system domestic and microbusiness consumers will, by default, provide HH consumption data. Domestic consumers may opt out to daily data processing.

The P432 solution will respect the obligations in the SLC.

Benefits

This change is an enabling step that forms part of the move to MHHS. The Ofgem full business case[25] set out the benefits of implementing MHHS. Ofgem estimates 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.

The Ofgem 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.

P432 will de-risk the migration to MHHS. CT Advanced Meters present a disproportionate risk in migration, so the early CoMC of these Meters will provide more time for Customers, Suppliers and their Agents to address any issues that may arise during the migration period. This Modification will therefore result in more accurate and equitable Settlement, whilst reducing the MHHS delivery risks for relevant MHHS Participants.

Assessment Procedure Consultation Responses – given against original solution

Do you agree that P432 will decrease the risks associated with transition to the MHHS TOM and to what extent will it decrease the risks?			
Yes	**No**	**Neutral/No Comment**	**Other**
4	4	0	0

The majority (mostly Suppliers) of respondents disagreed that P432 will decrease the risks associated with the migration to the MHHS TOM. One respondent stated that they have yet to see the effort required to move from HH Settled into "Advanced" segment of MHHS, so it is difficult to assess the effectiveness of moving any market sectors to HH

[25] https://www.ofgem.gov.uk/publications/electricity-retail-market-wide-half-hourly-settlement-decision-and-full-business-case

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prior to the migration to the MHHS TOM. Another respondent stated that they did not think the benefits of P432 outweighed the risks.

Respondents that did believe P432 will de-risk the migration (Supplier Agents, plus one Supplier), highlighted that the early moving of NHH CT Meters to HH via CoMC will allow more time to resolve any issues that may arise during the migration to MHHS.

The MHHS Programme clarified that if P432 is not approved then Suppliers would need to resolve the technical and operation issues during the 12 month migration window. This will increase the risk of Suppliers not completing the migration of these Meters within the 12 month window which will put them in breach of their licence obligation. It would also delay the benefit of reducing the settlement timetable from 14 months to 4 months and causing an extension of the Programme, the costs of which will be borne by suppliers and ultimately customers. The estimated costs of any Programme extension is about £1M/month.

P432 is intended to mitigate this risk, if it is not approved then the MHHS Programme will have to find another solution, but it would likely be sub-optimal to P432 and impact the MHHS timelines as part of the 12 months allocated to migration to MHHS will need to be allocated to CT MSIDs.

Alternative solution

No Alternative Modification was formally raised by the Workgroup. However, one Workgroup Member did suggest making changes to the Measurement Class (MC) definitions so that they are based on the capacity and the capability of customer supply rather than based on CT Metering. Generally WC Meters are installed on Supplies up to 69kVA, so the suggestion was that CT Meters that have demand above 70kVA would be more appropriate, effectively realigning the HH threshold from 100kW to circa 70kW.

The Proposer stated that they understood the logic of this suggestion but it goes against all the Targeted Charging Review (TCR) reforms. It would mean undoing all the work undertaken for the TCR reforms.

Furthermore, one element of the MHHS Market Segmentation was to move away from arbitrary boundaries and differentiate based on physical characteristics of the Meter and connection – hence CT vs WC differentiation. Making changes to MC definitions would cause issues with Distribution Charging. Also, MCs are due to disappear once the market migrations to the MHHS TOM.

Assessment Procedure Consultation Responses - given against original solution

Do you agree with the Workgroup that there are no other potential Alternative Modifications within the scope of P432 which would better facilitate the Applicable BSC Objectives?			
Yes	**No**	**Neutral/No Comment**	**Other**
7	1	0	0

The majority of the respondents agreed that there are no potential Alternative Modifications within scope of P432 which could better facilitate the Applicable BSC Objectives.

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One respondent disagreed and suggested that this time could be better used by Suppliers getting Smart/Advanced Meters installed in readiness for MHHS, however they did not provide an alternative solution.

Legal text

The revised P432 legal text and amendments to the BSC subsidiary documents are in Attachment A and summarised in Section 4.

Assessment Procedure Consultation Responses - given against original solution

Do you agree with the Workgroup that the draft legal text in Attachment A delivers the intention of P432?			
Yes	**No**	**Neutral/No Comment**	**Other**
6	2	0	0

The majority of the respondents agreed the draft legal text in Attachment A delivers the intention of P432. One respondent disagreed with the legal text as they did not agree with the implementation date of October 2023 and suggested the proposed changes are implemented in 2024/25 instead, in line with the MHHS Programme.

Another respondent disagreed with the legal text stating that it should be clear that 'actioning' a CoMC back to NHH should be stopped. However, the Workgroup consensus was that CoMCs back to NHH should not be prevented under P432 to align with the SLC.

Subsidiary Documents

Do you agree with the Workgroup that the amendments to the Code Subsidiary Documents in Attachment A delivers the intention of P432?			
Yes	**No**	**Neutral/No Comment**	**Other**
5	4	0	0

The majority of the respondents agreed that the amendments to the Code Subsidiary Documents deliver the intention of P432. Two of the respondents that disagreed were the same respondents that disagreed with the legal text and included the same responses as above. One respondent stated that the amendments to BSCP516 doesn't explain what the requirements are for CT Meters that don't meet the requirements under SLC12.17. Elexon pointed out that the BSCP516 document does not intend to direct what happens with different types of Meters, the mandate for P432 is set out in BSC Section L.

One respondent stated that BSCP516 is not clear that the deadline to settle HH on 1 October 2022 only applies to new CT connections. BSCP516 has been amended to make this mandate clearer.

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4 Impacts & Costs

We have defined cost impacts as:

- High: >£1 million
- Medium: £100-1000k
- Low: <£100k

Central costs of P432

There are no changes to Elexon costs and impacts as a result of the revised solution, other than monitoring of the CoMC migration will be over a longer period.

P432 is a document-only change. We therefore anticipate the central implementation costs to be less than £1K for the proposed solution. For the ongoing costs, it is anticipated that 0.25 FTE of effort will be spent on the monitoring and reporting activities each month, and a further 0.25 FTE (so 0.5 FTE in total) effort will be required if follow up actions are needed e.g. if CoMC activities are not complete.

Below is a detailed summary of the expected impacts and costs of the Modification for both the implementation phase and on-going.

Estimated central implementation costs of P432

Implementation cost estimates			
Organisation	Item	Implementation (£k)	Comment
Elexon	Systems	0	No impact identified. P432 is a Document only change.
	Documents	<1	Costs associated with implementing Sections X-1, L, S, Z and BSCP516.

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Implementation cost estimates			
Organisation	Item	Implementation (£k)	Comment
Industry	Systems & processes	Low to medium	Majority of the consultation responses indicated that costs are expected to be low (<£100k) to medium (£100-1000k) for industry. Majority of the implementation costs are expected to be for the CoMC activity and the extra resources required for customer engagement. The Workgroup expect costs to reduce with the revised compliance deadlines as it will help spread migration activity and two sets of design work (one for P432 and another for the enduring MHHS solution) should not be necessary. The Workgroup seek validation of this via this consultation.
	Total	Low to medium	

Estimated on-going costs of P432

On-going cost estimates		
Elexon	0.25 to 0.5 FTE per month until CoMC activity is complete (~2k to 4k per month)	There may be on-going costs for Elexon for monitoring the CoMC activities as part of its existing operations.
NGESO	0	No impact identified.
Industry	Low	Consultation responses indicated that on-going costs are expected to be low (<£100k) and confined to BAU HH servicing and resolution of any errors found post CoMC.
Total	Low	
Elexon	0.25 to 0.5 FTE until CoMC activity is complete (~2k to 4k per month)	There may be on-going costs for Elexon for monitoring the CoMC activities as part of its existing operations.

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P432 impacts

Impact on BSC Parties and Party Agents		
Party/Party Agent	Potential Impact	Potential cost
Suppliers	The SLC already required the installation and maintenance of Advanced Meters by the end of 2021 so any additional costs for HH Settlement are expected to be limited to the cost of carrying out the existing CoMC process. Suppliers will need to ensure that the relevant capacity charging agreements are in place, and may need to modify their customer billing arrangements for CT metered customers currently settled NHH.	Low to Medium
LDSOs	LDSOs may need to review the distribution of their charges as their customer base will change. For that reason, the impact on LDSOs has been highlighted but are expected to be minimal.	Medium to High
Generators	SVA connected Generators may be exposed to higher MOA costs at mixed use sites.	Low
SVA Meter Operators	The increase in the number of HH Metering Systems is expected to impact MOAs, who may need to support the CoMC plans of Suppliers. MOAs will need to engage in Change of Measurement Class activities. Meters will need reconfiguring for HH demand channels as opposed to NHH cumulative channels, unless Suppliers wish to retain both.	Low
HHDCs	The increase in the number of HH Metering Systems is expected to impact HHDCs. HHDCs will need to engage in Change of Measurement Class activities.	Low
NHHDCs	NHHDCs will need to engage in Change of Measurement Class activities.	Low
HHDAs	HHDAs will need to engage in Change of Measurement Class activities.	Low
NHHDAs	NHHDAs will need to engage in Change of Measurement Class activities.	Low

Send Back Consultation Question
How much will it cost your organisation to implement P432?
What will the ongoing cost of P432 be to your organisation?
Will P432 impact your organisation?
The Workgroup invites you to give your views using the response form in Attachment F

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Impact on the NETSO	
Impact	Estimated cost
None identified	None

Impact on BSCCo		
Area of Elexon	Impact	Estimated cost
Assurance	Assurance will need to monitor the CoMC activities in the first instance and work with the PAB in response to any increase in Settlement Risk.	Low

Impact on BSC Settlement Risks
P432 impacts a wide range of SVA risks. For the CoMC process the Meter Technical Details (MTDs) will need to be transferred from NHH Agents to the HH Agents. They may not always happen on time or they may potentially be transferred with the incorrect information. This could then potentially lead to Agents not being able to read the Meters or not being able to interpret the readings correctly, resulting in the wrong volumes being entered into Settlement. Furthermore, the CoMC requires a reconfiguration of the Meter to happen on a certain date. There is a risk that the reconfiguration may go wrong, which could result in erroneous data entering Settlement. Where the CoMC technical activity does not happen on the expected date, appointments will need to be backed out, which is another risk that erroneous data enters Settlement (although we plan to mitigate this with the proposed REC Change for retrospective CoMCs). This Modification is expected to impact the following BSC Settlement Risks (H – high impact, M – medium impact, L – low impact), which will be managed under the existing Elexon assurance activities: • 003 SVA Risk: Metering Equipment Installations are incorrect - M • 004 SVA Risk: Metering Equipment changes are not notified - H • 005 SVA Risk: Metering Equipment Faults are not resolved - M • 006 SVA Risk: Incorrect Meter detail transfer on change of agent - M • 007 SVA Risk: Metered Data is not retrieved - H • 008 SVA Risk: Metered Data is not processed or transferred - H • 009 SVA Risk: Data Aggregator Processing incorrect - L • 010 SVA Risk: Transfer of Meter Read History incorrect - L • 012 SVA Risk: Meter System Technical Details inaccurate - M • 015 SVA Risk: Reference Data incorrect - L

Impact on BSC Systems and process	
BSC System/Process	Impact
None	All existing systems are able to accommodate this small change in activity.

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Impact on BSC Agent/service provider contractual arrangements	
BSC Agent/service provider contract	Impact
None	None identified

Impact on Code	
Code Section	Impact
Section L 'Metering'	Section L has been updated to add the requirements for NHH CT Advanced Meters to settle HH and new CT connections to be settled HH.
Section S 'Supplier Volume Allocation'	The data provision requirements have been updated to include the submission period for HH Advanced Meters.
Section X, Annex X-1 'Glossary'	The definition of Advanced Meters in BSC Section X, Annex X-1 was constrained by the scope of P272 to refer only to SLC 12.18, the definition will be expanded by referring back to the definition of Advanced Meter in the SLC, condition 12, so that it captures all HH Metering Systems with remote communications that are not Smart Meters. Deletion of text that referred to the P272 monitoring and reporting requirements and references to Supplier Migration Plans as they are no longer relevant.
Section Z 'Performance Assurance'	Section Z has been amended to delete the P272 monitoring and reporting requirements and references to P272 Supplier Migration Plans as they are no longer relevant.

Impact on EBGL Article 18 terms and conditions and objectives
No impact identified

Impact on Code Subsidiary Documents	
CSD	Impact
BSCP516 'Allocation of Profile Classes and SSC's for Non Half Hourly SVA Metering Systems Registered in SMRS'	BSCP516 has been amended to clarify where the profile classes should not be allocated i.e. where this BSCP does not apply.

Impact on other Configurable Items	
Configurable Item	Impact
None	None identified

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Impact on Core Industry Documents and other documents	
Document	Impact
Ancillary Services Agreements	None anticipated at this stage.
Connection and Use of System Code	None required. The CCDG initially considered whether there may need to be a consequential change under the 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 CoMC activity will only start in early 2023, by this point the critical elements of the Targeted Charging Review will have been implemented and so there will not be any adverse impacts on TNUoS and a CUSC Modification is therefore not needed.
Data Transfer Services Agreement	None anticipated at this stage.
Distribution Code	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. A DCUSA Modification will be raised soon to ensure that the end consumer has the opportunity to discuss their appropriate capacity charging with their LDSOs before/when they are migrated to HH Settlement. This will address the second element of Ofgem's P432 Send Back direction
Grid Code	None anticipated at this stage.
Retail Energy Code	The CCDG initially considered whether there may need to be a consequential change under the REC, however this is no longer the case because this Modification doesn't have a direct impact on the REC. A complimentary REC Change R0015 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. A complimentary REC Change Proposal will be raised to allow retrospective CoMCs.
Supplemental Agreements	None anticipated at this stage.
System Operator-Transmission Owner Code	
Transmission Licence	
Use of Interconnector Agreement	

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Impact on a Significant Code Review (SCR) or other significant industry change projects
Ofgem directed that this Modification be worked up by the MHHS Programme and be progressed by the BSC in their response to the CCDG Recommendations. It has been raised to facilitate the MHHS migration to give effect to Ofgem's Settlement Reform SCR. Consequently, we requested that Ofgem treat this Modification as a SCR Exempt Modification Proposal on 2 December 2021. Ofgem confirmed that this Modification Proposal was SCR exempt on 9 December 2021.

Send Back Consultation Question
Do you agree with the Workgroup that the draft legal text in Attachment A delivers the intention of P432?
Do you agree with the Workgroup that the draft Code Subsidiary Documents in Attachment A delivers the intention of P432?
Do you agree with the Workgroup's assessment of the impact on the BSC Settlement Risks?
Do you agree with the Workgroup's assessment that P432 does not impact the European Electricity Balancing Guideline (EBGL) Article 18 terms and conditions held within the BSC?
The Workgroup invites you to give your views using the response form in Attachment F

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Consumer impacts

Impact of the Modification on the environment and consumer benefit areas:	
Consumer benefit area	Identified impact
1) Improved safety and reliability The Workgroup did not identify any impact on this consumer benefit from P432.	Neutral
2) Lower bills than would otherwise be the case A Workgroup Member held the view that this Modification will have a negative impact on this benefit area as they thought P432 would lead to higher bills for consumers, driven by increased costs to serve (higher Supplier Agent costs) and network charging costs. The majority Workgroup view, supported by the Proposer, is that the impact is neutral because charges will change but the costs may not necessarily increase. Some bills may be higher but some may decrease as a result of DUoS changes, so overall the costs will be neutral.	Neutral
3) Reduced environmental damage The overall consensus was that the impact is neutral, however the Modification does have indirect links to supporting Net Zero. One Workgroup Member suggested that a negative consequence could be that consumers could change their Meters so they are out of scope of P432 to avoid increased costs. They had the view that many sites with CT Meters did not need to be CT Metered as the capacity had been overestimated. The Workgroup noted the current Meter shortage issues in the market. However, the majority were of the view that exchanging Meters would be impractical because the Meters would have to change from CT to WC to become out of scope of P432. In doing so, this would require a downgrade of LDSO equipment.	Neutral
4) Improved quality of service The use of HH data results in more accurate Settlement than the NHH profiling arrangements. This allows for better cost reflectivity and reduces cross-subsidies in Settlement. One Workgroup Member did argue that P432 does not improve quality of service as they believed that PC 1-4 CT customers will struggle to get engagement from Suppliers for HH Settlement, as shown by the second cost exercise that they carried out. Please see section 6 for further details.	**Positive**
5) Benefits for society as a whole The overall consensus from the Workgroup was that the impact is neutral as there were some positive and some detrimental impacts. One Workgroup Member mentioned there may be a knock on effect on businesses who may be subject to higher costs to serve HH settled Meters, which may result in costs being passed on to their customers. Another Workgroup Member had the view that the benefit is positive as MHHS is positive for society as a whole (see Ofgem's MHHS Full Business Case) and P432 is a part of MHHS, supporting a path to net-zero.	Neutral

What are the consumer benefit areas?

1) Will this change mean that the energy system can operate more safely and reliably now and in the future in a way that benefits end consumers?

2) Will this change lower consumers' bills by controlling, reducing, and optimising spend, for example on balancing and operating the system?

3) Will this proposal support:
i) new providers and technologies?
ii) a move to hydrogen or lower greenhouse gases?
iii) the journey toward statutory net-zero targets?
iv) decarbonisation?

4) Will this change improve the quality of service for some or all end consumers. Improved service quality ultimately benefits the end consumer due to interactions in the value chains across the industry being more seamless, efficient and effective.

5) Are there any other identified changes to society, such as jobs or the economy.

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P432 end to end consumer journey impacts

A Member was concerned that if P432 is implemented customers will struggle to get competitive Supplier contracts and effectively be charged more for the new contracts. This would mean that customers with CT Advanced Meters would be exposed to an uncompetitive market 18 months before the MHHS transition deadline. The Member conducted two exercises to investigate the possible impacts on the end consumers to support this assertion. See section 6 for details.

The opt-in/out rights for microbusinesses and domestic customers will be reflected in P432. The customer will have a choice whether to move to a time of use tariff or not. Engagement with customers, by Suppliers and their Agents (particularly where the customer contracts directly with the Agents) will be critical (although this isn't directly an issue for the BSC as it does not relate to Settlement).

A Workgroup Member argued that additional site visits may be required if Meters at the impacted sites do not record maximum demand data, and that this will result in a detrimental environmental impact and an additional cost that would be passed through to customers.

However, other Workgroup Members have argued that this will only have an impact if the site visits are over and above the routine site visits that will be required during the six month preparatory period. Where Meters are not communicating remotely, there should be a need for NHHDCs to visit those sites to collect readings and maximum demand data can be collected alongside the billing reads. Where Meters are faulty, there is a requirement (under the REC Metering Operation Schedule) for SVA MOAs to respond to fault resolution requests.

Assessment Procedure Consultation Responses - given against original solution

Do you agree with the Workgroup's assessment of the impact on the consumer benefit areas?			
Yes	**No**	**Neutral/No Comment**	**Other**
4	3	1	0

Many respondents stated that the main benefit for customers will be the accurate billing as a result of settling HH. One respondent highlighted that by moving these customers to HH settlement via CoMC early advantages of MHHS could be exploited sooner, similar to those that are possible through the elective HH route.

Respondents that disagreed, highlighted that customers will be negatively impacted by the higher costs to serve HH supplies, which is driven by increased Supplier charges (costs that include Supplier imposed Meter Operator charges).

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5 Implementation

Revised Recommended Implementation Date

The Workgroup recommends an Implementation Date for P432 of:

- 29 June 2023 as part of the standard June 2023 BSC Release if the Authority's decision is received by 29 March 2023.

A decision from Ofgem is required by 29 March 2023 to give industry enough time to prepare for the obligation to settle all new CT Advanced Meter connections HH and to start the CoMC activities. The Workgroup believed this struck the right balance between giving industry enough time to prepare for settling new connections HH, allowing the associated DCUSA modification to be implemented and 'stem the flow' of further NHH CT Advanced Meter registrations. This would reduce the work required to CoMC existing CT Advanced Meter connections to HH.

Send Back Consultation Question
Do you agree with the Workgroup's recommended Implementation Date?
The Workgroup invites you to give your views using the response form in Attachment F

Original Recommended Implementation Date

The Panel and the Workgroup recommends an Implementation Date for P432 of:

- **5 WDs** after the Authority's decision is received if the Authority's decision is received by 26 August 2022.

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 and new connections from October 2022. The Proposer and Workgroup agree and therefore recommend this Modification is implemented via a special release, five WDs after Authority approval. This will provide the maximum lead time to meet the migration timescales that will be set by this Modification.

A decision from Ofgem is required by 29 March 2023to give industry enough time to prepare for the obligation to settle all new CT Advanced Meter connections HH. Implementing this Modification after 2 September 2022 has the risk that Suppliers may not be able to adjust their new connection processes by 1 October 2022.

Assessment Procedure Consultation Responses - given against original solution

Do you agree with the Workgroup's recommended Implementation Date?			
Yes	**No**	**Neutral/No Comment**	**Other**
4	4	0	0

Many of the respondents did not agree with the Implementation Date. These respondents were made up of Suppliers, except one. The respondents that did agree were mostly DCs/DAs and SVA MOAs.

One respondent stated that the timescales for the movement of CT Advanced Meters between April and October 2023 should provide sufficient time for the CoMC activities.

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Another respondent highlighted that the proposed Implementation Date and approach were recommended by the CCDG on the basis that CT Metering Systems will need to move HH Settlement under the existing CoMC process to allow for time to resolve issues which may arise prior to the MHHS TOM go live and migration.

Respondents that disagreed suggested that the proposed changes are done as part of the MHHS Programme.

Although disagreeing with the proposed Implementation Date, one Supplier did highlight that CT Metered customers constitute a disproportionately large risk as compared to other customer segments, so it is right to look at moving them to HH Settlement via CoMC as early as possible. However they suggested delaying the implementation date to 2024 so there is sufficient time to deliver system and process changes to support the changes, as well as give time to explain the rationale and benefits to customers in order for them to understand and engage with this change.

Assessment Procedure Consultation Responses - given against original solution

How long (from the point of approval) would you need to implement P432?			
0-6 months	**6 – 12 months**	**>12 months**	**Other**
2	3	0	3

The majority of the respondents stated that they will need less than a year to implement P432, with some respondents stating that the proposed timelines are sufficient.

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6 Workgroup's Initial Discussions on the original solution

This section covers the Workgroup's discussions on the original solution. The Workgroup discussions on the revised solution can be found in section 11.

Key dates for P432

The Proposer presented his key dates for P432, which the Workgroup accepted.

Key milestones:

- October 2022: New CT connections beyond this date should be HH settled to ensure that subsequent Change of Measurement Class (CoMC) activity is not required;
- February 2023: CP1558 (subject to its approval) implemented providing improved visibility of CT metering systems;
- October 2022 to March 2023: Planning and preparatory CoMC activities to be undertaken during this period to allow new TCR arrangements to come into effect and therefore avoid network charging impacts on customers;
- April 2023 to October 2023: CoMC process to begin for CT Advanced Meters settling Non-Half Hourly (NHH); and
- By October 2023: All CT Advanced Meters to be Settled HH.

The Proposer explained that the proposed timeline for P432 is driven by the MHHS timeline. The reason this proposal calls for implementation for all CT Advanced Meters to be Settled HH by October 2023 is because it de-risks to migration to MHHS, which is due to start in October 2024. If any issues were to arise during the migration of CT Advanced Meters, it would be better that they surfaced during the April 2023 to October 2023 period, as it would be more difficult to resolve any issues under duress during the MHHS migration. Six months to CoMC ~50,000 CT Advanced Meters should allow Parties to proceed more cautiously.

The dates are there to facilitate the movement to the MHHS TOM, therefore the Workgroup agreed that the October 2023 date should be hardcoded in the legal text drafting, however it was pointed out that we should keep in mind that things may change within the MHHS Programme.

Clarification of BSCP516 and CP1549 requirements

A Workgroup Member asked for clarification on the process for moving a Meter from HH back to NHH Settlement (which is detailed in BSCP516) and was recently amended by CP1549[26] 'Amendment of BSCP516 to clarify the criteria for Non-Domestic SVA Metering Systems to be allocated to Profile Classes 3 or 4' permitted. Elexon confirmed that CP1549 allows Non-Domestic customers with an Advanced Meter migrated from Profile Class (PC) 5-8 to HH Settlement (as part of the P272 process) back to NHH Settlement if validly reclassified as PC3-4.

[26] https://www.elexon.co.uk/change-proposal/cp1549/

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Where a Metering System is still classified by the Supplier as falling under the definition of what would have been PC5-8 pre P272 then it is not in scope to be reversed to NHH Settlement. Furthermore, PC5-8 apply where Maximum Demand is required to be recorded, not just where it happens to be recorded, this was clarified by CP1433 'Clarification of which Metering Systems are captured by the P272 requirements'.[27]

Elexon highlighted that these requirements should not have any implications on P432. P272 is already largely complete, the interest here is that some HH Meters are reverting back to NHH and to what extent, if any, this should be permitted for CT Advanced Meters under P432.

Exceptions to the rules

Domestic and microbusiness customers

Currently under the SLC47 requirements domestic consumers' HH consumption data can only be accessed for Settlement if they have given opt-in consent, and Suppliers can only access HH data from microbusinesses for Settlement if they have not opted-out.

However, as part of their work on market-wide Settlement reform, Ofgem has been considering amending the SLC47 in order to make access to HH data mandatory for microbusinesses, and Suppliers will have access to HH data from Domestic sites unless the consumer opts out, Ofgem's decision was set out in its access to half-hourly electricity data for settlement purposes paper[28] in 2019.

Assuming SLC47 changes are progressed in line with Ofgem's previous decision (which is expected by Workgroup Members), the new data access framework would only apply from the point the customer changes supply contract. Ofgem do not expect this to include situations where new terms and conditions apply by default, for example where a customer moves on to a default tariff following expiration of a fixed term contract. Whilst retail market issues have held up Ofgem's work, it's very likely that the SLC change will be implemented before the proposed April 2023 start date for CoMC activities.

As the decision for the data access requirements is likely to be made after P432 is submitted for Ofgem decision, Elexon asked the Workgroup whether domestic and microbusiness customers should be excluded from the P432 solution. The consensus amongst the Workgroup was that these customers shouldn't be excluded from the solution, instead the legal drafting should be drafted in a way that it is flexible and respects the SLC requirements. This was on the basis that it would avoid the need to re-draft the BSC, and allow domestic and microbusiness customers to CoMC to HH Settlement now, subject to SLC rights.

The Workgroup also discussed whether the ability of moving CT Advanced Meters from HH back to NHH should be removed as the market needs to move to HH Settlement eventually. The consensus was that the downgrade process should remain to maintain the opt-out/in rights for domestic and microbusiness customers. The BSC requirement should be drafted in a way to facilitate this.

[27] https://www.elexon.co.uk/change-proposal/cp1433/
[28] https://www.ofgem.gov.uk/publications/decision-access-half-hourly-electricity-data-settlement-purposes

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Remote communications

The Workgroup questioned how Suppliers should tackle CT Advanced Meters that can record HH data but do not have working communications. Another Member also pointed out that if the Metering Systems that are moving to HH Settlement via CoMC do not have communications fitted then these Meters will need to be exchanged. The Proposer clarified that for a Meter to meet the Advanced Meter criteria as defined in the SLC, they would need to have working communications and be HH capable. Situations where premises have an Advanced Meter with no working communications would not fit the criteria to move to HH Settlement, so they would not be in scope of P432. It was noted the MHHS Programme would need to consider how to handle these instances.

A question was raised about what to do with CT Advanced Meters where the communications stopped working. It was clarified that only CT Advanced Meters where the communication is working will go through the CoMC process, if communications stop after the Meter has been moved to HH Settlement, then it will be considered in scope of P432 requirements. Hand held readings may then need to be taken until such time the communications issue is resolved through the Meter Faults process. A Workgroup Member pointed out that hand held reads are typically £15 a reading, in the HH market customers could be looking at up to £180 a year on data collection costs (if readings are taken every month). The Proposer pointed out that this issue is a wider market issue and not specifically a P432 issue.

A Workgroup Member raised their concern over communication links being impacted by 2G hardware in phone masts being replaced for 4G/5G hardware. This will mean CSD connections over 2G will cease to work and GPRS connections over 2G will become more and more unreliable. This will all have impacts on the current communications performance of the Advanced Metering sector. However, it was highlighted that this is a wider market risk, rather than a specific P432 risk.

The Workgroup consensus was that P432 should not require significant, if any Meter Exchanges, as the SLC12.27 requirement to fit Advanced Meters to CT connection was December 2021. It should only be edge cases, where Meters may not have been able to be installed due to the Pandemic that may be lacking, but should still be fitted in time for the P432 migration.

Assessment Procedure Consultation Responses - given against original solution

Do you envisage P432 requiring Meters to be exchanged? If so please provide rationale, noting the SLC requirements and provide an indication of the number of likely meter exchanges required.			
Yes	**No**	**Neutral/No Comment**	**Other**
3	3	1	0

Some respondents stated that Meters would need to be exchanged. One stating they have identified 10% as needing a Meter exchange due to interoperability issues.

One respondent stated they only anticipate a small number of Meters being exchanged, these will be limited to Metering Systems that do not have the appropriate password levels needed to re-scheme the Metering System and where metering service providers hold the correct information to re-scheme the metering systems but do not work with a specific metering type.

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Two respondents stated that given non-communicating Meters are out of scope of P432, there should be no Meter exchange requirements

A Workgroup Member noted that in principal P432 should not require Meter exchanges. under the SLC, CT Meters should have been fitted and communications should be working. Only a small proportion of the ~50k Meters would need to be exchanged due to technical reasons.

Another Workgroup Member pointed out that if Meters need to be exchanged it is better to do that now rather than later during the migration to the MHHS TOM.

Monitoring, reporting and managing the migrations

PAB's role

Elexon presented the Workgroup with three different options for monitoring the compliance of the obligations, and noted that P432 will be a smaller migration activity, with less risk to Settlement, than P272 and so the assurance approach should reflect this and be proportionate. Indicative estimates suggest ~50k CT Advanced Meters with 1-2% of the total SVA import volume may be in scope for P432.

The three options were:

- **Option 1– Only checking compliance in October 2023.** The PAB and Elexon do not manage or monitor the migration period at all, and only perform checks at the end of the migration window (October 2023). If a Supplier has any CT Metering Systems which remain NHH Settled at that time, escalation/enforcement options would be applied as deemed necessary.
- **Option 2 – P272 style Supplier Migration Plans.** The PAB and Elexon would request a migration plan from all Suppliers, detailing approaches and timescales for migration of the portfolio of CT Metering Systems. These plans would be monitored monthly, with deviations from the plans triggering escalation/enforcement routes as necessary.
- **Option 3 – Lighter Touch.**
  Elexon, supported by the PAB, would engage with Suppliers ahead of the migration window, emphasising the obligation. Approaches to the migration would be discussed with Suppliers, although no formal 'plan' would be required to be submitted. As the migration window progresses, monitoring would be done at industry-level as well as Supplier level, with any Supplier(s) appearing to be 'behind' approached for further information. Any escalation/enforcement would only be sought after the migration deadline (October 2023), as necessary.

The majority of the Workgroup Members preferred option three, but one Workgroup Member had a preference for option two. They had the view that if the migrations aren't managed properly throughout, at the end of the process P432 may not be a success.

The Workgroup noted that a new CP has been raised; CP1558 'New Registration data items and processes to support the MHHS transition'. This CP will introduce new Registration Service data items and supporting BSC processes into existing Supplier Meter Registration Service (SMRS) systems, making it easier to identify CT Advanced Meters. The target implementation date for CP1558 is 23 February 2023. The Workgroup had a strong preference to use this data for the reporting of P432. However, if the CP1558 is delayed or rejected then there needs to be an alternative option, for example, Supplier reporting

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(noting that they would have to agree reporting with their Agents to meet the P432 obligations anyway), which could be done under existing arrangements. The PAB also noted that the implementation of CP1558 is important in order to determine the number of Metering Systems in scope for P432, so that the assurance could be applied against this number and the migrations can be adequately assessed.

PAB's initial views were that P432 was unlikely to have a material adverse impact on Settlement accuracy and queried whether assurance of the migration better sat with the MHHS Programme. However, the PAB did indicate a preference for option three but highlighted that it may be difficult to monitor because of the tight timescales between CP1558 being implemented and the short migration window.

MHHS Programme's views were that they would expect the monitoring of the CoMC process for this Modification to be run by Elexon as part of the implementation of P432 (with input from the MHHS Programme).

The Workgroup also discussed whether Elexon could do the reporting for P432 instead of the PAB. Once CP1558 is implemented, it will allow Elexon to track the number of CT Advanced Meters that still need to be migrated. The Workgroup consensus was that some monitoring should be done with option three and the starting point is for Elexon to do that. If there is a significant risk identified during the reporting then the PAB and Elexon can then take remedial action accordingly using existing arrangements. Ultimately, the MHHS Programme will then make sure the CT Advanced meters are moved over to the MHHS TOM which will be picked up as their wider MHHS activities. In conclusion, no new BSC obligations were required to support the assurance of P432. Any assurance required could be done using existing PAF processes and techniques. For example, Elexon could place a Supplier into Error and Failure Resolution[29] for failure to comply with the P432 migration, it could do checks via the BSC Audit[30] or request data from Suppliers (and their Agents), as outlined in BSC Section Z 'Performance Assurance' 5.1.4.

Change of Supplier events

When P272 was implemented, Suppliers were obligated to migrate their Advanced Meters within 45 working days of Change of Supplier (CoS). The Workgroup discussed whether this should also be a requirement for P432. They concluded that there should be no requirements linked to Change of Supplier events for this Modification, as there is a hard deadline under P432.

Supplier Charges and Performance Levels

The Workgroup reached the consensus that Supplier Charges and Performance Levels should not be impacted by this Modification. The Workgroup did note that they were concerned the general movement of the Meters will result in Suppliers moving their 'good Meters', with higher metered volumes to HH, therefore the 97% Performance Level requirement for NHH Metering Systems may become harder to reach, consequently impacting the associated Supplier Charges for the 97% target. However, this issue is not unique to P432, it needs further consideration as part of the wider migration to MHHS.

[29] https://www.elexon.co.uk/reference/performance-assurance/performance-assurance-techniques/error-and-failure-resolution/

[30] https://www.elexon.co.uk/reference/performance-assurance/performance-assurance-techniques/bsc-audit-performance-assurance-framework/

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P432 Costs

The baseline view is that a large impact on costs for BSC Parties is not expected as the processes already exist, and have already been conducted for P272. The bulk of the costs are expected to be from the CoMC activity.

Cost Exercises conducted

A Workgroup Member was concerned about the costs increasing for end customers as a result of P432 and conducted two exercises to investigate the possible impacts.

Attachment B provides the full details and analysis, together with the Proposer's response.

Cost exercise one

For this exercise, the Workgroup Member used the portfolio of a major client of theirs, comparing the cost differences between sites that have NHH Meters and HH Meters, across 1045 stores.

The sites were made up of:

Sites	**Projected costs (all based on 62,000kwh)**
40 CT metered supplies currently settled Half Hourly	£9,945.89
52 WC metered supplies currently settled Half Hourly	£9,858.22
953 Non Half Hourly settled supplied in profile classes 03/04	£8,725.73

The average cost across both CT and WC sites settling HH is £9,902.05, meaning that typical SME customers may pay around £1,200 more per year if the supply is settled HH. The Member's view was that Supplier profits were driving these higher costs and they have been overcharging the HH customers.

The Workgroup believed this was important information for Ofgem to consider, but were related to broader market issues, not P432 specific issues.

Cost exercise two

For the second exercise the Workgroup Member wanted to demonstrate how difficult it is for a customer to engage with the Suppliers in this sector of the market and also the effort needed to obtain offers directly from Suppliers.

They created 10 email addresses, using 10 different limited companies. Acting as a customer approaching a Supplier, they emailed the first, most suitable email address found on each Supplier's websites. Each 'company' requested a quote from 10 Suppliers. All

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Suppliers were asked to send a quote within 8 working days, with the start date of a new 12 month fixed price contract to commence from 1st April 2022 and the quote was to include their own MOA/DC/Data Aggregator charges.

Four quotes were returned in total, two quotes were received before the deadline, and two were received after the deadline. The Member had the view that Suppliers don't want to supply these low volume customers with CT Advanced Meters in the HH market because they are too labour intensive.

The exercise showed that there was an average difference per quote of £2,592 between HH and NHH customers with the range of difference being £988 to £6,425. Whilst the quotes have been carried out on a like for like basis, customers in the NHH market are mostly being charged on a single rate tariff, with typical costs being lower on such a tariff. Customers retain the option to choose single rate when contracting in the NHH market, however suppliers quoting HH customers mostly quote for the more expensive day/night tariff.

The Workgroup believed this was important information for Ofgem to consider, but were related to broader market issues, not P432 specific issues.

Customer Journey

The Ofgem representative welcomed Workgroup and industry views on the impacts P432 would have on consumers and the customer journey.

Following the second exercise conducted by the Workgroup Member the question raised was if P432 is approved will end users find it necessary to increase their engagement with Suppliers, particularly in relation to supply contract arrangements, or will impacted customers share the same experience that they presently do with Supplies being settled on a NHH basis?

Elexon's view was that whilst being NHH Settled the Suppliers know how your consumption will be allocated throughout the day, this is regardless of when you actually use the electricity. If customers are being HH settled then there would be a driver for more engagement between Suppliers and customers regarding Time of Use (ToU) contracts, which would be of benefit to the customer's energy efficiency.

A Workgroup Member was sceptical as to whether this would materialise, as they did not believe it had for the P272 segment.

Targeted Charging Review (TCR)

Elexon highlighted that these costs are mostly commercial rather than a cost to serve the customer. The quotes gathered from the cost exercises are based on the current Network charging regime which are in the process of changing under the TCR.[31] The Proposer held the same view and challenged the relevance of comparing total contract values for supply contracts now, as it does not consider the incoming changes to costs via the network charging reforms which will take effect in April 2023 (and why the Proposer is recommending the migration not to start until April 2023).

The TCR modifications (due to take effect in in April 2022 & 2023) as directed by Ofgem, have been progressed to reduce harmful distortions and were based on informed

[31] https://www.ofgem.gov.uk/publications/targeted-charging-review-decision-and-impact-assessment

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consumer research findings that determined non-domestic consumers (particularly those who can load manage to avoid charges) are not paying their fair share of the residual network total cost. The TCR is expected to lead to an increase in wholesale market prices during peak periods over the years by fixing the residual part of the network bill that has incrementally increased the domestic share of these costs. This will be remedied by making those costs fixed in both the domestic & non-domestic market and so require DNO's (DUoS) & NGESO (TNUoS) to recover costs based on 4 non-domestic connection types (LV WC, LV CT, HV CT & EHV CT) and consumption (aggregated tariffs) or capacity (site specific charges).

The move to connection type derived network cost recovery partly enables the industry's arrangements link between network costs (Both DUoS & TNUoS) and Settlement method (NHH or HH) derived to be moved away from the current MC assigned to an MSID. As P432 has been raised as an enabler to facilitate the migration to MHHS TOM which does not facilitate NHH methods of Settlement in the advanced segment, NHH CT must move to HH Settlement.

DUoS impact

The overall DUoS cost could be lower for HH CT customer dependent on how much electricity a site consumes under P432 as HH Settlement means energy consumed can be accurately apportioned to the DUoS Red, Amber, Green (RAG) time periods, which in itself provides an incentive for Suppliers to offer time of use tariffs as is incentivised in Ofgem's Full Business Case for MHHS.

TNUoS impact

The existing NHH TNUoS charge is derived from kWh consumption between 16:00-19:00 and charged daily, the existing HH CT+ yearly charge is derived from 3 highest HH peaks in national demand over the winter season on a £ per kWh basis (AKA TRIAD charges). In NHH Meters the charge is currently a volume based charge. Subject to the final decision on CMP343[32], TNUoS residual costs will move from being volumetric derived costs to fixed costs under the same charging band structure so it mirrors that of DUoS effective from April 2023. If P432 CoMC activitieswere to commence any earlier than 1 March 2023, consumers would be caught up in double charges in the annual TNUoS bill overall, due to the differences in NHH & HH TNUoS charges in play today.

Metering costs

Simply being HH settled currently incurs higher costs, Settlement performance targets for Measurement Class E, F and G Meters in the current HH market requires suppliers to meet 99% of actual reads by R1 (approx. 35 days) as opposed to the NHH measure of 97% by RF (approx. 14 months), as well as consumer billing accuracy commitments. This means the expectation of Suppliers to correct faults with Meters (e.g. comms failures) and obtain the HH consumption data has a requirement to be in Settlement and consumer bills (assuming Supplier bills to HH data) a lot quicker than they otherwise would for NHH Settlement, which comes at a cost.

[32] https://www.ofgem.gov.uk/publications/cmp343-consultation-minded-decision-and-impact-assessment#:~:text=We%20are%20minded-to%20approve,a%20year%2C%20to%20April%202023

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NHH CT Meters are perceived to be a cheaper cost primarily because a gaining Supplier does not know a NHH meter is CT when agreeing a new supply contract (this comes after as part of the registration process) or it may assume that all NHH is WC metered within pricing structures because the vast majority of today's NHH market are WC metered. This is information which is not available to industry in registration data currently.

However, supporting REC CP R0032 and BSC CP1558 propose to introduce a connection type indicator aligned to the TCR charging bands, which (if approved) also addresses other market issues (e.g. where an appointed Suppliers Agents staff are not qualified to work on CT Metering Systems) and that may enable Suppliers to price in costs associated for CT Metering services, so that the cost to serve the physical meter is better reflected in consumer bills.

It is not in the scope of P432 to enforce any commercial decisions as to what and how Suppliers or Supplier Agents provide offers to the market, or to impose cost restrictions on Supplier Agent services as these are not factors under BSC governance. However, the Proposer did agree this is a consumer cost that is very likely to impact consumers impacted by P432 as the metering service provisions can also better reflect the connection equipment in use. This should be considered on balance with all other CT Metered consumers as the ~50K consumers in scope of P432 are not paying a comparative costs for its metering service versus the 250K who are already HH settled today. All CT Metered customers currently settling HH are subject to these costs and consequently Suppliers generally make allowances for customers to choose their own Agents, thus enabling competition for Agent services to drive those costs.

Assessment Procedure Consultation Responses - given against original solution

Will customers (of electricity supply) be exposed to higher charges if P432 is approved?			
Yes	**No**	**Neutral/No Comment**	**Other**
5	0	3	0

Majority stated they expected customers to be exposed to higher charges as there is a higher cost to serve HH Settlement than NHH. One respondent highlighted that charges are set to increase as part of the MHHS Programme regardless, however P432 will bring forward that cost increase by 18 months.

One respondent stated in some instances charges will increase, however there is existing DUoS ToU benefits that some consumers may be able to benefit from that could either offset or overall benefit the consumer bill changes

Significance of P432 implementation

A Workgroup Member pointed out that assuming the figure is correct, ~50,000 CT Advanced Meters out of 2.4 million NHH commercial supply points that are due to be migrated under MHHS is only 2% of the total Meters that will be migrated. They questioned whether this is a significant enough figure for P432 to be implemented.

The Proposer did not agree with this comparison. They suggested a better comparison would be to compare the number with the existing HH market which stands at approximately 250,000 Meters, and this would increase by 20% as a result of P432.

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Retrospective Supplier Agent appointments for CoMC activities

Lessons learned from P272 suggested that the requirement to process Agent appointments prior to carrying out any Meter reconfiguration or Meter exchange needed for a CoMC led to challenges for Parties. Specifically, if the reconfiguration/replacement did not happen on the intended date, then HH appointments had to be "backed out" before the CoMC could be attempted again.

Working Practice 66 (which was governed under the Master Registration Agreement (MRA)) mitigated against this risk by allowing the appointments to take place retrospectively following a successful reconfiguration/replacement. However, the Working Practice 66 no longer exists, following the transition of the MRA to the REC. Working Practise 66 also didn't mitigate the issue entirely as it only applied to MOA appointments.

Assessment Procedure Consultation Responses - given against original solution

Do you believe that a related change should be raised under the REC to allow retrospective CoMCs?			
Yes	**No**	**Neutral/No Comment**	**Other**
5	1	2	0

Majority of the respondents supported a related change being raised under the REC to allow retrospective CoMCs, with one respondent stating that the "lessons learned" from P272 should be implemented where possible.

100kW Metering Systems

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 100kW threshold is becoming irrelevant. The 100kW requirement is not being amended as part of P432 as the industry is moving away from the arbitrary 100kW requirements already and moving towards connection type as a differentiator instead.

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7 Workgroup's Initial Conclusions on the original solution

The **majority** of the Workgroup Members believe that P432 would better facilitate Applicable BSC Objectives (c) and (d) and so should be **approved**. The Workgroup unanimously believes that P432 will be neutral against all other Objectives, (a), (b), (e), (f) and (g).

Workgroup's views

Does P432 better facilitate the Applicable BSC Objectives?		
Obj	Proposer's Views	Other Workgroup Members' Views[33]
(a)	• Neutral	• Neutral
(b)	• Neutral	• Neutral
(c)	• **Positive**	• **Majority positive** (two detrimental, one neutral)
(d)	• **Positive**	• **Majority Positive** (one detrimental, one neutral)
(e)	• Neutral	• Neutral
(f)	• Neutral	• Neutral
(g)	• Neutral	• Neutral

Objective (c)

Larger consuming electricity sites have the largest impact on Settlement accuracy. CT Metering Systems have the capability to consume more energy than WC Metering Systems, using the actual data available in the already installed Advanced Meter is a minimal additional cost. It enables a smooth migration to the MHHS TOM for Advanced Meters (subject to SCR progression). This 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, in line with arguments in P272 and the MHHS business case.

Two Workgroup Members did not believe P432 would better facilitate Objective (c), rather they believed it would be detrimental. One Member had the view that if P432 progresses it will stifle competition rather than promote it because they believe Suppliers are not prepared to offer perceived low consuming customer's contracts for supply (see attachment B for further details). They believe there is a lack of competition in this segment of the market. They provided some case studies, prepared especially for P432, from which they concluded, aside from having to pay more, it's quite feasible that a customer could have options to choose around 20 Suppliers in the NHH market, however only 3 or 4 are prepared to offer contracts once moved to HH.

Another Workgroup Member that was neutral against Objective (c) stated P432 will not make a difference to the competition of the generation and supply of electricity.

Objective (d)

The majority of the Workgroup believes P432 will simplify and clarify the BSC arrangements and consequently better facilitates efficiency in the implementation and

[33] Shows the different views expressed by the other Workgroup Members – not all Members necessarily agree with all of these views.

What are the Applicable BSC Objectives?

(a) The efficient discharge by the NETSO of the obligations imposed upon it by the Transmission Licence

(b) The efficient, economic and co-ordinated operation of the National Electricity Transmission System

(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

(d) Promoting efficiency in the implementation of the balancing and settlement arrangements

(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]

(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

(g) Compliance with the Transmission Losses Principle

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operation of the BSC. The Modification will align the definitions between the SLC and the BSC. It will also remove references to the 'P272 go live date' as well as P272 monitoring, reporting and Supplier Migration Plan requirements as these references are obsolete, and furthermore it will provide greater Settlement accuracy.

One Workgroup Member was neutral against objective (d) and another Workgroup Member believed P432 will be detrimental to Objective (d) as P432 will force consumers to move to HH Settlement via CoMC early, as opposed to giving them a choice. They also highlighted that there will be an additional burden on Parties to make changes to systems to operate these arrangements which may need to be brought forward for P432.

Another Member pointed out that under MHHS TOM Suppliers will assign greater amount of resources for the activities, however relatively small amount of resources will be spared for the first CoMCs (if P432 is implemented).

Assessment Procedure Consultation Responses - given against original solution

Do you agree with the Workgroup's initial majority view that P432 does better facilitate the Applicable BSC Objectives than the current baseline?			
Yes	**No**	**Neutral/No Comment**	**Other**
4	5	0	0

Half of the respondents did not agree with the Workgroup's view that P432 better facilitates the Applicable BSC Objectives than the current baseline. The main arguments against it were that it would be a more efficient use of resources to move CT Advanced Meters to HH Settlement via CoMC as part of the MHHS migration activities. Those that agreed, did so for the reasons put forward by the Workgroup.

One respondent stated that P432 fails to meet Objective (c) as they believe if P432 gains approval customers will suffer financial detriment and there will also be a time burden created by the extra effort required to secure supply contracts in the Half Hourly market.

Most respondents that agreed P432 better facilitates Objective (c), stated that P432 will promote more accurate and granular data which will enable innovation and drive competition.

Respondents that agreed stated that Objective (d) is better facilitated because it will simplify and clarify the BSC arrangements for HH settled CT metering systems and consequently better facilitates efficiency in the implementation and operation of the BSC.

Self-Governance

The Workgroup recommend that this Modification should not be considered suitable for Self-Governance and should be sent to the Authority for approval, as it will likely have a material impact on (Self-governance criteria (b) (i) and (b) (ii)):

- 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 to the customer;
- Competition in the generation, distribution, or supply of electricity or any commercial activities connected with the generation, distribution, or supply of

What is the Self-Governance Criteria?

A Modification that, if implemented:
(a) does not involve any amendments whether in whole or in part to the EBGL Article 18 terms and conditions; except to the extent required to correct an error in the EBGL Article 18 terms and conditions or as a result of a factual change, including but not limited to:
(i) correcting minor typographical errors;
(ii) correcting formatting and consistency errors, such as paragraph numbering; or
(iii) updating out of date references to other documents or paragraphs;
(b) is unlikely to have a material effect on:
(i) existing or future electricity consumers; and
(ii) competition in the generation, distribution, or supply of electricity or any commercial activities connected with the generation, distribution, or supply of electricity; and
(iii) the operation of the national electricity transmission system; and
(iv) matters relating to sustainable development, safety or security of supply, or the management of market or network emergencies; and
(v) the Code's governance procedures or modification procedures; and

(b) is unlikely to discriminate between different classes of Parties.

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electricity because the data will be more accurate and granular which will enable innovation and competition.

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8 Panel's Initial Discussions on the original solution

The P432 Assessment Report was presented to the Panel at its meeting on 9 June 2022 (327/04)[34].

The LDSO representative believed the impact on LDSOs could be medium to high and not low, as LDSOs will need to engage with customers about the new requirements and this may be more difficult for this type of customer. We updated the section 4 'Impacts & Costs' to reflect this following the Panel meeting.

The Panel pointed out that there is a clear split between the responses of Suppliers and Supplier Agents, majority of the Suppliers didn't see the benefits of this Modification and weren't in favour of its implementation. It was pointed out that the current difficult market situation should be considered. P432 will lead to increased costs to the majority of impacted consumers at a time where they are already facing exceptional cost of living pressure. Further, industry is facing these challenges and it would be wrong of the Panel not to carefully consider the views of the Suppliers who will need to implement P432.

A Panel Member added that if Suppliers state that they can't meet the deadlines for P432 (and believe it more efficient to migrate these Metering Systems under the MHHS Programme) they felt uncomfortable ignoring those voices. Another Member stated that they understood the reasons and logic for bringing P432 forward but that this needs to be weighed up against the feedback from Suppliers. At the same time, industry would not thank the MHHS Programme for delays or increased costs as a result of CT Advanced Meter market [where P432 was not progressed].

The Panel asked whether the cost of non-compliance had been factored in. Elexon stated that no compliance checks or mitigating actions would be taken prior to the migration deadlines, in line with PAB discussions that had been had. Elexon therefore expected the costs to be low for assurance activities, even after the migration deadlines, as the volumes of energy associated with these Metering Systems would pose a low risk to Settlement. However, Elexon and the PAB could take action using the existing PAF techniques, if needed.

It was also pointed out the reasons provided to implement this Modification is to do it prior to the MHHS migration rather than having hardcoded dates. The MHHS representative stated that P432 is a risk mitigation exercise, even if only some of the CT Advanced Meters can be moved by the mandated dates it will still help the migration to MHHS TOM. They added that P432 would help to avoid surprises in the MHHS migration at a time when you do not want surprises and that the MHHS migration start date was still unlikely to change. Further, the scale of the issues with CT Advanced Meters was not known, so starting early and learning lessons would be helpful for the MHHS migration.

It was pointed out that P432 is closely related to the MHHS Programme and it was raised to de-risk to Programme. The earlier CT Advanced Meters are moved to HH Settlement the sooner the Programme will observe what the issues are, therefore doing the work upfront will be beneficial.

The Panel agreed by majority that P432 does not better facilitate Applicable BSC Objectives (c) and (d), for the reasons put forward by the Workgroup, and thus made an initial recommendation that P432 should be rejected. The Panel commented that the

[34] https://www.elexon.co.uk/meeting/bsc-panel-327/

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increased costs to serve and the competiveness of this market segment was beyond their control, but P432 could exacerbate this existing issue.

The Panel also unanimously agreed that P432 should be submitted to Ofgem for decision (not Self-Governance), for the reasons provided by the Workgroup, did not impact the EBGL balancing terms and conditions or extend them and that the legal text and subsidiary documents delivered the intent of P432.

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9 Report Phase Consultation Responses to the original solution

This section summarises the responses to the Panel's Report Phase Consultation on its initial recommendations. We received eleven responses to the consultation, with respondents representing Suppliers, Distributors, Supplier Agents (DCs, DAs, and MOAs) and a Software Provider. You can find the full responses in Attachment D. Please note that one respondent gave their response verbally to indicate that they support the approval of P432 (captured in the first question in the table below only).

Summary of P432 Report Phase Consultation Responses

Question	Yes	No	Neutral/ No Comment	Other
Do you agree with the Panel's initial recommendation that P432 should be rejected?	5	5	0	0
Do you agree with the Panel that the redlined changes to the BSC deliver the intent of P432?	7	1	1	0
Do you agree with the Panel that the redlined changes to the Code Subsidiary Documents deliver the intention of P432?	7	1	1	0
Do you agree with the Panel's recommended Implementation Date?	4	5	0	0
Do you agree with the Panel's initial view that P432 does not impact the EBGL Article 18 terms and conditions related to balancing held within the BSC?	8	0	1	0
Do you agree with the Panel's initial view that P432 should not be treated as a Self-Governance Modification?	8	0	1	0
Do you have any further comments on P432?	5	4	0	0

Overall responses were in line with the views and arguments provided in the Assessment Procedure Consultation. No new arguments were put forward. We summarised the responses below.

Approval of P432

Five respondents agreed with the Panel's recommendation that P432 should be rejected and five respondents disagreed.

Respondents that agreed with the Panel noted that this change should be progressed as part of the MHHS Programme instead and the implementation of P432 could expose a subset of customers to higher charges earlier than necessary.

Respondents that disagreed stated that by moving CT Advanced Meters to HH Settlement prior to MHHS will be beneficial as it will give Parties a 'head start' on the migration and it will reduce the risk of implementing MHHS. It will highlight problems ahead of the greater

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transition scheduled within the implementation programme. Respondents also stated that P432 will increase Settlement accuracy as actual interval data entering Settlement is of a greater accuracy than Settlement based on estimations.

Amendments to the BSC and Subsidiary Documents

The majority of the respondents agreed that the redlined changes to the BSC and to the Code Subsidiary Documents deliver the intention of P432.

One respondent disagreed with the redlined changes to the BSC and the CSDs as they did not agree with the Implementation Date of October 2023 and stated that this change should be implemented in line with the MHHS programme in 2024/25. The respondent had the view that by implementing this change earlier it will result in additional costs and resources being taken away from the Programme.

Implementation Approach, Self-Governance and EBGL views

Four respondents were supportive of the Panel's recommended Implementation Date and five respondents disagreed. The respondents that disagreed all had the view that P432 should not be implemented rather than commenting on what the approach should be, were P432 approved.

All respondents, except one that did not comment, agreed that P432 should not be treated as a Self-Governance Modification. They also agreed that P432 does not impact EBGL Article 18 terms and conditions related to balancing held within the BSC

Further Comments

Majority of the additional comments were in line with those provided in the Assessment Procedure Consultation. However, one distributor did highlight that they estimate that their Low Volume (LV) and LV Sub HH Customers will go up in number by approximately an extra third. They stated that this will have a significant effect on reducing the TCR band levels i.e. some customers that were Band 1 will become Band 2, some Band 2 will become Band 3 and some Band 3 will become Band 4. Customers that have adjusted their capacity by over 50% to move bands may find that they are back in their original band.

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10 Panel's Final Discussions on the original solution

The first P432 Draft Modification Report was presented to the Panel at its meeting on 14 July 2022 (328/06)[35].

A Panel Member stated that they have had discussions with Suppliers regarding P432 and expressed that Suppliers are not against implementing the obligations proposed by this Modification, however they are not supportive of the timings proposed.

Another Panel Member explained that the MHHS Programme is looking at what impact moving these sites, amongst others, to HH Settlement early has on competition and what the consumer options are to switch early. The migration working groups will be well informed on these and Ofgem should wait until they have come to a conclusion before deciding on P432.

A Panel Member pointed out that MHHS is recommending this change is made early to reduce the risk of delivery. They did not see enormous evidence that it will be difficult for Parties to implement these changes, Parties that disagreed with implementing P432 have said these changes should be done later and that P432 is relatively marginal to delivery of MHHS.

A Panel Member stated that the Initial recommendation for this Modification was made back in 2021. At the time of the recommendation there were different aspirations for the MHHS timescale and therefore the benefits of de-risking the bigger project has eroded. They believed that essentially the window has closed and they couldn't see the point of implementing P432 before MHHS.

It was pointed out that the recommendation was made last year but it was an industry recommendation rather than an Elexon one. The MHHS representative agreed that the context has changed since the initial recommendation. Support for CCDG's recommendation was initially very strong. However, since then market conditions have changed. It was pointed out that although the MHHS design work has changed, the migration dates haven't moved and it is these dates that P432 was based on.

It was highlighted that CT Advanced Meters are quite complex cases and if we leave the obligations for later then Parties may not be able to implement these changes. Further, not all Parties are mobilising for MHHS which supports the case to bring difficult cases forward.

The LDSO representative commented that many LDSOs share the concerns expressed by WPD in the Report Phase Consultation (new HH customers that will require connection agreements in a short space of time). Another Panel Member added that if others were concerned they should have responded to the consultation as they need to deal with the evidence in front of them.

The Panel also discussed whether removing the compliance deadline would help, as it would allow those that can migrate early to do so, whilst not affecting those that would find it more challenging. A concern was raised that this approach would be unlikely to reduce the risk to the MHHS Programme that this Modification sought to achieve, as many organisations are unlikely to prioritise optional changes. A middle ground would be to move the P432 deadlines back, but this would require further consultation against an already challenging timeline.

[35] https://www.elexon.co.uk/meeting/bsc-panel-328/

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The Panel agreed by majority that P432 does not better facilitate Applicable BSC Objectives (c) and (d), for the reasons provided by the Workgroup and consultation respondents (that thought P432 should be rejected). The Panel therefore recommend P432 should be rejected.

The Panel also unanimously agreed that P432 should be submitted to Ofgem for decision (not Self-Governance), that it does not impact the EBGL balancing terms and conditions or extend them and that the legal text and subsidiary documents delivered the intent of P432.

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11 Send Back Process

In this section, we provide details on the Ofgem Send Back, the Panel's Send Back Process for P432 and the Workgroup discussion to address the Send Back.

Send Back Direction

Ofgem issued a Send Back Direction per Section F, 2.7A.1(a) (Attachment E) on 26 August 2022, citing its inability to approve or reject P432 based on the evidence provided. In its letter Ofgem state they understand and appreciate the benefits of de-risking the MHHS Programme and as such agree with the recommendation made by the CCDG to migrate CT Advanced Meters ahead of MHHS migration. However, they also recognise that in the current market conditions, which have changed since this Modification's conception, it may not be appropriate to require Suppliers to prioritise the migration of CT Advanced Meters over the coming months. Ofgem also agreed with concerns that costs to customers might increase inappropriately if their capacity requirements are not properly understood ahead of migration. Therefore they believe it is important, particularly in the context of current energy prices, that action is taken to address this generally, and specifically in relation to P432

In its letter Ofgem directed that additional steps should be undertaken to enable them to make a fully informed decision on the proposal:

1. Generate a revised implementation timeframe for P432, which takes appropriate account of the difficulties faced by Suppliers in the current market context but ensures that CT migration is completed sufficiently ahead of the end of MHHS migration to retain the benefit created by de-risking the wider MHHS Programme.

2. This work should also take account of the desirability of a DCUSA modification being raised as soon as possible to resolve the issues described surrounding excess capacity charging. The purpose of such a modification would be to ensure that the end consumer has the opportunity to discuss their appropriate capacity charging before/when they are migrated to HH. The DCUSA modification should come into force before the start of migration under P432.

   Ofgem considers that this DCUSA modification should come into force before the start of migration under P432. It should also addresses the situation of any customers who have been migrated to HH under P272, or at any other time without prior agreement with the customer and may still be paying inappropriately high capacity charges. Ofgem also notes that they expect the DCUSA modification to be pursued as a priority and are prepared to use their powers of direction if that would be helpful to ensure the modification is brought forward and implemented in a timely manner.

As outlined in Section F 2.7A, Elexon presented a draft Send Back Process to the Panel (Attachment E) describing how it intended to address Ofgem's Direction. This details how the P432 Workgroup will reconsider the compliance deadlines for P432 and Elexon's engagement with Ofgem and DCUSA regarding the DCUSA Modification. The Panel approved the following timetable for the P432 Send Back process:

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P432 Send Back Timetable	
Event	Date
Workgroup meeting to consider P432 Implementation approach	29 September 2022
P432 Consultation (10WDs)	11 October 2022 – 25 October 2022
Workgroup meeting to consider consultation responses	27 October 2022
Present revised Draft Modification Report to Panel	10 November 2022
Resubmit Final Modification Report to Authority	16 November 2022

Further Workgroup discussions

Elexon held a Workgroup meeting on 29 September 2022 to reconsider the Implementation approach for P432 in order to address the Send Back direction.

Risks to MHHS

The Workgroup re-explored what risks the absence of P432 would pose to P432 and the issues, mostly from Suppliers, given via the P432 consultations to date.

The MHHS representative re-confirmed that P432 is about ensuring sufficient time is allowed to address anticipated issues from this segment of the market. It had already flushed out the DCUSA issue, as detailed in Ofgem's P432 Send Back.

The feedback from Suppliers was that managing the P432 migration separate to the MHHS migration was not efficient and would require them to manage two separate migrations and two set of system changes. This could increase the delivery risk and costs for Suppliers, which could in turn, add risk to the MHHS delivery. The Workgroup were keen to find a new Implementation approach that would address the Send Back and the Supplier concerns, if at all possible.

Compliance deadlines to settle HH for CT Advanced Meters

Elexon explained that there are three milestones for P432:

1. All new connections for CT Advanced Meters to settle HH
2. Start of CoMC activity for existing CT Advanced Meters
3. CoMC completion for existing CT Advanced Meters

New connections

The Proposer confirmed the reason they wanted a different date for new connections compared to existing connections was to reduce the amount of work needed overall. Each new connection that is registered as NHH, adds to the backlog of NHH MSIDs to migrate to HH. They were open to whether the compliance deadline for new connections should be fixed or relative e.g. [n] number of months before a MHHS Milestone. A fixed date

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approach would provide certainty, whilst a relative date would provide flexibility, were circumstances to require key MHHS activity to change again.

The Workgroup discussed that the compliance date in the original solution for new connections for CT Advanced Meters to settle HH was previously 1 October 2022. However, this date was challenging for Suppliers as it only gave Suppliers ~1 month from the Implementation of P432 to prepare for this mandate. This was viewed as necessary (but not preferable) to meet the original MHHS timetable and fixed date approach taken under the original P432 solution. The Workgroup agreed that it would be better if new connections were required to:

- Settle HH after April 2023, to avoid unnecessary network charges; and
- Sufficient lead-time was given to enable Suppliers to manage their sales pipeline.

The Proposer believed at least a three month lead time would be needed to prepare new connections to be registered as HH instead of NHH (such as ensuring customers are properly informed and appropriate tariffs are offered), given the likely sales pipeline of Suppliers. The Workgroup agreed to consult on the required lead-time, believing three months seemed appropriate.

It was pointed out that the compliance date should take into consideration CP1558/R0032 Implementation Dates, as these two CPs will introduce the Connection Type data item, which makes it possible to identify CT Meters. This would also allow Suppliers to confirm and agree an appropriate Supply Capacity for these Meters, and therefore facilitate the requested DCUSA modification, which is expected to grant a 12-month grace period for the application of excess capacity charges for these types of meters.

Both CP1558/R0032 are targeting Implementation in June 2023, therefore the Workgroup agreed the Implementation Date for P432 and the new connections mandate should also come into effect on 29 June 2023, as part of the standard June 2023 BSC Release. It was also discussed that Ofgem should make a decision on P432 to give Suppliers sufficient time to prepare to settle new connections as HH instead of NHH. The current proposal is therefore three months prior to this compliance date so that industry has enough time to prepare for the new connection mandate.

Send Back Consultation Question
Do you agree a three month lead time is sufficient to settle new connections for CT Advanced Meters HH?
The Workgroup invites you to give your views using the response form in Attachment F

The Workgroup believed this fixed approach was appropriate as:

- It met the two requirements above (after April 2023 and sufficient lead time – subject to consultation responses);
- Would use existing processes;
- Would be more efficient to manage once CP1558/R0032 were implemented; and
- There were likely low volumes of new connections each month (100' or low 1000's was best guesses given in the Workgroup meeting).

The Workgroup noted that CP1558 had been approved, while R0032 was due for decision. Elexon highlighted that it was CP1558 that would introduce the required data to support

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the CT migration. R0032 intended to display the required data item in in the Electricity Enquiry Service (EES), however CP1558 did not update the REC Energy Market Asset Repository (EMAR) Data Specification so R0032 could not make this change. The group noted that two new CPs, CP1568 and R0062 were raised (also targeting June 2023 Release for Implementation) to display this data item in the EES. The Group noted that were any issues to arise with any of these CPs, that an alternative approach would be to require new connections to settle HH [3] months after the P432 Implementation Date.

The Workgroup agreed with Elexon that the DCUSA modification did not apply to new connections because an appropriate Supply Capacity should be agreed as part of the New Connections process and so no excess capacity charge will be levied.

A Workgroup member expressed concern that the capacity ratings were not agreed, but another member highlighted that a capacity agreement has to be agreed and signed with the customer. The member clarified that he was concerned many sites had agreed capacities much higher than was necessary, which could lead to higher costs than necessary. The consensus of the Workgroup was that the DCUSA modification, along with better data from CP1558/R0032 should help with this, as it would enable Suppliers to validate the capacity rating and require engagement between the customer, LDSO and Supplier on the capacity rating and the obligation to move to HH Settlement.

CoMC start date for existing CT Advanced Meters

Elexon explained that there was no explicit start date for the CoMC activity in the original solution, but industry was strongly advised not to start CoMC migration until after April 2023 after the DUoS changes come into effect (see Section 6 for further details). Moreover, the expectation set was that the migration would occur over a 12 months period beginning in October 2023, 12 months before M11 in the MHHS Transition Timetable.

It was suggested to only recommend the CoMC start and end date rather than mandating them. This would reduce the burden on industry. However, this was not taken forward the majority of the Workgroup did not believe enough Suppliers would migrate early enough to address the risk that P432 seeks to address.

As part of the Send Back Direction, Ofgem were clear that the DCUSA Modification should be in place prior the CoMC activity starts. The Workgroup agreed that the CoMCs should start at the point of the Implementation date for P432 so they suggested this activity should also begin in June 2023. This should also give enough time to implement the DCUSA modification. The Workgroup and Proposer therefore agreed to include a CoMC start date in the legal text. This would provide clarity to industry and send a consistent message, including the DCUSA workgroup [for the required DCUSA modification]. The Workgroup noted that in practice, it is the CoMC end date that is critical for the migration activities.

The Workgroup considered whether there should be some criteria that would be required to be met, before the CoMC activity could begin. This was not taken forward, as Suppliers or customers can currently elect to settle these Meters HH and this right should not be removed. Further, there are current obligations (100kW) on Suppliers to settle certain sites as HH, which would be complicated or not feasible were additional criteria to be introduced.

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CoMC completion date for existing CT Advanced Meters

Elexon explained that the completion date for CoMCs was particularly important as Ofgem has made it clear this Modification must retain its benefit to de-risk the Programme. It was highlighted that the MHHS Programme is currently going under a re-plan so having a relative date and pinning the compliance date to a MHHS Milestone could be a better option than having fixed dates. Fixed dates would risk needing to amend the P432 implementation approach again in the future if MHHS plans or industry circumstances change again.

Initially it was suggested the end date could be pinned to the M11 milestone (start of 1 year migration for UMS/Advanced). This would be in keeping with the CCDG recommendation. However, the Workgroup agreed the M14 milestone (all Suppliers must accept MSIDs under the new TOM (one way gate)) could be more appropriate. It was explained that M11 is the start of the migration, but it's the early adoption window with a two way gate. If CoMCs take place prior to M14, customers can still change their Supplier and go back to old arrangements (can do a reverse CoMC). As part of the consultation the Workgroup would like to find out if Market Participants prefer to pin the end date of CoMCs to M11 milestone (currently October 2024) or the M14 milestone (currently February 2025). The group believed M14 also had the advantage of addressing Supplier concerns of having to manage two migrations and two sets of system changes (one for P432 and one for MHHS). M14 would allow Suppliers to migrate straight to the TOM with its MHHS systems if they preferred. P432 activity would then primarily be about a data cleanse activity with Supplier choice to CoMC or migrate straight to MHHS TOM.

The MHHS Programme responded they are most concerned that P432 is approved, and for that reason alignment of the compliance date to M14 would be acceptable. The prerequisite activities and associated changes that support P432 will be required for migration whether CoMC happens or not, but P432 will bring these activities forward and decouple them from migration. The activities that occur outside the BSC, such as the agreement of an appropriate Supply Capacity and provision of remote communications have an additional lead time associated with them, and these should be initiated as soon as reasonably practicable. The M14 compliance date is the date by which the last CoMC needs to be completed for all currently NHH settled CT Metering Systems – the majority is expected to be moved to HH well before then.

Send Back Consultation Question
Do you agree with the P432 Workgroup that the CoMC migration completion date for CT Advanced Meters should be pinned to M14 and not M11?
Please provide any risks, issues and advantages and disadvantages for requiring CT Advanced Meters to migrate to HH by M11 versus M14.
The Workgroup invites you to give your views using the response form in Attachment F

HH v. NHH Cost Comparison

A Workgroup Member completed a further cost analysis (Attachment B – cost exercise 3) to compare the difference between the prices for NHH v. HH sites across ten different Suppliers (see attachment C for further details). They concluded that across these Suppliers the total for NHH supplies was £2,626,502.77 and for HH it was £3,297,715.30 (£671,212.52 higher), this meant that according to their analysis HH sites are priced 26% higher than NHH.

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The Workgroup Member argued that the cost analysis is further evidence that Supplier tariffs are driving the higher costs for HH sites compared to NHH and P432 would lead to increased costs for consumers.

It was pointed out that 69kVA capacity has been used for the HH sites in the cost exercise, however CT installations are usually only used above 69kVA. If the required customer demand is below 69kVA, then these would typically be whole current sites and not within scope of P432. The Member that carried out the exercise challenged back that the majority of those in scope for P432 will have confirmed demand less than 69kVA. The cost exercise considers the charges as they are now, versus how they would be should P432 gains approval. The variables post P432 implementation would be MOA contract cost and kVA, should a customer contact the DNO for a new capacity agreement.

It was challenged by the Workgroup that these are issues in the commercial HH market, they are not in scope of P432. It was also highlighted that Ofgem have carried out vast amounts of work previously to justify the benefits of MHHS, therefore the issues highlighted need to be weighed up against the overall benefits of MHHS.

The Workgroup Member also invited the Proposer to publish details of all metering costs associated with a NHH settled CT Metered supply, along with those when they are to be settled HH. The Proposer commented that this information is commercially sensitive as these costs are subject to commercial contracts they hold in place with various metering businesses, therefore they are not prepared to share this information.

Wider Issues for CT Advanced Meters

Increased MOA costs to service CT Metering Equipment

A Workgroup Member pointed out that a CT site will incur an additional cost to maintain an Advanced Meter and communications. However, this is one of the costs that a Supplier may not correctly factor into a NHH customer offering today, due to the historically poor quality of CT Ratio data in the D0150 (Non Half Hourly Meter Technical Details), meaning they do not have visibility of the presence of a CT Advanced Meter. Where CT, this cost should be added to the NHH charges too.

It was suggested that if Suppliers are incurring charges from MOAs because of Meter type differences, this could be resolved by requiring or encouraging consumers with CT Meters to directly agree their MOA contracts, whether they are settled NHH or HH.

Installation of CT metering in excess of current consumer demand

Another issue that was pointed out was that a typical load factor of the supplies that are in scope for P432 are as low as 5%. Such low load factors support the evidence that the vast majority of the 50,000 CT Meters in scope of P432 do not have sufficient demand to justify a CT Meter, and the connection arrangements are a consequence of larger capacity supply inherited from previous customers. While the Proposer recognises that this is a problem, it is not within P432's scope to fix as the decision to install CT Metering is outside the BSC.

Where a current end consumer's demand is well below the supply capacity provided by the installed CT metering, it would not be a good use of industry resources to remove these CT Meters to fit whole current metering only for a future consumer to find it insufficient.

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Increased cost for more frequent manual site retrieved readings

A Workgroup Member pointed out that for some sites where the Meter's communications has stopped working, Suppliers could request weekly hand held readings which would incur an annual cost of up to £780 (£15 a reading).

Elexon explained that such situations are unlikely as only CT Advanced Meters are in scope of P432, and these Meters must have remote communications to be compliant with their license conditions. There shouldn't be many instances where sites would need weekly readings to be taken. Although there may be manual site visits driven by faults with the Advanced Metering equipment, there is a process to resolve communication faults. The Workgroup Member countered that whilst MOAs are supposed to adhere to both contracts and industry requirements to resolve fault issues, faults can and do go unresolved for more than a year.

Although P432 is unable to consider these wider issues, the Workgroup wishes to understand whether respondents have suggestions for how these issues could be solved. Elexon is willing to work with interested Parties or other Industry Codes to progress these solutions, as they will be relevant to future MHHS.

Send Back Consultation Question
Do you have any suggestions how the wider issues for CT Advanced Meters could be solved?
The Workgroup invites you to give your views using the response form in Attachment F

How is the Ofgem direction to raise a DCUSA modification being addressed?

The P432 Proposer has agreed to raise the required DCUSA modification. At the time of writing they are drafting the Proposal form and working closely with DCUSA, Elexon and Ofgem.

Ofgem require this DCUSA modification to come into force before P432 obligations come into force. The P432 Workgroup are of the view, including the DCUSA modification Proposer, that this is reasonably achievably given their revised P432 Implementation Date of 29 June 2023. The Workgroup included a DCUSA representative who confirmed, subject to how Workgroup discussions and impact assessments unfold, should be achievable, particularly given the request from Ofgem to treat this as a priority.

Workgroup Views on the revised solution to address the Ofgem Send Back

Does P432 better facilitate the Applicable BSC Objectives?		
Obj	Proposer's Views	Other Workgroup Members' Views[36]
(a)	• Neutral	• Neutral
(b)	• Neutral	• Neutral

[36] Shows the different views expressed by the other Workgroup Members – not all Members necessarily agree with all of these views.

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Does P432 better facilitate the Applicable BSC Objectives?		
Obj	Proposer's Views	Other Workgroup Members' Views[36]
(c)	• **Positive**	• **Three positive, three negative**
(d)	• **Positive**	• **Majority Positive** (one detrimental, one neutral)
(e)	• Neutral	• Neutral
(f)	• Neutral	• Neutral
(g)	• Neutral	• Neutral

The Workgroup's views remained largely similar after Ofgem's Send Back Direction, the Workgroup by majority still believed P432 should be approved. However, there was an additional vote that P432 would not better facilitate Applicable BSC Objective (c) and rather it will be detrimental. Their view was in line with previous discussions that if P432 progresses it will stifle competition rather than promote it because Suppliers are not prepared to offer low consuming customer's contracts for supply.

Send Back Consultation Question
Do you agree with the Workgroup's majority view that P432 does better facilitate the Applicable BSC Objectives than the current baseline?
Do you agree with the Workgroup that there are no other potential Alternative Modifications within the scope of P432 which would better facilitate the Applicable BSC Objectives?
The Workgroup invites you to give your views using the response form in Attachment F

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Appendix 1: Workgroup Details

Workgroup's Terms of Reference

Specific areas set by the BSC Panel in the P432 Terms of Reference	Conclusion
Should the references to the P272 implementation date in Section S 2.6.1A and 2.6.1B be removed, as the implementation date has now passed?	Workgroup consensus was that references to P272 that are no longer relevant should be removed.
Should the BSC definition of Advanced Meters be extended from SLC 12.18 to other SLCs?	The Workgroup agreed that the definition should be extended. The consensus was that the new definition for Advanced Meters in 'BSC Section X, Annex X-1' should be extended so that it captures all HH Metering Systems with remote communications that are not Smart Meters.
What interactions does the proposal have with existing P272 obligations and CP1549?	Workgroup consensus was that there are no interactions. PC5-8 Meters that are not Advanced won't settle HH, if they are Advanced then they should be settled HH by now.
Consider removing the ability to CoMC back to NHH?	The Workgroup decided to maintain the ability to move back to NHH to maintain domestic and micro-business opt-out rights.
Consideration of exemptions	The Workgroup agreed that domestic and microbusiness premises can opt out of the P432 requirements. The Workgroup also agreed that CT Advanced Meters with no working communications will be exempt from the P432 solution (unless the communications stopped working after the move to HH Settlement).
Assessment of the costs and benefits, where possible and needed.	The baseline view is that we don't perceive a large impact on costs as the processes are already there, and have already been conducted for P272. The main benefit is that P432 is de-risking the migration to MHHS.
Consider impacts on Supplier Charges.	Workgroup reached the consensus that P432 is not likely to materially impact Supplier Charges (in relation to SP04 and SP08), noting that some Suppliers will be more impacted by P432 than others, depending on their Supplier portfolio.

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Specific areas set by the BSC Panel in the P432 Terms of Reference	Conclusion
Consideration of the role of Elexon and the PAB in monitoring, reporting and managing the migration and new obligations.	The Workgroup consensus was that no new requirements were needed. Some monitoring should be done and the starting point is for Elexon to do that using the data made available by CP1558. If there is a significant risk identified during the monitoring then the PAB and Elexon can then take remedial action accordingly, using existing mechanisms. Ultimately, the MHHS Programme will then make sure the CT meters are moved over to the MHHS TOM which will be picked under their wider MHHS activities.
What data cleanse obligations are required?	No data cleanse obligations are obligated under P432, but Suppliers will have to undertake data cleanse activities in order to complete the CoMC activities.
What barriers currently exist that prevent Suppliers from moving Whole Current Meters to settle HH?	As WC Meters are out of scope of P432 no change is needed to address these. A Workgroup Member stated there aren't any barriers, as WC could be moved to HH Settlement now using the existing CoMC process. However, the same issues with moving CT Meters to HH will persist for WC, such as higher costs for consumers.
How will P432 impact the BSC Settlement Risks?	Workgroup agreed with the Identified BSC Settlement Risks.
What changes are needed to BSC documents, systems and processes to support P432 and what are the related costs and lead times? When will any required changes to subsidiary documents be developed and consulted on?	The Proposed Modification makes amendments to BSC Sections L, S, X-1, Z and BSCP516. P432 is a document only change that will not require any changes to BSC Central Systems.
Are there any Alternative Modifications?	None formally raised.

Assessment Procedure timetable

P432 Assessment Timetable	
Event	Date
Panel submits P432 to Assessment Procedure	9 December 2021
Workgroup Meeting 1	24 January 2022
Workgroup Meeting 2	23 February 2022
Assessment Procedure Consultation	30 March 2022 – 22 April 2022

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P432 Assessment Timetable	
Event	Date
Workgroup Meeting 3	6 May 2022
Panel considers Workgroup's Assessment Report	9 June 2022
Report Phase Consultation (10WDs)	15 June 2022 – 1 July 2022
Present Draft Modification Report to Panel	14 July 2022
Issue Final Modification Report to Authority	20 July 2022
Workgroup Meeting 4	29 September 2022
P432 Consultation (10WDs)	11 October 2022 – 25 October 2022
Workgroup Meeting 5	27 October 2022
Present revised Draft Modification Report to Panel	10 November 2022
Resubmit Final Modification Report to Authority	16 November 2022

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Workgroup membership and attendance

P432 Workgroup Attendance					
Name	Organisation	24 Jan 2022	23 Feb 2022	6 May 2022	29 Sep 2022
Members					
Lawrence Jones	Elexon *(Chair)*	☎	☎	×	☎
Elliott Harper	Elexon *(Chair)*	×	×	☎	×
Aylin Ocak	Elexon *(Lead Analyst)*	☎	☎	☎	☎
Lee Stone	Npower Commercial and Gas Limited *(Proposer)*	☎	☎	☎	☎
John Greene	SSE	☎	☎	☎	☎
Phil Russell	Consultant	☎	×	☎	×
Tom Chevalier	Power Data Associates	☎	☎	☎	×
Nik Wills	Stark	☎	☎	☎	☎
Pete Butcher	SSE	☎	☎	☎	×
Simon Askew	Business Energy Direct	☎	☎	☎	☎
Andy Kelsall	Scottish Power	☎	×	☎	☎
Tony Mason	Siemens	☎	×	☎	×
George Barnes	Utilita	×	☎	☎	×
Ian Hall	ImServ	×	☎	☎	×
Claire Roberts	Scottish Power	×	☎	×	☎
Attendees					
Mark DeSouzaWilson	Elexon *(Design Authority)*	☎	☎	×	☎
Jonny Moore	Elexon *(Design Authority)*	×	×	☎	×
Eden Ridgeway	Elexon *(Lead Lawyer)*	☎	☎	☎	☎
Vlada Petuchaite	Ofgem	×	☎	×	×
Danielle Walton	Ofgem	×	×	☎	×
Andy MacFaul	Ofgem	×	×	×	☎
Helen Clarke	Siemens	×	☎	×	☎
William McKay	Scottish and Southern Electricity Networks	☎	☎	☎	×
Ben Trasler	Drax	☎	×	☎	×
Louis Corsi	SSE	☎	☎	×	×
Chris Day	Elexon *(SME)*	☎	☎	☎	×
Oliver Meggitt	Elexon *(SME)*	☎	×	☎	×
Matthew McKeon	MHHS Programme	×	☎	☎	☎
Kevin Spencer	MHHS Programme	×	☎	×	×

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P432 Workgroup Attendance					
Name	Organisation	24 Jan 2022	23 Feb 2022	6 May 2022	29 Sep 2022
Dylan Townsend	Electralink	✖	✖	✖	☎
Kristina Leary	SMS Plc	✖	✖	✖	☎
Mike Jarman	Imserv	✖	✖	✖	☎
Gareth Evans	Waters Wye Associates Limited	✖	✖	✖	☎
Rhys Kealley	British Gas	✖	✖	✖	☎
Ed Rees	Citizens Advice	✖	✖	✖	☎

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