

## Phase

Initial Written Assessment

Definition Procedure

Assessment Procedure

Report Phase

Implementation

## P434 'Mandate to Half Hourly Settle the Non-Half Hourly Unmetered Supplies Metering Systems'

This Modification will require a period of mandatory Change of Measurement Class (CoMC) activity for all Non-Half Hourly (NHH) Unmetered Supplies (UMS) Metering Systems to complete before the Market Wide Half Hourly Settlement (MHHS) migration to the Target Operating Model (Milestone 11 (M11) in the MHHS Timetable). At the time of writing, this would need to complete by October 2024. It will also require all new UMS connections to be settled Half Hourly (HH) from 12 months prior to M11, currently October 2023. This will de-risk the MHHS Transition Timetable. It will deliver Recommendation 8 by the Code Change and Development Group (CCDG) as set out in its [Recommendations on the Transition to Market-wide Half-Hourly Settlement \(MHHS\)](#).<sup>1</sup>



The P434 Workgroup recommends **approval** of P434



The P434 Workgroup **does not** believe P434 impacts the European Balancing Guideline (EBGL) Article 18 terms and conditions related to balancing held within the BSC

This Modification is expected to impact:

- Suppliers
- Licenced Distribution System Operators (LDSOs)
- Unmetered Supplies Operator (UMSOs)
- Meter Administrators (MAs)
- Half Hourly Data Collectors/Aggregators (HHDCs/HHDAs)
- Non Half Hourly Data Collectors/Aggregators (NHHDCs/NHHDAAs)

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<sup>1</sup> <https://www.elexon.co.uk/consultation/ccdg-consultation-on-transition-approach-for-mhhs/>



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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 and 7
- 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 document is the P434 Workgroup's Assessment Report to the BSC Panel. Elexon will present this report to the Panel at its meeting on 13 October 2022. The Panel will consider the Workgroup's recommendations, and will agree an initial view on whether this change should be made. It will then consult on this view before making its final recommendation to the Authority on 10 November 2022.

There are three 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 draft redlined changes to the BSC and its subsidiary documents for P434.
- Attachment B contains the draft data cleanse template for P434.
- 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.

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## Why Change?

Market-wide Half-Hourly Settlement (MHHS) requires that all Metering System Identifiers (MSIDs) are settled on a Half-Hourly basis. The Code Change and Development Group (CCDG) recommended moving Non Half Hourly (NHH) Unmetered Supplies (UMS) MSIDs to settle Half Hourly (HH) between October 2023 and October 2024 to mitigate the risk of not meeting the Transition Timetable set out by Ofgem in its [Full Business Case](#)<sup>2</sup>. This recommendation was [endorsed by Ofgem](#)<sup>3</sup>.

## Solution

Section S8 of the Balancing and Settlement Code (BSC), where the obligations for UMS are set out, will be amended to mandate all NHH UMS are settled HH via a Change of Measurement Class (CoMC) process. The date by which this must happen is tied to the MHHS Transition Timetable (Milestone M11) and is referred to as the UMS Mandate Go-Live Date. Under the current timetable it would require all new UMS MSIDs to settle HH from October 2023 (12 months prior to the UMS Mandate Go-Live Date), the coordinated data cleanse activity window is mandated to commence 18 months prior to the UMS Mandate Go-Live Date (currently April 2023), and all existing NHH UMS MSIDs will be settled on a HH basis by the UMS Mandate Go-Live Date (currently October 2024). The [MHHS Programme](#)<sup>4</sup> will then migrate these HH UMS to the [MHHS Target Operating Model \(TOM\)](#)<sup>5</sup>.

We are aware that the MHHS Programme is currently going through a [re-plan activity](#)<sup>6</sup>, which if approved would result in the UMS Mandate Go-Live Date changing.

## Impacts & Costs

Costs Estimates			
Organisation	Implementation (£k)	On-going (£k)	Impacts
Elxon	<2	75 - 111	<p>Minor implementation costs are associated with drafting and implementing BSC Sections S, BSCP520, BSCP502, BSCP501 and Guidance Notes.</p> <p>On-going costs are driven by holding Implementation Working Groups every 4-6 weeks during the Implementation Phase (24 month period), monitoring the CoMC activities and coordinating the data cleanse activities.</p>

## Market-wide Half-Hourly Settlement

Ofgem is introducing half-hourly settlement (HHS) on a market-wide basis in order to realise the full benefits of settlement reform. The successful introduction of MHHS is a key component of Ofgem's work to facilitate decarbonisation and smarter, more flexible energy sector.



## MHHS TOM

The MHHS TOM (designed by the Elxon-led Design Working Group (DWG)) is a set of Services required to deliver Settlement Period (SP) 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)

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<sup>2</sup> <https://www.ofgem.gov.uk/publications/electricity-retail-market-wide-half-hourly-settlement-decision-and-full-business-case>

<sup>3</sup> [Update: Electricity Settlement Reform Significant Code Review. Response to the CCDG recommendations on the transition approach for MHHS \(ofgem.gov.uk\)](#)

<sup>4</sup> <https://www.mhhsprogramme.co.uk/>

<sup>5</sup> [Design Working Group preferred TOM report | Ofgem](#)

<sup>6</sup> <https://www.mhhsprogramme.co.uk/programme-information/planning>

Costs Estimates			
Organisation	Implementation (£k)	On-going (£k)	Impacts
NGESO	0	0	No impact identified
Suppliers, LDSOs, UMSOs, MAs, HHDCs, NHHDCs, HHDA and NHHDA	Low to high	Low	Consultation responses indicated cost estimates ranging from low (<£100k) to high (>£1M). It is understood that bulk of the implementation costs are expected to be for the CoMC activity and increased external engagement. Ongoing costs are expected to be low.
<b>Total</b>	Medium	Low	

## Benefits

The main benefits to P434 are to de-risk the migration to the MHHS TOM and improve Settlement accuracy.

## Implementation

The Workgroup recommend P434 is implemented via a special release, **five Working Days (WD) after the Authority decision is made**, so long as the decision is received at least 18 months and 5WDs before the UMS Mandate Go-Live Date.

## Recommendation

The Workgroup agrees **unanimously** that P434 should be **approved** as they unanimously believe it would better facilitate Objective (d) 'efficiency in the BSC arrangements'. Three Members agreed P434 would better facilitate objective (c) 'competition' three members were neutral against objective (c), P434 should therefore **be approved**. The Workgroup do not believe P434 will impact the EBGL provisions in the BSC. They believe P434 should be submitted to Ofgem for decision (not a Self-Governance Modification).



### 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.

### What is the issue?

The CCDG has recommended moving NHH UMS MSIDs to settle HH between October 2023 and October 2024 (based on the MHHS Timetable at the time) to mitigate the risk of not meeting the Transition Timetable set out by Ofgem in its Full Business Case.

If the CoMC of NHH UMS MSIDs is not done in advance of transition to the TOM, combined with the workload from other MHHS migration activities, it will significantly increase the risk that there will be insufficient time for Customers, Suppliers and UMSOs to address any issues that may arise during the transition to the MHHS TOM.

The preparation before MHHS TOM migration requires two high level steps:

1. Data cleansing; and
2. Rationalising up to four NHH UMS MSIDs to one HH UMS MSID.

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

The UMSO role will remain like the existing role for HH UMS supplies in receiving inventories from Customers, validating and passing the summary UMS Inventory to the Unmetered Supplies Data Service (UMSDS). The requalification of the MA Role to the UMSDS is due to complete by September 2024. The current UMSO activity to determine NHH Estimated Annual Consumptions (EACs) and the associated processes will cease once the last NHH MSID has migrated to HH Settlement (currently targeted for October 2024).

The UTC (Coordinated Universal Time) Period Level Consumption will be calculated by the UMSDS. This service will be responsible for:

1. receiving inventory data associated with unmetered supplies from UMSOs;
2. validating the inventory data and responding to the UMSO, as appropriate;
3. accessing other dynamic information relating to the operation of Unmetered Supplies;
4. accessing standing data relating to Unmetered Supplies;
5. calculating UTC Period level data for Unmetered Supplies; and
6. providing access to the calculated UTC Period level data to the Market-wide Data Service (MDS) and other market participants.

The UMSDS will be an adapted version of the existing Settlement Market Role of Meter Administrator.

### Background

#### What are Unmetered Supplies?

An Unmetered Supply is any electronic equipment that draws a current and is connected to the Distribution Network without a Meter recording its energy consumption. Unmetered

Supplies exist in the HH and NHH Supplier Volume Allocation (SVA) markets. UMS are typically for things like streetlights and traffic lights.

## MHHS Recommendations

The Ofgem Significant Code Review (SCR) considering [Settlement Reform](#), also known as Market-wide Half Hourly Settlement (MHHS) was launched in July 2017. Under the SCR, the CCDG was convened to develop the MHHS 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, on the basis these changes will need to be raised to allow the required lead time to implement and comply.

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

- **Recommendation 1** will require changes to the BSC and REC to introduce new SMRS registration data items and supporting processes.

*BSC Change Proposal [CP1558](#)<sup>7</sup> and REC Change Proposal [R0032](#)<sup>8</sup> were raised in February 2022 and [CP1568](#)<sup>9</sup>/[R0066](#)<sup>10</sup> were raised in August/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 initially considered whether there may need to be a consequential change under the REC and CUSC, however this is no longer the case because the Modification doesn't have a direct impact on the REC, but a complimentary REC Change has been raised ([R0015 'Remote communication obligations for Advanced Meters'](#)). Also due to the timing of the CoMC activity a CUSC Change is no longer required.

*[P432](#)<sup>11</sup> Modification was raised to progress Recommendation 3 in December 2021.*

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

*This Modification is in support of Recommendation 8.*

The CCDG sought direction from Ofgem on how to progress their recommendations. [In response](#), Ofgem requested that these enabling changes are progressed through the existing code governance framework, with oversight by the MHHS Programme.

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<sup>7</sup> <https://www.elexon.co.uk/change-proposal/cp1558/>

<sup>8</sup> <https://recportal.co.uk/group/quest/-/new-registration-data-items-and-processes-to-support-the-transition-to-market-wide-half-hourly-settlement-mhhs->

<sup>9</sup> <https://www.elexon.co.uk/change-proposal/cp1568/>

<sup>10</sup> <https://recportal.co.uk/group/quest/-/inclusion-of-new-dno-mastered-smrs-data-items-in-the-ees->

<sup>11</sup> <https://www.elexon.co.uk/mod-proposal/p432/>

## Desired outcomes

This Modification should put in place the mandate for Suppliers, LDSOs, UMSOs and Meter Administrators to co-operate in the CoMC process in order the move NHH settled UMS MSIDs to Half-Hourly Settlement in a timely manner to facilitate migration to the MHHS TOM.

### Proposed solution

The obligations for UMS are set out in Section S8 of the Balancing and Settlement Code. It is proposed that the mandate to settle NHH UMS MSIDs on a HH basis is defined in this section of the BSC, together with, obligations on parties to co-operate in the CoMC process, and the centrally coordinated data cleanse operation.

We use dates based on the current MHHS implementation plan in this document. However, the compliance dates for P434 are relative to the MHHS implementation plan. P434 will create a UMS Mandate Go-Live Date, which is defined as the relevant date in the MHHS Programme Timetable. The relevant date is the start of the MHHS migration to the MHHS TOM, currently milestone M11 in the current plan, set as October 2024.

The solution sets out a mandate that the movement of NHH MSIDs to HH should be completed by the UMS Mandate Go-Live Date (currently October 2024) and any new UMS MSIDs have to be registered directly into the HH Settlement process from 12 months prior to the UMS Mandate Go-Live Date (currently from October 2023), **this deadline will also prevent HH UMS MSIDs reverting to NHH Settlement.**

The Balancing and Settlement Code Procedure (BSCP) 520 'Unmetered Supplies Registered in SMRS' has been amended to change the UMS CoMC process so that it requires changing one of the existing NHH MSIDs to HH and de-energising/disconnecting the remaining MSIDs, the document also sets out the process for the coordinated data cleansing operation.

### Data Cleanse and Planning

Data cleansing and migration activity can start at any time now that Ofgem has published the Full Business Case for the MHHS TOM, however the coordinated data cleanse activity window will commence no later than 18 months prior to the UMS Mandate Go-Live Date (currently from April 2023). The UMSO will need to work with the Supplier to cleanse erroneous or non-existent NHH UMS MSIDs. The UMSO will need to logically disconnect where UMS no longer physically exists in consultation with the Supplier.

MA, LDSOs, Suppliers, HHDCs, NHHDCs and UMSOs will be mandated to cooperate with each other for the data cleanse and CoMC activities.

There will be an obligation for UMSOs and Suppliers to complete the data cleanse template provided by Elexon to facilitate the data cleanse activities.

Dealing with orphaned MSIDs should be part of the data cleanse activities and they shouldn't be disconnected if UMSOs/Suppliers can't get hold of the Customer. MSIDs should only be logically disconnected if it becomes apparent there is no UMS apparatus connected for the UMS MSID. By the UMS Mandate Go-Live Date (currently October 2024) the requirement is that all NHH MSIDs move to HH by undergoing a CoMC even if there are still uncertainties or unknowns that need to be dealt with.

Once the data cleanse is complete the Supplier in conjunction with the UMSO, MA and HHDC will migrate its portfolio of NHH UMS MSIDs to HH via the amended CoMC process. This activity will be monitored by Elexon, but Elexon does not expect to be requesting or managing data cleanse or CoMC plans with parties.

## Key dates based on current MHHS timetable:

**Jun 2022** new Data Transfer Network (DTN) data flows between UMSO & MA for Summary and Control files implemented ([CP1546 'Introducing DTC flows to transfer UMS Summary Inventories and Control files'](#))<sup>12</sup>

**By Oct 2023** – commercial arrangements agreed between Suppliers and organisations acting as Meter Administrators

**By Oct 2024** – complete NHH to HH CoMC for all UMS MSIDs as mandated by this Modification

**From Oct 2023** all new UMS connections shall be HH from date of connection as mandated by this Modification and CoMCs back to NHH will be prevented

These activities will then be followed by the migration to the TOM Service, the Unmetered Supplies Data Service, from Oct 2024 to Sept 2025 (or earlier) under the MHHS Programme.

## CoMC Process

The CCDG discussed the transition approach with the [Unmetered Supplies User Group \(UMSUG\)](#)<sup>13</sup> and identified two potential options for the CoMC approach:

### Option one

Option one follows the current CoMC process in BSCP520 which requires a new MSID to be established with HH Measurement Class. To enable the CoMC the new HH MSID is energised and the old NHH MSIDs are de-energised on the day of change, and then subsequently disconnected. Some UMSOs also set the NHH MSIDs to a zero EAC to further assure accurate Settlement

### Option two

Option two involves changing the CoMC process in BSCP520 so that one of the existing NHH MSIDs is changed to HH and the remaining MSIDs are de-energised and disconnected.

The P434 Workgroup preferred option two and agreed that this option will be taken forward as the CoMC approach. The new CoMC process will only kick in 12 months prior to the UMS Mandate Go-Live Date. Suppliers will drive the CoMC process, however there needs to be an amount of UMSO cooperation.

## UMS certificates

Once MSIDs are migrated to HH, there will be no requirement for UMSOs to issue UMS certificates unless it has been requested by the Supplier or Customer. The Workgroup does not envisage Suppliers will need to hold a certificate for record.

<sup>12</sup> <https://www.elexon.co.uk/change-proposal/cp1546/>

<sup>13</sup> <https://www.elexon.co.uk/group/unmetered-supplies-user-group-umsug/>

## Three Decimal Places for Data Flows

HHDCs, HHDAAs and Suppliers will have the option to send/receive the D0379 (Half Hourly Advances UTC) and/or D0380 (Half Hourly Advances for Inclusion in Aggregated Supplier Matrix) to the nearest three decimal places so that the volumes for these smaller energy consuming sites are calculated more accurately. However, these Market Participants will still have the option to send/receive the consumption data flows currently used - D0036 Validated Half Hourly Advances for Inclusion in Aggregated Supplier Matrix) and D0275 (Validated Half Hourly Advances).

## Implementation Working Group

Exelon will set up an Implementation Working Group for interested Parties to facilitate the Implementation and resolve any operational issues. It is proposed these meetings will be held every four to six weeks and run from the Implementation of P434 until the UMS Mandate Go-Live Date.

The Terms of Reference for the Group will be drafted following P434 approval, but will include things such as:

- Suggesting amendments to the guidance note; and
- Helping Parties meet their new BSC requirements.

## Benefits

This Modification will mitigate the risk of not meeting the Transition Timetable set out by Ofgem in its Full Business Case. If the CoMC for NHH UMS MSIDs is not brought forward, combined with the workload from other MHHS migration activities, it will significantly increase the risk that there will be insufficient time for Customers, Suppliers and UMSOs to address any issues that may arise with the transition to the MHHS TOM.

This change is part of the move to MHHS. The Ofgem full business case set out the benefits of implementing MHHS. Ofgem estimate MHHS will save consumers about £300m per year, with anticipated £4bn-£5bn consumer savings in total over the period to 2040. This change forms part of that implementation. For the avoidance of doubt the TOM will be unable to support the existing NHH Settlement arrangements.

Specifically, the HH Settlement calculation for UMS is more accurate as it models the behaviour of each piece of inventory data provided by the Customer. For example, if a street light is switched off for a period during the night this behaviour will be modelled using the Charge Code which indicates the Circuit Watts for the street light and the Switch Regime which shows the pattern of behaviour. Likewise, if the street light dimmed to another light output level the energy calculation will reflect the behaviour. In general terms the calculation will better reflect the energy consumed within a Settlement Period.

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

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

Do you agree P434 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
8	4	1	2

Majority of the respondents agreed P434 reduces the risks associated with the transition to the MHHS TOM, as early migration will provide Parties additional time to address any risks or issues that may arise. It was also noted that based on the current TOM Design it is more complex to migrate NHH UMS MSIDs directly into the TOM prior to them becoming HH settled, as such the requirement to migrate NHH UMS to HH Settlement prior to the migration to the MHHS TOM is necessary in order to de-risk this element of the MHHS transition.

Respondents that disagreed (comprised of Suppliers) stated that P434 can divert resources required to support the MHHS Programme and the changes should be progressed as part of the Programme instead.

Will your organisation incur additional costs as a result of P434 that you would not have incurred under MHHS? Alternatively, would there be any cost savings from migrating NHH UMS Metering Systems before the MHHS migration?			
Yes	No	Neutral/No Comment	Other
5	5	1	4

There were mixed responses to whether P434 will incur additional costs. Some respondents stated that they did not identify any additional costs that would not have come to light under the MHHS Programme in the absence of P434.

Respondents that replied they would incur additional costs as a result of P434 stated that they would expect UMSDS costs to be incurred earlier than if left to the main migration. One Supplier mentioned they would need to carry out system changes to enable them to action CoMCs, and these changes may only be for up to a year when they would then be required to carry out further system changes to migrate to MHHS under the TOM. Another identified additional cost was the increase in DTN charges, by having to provide consumption data through the DTN.

However, it was pointed out that although a flawless move from current arrangements straight into MHHS would cost less than having to work through two sets of migrations. That approach will have increased risks, if issues arise they may be more difficult and costly to resolve in a shorter timescale and in combination with other MHHS activity. The Workgroup recognised that there may be additional costs for appointing the MAs, HHDCs and HHDAAs, there may also be some costs for system changes relating to dealing with small HH inventories. However it was noted that the additional costs may not be necessarily a negative due to the benefits P434 brings.

## Alternative solution

No alternative solution was raised by the Workgroup, however the Workgroup did discuss CoMC option one as an alternative solution to CoMC option two. The Workgroup also discussed an alternative solution to only mandate the co-ordinated data cleanse activity. See section 6 for further details on the Workgroup discussions.

### Assessment Procedure Consultation Responses

**Do you agree with the Workgroup that there are no other potential Alternative Modifications within the scope of P434 which would better facilitate the Applicable BSC Objectives?**

Yes	No	Neutral/No Comment	Other
13	0	1	1

No other alternatives were given, however one Supplier did state their preference would be CoMC option one is used rather than option two, as they believe it is a cleaner process and disconnecting old MSIDs will reduce the risk of duplication. The Workgroup observed that CoMC option one generally impacts LDSOs more and Suppliers less, whilst CoMC option two impacts Suppliers more than LDSOs. It was stated that the main benefit CoMC option two brings is that a new connection agreement wouldn't be required as an existing MSID will be used in this process.

**What would be the total cost to your organisation if CoMC option 1 is used?**

High	Medium	Low	None	Other
3	3	4	3	2

Respondents gave a large range for the total cost of CoMC option one. The approximate costs for LDSOs ranged from £62K-£120K, for Suppliers it was £15K-£1M+.

One Supplier stated that option one would be a much more straightforward option to implement. They would require a system change regarding the automation of actions when a D0171 'Notification of Distributor Changes to Metering Point Details' is received. They stated this would have benefits for all types of customers when receiving this flow, not just UMS, and the benefits would be seen on an enduring basis. However for another Supplier this option was more costly as it would require more manual effort. They noted there would be more effort required to engage with various stakeholders to confirm all relevant information has transferred over to new MSIDs in order to mitigate the risk of information being lost. For LDSOs this was the more costly option as there are additional costs to create new MSIDs.

MAs stated that there will be no difference in costs or impacts to them from either CoMC option. One DC quoted that both options will have a similar cost to them (low) as both options will require the processing and managing of flows into their system. Another DC stated that CoMC option one will be a medium cost to their organisation, whereas option two will be a low cost, as option one may potentially increase administration costs.

What would be the total cost to your organisation if CoMC option 2 is used?				
High	Medium	Low	None	Other
3	3	5	3	1

A large range in costs were also quoted for CoMC option two. The approximate costs for LDSOs ranged from £11K-£65K and for Suppliers ranged from £180K-£1M.

One Supplier stated option two would bring higher costs to their organisation as they would need to automate their UMS CoMC process. However, another Supplier had the view that automating their systems would carry a medium cost to their organisation and it would reduce manual effort. It was also noted that option two could reduce the requirement for customer contracts to be cancelled and re-agreed on the basis that an existing UMS MSID would be retained.

For LDSOs this was the preferred option, as it will remove the requirement to create a new HH MSID and to involve the customer in amending their records and systems. The Workgroup discussed both options and acknowledged that both options have costs associated with them but they preferred to stick with CoMC option two, in line with previous arguments that were given for option two (see section 6 for further details).

## Legal text and Code Subsidiary Documents

The P434 proposed draft redlined text is available in Attachment A. Further discussions had by the Workgroup on the proposed redlining can be found in section 6.

### Assessment Procedure Consultation Responses

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
11	1	3	0

Most respondents agreed the draft legal text in Attachment A delivers the intention of P434. One respondent disagreed with the legal text as they did not agree with the implementation date of October 2023 for new UMS MSIDs to be registered directly into HH Settlement. The respondent suggested the proposed changes are implemented in 2024/25 instead. The Workgroup stated that the dates are relative and are likely to move as a result of the MHHS re-plan.

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
9	3	3	0

Most respondents agreed the amendments to the Code Subsidiary Documents deliver the intention of P434. One respondent that disagreed was the same respondent that disagreed with the legal text as they did not agree with the proposed Implementation date.

The two other respondents that disagreed with the CSDs gave suggestions for further amendments. Elexon updated the CSDs accordingly.

### Estimated implementation costs of P434

#### Elexon

P434 is a document only change. No changes to Elexon systems are required. We therefore anticipate the central implementation costs to be less than £2K for the proposed Document changes. Elexon will also need to provide resource to coordinate the data cleansing operation from April 2023 and for the Implementation Working Group which is expected to run to for a period of two years (every 4-6 weeks) resulting in an expected cost of ~£1K to £1.5K per month (£24K to £36K).

It is also anticipated that 0.25 FTE of effort will be spent on the monitoring activities over the one year CoMC period, and a further (up to 0.25 FTE, so 0.5 FTE in total) effort will be required if follow up actions are needed if CoMC activities are not complete.

#### Industry

Costs for industry were validated during the Assessment Procedure Consultation. We have defined cost impacts as:

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

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

Implementation cost estimates			
Organisation	Item	Implementation (£k)	Comment
Elexon	Systems	0	No impact identified. P434 is a Document only change.
	Documents	<2	Costs associated with implementing Sections S, BSCP520, BSCP501, BSCP502, and the Guidance Notes.
	Other	0	No impact identified.
NGESO	Systems & process	0	No impact identified

Implementation cost estimates			
Organisation	Item	Implementation (£k)	Comment
Industry	Systems & processes	Low to High	The consultation results indicated a large range of responses from low (<£100k) to high (>£1M). It is understood that the bulk of the costs are expected to be for the CoMC activity and extra resources required for external engagement with industry and customers.
<b>Total</b>		Medium	

## Estimated on-going costs of P434

On-going cost estimates		
Organisation	Implementation (£k)	Comment
Elexon	75 - 111	0.25 to 0.5 FTE during CoMC activity, ~12 month period. This includes costs for monitoring the CoMC activities as part of our existing operations (~£2k to £4k per month). Costs associated with the Implementation Working Group, ~24 month period (~£1k to £1.5k per month). Costs associated with coordination of the data cleansing operation, ~18 month period (~£1.5k per month).
NGESO	0	No impact identified
Industry	<100	Consultation responses indicated that on-going costs are expected to be low (<£100k) and mostly due to the increased use of the DTN.
<b>Total</b>	<250	

## P434 impacts

Impact on BSC Parties and Party Agents		
Party/Party Agent	Impact	Estimated cost
Supplier	Suppliers will lead the CoMC activity and support the data cleanse activities. There will be system changes associated with receiving and storing the D0379 and D0380, if they chose to use it and do not already have the system capability. There will also be system and process changes associated with the CoMC activity.	L-H

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Impact on BSC Parties and Party Agents		
Party/Party Agent	Impact	Estimated cost
UMSO/LDSO	UMSOs/LDSOs will need to lead the data cleanse activities and support the CoMC process. There will be system and process changes associated with the CoMC activity.	L-M
MA	MAs will be appointed to support the CoMC activities.	L
HHDC	HHDCs will need to support the CoMC activities. HHDCs will have the option to send the D0380 flows to three decimal places from October 2023, which might incur additional costs, if they chose to use it and do not already have that system capability.	L
NHHDC	NHHDCs will be de-appointed to support the CoMC activities.	L
HHDA	HHDAs will need to support the CoMC activities. HHDAs will have the option to receive the D0380 flows to three decimal places from October 2023, which might incur additional costs, if they chose to use it and do not already have that system capability.	L
NHHDA	HHDAs will need to support the CoMC activities.	L

Impact on the NETSO	
Impact	Estimated cost
None identified	None

Impact on BSCCo		
Area of Elexon	Impact	Estimated cost
Assurance	No additional assurance activity is needed to monitor the migration, but if there are issues with Compliance then appropriate measures and techniques can be applied. Supporting the Implementation Working Group.	L
Participant Management	Drafting the Guidance and FAQ documents, supporting the Implementation Working Group.	L

Impact on BSCCo		
Area of Elexon	Impact	Estimated cost
Operational Support Managers	Supporting the communication activities for P434. Coordinating the data cleansing operation by checking in with UMSOs and Suppliers on their progress, reminding Parties of their obligations.	L

Impact on BSC Settlement Risks
This Modification will lead to a small increase to the BSC Settlement Risk <u>011 SVA Risk: Unmetered Supplies volumes calculated incorrectly</u> as Risk 11 covers all risks associated with UMS. In the short term the risk to Settlement is likely to increase as the volatility will change, but following CoMC migration the risk should decrease. However, the risk to Settlement from P434 is low due to the small volumes of energy (the total consumption of UMS is <2% of the SVA market).

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

Impact on BSC Agent/service provider contractual arrangements	
BSC Agent/service provider contract	Impact
None	None anticipated at this stage.

Impact on Code	
Code Section	Impact
<u>BSC Section S 'Supplier Volume Allocation'</u>	Section S has been amended to set out the mandate for Parties to comply with the CoMC process and data cleanse activities, introduce a new term that will describe the timetable date "UMS Mandate Go-Live Date", add in the requirement that HH UMS certificate are only issued on request.

Impact on EBGL Article 18 terms and conditions
No impacts on EBGL Article 18 terms and conditions have been identified by Elexon, the Workgroup or respondents to the Assessment consultation.

Impact on Code Subsidiary Documents	
CSD	Impact
<a href="#">BSCP520 'Unmetered Supplies Registered in SMRS'</a> <sup>14</sup>	<p>The UMS CoMC process in BSCP520 has been amended so that it requires changing one of the existing NHH MSIDs to HH and de-energising/disconnecting the remaining MSIDs.</p> <p>Sets out the process for the coordinated data cleansing operation.</p> <p>Clarifies in the absence of more specific information, the latitude and longitude for the geographic centre of the Grid Supply Point (GSP) Group should be used.</p> <p>Sets out the requirement that the UMS Certificate should only be issued on request by the Supplier or Customer.</p>
<a href="#">BSCP501 'Supplier Meter Registration Service'</a> <sup>15</sup>	BSCP501 has been amended to clarify that Non Half Hourly MOA Appointments for UMS should no longer be available past the UMS Mandate Go-Live Date.
<a href="#">BSCP502 'Half Hourly Data Collection For SVA Metering Systems Registered in SMRS'</a> <sup>16</sup>	BSCP502 has been amended to include the optionality of sending data flows with three decimal places.
<a href="#">Operational Information Document (OID)</a> <sup>17</sup>	The latitude and longitude for the geographic centre of the different GSP Groups have been added to the OID.

Impact on other Configurable Items	
Configurable Item	Impact
None	None identified

Impact on Core Industry Documents and other documents	
Document	Impact
Ancillary Services Agreements	None anticipated at this stage.
Connection and Use of System Code	The CCDG initially considered whether there may need to be a consequential change under the Connection and Use of System Code (CUSC) to prevent NHH UMS MSIDs being double charged during the year in which they are migrated. It concluded that due to the implementation timing the potential double charging issues are avoided so a CUSC Modification is not needed.
Data Transfer Services Agreement	None anticipated at this stage.

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<sup>14</sup> <https://www.elxon.co.uk/csd/bscp520-unmetered-supplies-registered-in-smrs/>

<sup>15</sup> <https://www.elxon.co.uk/csd/bscp501-supplier-meter-registration-service/>

<sup>16</sup> <https://www.elxon.co.uk/csd/bscp502-half-hourly-data-collection-for-sva-metering-systems-registered-in-smrs/>

<sup>17</sup> <https://www.elxon.co.uk/guidance-note/operational-information-document/>

## Impact on Core Industry Documents and other documents

Document	Impact
Distribution Code	
Grid Code	
Retail Energy Code	
Supplemental Agreements	
System Operator-Transmission Owner Code	
Transmission Licence	
Use of Interconnector Agreement	

## 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 3 February 2022. Ofgem confirmed that this Modification Proposal was SCR exempt on 10 February 2022.



### 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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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 impacts on this consumer benefit.	Neutral
2) Lower bills than would otherwise be the case Bills will be more accurate, but it is offset by the MA and HHDC costs, so the impact is neutral.	Neutral
3) Reduced environmental damage HH Settlement of UMS allows new technologies such as central management systems to be used to introduce flexibility to do things like reduce lighting load, which will help the move to net zero and de-carbonisation.	<b>Positive</b>
4) Improved quality of service The additional data the MA role facilitates is likely to improve the quality of service as it has the potential to develop TOU tariffs.	<b>Positive</b>
5) Benefits for society as a whole There is a benefit from the cleansing activities and getting more accurate inventories e.g. Customers that had updated to LED lighting but didn't update inventories were paying for their old lighting.	<b>Positive</b>

A Workgroup Member pointed out that the benefits identified are a result of UMS connections moving HH rather than a direct impact of P434. However, these benefits will be realised earlier as a result of P434 as the CoMC migrations will be brought forward.

A Workgroup Member highlighted that additional data will benefit Customers but it hasn't been decided which Party will inform Customers what their consumption is. Once EAC certificates are end dated there will be no formal notification of consumption. The consensus was that this should sit with the Supplier.

### Assessment Procedure Consultation Responses

Do you agree with the Workgroup's assessment of the impact on the consumer benefit areas?			
Yes	No	Neutral/No Comment	Other
10	3	2	0

The majority of the respondents agreed with the identified impacts on the consumer benefit areas, stating that P434 will lead to improved consumption reporting and billing accuracy.

Some respondents disagreed the impact on bills will be neutral. It was stated that customer bills will rise as a result of the changes as HH Agent charges are higher than NHH Agent charges. Customers will also have additional MA costs. The Workgroup observed that these cost could be reduced by reducing the period of time between the CoMC and the TOM migration. Suppliers will need to carefully manage these costs and expectations with customers, whilst not leaving all of the CoMC migration up until the

compliance deadline, which could risk non-compliance and missing readiness for M11, if issues arise.

One respondent did not agree P434 can increase quality of service for UMS customers with the potential to develop TOU tariffs because the majority of their UMS sites are festive and street lighting, where they will not benefit from TOU tariffs as the opportunity to change behavior is very limited. The Workgroup acknowledged that opportunities for TOU will be fairly limited for UMS and cost savings will be very minimal, however they believed P434 still creates the opportunity for TOU tariffs.

<b>Do you agree with the Workgroup’s assessment of the impact on the BSC Settlement Risks?</b>			
<b>Yes</b>	<b>No</b>	<b>Neutral/No Comment</b>	<b>Other</b>
12	1	2	0

The majority of the respondents agreed with the Workgroup’s assessment of the impact on the BSC Settlement Risks.

One respondent disagreed and stated they did not believe there is an increase in the BSC Settlement Risk for UMS from P434. They commented that there are risks to Settlement whether a MSID is traded NHH or HH, as shown in the potential causes list of 011 SVA Risk. Whilst some potential causes may increase from this change, others will decrease – hence the overall UMS risk will remain the same.

The Elexon assurance representative explained that there will be a potential small increase in risk due to the large shift in data. They noted that in the short term the risk to Settlement is likely to increase as the volatility will change, but following CoMC migration the risk should decrease.

<b>Do you agree with the Workgroup’s assessment that P434 does not impact the European Electricity Balancing Guideline (EBGL) Article 18 terms and conditions held within the BSC?</b>			
<b>Yes</b>	<b>No</b>	<b>Neutral/No Comment</b>	<b>Other</b>
13	3	2	0

The majority of the respondents agreed (and two did not provide a comment on this point) that this Modification will have no impact on the EBGL Article 18 terms and conditions held within the BSC.

### Recommended Implementation Date

The Workgroup recommends an Implementation Date for P434 of:

- **5WDs** after the Authority's decision is received, so long as the decision is received at least 18 months and 5WDs before the UMS Mandate Go-Live Date.

The CCDG has recommended this change to be implemented as soon as possible to ensure that all UMS MSIDs are moved to settle HH via the CoMC process by October 2024 and new connections from October 2023.

The Proposer and Workgroup agree and therefore recommend this Modification is implemented via a special release, five WDs after Authority approval. The Workgroup were also mindful that participants will need sufficient time to make changes to commercial arrangements and believed these activities would need to start as soon as the Modification is approved.

### Assessment Procedure Consultation Responses

Do you agree with the Workgroup's recommended Implementation Date?			
Yes	No	Neutral/No Comment	Other
10	4	1	0

The majority of the respondents agreed with the recommended Implementation Date. Most respondents that disagreed did so because they didn't agree P434 should be implemented. One respondent recommended the changes proposed should be optional instead and if Market Participants are able to transition early then it should be possible but not mandated. However, the Workgroup disagreed and stated it should remain mandatory as it was unlikely that Suppliers will CoMC early if it remained optional which would not bring the benefits P434 seeks to achieve.

It was also suggested that only the new connections could be mandated to become HH and the CoMCs could be optional. However the Workgroup did not want to raise this as an Alternative Modification as Parties already have this option through the elective HH market. Further, if the CoMC is optional then the MHHS Programme would need to develop a process for transitioning NHH UMS to the TOM, which could cause delays to the Programme.

### Relative Timelines

The Workgroup discussed whether there should be a fixed or relative timeline approach for the P434 obligations as there are currently uncertainties around the existing timelines for MHHS. The Proposer explained that there is a clear need for relative timelines for P434 as opposed to P432 (where the mandate includes fixed dates), this is because the Metered space may involve site visits to fix any problems with the Meters prior to migration e.g. to rectify password problems, however for P434 site visits are not needed.

The Proposer and the Workgroup supported pinning the P434 deliverables against the MHHS milestone plan and agreed the legal text should be drafted in a way that the timelines are relative.

### Data Flows

#### Appointment flows

The Workgroup discussed that there is an inconsistency between BSCP520 and the Energy Market Architecture Repository (EMAR)<sup>18</sup> in the use of the D0011<sup>19</sup> (Agreement of Contractual Terms), D0148 (Notification of Change to Other Parties), D0151 (Termination of Appointment or Contract by Supplier), D0155 (Notification of New Meter Operator or Data Collector Appointment and Terms) and the D0261 (Rejection of Agent Appointment) flows. BSCP520 identifies the use of these flows, but the EMAR does not include the instances for MAs. A Workgroup Member pointed out that if there is going to be a transition of 20,000 UMS Metering systems to HH this volume of re-appointments lends itself to the use of the EMAR flows via the Data Transfer Network (DTN).

The Workgroup also considered whether the use of the DTN may not be cost effective for those participants that have not configured their systems to accept these flows for these instances, given this will be a one off activity. Once the move to MHHS is complete these data flows may no longer be used.

The Proposer expressed their concerns that setting up an MA role within the EMAR could be a sizeable system change for Suppliers to facilitate. However, they believed it should be encompassed as it would reduce the burden on operational staff and should result in fewer errors. It was noted that some Suppliers may not have systems in place to support this change, so if they cannot send the data flows for this purpose, then an alternative method (e.g. emails) will need to be agreed bilaterally between Parties.

A Workgroup Member pointed out that for DCs it is difficult to know who the MA is with these flows, as the D0148 doesn't state who the MA is and who they are expecting to receive data from. However, it was pointed out that if the D0148 is used correctly, the MA is in the MOA field.

<sup>18</sup>[https://emar.energycodes.co.uk/rm/web#action=com.ibm.rdm.web.pages.showFoundationProjectDashboard&componentURI=https%3A%2F%2Femar.energycodes.co.uk%2Frm%2Frm-projects%2F\\_Xqe2IFBPEeuGWeSXvTEFcQ%2Fcomponents%2F\\_XwleIFBPEeuGWeSXvTEFcQ](https://emar.energycodes.co.uk/rm/web#action=com.ibm.rdm.web.pages.showFoundationProjectDashboard&componentURI=https%3A%2F%2Femar.energycodes.co.uk%2Frm%2Frm-projects%2F_Xqe2IFBPEeuGWeSXvTEFcQ%2Fcomponents%2F_XwleIFBPEeuGWeSXvTEFcQ)

<sup>19</sup> <https://www.electralink.co.uk/dtc-catalogue/>

## Assessment Procedure Consultation Responses

**What is the best mechanism for bulk appointments? Would the benefits of using the DTN outweigh the costs?**

Yes	No	Neutral/No Comment	Other
7	2	6	0

The majority of the respondents stated that using the DTN would be the most appropriate method for bulk appointments, as it will reduce manual work and although it would create additional costs it would likely to be a worthwhile investment. One Supplier stated that although they preferred using the DTN, the cost for Suppliers to implement this may outweigh the benefits.

Respondents also stated that other alternatives could be used, for example CSV files can be sent via email. Instead of mandating the use of DTN flows it can be decided between the Suppliers and MAs/DCs how they manage the appointments. It was also pointed out that this change would be a temporary one. Under MHHS the process for appointments will be carried out via the Data Integration Platform.

The Workgroup agreed the use of the DTN should not be mandated, instead Parties can use the D0155 or they can agree amongst themselves whether they would prefer to use another method e.g. email.

### **D0139 (Confirmation or Rejection of Energisation Status Change)**

The Workgroup discussed that the instances between UMSOs/Suppliers/MAs for the D0139 data flow are not recognised in the EMAR. In HH UMS there is no concept of needing to de-energise the MSIDs during the Christmas period as they work all year around, but this is not the case for NHH MSIDs e.g. festive lighting are typically energised in November and de-energised at the end of January. Envisaging that a number of these NHH MSIDs are likely to become HH MSIDs, MAs may need to receive the D0139 data flows through the DTN to make the energisation/de-energisation process more efficient, however this could result in increased costs for Participants.

It was discussed that CP1546 is introducing the concept of a zero inventory charge code, so an alternative approach is that the UMSO could send a zero inventory charge code to the MA then the MSID can remain energised throughout the year (but settling on zeros when not in use), with the HH data calculated correctly. This approach will make no difference to billing or DUoS and it would reduce the need for change to use the D0139.

The MHHS Programme stated that this is a transitional issue, under MHHS the energisation status will be provided through the Unmetered Supplies Data service. The direction of travel seems to be that on change of energisation status Parties will submit zeros until it is re-energised. Although this is a temporary issue, it was pointed out that there will be at least one Christmas period where the D0139 flows will need to be sent, so the Workgroup is keen to understand through the Consultation what impact it will have on Parties to send MAs the D0139 data flows via the DTN.

## Assessment Procedure Consultation Responses

**Do you agree Meter Administrators should receive D0139 data flows via the DTN? Would the benefits of this outweigh the costs?**

Yes	No	Neutral/No Comment	Other
10	1	4	0

Most respondents supported MAs receiving the D0139 data flows via the DTN. One MA didn't see the need to introduce this as currently MAs are not notified of the Energisation status. Instead if the UMSO determines an MSID is de-energised they can provide the MA with an updated D0388 UMS Inventory that uses the zero charge code. The MHHS Design is looking into taking this approach too, therefore if this process of sending D0139s is introduced it will only be a temporary one.

Despite the consultation responses mostly being in favour of MAs receiving the D0139 data flows, the Workgroup agreed the use of the D0139 should not be mandated as the submission of the zero charge codes would achieve the same outcome, but at lower cost.

## Three Decimal Places for Data Flows

The Workgroup discussed that at the moment MAs send data flows to three decimal places to the HHDCs, but BSCP502 states that the data flows sent to the DA is to one decimal place. When these flows are rounded to the nearest one decimal place it can result in a value of zero, this causes the granularity to be lost, the purpose of rounding to three decimal places is to make sure the volume for smaller energy consuming sites are correctly calculated.

The Workgroup agreed that BSCP502 needs to include the optionality for Parties to send the D0379 (Half Hourly Advances UTC) or D0380 (Half Hourly Advances for Inclusion in Aggregated Supplier Matrix) from October 2023 to be sent using three decimal places.

## Assessment Procedure Consultation Responses

**What impact will sending/receiving the D0379 and D0380 flows be for HHDCs, HHDCAs and Suppliers?**

High	Medium	Low	None	Other
0	4	3	1	7

Most respondents agreed that this will lead to more accurate HH data and will ensure that smaller consuming MSIDs don't see HH consumption rounded to zero. Also on the basis that a large proportion of NHH UMS have small EAC values it would be necessary to move to watt-hour granularity in order to ensure energy consumed is allocated to the correct Settlement periods.

The DAs/DCs that responded said this change would be a low impact as they already have the ability to receive the D0379 and use the D0380. The four respondents that stated it will be a medium impact were all Suppliers. It was stated that in order to change from the consumption data flows currently used (D0036/D0275) to D0379/D0380 they would need further system changes to accommodate this. One Supplier stated they are happy to keep receiving the D0275 to one decimal place and see no value in changing this.

Although the Workgroup could see the value of sending the data flows to 3 decimal points, they agreed sending/receiving the D0379 and D0380 flows should be kept optional to

allow Suppliers to decide if they want to have this level of granularity. Ultimately once transitioned to the TOM the data flows will be to 3 decimal points regardless, so any drop off in accuracy will be for a temporary period.

## PECU Arrays

A Workgroup Member explained that BSCP520 currently gives UMSOs the choice to determine if a Customer needs a Photo Electric Control Unit (PECU) Array or not. They questioned whether this should still be the case going forward or whether the use of PECU Arrays for Customers with larger loads should be mandated as it will result in more accurate Settlement.

The other suggestion was to have a default PECU Array within each GSP Group that would ultimately need to be owned and maintained by the MA or the Unmetered Supplies Data Service. The Workgroup noted that although a PECU array would usually result in more accurate Settlement, if it's situated in a larger area like Lancashire, an array in the middle of that GSP Group will not be reflective of the whole area.

The majority of the Workgroup agreed that although this is an issue that should be resolved, it is not in scope of P434, so it should be picked up at UMSUG instead. At the UMSUG meeting on [15 June 2022](#)<sup>20</sup> (UMSUG136) this item was discussed and it was agreed Elexon will establish a sub-group to consider this issue.

## Data cleanse

The Workgroup agreed that UMSOs should take lead with the data cleanse with input from Suppliers and Customers and Elexon should coordinate the activities.

The Workgroup suggested developing a data cleanse template which includes all the data items the UMSOs will need to carry out the data cleanse activities. It was agreed that UMSOs will send the template to the Suppliers and the Suppliers will be mandated to fill out the template. The Workgroup believe the use of the template will help reduce complexity (as all impacted parties will use the same template and become familiar with it) and help standardise the data cleanse activity, improving efficiency.

It was asked at what point the MSID that will be kept and the remaining that will be de-energised for the CoMC process will be identified. A Workgroup Member pointed out that it might be too early to identify this during the start of the data cleanse phase, but could be identified later on in the phase whilst UMSOs and Suppliers are in discussion. The Proposer had the view that they didn't mind when the primary MSID is chosen as long as it is done before October 2023, so the data cleanse update was not updated to include this requirement.

It was also agreed that dealing with orphaned MSIDs should be part of the data cleanse activities. MSIDs shouldn't be disconnected because they can't get a hold of the Customer. These sites should only be disconnected if it becomes apparent there is no UMS apparatus connected for the UMS MSID. By October 2024 the expectation is that all NHH MSIDs move to HH by via the CoMC process, even if there are still uncertainties or unknowns that need to be dealt with. Any outstanding issues will need to be dealt with under the HH arrangements post-October 2024. The Workgroup also discussed that some NHH MSIDs

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<sup>20</sup> <https://www.elexon.co.uk/meeting/umsug136/>

don't have a related flag, where multiple MSIDs on a certificate are with different Suppliers. It was suggested that UMSOs could look at the last date of registration on portfolios that contain two or more MSIDs and take the MSID with the latest date being the one that is the intended Supplier. However, it was pointed out that UMSOs cannot make that choice on behalf of their Customers without knowing which Supplier the Customer wishes to retain.

### Assessment Procedure Consultation Responses

Do you agree with the data items included in the mandated data cleanse template?			
Yes	No	Neutral/No Comment	Other
9	2	4	0

The majority agreed with the data items included in the data cleanse template. One respondent disagreed stating that they need to obtain a GDPR view on whether this data can be shared. The Elexon legal team has looked into this and Elexon has a suitable data protection policy in place that would cover the personal data that is set out in the data cleanse template. However, as the template will be shared between the UMSOs and Suppliers, it is for each Party involved in this process to ensure their own data protection policy covers processing such personal data.

The other respondent that disagreed stated that they did not see any relevance to request Invoice and Correspondence Details, however the Workgroup thought that these items should remain in the template as it would help with the rationalisation process.

### Implementation Working Group

The Workgroup suggested setting up a Working Group for interested Parties so they can thrash out edge cases like the one above. Elexon agreed to set this working group up during the implementation phase of P434, and to hold these meetings every 4 – 6 weeks from approval of this Modification (targeting April 2022) to October 2024.

### UMS Certificates

The Workgroup discussed whether the requirement to produce UMS certificates should remain in the BSC once we move to HH Settlement. It was pointed out by a Workgroup Member that HH UMS certificates will still be relevant long term, when there is a Customer change in responsibility a UMS certificate will be required to provide the details of the new incoming Customer in relation to the MSID on the certificate.

Another Member asked whether HH UMS certificates between Parties can be replaced with a data flow instead. The Proposer was hesitant to introduce a new data flow for this Modification and highlighted that there will be a gradual decline of the EMAR post MHHS.

The consensus was that HH UMS certificates shall remain and should be sent to Customers and Suppliers upon their request, however it shouldn't be a requirement to send a UMS certificate as part of the data cleanse and CoMC activities. The Workgroup stated that they did not envisage Suppliers would need to hold certificates for record, as historically

certificates were requested for the EAC information but that data will not be available in HH Settlement.

## Alternative Solution

### CoMC Process

The Workgroup was presented with two different options for the CoMC approach and were asked which they preferred:

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

Elxon explained that both options were consulted on as part of CCDG's consultation on the Transition Approach to MHHS and the following key themes were identified in the [responses](#)<sup>21</sup>:

Key Theme	Option	Analysis
Customer Interaction	1	Suppliers are best placed to initiate contact with Customers to notify changes to HH Settlement.
	2	Suppliers are best placed to initiate contact with Customers to notify change to HH Settlement. Potential for option 2 to keep link with Customer via converted NHH MSID.
Supplier Activity	1	There were concerns Suppliers could lose unwanted UMS supplies during the CoMC activity. The Supplier would need to register a new MSID.
	2	Increased manual Supplier activity may be required. However, Supplier system changes could reduce manual activity.
UMSO Costs	1	Option 1 will result in more manual effort for UMSOs.
	2	Some UMSOs would incur costs but system changes could potentially remove manual effort.
	1	Suppliers would need to de-energise all NHH MSIDs and disconnect, which can be

<sup>21</sup> <https://www.elxon.co.uk/consultation/ccdg-consultation-on-transition-approach-for-mhhs/#:~:text=This%20consultation%20sets%20out%20the,the%20substance%20of%20those%20recommendations.>

De-energisation/Disconnection		done at the same time as there will be no need to remove related MSID flags.
	2	Suppliers would need to remove the related MSID flag and only disconnect the NHH MSIDs not being converted to HH. However, the MSIDs to be disconnected and retained can be identified beforehand.
Retrospective Changes to Inventories	1	Changes to NHH EACs could be progressed while the registration is live for the period that the NHHDC was appointed.
	2	Changes to NHH EACs could be progressed while the registration is live for the period that the NHHDC was appointed.
System Changes	1	Supplier systems are already set up to provide this option. It is not clear if UMSOs could implement changes to address manual effort required.
	2	Some UMSOs identify that system changes would be required but this would enable a reduction in manual effort. Suppliers would need to consider what system changes they require to deliver this option.
Manual Effort	1	UMSOs identify higher manual effort for this option.
	2	Suppliers identify greater manual effort for this option.
Data cleansing Activity	1	Required for this option.
	2	Required for this option.
BSCP changes	1	BSCPs need amending to set out requirements for data cleanse.
	2	BSCPs need amending to set out requirements for data cleanse and to set out the new CoMC process using the NHH MSID.

## Conclusion

The Workgroup had a strong preference for option two and the consensus was to use this approach for the solution. It was agreed Suppliers and UMSOs need to work together on the CoMC process but it will sit with Suppliers to drive the process and engage with Customers, as they are ultimately responsible under the BSC for the MSID.

The Workgroup pointed out that option one would require a lot of manual effort from UMSOs. The Workgroup assumed that Suppliers with a large number of NHH UMS would likely be more willing to automate their processes to facilitate option two. Whereas,

Suppliers with a smaller number of UMS MSIDs that can't justify automating their processes, option two would likely require more manual work than option one.

The Workgroup mentioned that another appeal of option two was that Customers still retain a relationship with an existing unmetered MSID. This should reduce the number of queries from Customers down the line because a historical reference of what was trading before will be kept.

One Workgroup Member had concerns whether the Metering Point Registration System (MPRS) system could facilitate the CoMC option two process and whether there will be any system constraints if the primary MSID is related to any secondary MSIDs. They pointed out that this should be checked with the main Service Provider. The Service Provider confirmed that this change can be facilitated as long as the MSIDs are not disconnected, the Supplier is the same for all the MSIDs and there is no Switch (Change of Supplier) in progress. If there is a relationship between the MSIDs, the Supplier will need to delete the relationship before the LDSO can disconnect the redundant MSIDs. They can either delete the whole relationship (where there are no MSIDs remaining in the relationship), or they can delete the MSIDs which are not required, retaining the others.

### Removing CoMC process

Exelon asked the Workgroup Members whether there was value in raising an Alternative Modification were the obligation around the CoMC activities are taken out and only the obligation for the coordinated data cleansing remained. This was on the basis that much of the effort and work required to be ready for NHH UMS to migrate to the TOM, is in the data cleanse activities, including the MSID rationalisation.

The Proposer and the Workgroup stated that they believed doing the CoMC early is beneficial and would prefer to include it in the solution. It was stated that doing the CoMC and rationalising up to four NHH MSIDs into one HH MSID has the same importance as the data cleanse. P434 will also essentially stop customers from moving back to NHH Settlement. The HH Settlement mandate under P434 means that if reverse TOM migration is allowed, customers migrating out of the TOM would go to HH UMS. Without the P434 mandate, a customer migrating out of the TOM might choose to go back to NHH UMS, which would require the creation of new NHH UMS MSIDs.

It was pointed out that at the moment there isn't anything in the Migration Design to accommodate a consolidation of NHH UMS MSID to a single HH MSID, so that is a process that would need to be designed if the CoMC activity is not done via P434.

It was also pointed out that by moving customers to HH Settlement early, their consumption will be reflected more accurately. P434 will result in earlier customer engagement too so it spreads the workload for customer queries.

### Latitude and Longitude

The Lat/Long for each MSID/UMS Sub-meter is a key data item to calculate the sunset/sunrise times and materially differs across the country and across the year. Currently the UMSO and MA agree the Lat/Long used for each UMS Sub-meter, which has been done via email, to date, given the associated low volumes. However, for the migration of 20,000 MSIDs this is not feasible.

The Workgroup discussed that there are several approaches:

1. Use the MSID site address postcode of the MSID to derive the Lat/Long
2. Add a new field into the D0388 which the UMSO populates each time the flows is sent
3. Introduce a new flow completely
4. Default to a GSP Group average Lat/Long

The Workgroup noted that using the GSP Group average Lat/Long would involve the least change but using the site address would probably be the most accurate method. A Workgroup Member stated that the differences across most GSP Groups doesn't tend to be large and questioned whether there was a need to go down to post code level of accuracy. The Workgroup was also not keen on creating a new data flow for this work, given the costs associated with system and/or process changes this would likely bring.

The consensus was that, in the absence of better information, the default per GSP Group should be used. Where more specific information is gained from Customers for specific MSIDs such as coordinates, this can be subsequently updated. The Workgroup agreed this should approach should be included in guidance for industry.

## Assurance

The assurance team explained that they do not believe any additional assurance activities are needed to manage any migration resulting from P434, however they can monitor the migrations through the Implementation Working Groups.

They stated that no UMS Risks are Focus Risks in 2022/23 Risk Operating Plan. The PAB also agreed with this approach. The total consumption from UMS MSIDs make up a very small percentage of the SVA market (<2%) and failure to move these MSIDs to HH would have negligible Settlement impact.

However, engagement with Parties beforehand will still be a key priority for the assurance team. If any issues or problems are identified during or after CoMC phase, appropriate assurance measures or techniques can be applied, including escalation to the PAB.

## Customer contracts

The Workgroup discussed whether Suppliers would need to change their Customer contracts to reflect any cost changes in the HH market. The Proposer stated they didn't perceive a contract change but instead a tariff change to reflect the cost differences of the MA coming in and potentially to capture any time of use (TOU) benefits. Also under CoMC option two, it won't be necessary to change Customer contracts as an MSID will be retained so some form of agreement will already be in place (whether that is a tariff or agreed contract).

## Commercial arrangements

The CCDG suggested that Suppliers should seek commercial arrangements with MAs directly. The Workgroup agreed that with the large number of Customers that will need to be moved to HH Settlement it does require Suppliers to have arrangements with MAs. However, Customers currently do have direct MA agreements in some instances so the Workgroup didn't want to remove the ability of Customer choice in this space.

The Workgroup consensus was that the direct relationship between Suppliers and MAs will be beneficial, so the first point of call is the Supplier to put arrangements in place but the Customer can change their MA if they wish.

## Verifying Customer Bills

Currently, Customers (those paying the energy bill) can choose to contract directly with the MA and can be provided with their consumption data independently of their Supplier. This way Customers can verify their bills. Under the current proposal, the MA would be contracted with the Supplier directly and hence would be unable to send data to the Customer (unless the customer additionally contracted with the MA for this service). An MA was of the view that there needs to be a method by which Customers can verify the values they are being charged independently of the data from the Supplier. There were mixed views from the Workgroup on this topic as there's no obligation on Suppliers to provide their MA data to the Customer. The consensus of the Workgroup was that there is an issue to be resolved here, but it is not a P434 issue.

The MHHS Programme commented that they have identified the need for an Annual Consumption value to be provided and there is now an Annual Consumption Method Statement. The Annual Consumption value will be calculated based on the data submitted by the Data Service on a monthly basis, together with, a data quality flag. This would allow customers to check their Supplier bills if a mechanism to provide such data to the customer can be identified. It is currently intended that this data will be made visible on a new real-time enquiry service (similar to ECOES). However, the representative explained that this solution will not solve the issue of customer's verifying their bills and instead there needs to be a mechanism in place where customers can check their bills.

The Proposer's view was that customers not being able to independently check their bills is an issue, however it is more of a commercial issue and does not impact Settlement, therefore it falls outside the scope of P434.

## Benefits to MHHS Programme

The Proposer explained it needs to be demonstrated clearly what the benefits of P434 are for the Programme and what difficulties the MHHS Programme will face if P434 is not implemented. The Workgroup sent the MHHS Programme several questions to understand the full extent of the benefits (and required an additional two months to the P434 progression timetable in order to obtain this information):

### **1. What are the impacts and challenges of transitioning straight into the TOM for NHH UMS in the absence of P434?**

The MHHS Programme responded that the CCDG recommended this Modification to de-risk the UMS transition under MHHS. The early implementation was to allow time for a data cleanse and to give time for Suppliers to contact their customers to make them aware of the changes that will arise once they move to HH Settlement. The responses to the Assessment Consultation (attached) indicate that the majority agreed P434 reduces the risks associated with the transition to the MHHS TOM and early migration will allow Parties to address any risks or issues that may arise.

- **What issues could arise?**

In the absence of P434 the data cleanse and Supplier/customer interaction would not be obligated. This could have a knock on impact to the migration timescale and the overall MHHS Programme timelines.

- **How will P434 help mitigate those issues?**

P434 will enable the obligation for Suppliers and LDSOs to interact in the data cleanse activity which could start immediately after implementation. Having the UMS customers already set up as HH customers with the MA/ UMSDS having already validated the D0388 UMS Inventory and producing HH Consumption eases the transition. This is because the Supplier will only need to update the Registration data for the UMS MPAN and the UMSDS then only has to publish the HH Consumption data to Elexon Central Systems, rather than to the Half-Hourly Data Collector (HHDC).

- **What are the costs and impacts associated with transitioning directly to the TOM?**

The MHHS Programme believes that the costs are sunk for both Suppliers and LDSO and the absence of P434 would only delay the realisation of these costs. These need to be offset against the MHHS Programme risk realised which could cause a costly delay in the migration process to HH Settlement under the TOM and delay any potential benefits to the UMS Customer.

It was pointed out by a Workgroup Member that the MHHS migration is built on the fact that P434 will be approved. If P434 isn't implemented then the Programme will have to design a new arrangement to CoMC NHH UMS MPANs. This could potentially delay the migration. Furthermore, Ofgem's Significant Code Review (SCR) objective is to move everything to HH to ensure there is accurate Settlement for consumers. P434 achieves the SCR objectives of HH Settlement earlier.

### Assessment Procedure Consultation Responses

Do you have any further comments on P434?	
Yes	No
4	11

Two respondents had concerns around the customer engagement aspect of P434, with one respondent stating there should be a clear obligation on Suppliers to communicate with their customers and advise them what is happening, when the migration will take place for them and what the impact will be. The Workgroup agreed that Suppliers should engage with their customers through this process and the expectation was that they would need to. However, they did not think this could be obligated under the BSC as it is not a Settlement activity.

Another concern stated was regarding implementing this change outside of the MHHS Programme. One respondent stated there could be costs and time/distraction impacts from delivering MHHS, which could be better served by a later delivery. Another respondent shared this view stating that they have concerns regarding any proposals that relate to MHHS but raised outside the Programme. The Workgroup believed the costs of progressing this Modification would be less than the costs to a delay to the Programme and the benefits of P434 also justified progressing it outside of the Programme.

## 7 Workgroup's Conclusions

The Workgroup views were split in regards to Applicable BSC Objectives (c), three Members agreed P434 would better facilitate objective (c) and three members were neutral against objective (c). The Workgroup agreed **unanimously** that P434 would better facilitate Objective (d) so should be **approved**. The Workgroup unanimously believes that P434 will be neutral against all other Objectives, (a), (b), (e), (f) and (g).

Does P434 better facilitate the Applicable BSC Objectives?		
Obj	Proposer's Views	Other Workgroup Members' Views <sup>22</sup>
(a)	• Neutral	• Neutral
(b)	• Neutral	• Neutral
(c)	• <b>Positive</b>	• <b>Two positive, three neutral</b>
(d)	• <b>Positive</b>	• <b>Positive</b>
(e)	• Neutral	• Neutral
(f)	• Neutral	• Neutral
(g)	• Neutral	• Neutral

### Objective (c)

The Modification enables a smooth transition to the MHHS TOM for Unmetered Supplies. The Modification will promote effective competition in the generation and supply of electricity because the data will be more accurate and granular which will enable more accurate purchasing and promote innovation and competition. One Member added that ensuring the volumes of energy associated with these MSIDs are sent using three decimal places will further improve the accuracy of Settlement, rather than one decimal place, which would otherwise be the case.

Three Workgroup Members were neutral against Objective c as they couldn't see any impact on competition.

### Objective (d)

The HH Settlement of UMS is more accurate, efficient and robust than the NHH processes which currently require Material Error Monitoring processes to be undertaken on a regular basis. This Modification will therefore better facilitate Applicable BSC Objective (d) as it will introduce more efficient and effective processing of UMS data for Settlement.



### What are the Applicable BSC Objectives?

(a) The efficient discharge by the Transmission Company 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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<sup>22</sup> Shows the different views expressed by the other Workgroup Members – not all Members necessarily agree with all of these views.



## Assessment Procedure Consultation Responses

Do you agree with the Workgroup’s initial Majority view that P434 does better facilitate the Applicable BSC Objectives than the current baseline?			
Yes	No	Neutral/No Comment	Other
9	4	2	0

The majority of the respondents agreed that P434 does better facilitate Applicable BSC Objectives (c) and (d). Respondents that disagreed were comprised of Suppliers, as they believed this change should be implemented under the MHHS Programme instead. This resulted in the Proposer requesting additional information from the MHHS Programme on the benefits and associated risks related to P434 (see section 6 for details).

One Workgroup Member commented that they had qualms over objective (c) as UMS customers are already finding it difficult to get Suppliers to take them on and they believed it would be harder to find Suppliers during the transition period and therefore P434 will have a detrimental impact on competition. However, once MHHS comes in then this problem would no longer exist.

There was recognition from the Workgroup that there may be some current issues with Suppliers being unwilling to take on new customers. The Proposer commented that during the transition to the TOM the same issue will persist so it’s a question of do you take the hit early with P434 or later during the transition.

## 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 materially impacts the Settlement of Unmetered Supplies, consequently impacting competition and consumers (Self-Governance criteria (b)(i) and (b)(ii)).

### 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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## 8 Recommendations

The P434 Workgroup invites the Panel to:

- **AGREE** that P434:
  - **DOES** better facilitate Applicable BSC Objective (c); and
  - **DOES** better facilitate Applicable BSC Objective (d);
- **AGREE** an initial recommendation that P434 should be **approved**;
- **AGREE** that P434 **DOES NOT** impact the EBGL Article 18 terms and conditions held within the BSC;
- **AGREE** an initial Implementation Date of:
  - 5 WDs after Authority decision, so long as the decision is received at least 18 months and 5WD before the UMS Mandate Go-Live Date;
- **AGREE** the draft legal text;
- **APPROVE** the amendments to the Code Subsidiary Documents;
- **AGREE** an initial view that P434 should not be treated as a Self-Governance Modification;
- **AGREE** that P434 is submitted to the Report Phase; and
- **NOTE** that Elexon will issue the P434 draft Modification Report (including the draft BSC legal text) for a 10 Working Day consultation and will present the results to the Panel at its meeting on 9 November 2022.

## Workgroup's Terms of Reference

Specific areas set by the BSC Panel in the P434 Terms of Reference	Conclusion
Consideration of the role of Elexon and the PAB in Migration planning and data cleansing.	Elexon and PAB had the view that no additional assurance activity is needed to monitor the migrations. The data cleansing will be led by UMSOs with input from Suppliers and Customers and coordinated by Elexon.
Should the CoMC process in BSCP520 change?	The Workgroup agreed that the CoMC process in BSCP520 should change so that an existing NHH MSID is changed to HH and the remaining MSIDs are de-energised/disconnected.
Do Suppliers need to change their Customers' contracts to reflect cost changes?	The Workgroup consensus was that given we are going with CoMC option 2 a contract change is not perceived but there could be tariff changes to reflect the cost differences of the MA coming in and potentially to capture any TOU benefits. Under option 2 it won't be necessary to break Customer contracts as retaining an MSID you already have some form of agreement in place (tariff or agreed contract).
Consider whether Suppliers should seek commercial arrangements with MAs directly or if Customers should have the option to pick their MA.	The Workgroup consensus was that Customers should keep the ability to pick their MAs.
Assessment of the costs and benefits, where possible and needed.	Costs for industry were consulted on as part of the Assessment Procedure consultation. Costs varied from £15k to £1M+ for CoMC option 1 and varied from £11K to £1M for CoMC option 2. Overall LDSOs quoted lower costs for option 2 compared to option 1 and some Suppliers believed Option 2 would be more costly for them.
How will P434 impact the BSC Settlement Risks?	The Workgroup agreed with the identified BSC Settlement Risks.
What changes are needed to BSC documents, systems and processes to support P434 and what are the related costs and lead times? When will any required changes to subsidiary documents be developed and consulted on?	Workgroup agreed P434 is a document only change, costing Elexon <£1K to implement the change.
Are there any Alternative Modifications?	None raised by the Workgroup.

Specific areas set by the BSC Panel in the P434 Terms of Reference	Conclusion
Should P434 be progressed as a Self-Governance Modification?	The Workgroup consensus is that P434 should not be progressed as a Self-Governance Modification.
Does P434 better facilitate the Applicable BSC Objectives than the current baseline?	Workgroup's initial views by majority was P434 better facilitates Applicable BSC Objectives C and D.
Does P434 impact the EBGL provisions held within the BSC, and if so, what is the impact on the EBGL Objectives?	The Workgroup believe that the redlining <b>does not impact</b> the EBGL Article 18 Terms and Conditions.

## Assessment Procedure timetable

P434 Assessment Timetable	
Event	Date
Present Initial Written Assessment to Panel	10 February 2022
Workgroup Meeting 1	18 March 2022
Workgroup Meeting 2	20 May 2022
Workgroup Meeting 3	8 June 2022
Assessment Procedure Consultation (15WDs)	21 June 2022 – 12 July 2022
Workgroup Meeting 4	21 July 2022
Workgroup Meeting 5	9 September 2022
Present Assessment Report to Panel	13 October 2022
Report Phase Consultation (10WDs)	14 October 2022 – 28 October 2022
Present Draft Modification Report to Panel	10 November 2022
Issue Final Modification Report to Authority	16 November 2022

## Workgroup membership and attendance

P434 Workgroup Attendance						
Name	Organisation	18 Mar 2022	20 May 2022	8 Jun 2022	21 Jul 2022	9 Sep 2022
<b>Members</b>						
Lawrence Jones	Elexon ( <i>Chair</i> )					
Aylin Ocak	Elexon ( <i>Lead Analyst</i> )				x	
Lee Stone	Npower ( <i>Proposer</i> )					
Annika Moody	Imserv					x
John Greene	SSE			x		
Ryan Parker	WPD					
Simon Askew	Business Energy Direct	x		x	x	x
Tom Chevalier	Power Data Associates	x			x	
Phil Russell	Consultant		x	x		
Nik Wills	Stark					x
Richard French	Power Data Associates			x		
Leanne Yates	Northern Power Grid			x		x
Meg Wong	Stark	x				
<b>Attendees</b>						
Mark DeSouzaWilson	Elexon ( <i>Design Authority</i> )					
Tina Wirth	Elexon ( <i>Lead Lawyer</i> )					
Kevin Spencer	MHHS Programme				x	
Danielle Walton	Ofgem	x		x	x	
Sinead Quinn	Ofgem	x	x	x		x
Jessica Davis	Elexon (SME)			x		
Freya Gardner	Elexon (SME)			x	x	x
Andrew Giblin	UK Power Networks					
Ceri Jones	Scottish Power			x		
Nicola Dew	Northern Power Grid					
Paul Angus	SSEN			x		x
Tym Huckin	Tym Huckin Ltd.					
Joseph Kavanagh	BUUK Infrastructure		x	x	x	331/06
Lucy Penketh	Electricity North West		x	x	x	P434 x Assessment Report
Elaine Carr	SP Energy Networks		x		x	
Kate Murphy	EDF	x		x	x	6 October 2022
Tracey Dunne	Electricity North West Limited	x				Version 1.0
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