Transmission Charging Methodologies Forum and CUSC Issues Steering Group

Meeting 141 - 23 November 2023

ESO

Agenda

1	Introduction, meeting objectives and review of previous actions **Claire Huxley - ESO**	10:30 - 10:35
2	TNUoS Task Force verbal update **Binoy Dharsi – EDF Energy Task Force member**	10:35 - 10:45
3	CISG Connection subgroup verbal update **Alison Price - ESO**	10:45 - 10:50
4	Market Wide Half Hourly Settlement (MHHS) **Neil Dewar & Keren Kelly - ESO**	10:50 - 11:20
5	BSUoS Fixed Tariffs **Nick Everitt - ESO**	11:20 - 11:30
7	Comfort break	11:30 - 11:35
9	Overview of Proposed CUSC Modification: Cost Recovery for Boundary Reinforcement **Nitin Prajapati - ESO**	11:35 - 11:55
10	Code Administrator update **Milly Lewis - Code Administrator ESO**	11:55 - 12:00
11	AOB and Meeting Close **Claire Huxley - ESO**	12:00 - 12:15

TCMF Objective and Expectations

Objective
Develop ideas, understand impacts to industry and modification content discussion, related to the Charging and Connection matters.
Anyone can bring an agenda item (not just the ESO!)

Expectations
Explain acronyms and context of the update or change
Be respectful of each other’s opinions and polite when providing feedback and asking questions
Contribute to the discussion
Language and Conduct to be consistent with the values of equality and diversity
Keep to agreed scope

Review of previous actions

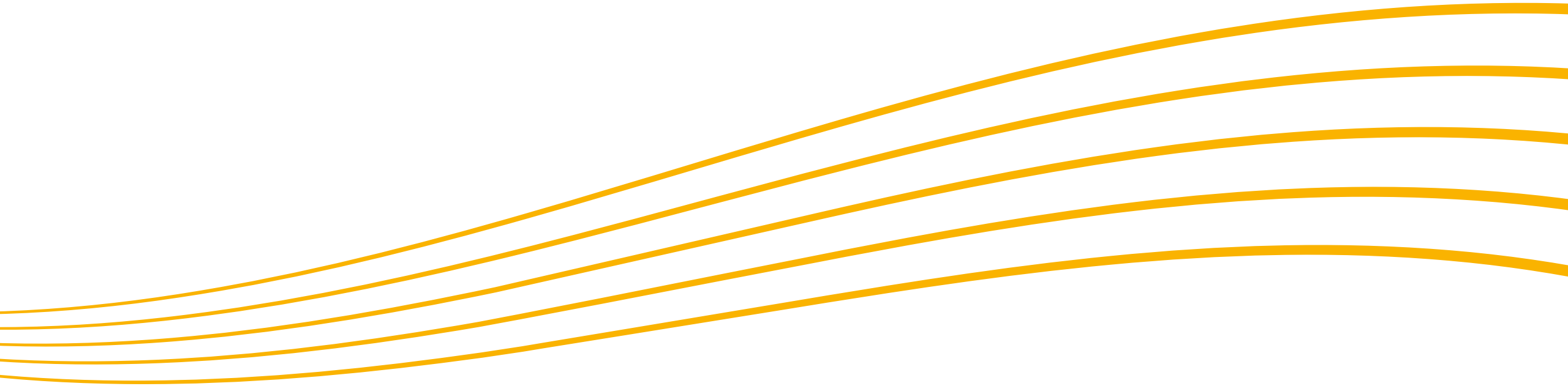
ID	Month	Description	Owner	Notes	Target Date	Status
23-9	October 23	Thinking about the 30% that will connect what is the impact on Transmission Network requirements and the any investment that may be required. Also, what is the geographical spread are they evenly spread or are they all in the north for example (For reference Slide 7 – October slidepack)	AC	Query is with the Customer Operability Assessment team – will update in Dec TCMF	Nov 23	Open
23-10	November 23	5 Point Plan - share high level Construction Planning Assumptions (CPA) approach and methodologies.	AC		Nov 23	Open
23-11	November 23	To update slide 17 with the applicable TNUoS tariff between the Local Substation and Onshore OFTO Substation.	NE		Nov 23	Open

TNUoS Task Force verbal update

Binoy Dharsi – EDF Energy Task Force member

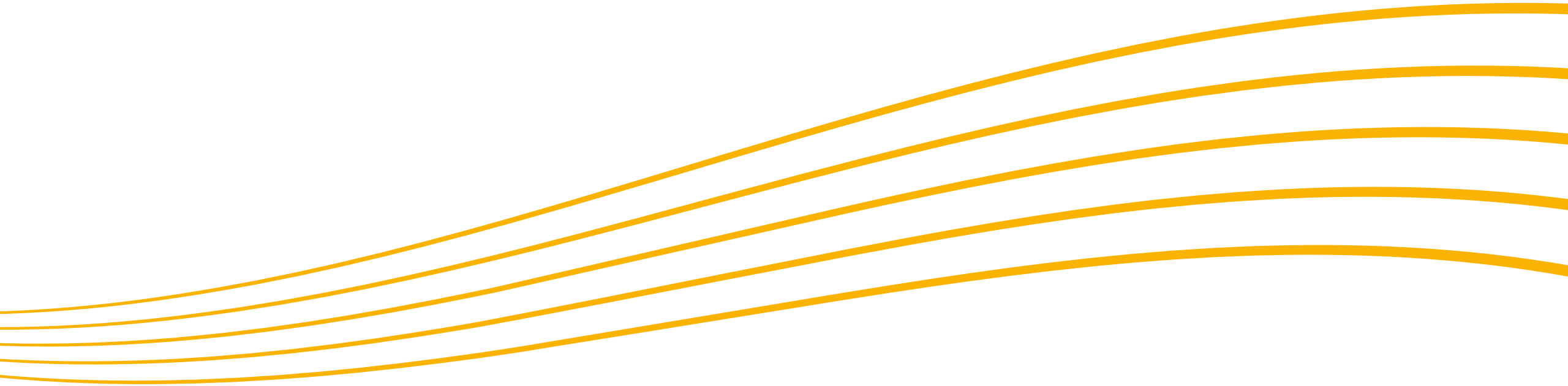
CISG Connection subgroup verbal update

Alison Price - ESO



Market Wide Half Hourly Settlement (MHHS)

Neil Dewar & Keren Kelly - ESO



Agenda

1. MHHS Introduction and Key Dates
2. MHHS Programme Governance Structure
3. Treatment of Measurement Class in the BSC
4. Current TNUoS Charging Methodologies
5. Problem Statements and Potential Solutions
6. TCMF Asks

MHHS Introduction and Key Dates

Market-wide Half Hourly Settlement (MHHS) – High level Introduction

- What is it?
- Industry wide Programme to implement a new Target Operating Model (TOM) for the electricity market where site-specific, half-hourly energy consumption is recorded and settled for all metering points

- Where has this come from?
- In 2017 Ofgem initiated the Settlement Significant Code Review (SCR) and published their decision in April 2021

- The output was that Market-Wide settlement reform is a key enabler of the move to a smarter, more flexible energy system and has a fundamental role in delivering the smart systems and flexibility plan towards Net Zero

- When is Programme due to be completed?
- Expected between December 2026 and 2027

- How?
- Programme split into 16 different Milestones

- M1-M5 complete (Were subject to approximately 18month delay)

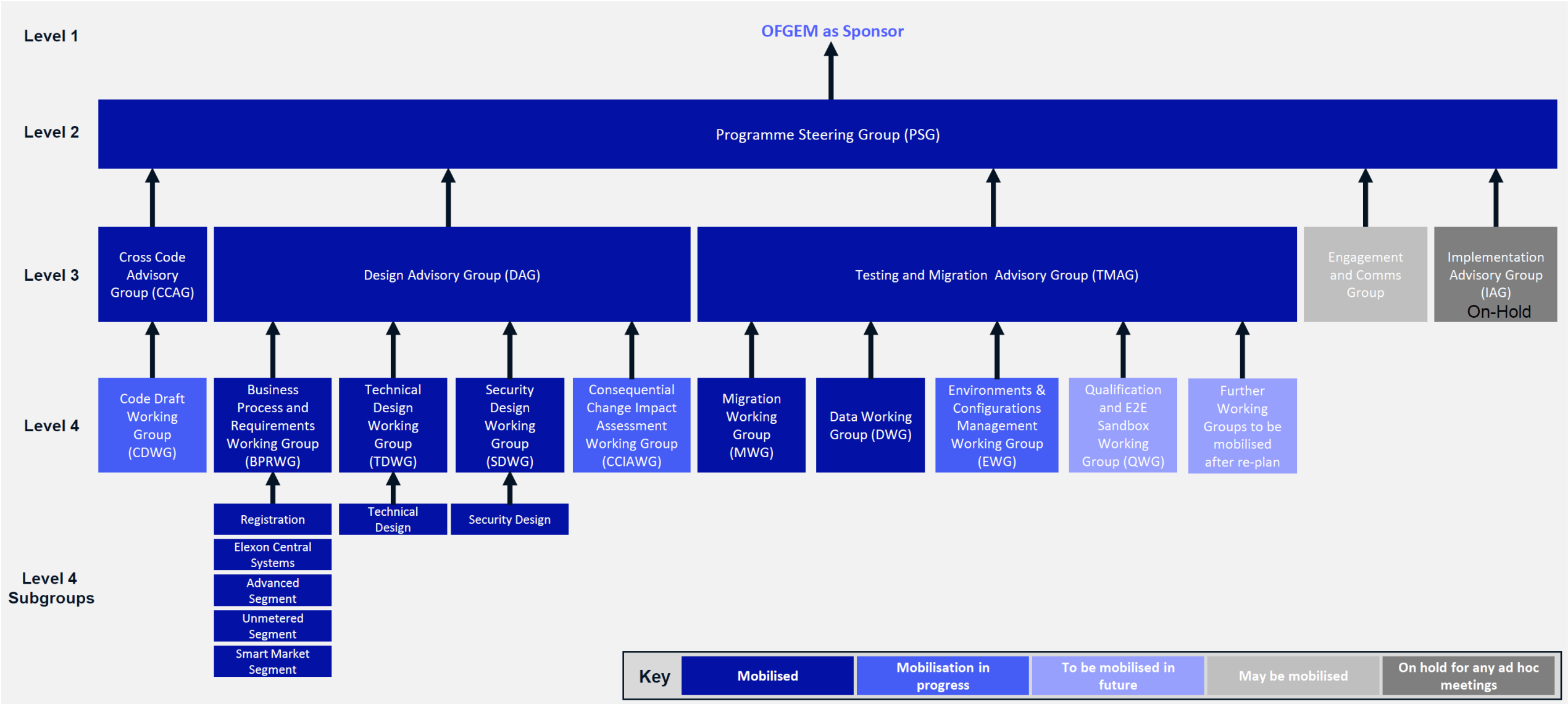
- Remaining Milestones ongoing, but relevant Milestones for TCMF to consider are on the next slide

MHHS Programme Milestones

Milestone Ref	Milestone Title	Replan Date	Description
M11	Start of 1 year migration for UMS/Advanced	Apr 25	Start of migration window for suppliers to move all UMS and advanced meter points to be settled in the new arrangements.
M12	Start of 1 year migration for Smart/Non-smart	Apr 25	Start of migration window for suppliers to move all smart and non-smart meter points to be settled in the new arrangements.
M15	Full transition complete	Oct 26	Completion of implementation activities including 18 month migration.
M16	Cut over to new settlement timetable	Dec 26	The date of the cut over to the new settlement timetable will occur after the end of migration. The decision on when the settlement timetable should be reduced should be taken nearer the time, and on market monitoring against trigger points. Industry should ensure that the new settlement timetable is introduced as soon as practical after the end of migration, ideally 2 months

MHHS Governance Structure

MHHS Governance and Decision-making Structure



MHHS PROGRAMME
Industry-led, Elexon facilitated

Treatment of Measurement Class in the BSC

BSC Measurement Classes

BSC defined definition

A classification of Metering Systems which indicates how Consumption is measured i.e.

- Non Half Hourly Metering Equipment (equivalent to Measurement Class “A”)
- Non Half Hourly Unmetered Supplies (equivalent to Measurement Class “B”)
- Half Hourly Metering Equipment at above 100kW Premises (equivalent to Measurement Class “C”)
- Half Hourly Unmetered Supplies (equivalent to Measurement Class “D”)
- Half Hourly Metering Equipment at below 100kW Premises with current transformer (equivalent to Measurement Class “E”)
- Half Hourly Metering Equipment at below 100kW Premises with current transformer or whole current, and at Domestic Premises (equivalent to Measurement Class “F”)
- Half Hourly Metering Equipment at below 100kW Premises with whole current and not at Domestic Premises (equivalent to Measurement Class “G”)

Removal of Measurement Classes as part of MHHS

- Measurement Class as a concept/data item will not exist under the MHHS arrangements, as outlined in Ofgem's Final decision letter from 20th April 2021 on the Full Business Case for MHHS (p25 Clause 3.10).
- From April 2025 – October 2026 (migration period), once a site migrates to the new settlement arrangements, there will be no Measurement Class held for that site. This is true for both sites that are HH and NHH settled pre-migration.
- Measurement Class is not being deleted from MDD, but MDD is being replaced under MHHS by Industry Standing Data (ISD) and ISD does not contain Measurement Class.
- When an MPAN moves to the new MHHS arrangements, the P0210 (TUoS – HH/NHH Split) file will no longer show a Measurement Class identifier.
- Migration will be done by Supplier MPANs by group during the Migration period
- If an MPAN changes Suppliers during the course of the Migration period and ends up with a Supplier that is still on the old arrangements, there is the concept of Reverse Migration which means that P0210 Measurement Class information would be re-instated.

Current TNUoS Charging Methodologies

M6 - CUSC Charging – (TNUoS)

- How are suppliers and directly connected demand charged TNUoS?
- Chargeable Demand Locational Capacity (Half Hourly settled) *generally commercial*:
  - Half hourly customers are charged according to the demand (MW) they take over the three 'Triad' periods each year; the charge is levied through a £/kW tariff
  - Triads are defined as the three half-hours with the highest system demand, between November and February, separated by at least ten clear days.
- Chargeable Energy Capacity (Non Half Hourly settled) *generally domestic, or smaller non-domestic premises*:
  - Non half hourly charges are based on their annual consumption between 4pm and 7pm (in kWh), through a p/kWh tariff.
- CMP401 extended the protection of Double Charging for MPANs in Measurement Classes F and G (extending P272 and CMP318) should there be a change in Measurement Class during certain points of the year, to prevent HH and NHH Charging during the same Charging Year. This protection does not exist for MPANs in the new MHHS arrangements.
- Subsequently, there is a risk of double charging of end consumers' MPANs depending on when Suppliers move to the new arrangements i.e. portion of year on old arrangements/rest on new if nothing changes.
- TNUoS tariffs are set a year ahead and charges are reconciled based on actual usage at the end of that year. Users are then billed monthly for this TNUoS charge
- For all final demand customers, there is a daily site charge – the Demand Residual

Problem statements and Solution options

Problem Statements

- How do we address changes to CUSC, protect end users from double charging implications by April 2025 (Start of Migration), while fitting in with MHHS Programme Milestones and not being a blocker to the success or delaying implementation?

- What should TNUoS charging look like after MHHS Migration?

Now – April 2025 (Pre Migration Period – Short Term)

Situation

- The TUoS Report (P0210 – Half Hourly HH/Non Half Hourly NHH Split) states that HH data is provided for Half Hourly Measurement Classes: C, D, E, F and G. ESO then uses this information to charge for HH Demand under the Triad methodology
  - ➢ Existing treatment of some Measurement Classes to be noted:
  - MPANs that were 'Elective' Half Hourly settled (Measurement Class E) are already charged under the Triad methodology
  - CMP401 extended the protection of double charging for MPANs in Measurement Classes F and G (extending P272 and CMP318) should there be a change in Measurement Class during the year, preventing a site being charged under the triad and NHH methodologies during the same Charging Year. This protection lasts until completion of M15 of the MHHS Programme (End of Migration). Until this point, all Measurement Class F and G sites will be charged under the NHH arrangements.
- **No impact on Tariff setting for Charging Year commencing 1st April 2024, but will impact Tariff setting for Charging Year 2025**

Current Activities

- Work with Elexon to deliver the most reflective P0210 file that replicates most of the current TUoS File
- Work with industry (mainly Suppliers) to understand impacts on their portfolios
- Work with Ofgem/MHHS Programme on most appropriate governance route

April 2025 - October 2026 (Migration Period – Medium Term)

Situation

- All MPANS (roughly 33m) will migrate to the new Target Operating Model (TOM) over an 18 month period
- Migration will be done by Supplier MPANs by group during the period
- As it stands, once a site moves to the new TOM arrangements, it will be treated as a Half Hourly settled irrespective of how site is metered
- If the end consumer changes from a Supplier who is participating in new arrangements between April 2025 and October 2026 to a Supplier who is not, the end consumer will move back into the old settlement arrangements (reverse migration)
- CMP401 extended the protection of double charging for MPANs in Measurement Classes F and G (extending P272 and CMP318) should there be a change in Measurement Class during the year, preventing a site being charged under the triad and NHH methodologies during the same Charging Year. This protection no longer exists for MPANs in the new arrangements (no Measurement Class)
- Subsequently, there is a risk of double charging of MPANs depending on when Suppliers move to the new arrangements i.e. portion of year on old arrangements/rest on new (if no change)

Solution Options

- Move all MPANs to 4pm to 7pm charging arrangements (Chargeable Energy Capacity) from 1st April 2025 until end of Charging Year 2026 which would cover the migration period (removes double charging risk)
- Maintain current charging arrangements segmenting MPANs using MHHS data instead of Measurement Class (double charging risk remains)
- Raise CUSC Modification Proposals (Independent of MHHS) or amend Legal text in CUSC as part of the MHHS Programme Plan

October 2026 onwards (Post Migration Period – Long Term)

Situation

- All MPANS will have migrated to the new TOM and will be Half Hourly settled irrespective of how they are metered – this includes sites that are not on smart meters, and also unmetered sites

Proposed Solution:

- TNUoS Task Force to look at the long term solution as part of the Signals Workgroup

Asks of Task Force

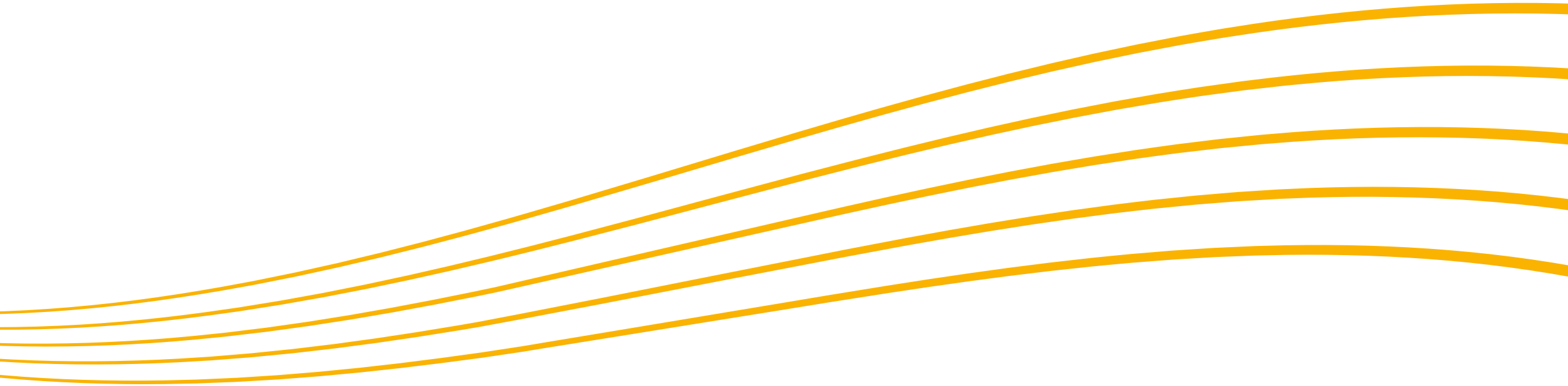
1. What should Demand Charging look like as an enduring solution?
2. What could Triads be replaced with that is suitable for both domestic and non domestic end consumers?
3. Should the industry continue with Medium Term solution (Migration Period) until a long term solution can be implemented?

TCMF Asks

- Feedback and support in developing solutions to the Medium Term charging defect outlined
  - The governance route is still to be determined

BSUoS Fixed Tariffs

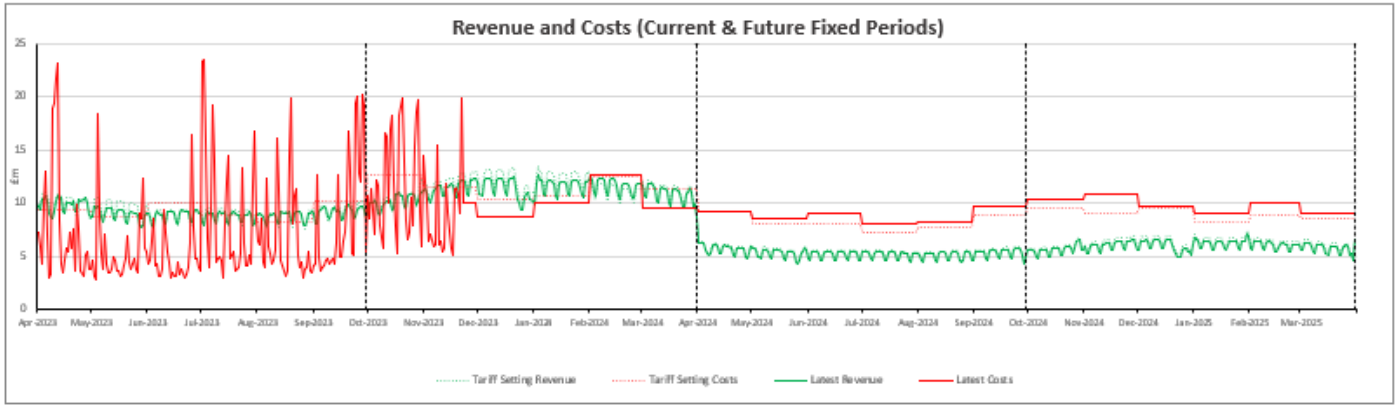
Nick Everitt - ESO

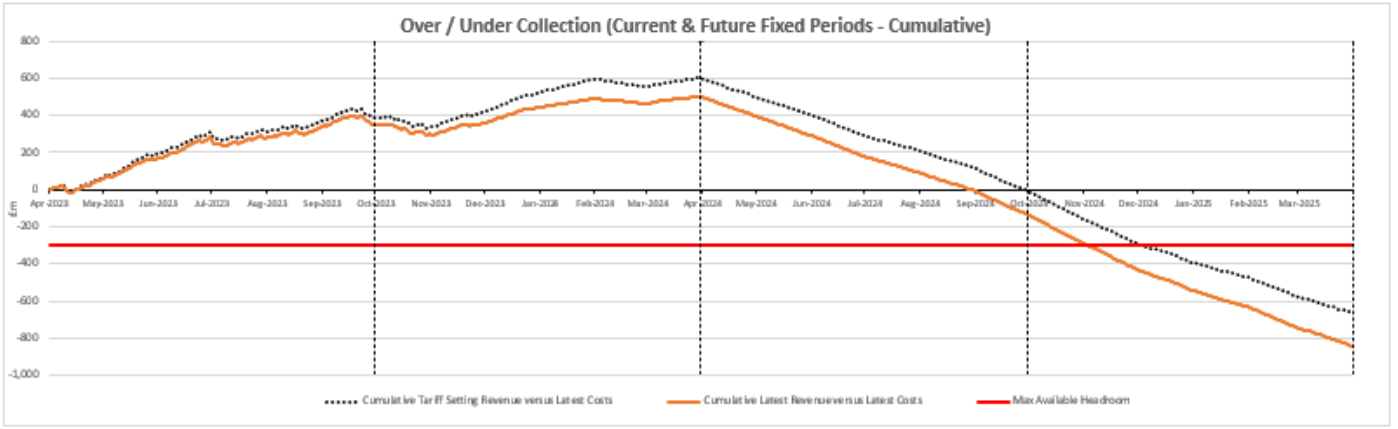


BSUoS Fixed Tariff - Revenue v Costs

Today's Date	23/11/2023
Latest Revenue in Fixed Period to date	2,228,598,161
Latest Costs in Fixed Period to date	1,882,043,869
Over / (Under) Recovery to Date	346,554,292

Last date Control Room data availat	22/11/2023
Last date II data entered	14/11/2023
Last date SF data entered	30/10/2023
Latest published forecast	December 23





	Today 23/11/2023	As at last report 17/11/2023	As of Fixed Tariff 3 setting 22/06/2023
Forecast cash position at the end of fixed tariff 1	£352m	£352m	£504m
Change from Last Report	£0m		
Change from Tariff 3 Setting	-£152m		
Forecast cash position at the end of fixed tariff 2	£500m	£492m	£1,015m
Change from Last Report	£8m		
Change from Tariff 3 Setting	-£515m		
Forecast cash position at the end of fixed tariff 3	-£135m	-£143m	£511m
Change from Last Report	£8m		
Change from Tariff 3 Setting	-£646m		
Forecast cash position at the end of draft fixed tariff 4	-£841m	Forecast cash position at the end of fixed tariff 4 (draft tariff) -£849m	Forecast cash position at the end of fixed tariff 4 (draft tariff) £0m
Change from Last Report	£8m		
Change from Draft Tariff 4 Setting	-£841m		


Comfort Break

Overview of Proposed CUSC Modification: Cost Recovery for Boundary Reinforcement

Nitin Prajapati - ESO

CUSC Modification Proposal Overview

Background and Methodology Challenge

- The ESO published a Holistic Network Design (HND) in July 2022, to enable a more coordinated approach to offshore wind connections.
- The Authority published an asset classification decision, classifying HND assets as either onshore transmission, radial offshore transmission or non radial offshore transmission.
- Onshore transmission represents reinforcement of a congested onshore boundary to convey electricity generated from a congested region behind that boundary onshore, to other parts of the onshore system with a demand bias.
- CUSC section 14.15.35 confirms ‘Generators directly connected to a Main Integrated System (MITS) node will have a zero local circuit tariff.’
- When applying the current rules, any generators which are not directly connected to a MITS node but directly connected to a circuit being effectively utilised as onshore boundary reinforcement would be subject to the local tariff to recover the cost of that circuit.
- This would not be cost-reflective, as the primary purpose of these types of circuit is boundary reinforcement to the benefit of a number of users, so it would not be appropriate to recover the cost of these circuits or future circuits used for boundary reinforcement predominantly from a specific user.

CUSC Modification Proposal Overview

Solution

- This proposal recommends reviewing the cost recovery of HND circuits that are being used as boundary reinforcement to ensure they are not predominantly recovered by a specific user, but by wider users of the network.
- A number of options have been explored, and the preferred approach is to recover the costs via the wider tariff.
- To enable this, the circuits utilised for boundary reinforcement would need to be classed as a wider circuit.
- To ensure these circuits are classed as a wider circuits, the proposer recommends that CUSC section 14 is updated to outline:
    - That wider charges are based on the current definitions, plus any circuit deemed by the Authority to be ‘onshore reinforcement.’
    - This would be outlined between CUSC section 14.15.35 - 14.15.36 to reflect that circuits deemed to be ‘onshore reinforcement’ would not be subject to a local charge.
    - Through the workgroup process consideration will also be given to other areas of CUSC section 14 that may need updating to ensure recovery through the wider tariff.
- This would effectively ensure that any circuits in the HND/HND follow up process that are used as boundary reinforcement would be classed as wider circuits rather than a local circuit, therefore its cost would be recovered via wider TNUoS charges.

CUSC Modification Proposal Overview

Benefits of Solution

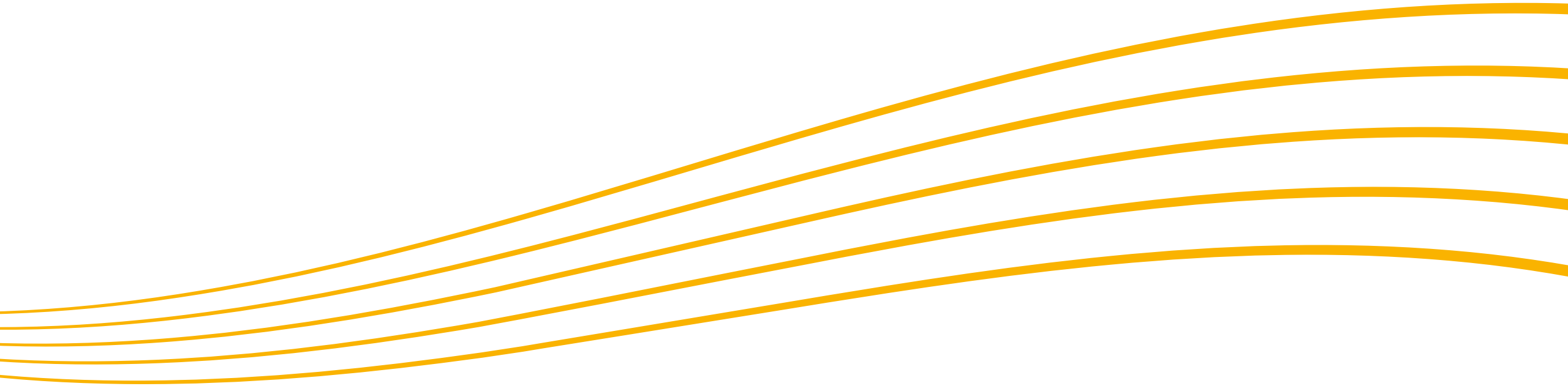
- The purpose of the circuit is reflected in the charging methodology, improving cost reflectivity.
- Future-proofs the methodology for any additional offshore circuits deemed to be boundary reinforcement.
- Should better incentivise investment from offshore generators, including in circumstances where a boundary reinforcement might optimally be a feature of network designs.
- Fairly simple approach to implement.

Next Steps and Considerations

- Raise this modification in late November to be discussed at the CUSC Panel in December.
- There is an appreciation that other options for a well-targeted and effective solution to the identified issue could also be explored during the workgroup process dependent on feedback and discussions.

Code Administrator Update

Milly Lewis - Code Administrator ESO



Key Updates since last TCMF

New Modifications	• **None**
Decisions	• **CMP376 ‘Inclusion of Queue Management process within the CUSC ’**
Implementations	• **None**

Authority Expected Decision Date

Decisions Pending

Modification	Final Modification Report Received	Expected Decision Date
CMP298 'Updating the Statement of Works process to facilitate aggregated assessment of relevant and collectively relevant embedded generation'	06/04/2022	30/11/2023*
CMP330&CMP374 'Allowing new Transmission Connected parties to build Connection Assets greater than 2km in length and Extending contestability for Transmission Connections'	10/08/2023	08/03/2024
CMP344 'Clarification of Transmission Licensee revenue recovery and the treatment of revenue adjustments in the Charging Methodology'	08/02/2023	08/12/2023
CMP392 'Transparency and legal certainty as to the calculation of TNUoS in conformance with the Limiting Regulation'	13/10/2023	31/01/2024
CMP398 'GC0156 Cost Recovery mechanism for CUSC Parties'	11/07/2023	30/01/2024*
CMP408 'Allowing consideration of a different notice period for BSUoS tariff settings'	13/10/2023	TBC
CMP412 'CMP398 Consequential Charging Modification'	11/07/2023	30/01/2024*
CMP414 'CMP330/CMP374 Consequential Modification'	10/08/2023	08/03/2024
CMP415 'Amending the Fixed Price Period from 6 to 12 months'	13/10/2023	TBC

The Authority's publication on decisions can be found on their website below:
https://www.ofgem.gov.uk/publications/code-modificationmodification-proposals-ofgem-decision-expected-publication-dates-timetable

* Dates moved since last update

Key Updates ahead of the next TCMF

November / December Consultations

- **CMP286** (Improving TNUoS Predictability through Increased Notice of the Target Revenue) Send Back Second Code Administrator Consultation is scheduled to run **29 November 2023 until 5pm 02 January 2024***
- **CMP315** (TNUoS Review of the expansion constant and the elements of the transmission system charged for) and **CMP375** (Enduring Expansion Constant & Expansion Factor Review Code Administrator Consultations closes **5pm 15 December 2023**
- **CMP411** (Introduction of Anticipatory Investment (AI) within the Section 14 charging methodologies) Code Administrator Consultations scheduled to run **until 5pm 27 November 2023**
- **CMP425** (Billing Demand Transmission Residual By Site) Code Administrator Consultations scheduled to run from **24 November 2023 until 5pm 29 November 2023***

* (pending November 2023 CUSC Panel approval)

Useful Links

Updates on all Modifications are available on the Modification Tracker here

Ofgem's expected decision dates/ date they intend to publish an impact assessment or consultation, for code modifications that are with them for decision are available here

The latest CUSC Panel Headline Report is available here

The latest prioritisation stack is available here

CUSC 2023 - 2024 - Panel dates

	Panel Dates	Papers Day	Modification Submission Date	(TCMF) CUSC Development Forum
November	24	16	9	2
December	15	7	30 November	23 November
January	26 (Face to Face Meeting)	18	11	4
February	23	15	8	1
March	22	14	7	29 February
April	26 (Face to Face Meeting)	18	11	4
May	31	23	16	9
June	28	20	13	6
July	26 (Face to Face Meeting)	18	11	4
August	23	15	8	1
September	27	19	12	5
October	25 (Face to Face Meeting)	17	10	3
November	29	21	14	7
December	13	5	28 November	21 November

AOB & Close

CUSC Credit Threshold Arrangements

Rob Wilson

TCMF 23rd Nov 2023

CUSC Credit Threshold issue – code text

PART III - CREDIT REQUIREMENTS

3.22.3 The User shall be required to provide Security Cover where its Security Requirement exceeds its User's Allowed Credit.

This refers to an appendix and definitions as below. Via the definitions this actually refers to NGET's RAV alone which feels inappropriate. While respecting the principle of no betterment, there is one question here to do with the appropriateness of using NGET RAV; another question about the FSO's continued ability to extend credit and whether this needs further scrutiny or potentially a different limit to manage exposure.

APPENDIX 1 CREDIT ARRANGEMENTS

1 Where the User meets the Approved Credit Rating that User's Allowed Credit at any given time shall be calculated as a percentage of Unsecured Credit Cover by reference to the specific investment grade within the User's Approved Credit Rating as follows: [etc]

From the definitions section:

"The Company Prescribed Level" the forecast value of the regulatory asset value of NGET for a Financial Year as set out in the document published from time to time by Ofgem setting this out and currently known as "Ofgem's Transmission Price Control Review of The Company – Transmission Owner Final Proposals" such values to be published on The Company Website by reference to The Company credit arrangements no later than 31 January prior to the beginning of the Financial Year to which such value relates;

"Unsecured Credit Cover" the maximum amount of unsecured credit available to each User for the purposes of Part III of Section 3 of the CUSC at any time which shall be a sum equal to 2% of the The Company Prescribed Level in the relevant Financial Year;

"User's Allowed Credit" that proportion of the Unsecured Credit Cover extended to a User by The Company as calculated in accordance with Paragraph 3.26;

"Security Amount" in respect of the User the aggregate of available amounts of each outstanding (a) Letter of Credit, (b) Qualifying Guarantee and (c) the principal amount (if any) of cash that the User has paid to the credit of the Escrow Account (and which has not been repaid to the User); for the purpose of this definition, in relation to a Letter of Credit or Qualifying Guarantee "available amount" means the face amount thereof less (i) payments already made thereunder and (ii) claims made thereunder but not yet paid;

"Security Cover" for each User, the User's Security Requirement less the User's Allowed Credit;

"Security Requirement" the aggregate amount for the time being which the User shall be required by The Company to provide and maintain by way of Security Cover and its User's Allowed Credit in accordance with Paragraph 3.22;

CUSC Credit Threshold issue – how does this work currently?

The way that this works is quite convoluted but is as follows:

- Users have to provide Security Cover as set out in CUSC 3.22.1
- The Security Cover definition requires them to secure an amount being their User's Security Requirement less the User's Allowed Credit
- Their User's Security Requirement is the amount that is defined as their combined BSUoS/TNUoS liability
- The User's Allowed Credit is a threshold. Users only have to secure quantities that go above this
- The value of their User's Allowed Credit is set as a maximum figure of the Unsecured Credit Cover, which is defined via the The Company Prescribed Level definition as 2% of NGET RAV.
- And then in CUSC section 3 app 1 para 1 the factor by which the Unsecured Credit Cover figure is multiplied to arrive at the User's Allowed Credit is defined in a range from 100% downwards depending on a number of methods but most simply their credit rating.

CUSC Credit Threshold issue – what's the issue?

As part of the FSO transition a Crosscode Workgroup has been established to progress code changes where necessary to:

- Amend references and naming where necessary to reflect the updated arrangements and licensing
- Consider changes to areas of code that no longer feel appropriate
- Add to the codes reflecting new FSO roles and responsibilities

- The current CUSC credit threshold arrangements feel inappropriate – why is NGET (and only NGET) RAV used?
- Is there a more appropriate solution?

CUSC Credit Threshold issue – suggested amendment

- The suggested amendment is to find a more suitable figure to use instead of NGET RAV within the 'The Company Prescribed Level' definition.
- NGET RAV does seem inappropriate to use but this was also the case at legal sep - and potentially before
- The rationale seems to be to relate the level of credit cover to the value of installed assets but why just NGET RAV and not including the Scottish TO RAVs or considering offshore assets, particularly going forwards?
- It is perhaps just a method of getting to an acceptable number for industry while being based on some history relating to when the CUSC was only concerned with England&Wales pre-BETTA.

What could be used instead?

- Using the entire summated RAVs of all of the TO/OFTO companies would be a better signal but rather more complex as well as considerably bigger.
- The RAV figures for each of the onshore TOs are public domain so using these would be straightforward.
- As a basic solution, to keep the actual number the same would need a revision to the current position of 2% of NGET RAV.
- But it also needs consideration of whether this is the right level for the FSO going forwards.

CUSC Credit Threshold issue – suggested amendment text

Suggested solution in the CUSC definitions section:

"The Company Prescribed Level" the forecast value of the regulatory asset value of ~~NGET~~ Onshore Transmission Licensees *[or could make it specific to NGET, Scottish Hydro Electric Transmission plc and SP Transmission plc to avoid including any future competitively appointed TOs; and also need to check if it would be appropriate to include offshore assets]* for a Financial Year as set out in the document published from time to time by Ofgem setting this out and currently known as "Ofgem's Transmission Price Control Review of The Company – Transmission Owner Final Proposals" such values to be published on The Company Website by reference to The Company credit arrangements no later than 31 January prior to the beginning of the Financial Year to which such value relates;

"Unsecured Credit Cover" the maximum amount of unsecured credit available to each User for the purposes of Part III of Section 3 of the CUSC at any time which shall be a sum equal to 2% *[likely to need revising if using a different totalised RAV]* of the The Company Prescribed Level in the relevant Financial Year;

- This is not essential to resolve for the FSO day 1 as it is a longstanding issue and is likely to be sufficiently complex that it should be taken forwards separately to the main FSO transition modifications to avoid any risk of delay
- The Crosscode Workgroup progressing the FSO code changes has agreed this approach – and asked that the issue be presented to TCMF