Modification proposal:	**Connection and Use of System Code (CUSC) CMP363: TNUoS Demand Residual Charges for Transmission Connected Sites with a Mix of Final and Non-Final Demand (CMP363)**		
Decision:	The Authority[1] directs that this modification be made[2]		
Target audience:	National Grid Electricity System Operator (NGESO), Parties to the CUSC, the CUSC Panel and other interested parties		
Date of publication:	13 December 2022	Implementation date:	1 April 2023

Background

In November 2019, we published our Decision (and associated Direction) on the Targeted Charging Review (TCR) Significant Code Review.[3] Once the Decision is implemented, the costs of operating, maintaining and upgrading the electricity grid will be spread more fairly and, through reducing harmful distortions, will save consumers approximately £300m per year, with anticipated £4bn-5bn consumer savings in total over the period to 2040.

The TCR included a review of how residual network charges are set and recovered. The aim of the TCR is to ensure that these charges are recovered from network users in a way that meets the TCR Principles:

- reducing harmful distortions;
- fairness; and
- proportionality and practical considerations.

[1] References to the "Authority", "Ofgem", "we" and "our" are used interchangeably in this document. The Authority refers to GEMA, the Gas and Electricity Markets Authority. The Office of Gas and Electricity Markets (Ofgem) supports GEMA in its day to day work. This decision is made by or on behalf of GEMA.
[2] This document is notice of the reasons for this decision as required by section 49A of the Electricity Act 1989.
[3] https://www.ofgem.gov.uk/system/files/docs/2019/12/full_decision_doc_updated.pdf

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We decided that residual charges should apply to Final Demand[4] consumers and that residual charges will be fixed charges. For domestic consumers, we decided that there will be a single transmission residual charge, and a single distribution residual charge within each of the 14 distribution licensed areas. For distribution and transmission connected non-domestic consumers, we decided that a structure of banded fixed charges should be used for residual charges. The changes were implemented in April 2022 for distribution residual charges, and will be implemented for transmission residual charges in April 2023.[5]

Alongside our Decision, we issued a Direction to National Grid Electricity System Operator (NGESO) (the 'TCR Direction'), to bring forward proposals to modify the Connection and Use of System Code (CUSC) in relation to residual charges, to give effect to the terms of the TCR Decision. In the TCR Direction[6], we directed (paragraph 33.c) that *"appropriate arrangements to develop any consequential changes that may be required in relation to residual charges for […] consumers connected to private wires and complex sites"*[7], should be made.

In November 2020, we approved CMP334 which defined 'Final Demand Site' in the CUSC. This definition is used in the Transmission Network Use of System (TNUoS) methodology as a result of our decisions to approve CMP343 and CMP340. In our decision on CMP334, we stated that sites that have a mix of Final and Non-Final Demand had not been adequately covered by the proposed solution. We noted that we expected a modification brought forward to cover these sites in order to satisfy this element of the TCR Direction, and stated that it should ensure that:

- *"sites that would not be subject to the TDR under CMP334 WACM1 would not be [sic] subject to the TDR if they exist in a private wire/complex site; and*
- *any site in a private wire/complex site that has associated final demand would be liable for the TDR in a proportionate way."*

[4] Final Demand is defined as "electricity which is consumed other than for the purposes of generation or export onto the electricity network". The CUSC modification CMP334 defined this term and other relevant terms. We approved CMP334 on 30 November 2020, though it will not have any effect until CMP343 is implemented.
[5] We decided in our approval of CMP343 WACM2 that there would be four residual charging bands transmission-connected users: CMP343 Decision.pdf
[6] https://www.ofgem.gov.uk/sites/default/files/docs/2019/11/cusc_direction_1.pdf
[7]The term 'complex site' in the context of the TCR relates to sites that have a mix of Final and Non-Final Demand. This was a colloquial term used in industry and so had no formally recognised meaning, and was also not recognised by CUSC. To avoid confusion with the 'Complex Site' definition in the BSC, the Workgroup agreed to use the term 'complicated sites' to avoid confusion in industry. CMP364 has introduced 'Mixed Demand Site' into CUSC to give definition to these types of sites.

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The modification proposal

NGESO (the 'Proposer') raised modification CMP363 on 10 December 2020. CMP363 seeks to clarify the residual charging arrangements for transmission connected sites that have a mix of Final and Non-Final Demand ('Mixed Demand Sites'). Supporting modification CMP364 will introduce this definition into the CUSC.

The CMP363 Original proposal ('Original Proposal') seeks to clarify how residual charges will apply to sites with a mix of Final and Non-Final Demand by introducing the following principles:

- A Single Site[8] with mixed demand will have the residual methodology applied based on the sum of its Final and mixed demand[9], ie Non-Final demand will not be included if it is separately identifiable via settlement metering.
- The residual charge will be applied on a Single Site basis irrespective of the number of connection points that site may have to the transmission network or other networks. The methodology will be applied based on the sum of all connection points to the transmission network.
- Transmission connected unlicensed networks will have no special treatment in the TNUoS methodology and so will be treated as transmission connected.
- Where it is unclear whether the consumption is Final Demand or not, it will be treated as Final Demand.

CMP363 also proposes to move the definition of 'Declarations' from Section 11 to Section 14 of the CUSC and add additional text regarding the validation of the Declaration.[10]

The Proposer considered that the Original Proposal would be positive in terms of Applicable CUSC Objectives (ACOs) (a), (c) and (e) and neutral against the remaining Objectives. In their view, the proposal would better facilitate effective competition as it would provide clarity in the treatment of residual charges in respect of more complicated sites to ensure a level playing field across these types of sites. They also believe that

[8] Single Site is defined in CUSC Section 11: Interpretation and Definitions as *'Shall mean either; 1. For Users with a Bilateral Connection Agreement, the Connection Site as defined in the Bilateral Connection Agreement, or 2. For all other parties, as defined as 'Single Site' in the DCUSA'*

[9] In this context, the term 'mixed demand' covers individual customers who are on a Mixed Demand Site who do not have separate meters to identify their Final and Non-Final Demand. In these cases, where it is unclear whether the consumption is Final Demand or not, the customer will be treated as Final Demand.

[10] Supporting modification CMP364 proposes to delete the definition of 'Declarations' from Section 11

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developments in transmission licensees' transmission businesses are better facilitated by this proposal as the Authority directed that this modification be made. Furthermore, the Proposer considers that this change better facilitates efficiency in the charging methodology for the same reason as presented for ACO (a).

Following the Workgroup Consultation, there were mixed views as to whether settlement metering or operational metering was the most appropriate solution. The Original Proposal proposes to use settlement metering (as per the Balancing and Settlement Code (BSC)) rather than operational (as per the Grid Code). The advantages of settlement metering highlighted by Workgroup members were that it was more accurate, properly takes losses into account, and requires no system or process changes for NGESO. However, it was noted that if settlement metering is not already installed on a site, its installation would lead to higher metering hardware and operating costs for a site than if operational metering is installed.

Some Workgroup members outlined their concerns with operational metering, highlighting that its processes were slow and cumbersome in comparison to settlement metering, and require additional manual work and processes for the ESO in terms of retrieving data. However, those in favour of operational metering recognised that it would be more cost effective for parties who can potentially use existing metering, and it should be sufficient to allow the determination of which band the site is allocated to. Furthermore, it was noted by Workgroup members that sites should not incur extra costs to change their existing metering configuration to calculate a cost recovery charge.

The Workgroup agreed to support the Workgroup Alternative CUSC Modification (WACM1) to address this concern. WACM1 proposes the same principles as the Original Proposal but would use settlement metering as the default, with operational metering as a fallback where settlement metering is not practical or economical.

CUSC Panel[11] recommendation

At the CUSC Panel meeting on 30 September 2022, the CUSC Panel unanimously considered that both solutions would better facilitate the CUSC objectives than the Baseline (ie the existing provisions of the CUSC). When considering which solution best met the ACOs, the majority of the CUSC Panel recommended that WACM1 be

[11] The CUSC Panel is established and constituted from time to time pursuant to and in accordance with section 8 of the CUSC.

implemented. Two Panel members were neutral in response as to which solution was preferable.

Our decision

We have considered the issues raised by the modification proposal and the Final Modification Report (FMR) dated 12 October 2022. We have considered and taken into account the responses to the industry consultation(s) on the modification proposal which are attached to the FMR[12]. We have concluded that:

- WACM1 would better facilitate the achievement of the ACOs;[13] and
- directing that WACM1 be made is consistent with our principal objective and statutory duties.[14]

Reasons for our decision

We consider that both the Original Proposal and WACM1 would better facilitate ACO (a), (c) and (e) and have a neutral impact on the other ACOs. We believe that approving WACM1 brings further benefits than the Original Proposal as it implements the relevant parts of our Direction whilst facilitating additional benefits with respect to ACOs (a) and (e).

(a) that compliance with the use of system charging methodology facilitates effective competition in the generation and supply of electricity and (so far as is consistent therewith) facilitates competition in the sale, distribution and purchase of electricity;

The CUSC Panel members unanimously voted that both the Original Proposal and WACM1 would better facilitate ACO (a), as both solutions would provide clarity in the treatment of sites with a mix of Final and Non-Final Demand, therefore, levelling the playing field across these types of sites. Under the current arrangements, standalone Non-Final

[12] CUSC modification proposals, modification reports and representations can be viewed on NGESO's website at: https://www.nationalgrideso.com/industry-information/codes/connection-and-use-system-code-cusc/modifications
[13] As set out in Standard Condition C10(1) of the Electricity Transmission Licence, see: https://epr.ofgem.gov.uk//Content/Documents/Electricity%20transmission%20full%20set%20of%20consolidated%20standard%20licence%20conditions%20-%20Current%20Version.pdf
[14] The Authority's statutory duties are wider than matters which the Panel must take into consideration and are detailed mainly in the Electricity Act 1989 as amended.

Demand sites will not be liable for residual charges. However, sites with a mix of Final and Non-Final Demand will not have their Non-Final Demand volumes exempt when calculating their residual. In other words, these sites will be banded based on both Final and Non-Final Demand, which could create a distortion between these sites and competitors who are solely Non-Final Demand

The Workgroup unanimously agreed that both solutions would better facilitate ACO (a) as it would level the playing field between Non-Final Demand standalone sites and Mixed Demand Sites in respect of their residual liability, hence improving competition. The Workgroup unanimously agreed that both solutions would better facilitate ACO (a) as it would level the playing field between Non-Final Demand standalone sites and mixed demand sites in respect of their residual liability, hence improving competition. One Workgroup member noted that both solutions provide a fair and proportionate mechanism for industry and NGESO to ensure residual costs are allocated fairly across the residual charging regime.

Another Workgroup member noted specifically that both the Original Proposal and WACM1 reduce confusion amongst suppliers about how Mixed Demand Sites should be face residual charges, and therefore better facilitates competition between suppliers (as there is reduced difference between suppliers with differing portfolios).

Our position

Both proposals help facilitate our TCR reforms, by giving effect to elements of our TCR Direction, which is expected to have a positive impact on competition generally. We agree that both the Original Proposal and WACM1 better facilitates competition than the Baseline because both solutions provide clarity in how residual charges should be applied to Mixed Demand Sites. Furthermore, both the Original Proposal and WACM1 ensure that sites, regardless of their configuration (eg large amount of generation with small consumption volume, or vice vera etc), are charged their residual based on Final Demand volumes only. This facilitates effective competition as it ensures that the treatment of Non-Final Demand on both standalone Non-Final Demand Sites and Mixed Demand Sites is consistent, in that the Non-Final Demand volumes are not charged or included in the calculation for residual charges.

Although both solutions provide similar benefits in regard to providing clarity in the residual charging regime, the Original Proposal does not cater for

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Mixed Demand Sites with existing operational metering in place. Therefore, the Original Proposal has the potential to create distortions between Mixed Demand Sites with settlement metering against those with operational metering, as those with operational metering could face a potential disadvantage as a result of having to install settlement metering, and also incur extra costs to change their metering configuration.

For this reason, we consider that competition is better facilitated under WACM1 as it mitigates against the risk of distortion between sites with existing operational metering and those with settlement metering.

(b) that compliance with the use of system charging methodology results in charges which reflect, as far as is reasonably practicable, the costs (excluding any payments between transmission licensees which are made under and accordance with the STC) incurred by transmission licensees in their transmission businesses and which are compatible with standard licence condition C26 requirements of a connect and manage connection);

The majority of Panel members agreed that both solutions are neutral against this objective. Only one Panel member considered the Original Proposal and WACM1 to be positive against this objective. However, one Workgroup member believed that the Original Proposal and WACM1 better facilitated this objective as it applies the TCR Decision to a wider range of Non-Final Demand users in respect of the residual charge, and makes the residual more equitable and thus more cost reflective than the Baseline.

Our position

We agree to an extent with the Workgroup member, as both solutions do apply residual charges to a wider range of demand users. However, the residual charge is a cost recovery charge and is not intended to be cost reflective. Overall, we consider both the Original Proposal and WACM1 to be neutral against this objective.

(c) that, so far as is consistent with sub-paragraphs (a) and (b), the use of system charging methodology, as far as is reasonably practicable, properly takes account of the developments in transmission licensees' transmission businesses;

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The majority of Panel members considered both the Original Proposal and WACM1 to better facilitate ACO (c) and one Panel member considered both solutions to be neutral against this objective. They considered the solutions to better facilitate this objective as they reflect the Authority's TCR Decision and Direction on how to recover the residual, and also addresses the defect described in CMP334.

Our position

We directed ESO to implement the TCR Decision by proposing a means of calculating residual charges for final demand consumers. In the TCR Direction, we directed (paragraph 33.c) that "*appropriate arrangements to develop any consequential changes that may be required in relation to residual charges for […] consumers connected to private wires and complex sites*", should be made.

Furthermore, we set out the following expectations of how complex and private wire sites should be addressed in our decision on CMP334:

For clarity, we expect that any proposal brought forward will ensure that:

- *sites that would not be subject to the TDR under CMP334 WACM1 would not be [sic] subject to the TDR if they exist in a private wire/complex site; and*
- *any site in a private wire/complex site that has associated final demand would be liable for the TDR in a proportionate way.*

We consider that both the Original Proposal and WACM1 ensure that mixed demand and private wire sites face residual charges based on Final Demand only. As such, both solutions give effect to the relevant parts of our TCR Direction related to the recovery of residual charges and help NGESO to fulfil the requirements placed upon it in regard to developments in transmission businesses. We therefore conclude that both options are positive against this objective.

(e) promoting efficiency in the implementation and administration of the system charging methodology

The majority of the CUSC Panel considered both the Original Proposal and WACM1 to be positive against this objective, with remaining members considering it to be neutral. They highlighted that both the proposals would remove uncertainty and therefore increase efficiency of the charging arrangements.

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One Panel member considered that since WACM1 includes the option for using operational metering as a backup if settlement metering is not viable, this will allow wider scope of inclusion and also has potential for more accurate recording of demand at sites with mixed generation. Another Panel member also noted a similar benefit of WACM1, highlighting that it will improve the practical application of the solution by avoiding the potential need for additional settlement metering simply for this purpose.

Two Workgroup members also supported WACM1 over the Original Proposal for the same reasons above, noting that WACM1 prevents consumers incurring costs to install settlement metering at their site to differentiate their Final and Non-Final Demand.

Our position

We agree with Panel and Workgroup members that both the Original Proposal and WACM1 better facilitate this objective than the Baseline as they both offer a method of applying residual charges to sites with mix of Final and Non-Final Demand. If neither of these solutions were put in place, all volumes at Mixed Demand Sites would be treated as Final Demand, and such sites would be disproportionately charged their residual, which was not the intent of the TCR Decision. This removes uncertainty and increases efficiency in the charging arrangements.

However, we believe that WACM1 better promotes efficiency in that it implements a more practical and fair solution for all types of mixed demand sites, as users would have the choice of settlement or operational metering, and make their choice based on their existing metering arrangements and cost effectiveness.

We understand that there were some concerns raised by NGESO in their Workgroup Consultation response that the use of operational metering would introduce additional manual work to configure control room systems and new manual processes to retrieve data, and could potentially hinder future opportunities for centralisation of industry data (and therefore future efficiency) compared to settlement metering.

However, it is noted in the FMR that only sites with significant Non-Final Demand and/or those closer to lower point of a transmission band are likely to make use of the changes proposed by this modification. NGESO have estimated that there are approximately 70 mixed demand sites on the transmission network, with only 6-12 sites expected to take

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advantage of the solutions suggested in WACM1. Given the relatively low number of sites expected to be affected, we consider that any increase in manual work for NGESO is likely to be minimal, such that the benefits of WACM1 still outweigh this potential negative.

Legal text

Our review of the legal text has identified ambiguities in the existing drafting which we consider would benefit from clarification by way of a further modification proposal. Notwithstanding this, we consider the legal text as it stands to be operative and effective.

Specifically, we note that the legal text for CMP363 WACM1 contains the following sentence:

'This Declaration shall clearly identify the Metering Systems used to isolate and identify gross Final Demand Consumption from any other Consumption at the Mixed Demand Site.'

We consider that this text is duplicative of the sentence preceding it and has the potential to cause ambiguity and confusion as to application of the provisions. In addition, the following sentence in the legal text appears to contain a typographical error: 'consumption metered at each asset which is does not consume Final Demand'.

We expect NGESO/Code Administrator to rectify these legal text issues before implementation of CMP363 WACM1 on 1 April 2023 through a further CUSC modification.

Whilst these errors have not affected our ability to reach a view as to the merits of CMP363 WACM1, we would reiterate that it is the responsibility of the Code Administrator to ensure that legal text is clear from ambiguity and capable of operation. It continues to be our expectation that legal text is fit for purpose.

Decision notice

In accordance with Standard Condition C10 of the Transmission Licence, the Authority, hereby directs that modification proposal CMP363: *TNUoS Demand Residual Charges for Transmission Connected Sites with a Mix of Final and Non-Final Demand* be made.

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Tom Kenyon Brown

Head of Electricity Network Charging

Signed on behalf of the Authority and authorised for that purpose

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