Stage 02 – Workgroup Consultation

At what stage is this document in the process?

01	Initial Written Assessment
02	Workgroup Consultation
03	Workgroup Report
04	Code Administrator Consultation
05	Draft CUSC Modification
06	Final CUSC Modification Report

CMP317:

Identification and exclusion of Assets Required for Connection when setting Generator Transmission Network Use of System (TNUoS) charges

and:

CMP327:

Removing the Generator Residual from TNUoS Charges (TCR)

Purpose of Modification: CMP317 - To define, for the purposes of EU regulation 838/2010, which specific elements of generator TNUoS pertain to assets required for connection, which specific elements should therefore be excluded when considering whether generator TNUoS charges fall within the stipulated range of €0-2.50/MWh and to establish a methodology for maintaining compliance in charge setting on an ex ante and an ex post basis. This is necessary as the application of section 14.14.5 (v) of the CUSC no longer ensures compliance with the €0 - €2.5/MWh charge range in future years

CMP327 - On 21st November 2019 The Authority directed the ESO (The Company) to change the TNUoS Charging Methodology such that the Residual element of Generator TNUoS is £0 and ensure that the correct interpretation of 838/2010 is incorporated. This CMP has been raised to give effect to that direction.

This document contains the discussion of the Workgroup which formed in July 2019 to develop and assess the proposal. Any interested party is able to make a response in line with the guidance set out in Section 5 of this document.

Published on: 20 February 2020

Length of Consultation: 15 Working days

Responses by: 12 March 2020

	**High Impact**: Users liable for Generator TNUoS charges, The Company
	**Medium Impact** Supplier Users liable for TNUoS

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Timetable

The Code Administrator recommends the following timetable:	
Workgroup Report presented to Panel	24 April 2020
Code Administration Consultation Report issued to the Industry	27 April 2020
Draft Final Modification Report presented to Panel	20 May 2020
Modification Panel decision	29 May 2020

Any questions?

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Final Modification Report issued to Authority (25 WD)	**9 June 2020**
Indicative Decision Date	**14 July 2020**
Decision implemented in CUSC (2WD after determination)	**1 April 2021**

1 About this document

This report contains the discussion of the Workgroup which formed in July 2019 to develop and assess the CMP317 proposal.

On 29 January 2020[1], Ofgem gave permission for the modifications CMP317 and CMP327 to be amalgamated, which had previously been requested by CUSC Panel. As such, this consultation will be for both modifications.

Section 2 (Original Proposal) and Section 3 (Proposer's solution) are sourced directly from the Proposer and any statements or assertions have not been altered or substantiated/supported or refuted by the Workgroup. Section 5 of the Workgroup contains the discussion by the Workgroup on the Proposal and the potential solution.

The CUSC Panel detailed in the Terms of Reference the scope of work for the CMP317 Workgroup and the specific areas that the Workgroup should consider.

The table below details these specific areas and where the Workgroup have covered them or will cover post Workgroup Consultation.

The full Terms of Reference can be found in Annex 1.

Table 1: CMP317 ToR

Specific Area	Location in the report
a) to determine a clear definition and understanding of the range	Section 4, Paragraph 3
b) an interpretation of the Ofgem "but for" and "required for" test, consideration of the CMP261 and CMA decision i.e. an assessment of what should and should not be excluded. [rather than it being	Section 4, Paragraph 1 Section 4, Paragraph 2

[1] Ofgem Letter to CUSC Panel, granting permission for the modifications to be amalgamated - https://www.nationalgrideso.com/document/162076/download

assumed that it has been settled by CMP261 - which did not address this point in the FMR]. For example, consideration of: a. European precedents and lessons from other Member States, including the Belgium case referenced by the CMA. b. Energy policy implementation – why were OFTOs classified as "transmission" not "connection" c. Interpretation of Generator only spur (GOS) as transmission – exploration of the definitional use of connection and transmission within the legislative and regulatory regime. d. Definition of the individual elements of paragraph 2 (1) of Commission Regulation 838/2010 Part B e. Anything else	
c) Consider the most appropriate target. For example, considering statements made by Ofgem in relation to CMA appeal of CMP261	Work ongoing, detailed throughout Section 4, Paragraph 3
d) Clearly define the methodology of exclusion of assets for the purpose of Commission Regulation 838/2010 Part B e.g. a. What are the practical issues with the regulatory exclusions: e.g. i. how far back do we go with each asset classification, ii. what is the objective test for categorising an asset cost as "connection", iii. what about where the asset has greater capacity than the connecting generators' TEC – how is excluded cost	Work ongoing, Section 4, Paragraph 2

determined in that case, iv. what happens if an Offshore generator terminates their TEC and their OFTO agreement falls away, v. what happens in the case of circuit becoming shared or has demand added, vi. what does "pre-existing" mean.	
e) What other ways are there of tackling the defect.	Throughout Section 4

Table 2: CMP327 Terms of Reference

Specific Area	Location in the report
a) to determine a clear definition and understanding of the range as specified in the EUK Regulation	Section 4 paragraph 3
b) Provide an interpretation of the Ofgem "but for" and "required for" test, consideration of the CMP261 and CMA decision i.e. an assessment of what should and should not be excluded. [rather than it being assumed that it has been settled by CMP261 - which did not address this point in the FMR]. For example, consideration of: ○ European precedents and lessons from other Member States, including the Belgium case referenced by the CMA. ○ UK Government Energy policy implementation – why were OFTOs classified as "transmission" not "connection" ○ Interpretation of Generator only spurs (GOS) as transmission – exploration of the definitional use of	Section 4, Paragraph 1 Section 4, Paragraph 2

connection and transmission within the legislative and regulatory regime. o Definition of the individual elements of paragraph 2 (1) of Commission Regulation 838/2010 Part B o Anything else	
c) Consider the most appropriate target within the range as defined above. For example, considering statements made by Ofgem in relation to CMA appeal of CMP261	Section 4 paragraph 3
d) Clearly define the methodology of exclusion of assets for the purpose of Commission Regulation 838/2010 Part B e.g. What are the practical issues with the regulatory exclusions: e.g. i. how far back do we go with each asset classification, ii. what is the objective test for categorising an asset cost as "connection", iii. what about where the asset has greater capacity than the connecting generators' TEC – how is excluded cost determined in that case, iv. what happens if an Offshore generator terminates their TEC and their OFTO agreement falls away, v. what happens in the case of circuit becoming shared or has demand added, vi. what does "pre-existing" mean in the	Section 4, Paragraph 2

context of the CMA decision.	
e) Assessment of the impact on TNUoS Tariffs	Throughout Section 4
f) Recital 36, 2009/72 "National regulatory authorities should be able to fix or approve tariffs, or the methodologies underlying the calculation of the tariffs, on the basis of a proposal by the transmission system operator or distribution system operator(s), or on the basis of a proposal agreed between those operator(s) and the users of the network. In carrying out those tasks, national regulatory authorities should ensure that transmission and distribution tariffs are non-discriminatory and cost-reflective, and should take account of the long-term, marginal, avoided network costs from distributed generation and demand-side management measures.	Work ongoing
g) Consider the Authority's TCR SCR Direction to the Company and any associated implications for this Modification.	Throughout Section 4

2 Original Proposals

Section 2 (Original Proposal) are sourced directly from the Proposer and any statements or assertions have not been altered or substantiated/supported or refuted by the Workgroup. Section 4 of the Workgroup contains the discussion by the Workgroup on the Proposal and the potential solution.

CMP317

Defect

In accordance with EU regulation 838/2010 (the Limiting Regulation), the average annual transmission charge for all generators must be within a range of €0-2.50/MWh.

In establishing the average annual transmission charge for the purposes of this calculation, charges relating to the 'assets required for connection' should be excluded. These are both the assets provided for a connection, and the assets required for the upgrade of a connection. The scope of assets to be excluded has now been established following Ofgem's decision on CUSC Modification Proposal (CMP) 261 and the outcome of the appeal to the CMA of the same decision. This CMP seeks to resolve the following issues:

- The CUSC does not identify which assets should be excluded when considering whether TNUoS charges fall within the stipulated range. The CUSC needs to be updated to establish a methodology by which The Company can determine which assets are to be included, and which are to be excluded, when assessing compliance with the €0-2.50/MWh range;

- Under the current methodology, the total amount to be recovered from Generator Users is calculated, and the residual used to bring charges in line with that total amount; if, for example, solely Offshore Local Tariff revenue is deducted from consideration of the range, the total value to be recovered through Generation TNUoS falls below the lower limit of the Limiting Regulation. The CUSC should therefore also be updated such that the 'residual' element (or any other element having the same effect) of Generator TNUoS charges is calculated after the costs of the assets required for connection have been calculated and removed from the calculation in 14.14.15(v); and

- There is no mechanism within the CUSC for The Company to provide ex-post adjustments to costs in the unlikely event that tariffs are set outside of the range in the Limiting Regulation. This change is needed to allow The Company to set tariffs on an ex ante basis now (using an adjustment factor or generator residual) and in the future preserving predictability for Users. This will need to be considered and created as part of this modification to provide further certainty to Users of how these unlikely events would be administered.

It is not necessary, for the purposes of ensuring The Company's ongoing compliance with the Limiting Regulation, to levy charges to Generator Users which would constitute a significantly greater proportion of total TNUoS recovery than that levied today. Whilst the solution should be determined by the Workgroup, the Proposer is of the view – and has raised this CMP with the intent that - Generator Users should not, through this CMP, be charged more than is necessary to ensure compliance[2].

[2] Following Ofgem's TCR/SCR decision, The ESO's scope for compliance has changed, and therefore the original solution has been updated to reflect Ofgem's direction and decision. This is fully detailed in Section 3 of this report.

What

Following the Authority's[3] decision in November 2017 to reject CMP261, later upheld by the Competition and Markets Authority[4], the definition of 'assets required for connection' is broader than those assets classed as transmission connection assets in the GB framework. As a consequence, revenues for offshore radial circuits that feed only generation (sometimes referred to as 'Generator-only spur' or 'GOS') also need to be excluded from consideration of the applicable range.

The CUSC does not currently identify the assets to be classed as "assets required for connection". The CUSC must now be updated to provide, within Section 14, the criteria by which 'assets required for connection' will be defined. At a minimum, The Company expects this to be Offshore GOS although excluding these, given the relative value of expected additional investment in offshore and onshore transmission, will not in itself maintain ongoing compliance over time with the Limiting Regulation. The Workgroup for this modification will therefore need to consider the most appropriate mechanisms to ensure compliance on an ongoing basis.

Introducing the concept of "assets required for connection", may increase costs to Generator Users as the compliance issue identified by The Company is primarily concerned with the lower end of the range. This is because the scale of investment in offshore circuits in the near term is outweighing the revenue recovered through other means (i.e. charges for onshore) resulting in an average annual charge that is negative when considered against the interpretation established by the Authority Decision and appeal to the Competition and Markets Authority (CMA). The Workgroup should consider a methodology by which Generator charges should be adjusted (through the generator residual or any other adjustment factor) to ensure that compliance is maintained.

Why

The Company needs to be compliant with the Limiting Regulation when setting and levying transmission tariffs. Changes to the CUSC are required to adopt the interpretation established by the Authority's decision and appeal to the CMA so that The Company can continue to set tariffs in a manner that is compliant with the range within the Limiting Regulation on both an ex ante and ex post basis. Following the CMA appeal the intention of The Company was to allow changes to happen as part of the Targeted Charging Review (TCR), however, The Company now considers that its compliance with the Limiting Regulation is a concern which needs to be addressed within timescales that would not be feasible under the TCR and therefore change is needed now.

[3] https://www.ofgem.gov.uk/system/files/docs/2017/11/cmp261_decision.pdf

[4] https://assets.publishing.service.gov.uk/media/5a95295de5274a5b849d3ad0/EDF-SEE-decision-and-order.pdf

How

Under this CUSC Modification Proposal removal of revenue linked to the definition of "assets required for connection" will be added to the calculation of Maximum Allowed Revenue (MAR) under 14.14.15(v). This will align the CUSC to the broader interpretation of these assets in the Limiting Regulation in accordance with the Authority's decision. This will lead to changes in the manner in which the generator and demand residual charges are calculated. For the avoidance of doubt The Company intends to maintain compliance on an ex ante basis as today. However, the solution will also need to incorporate an "if-needed" process to adjust charges on an ex post basis should the tariffs set on an ex ante basis be non-compliant with the Limiting Regulation when the actual values are used. This is necessary as the ex ante approach contains an error margin but forecasting errors, movement in exchange rates and generator output can all affect the outturn compliance. This error margin will need to be applied to both the upper and lower ends of the range.

CMP327

Defect

The ESO, as the Licensee responsible for the CUSC, has received an Authority Direction to set the residual element of TNUoS to £0 for Generator Users. To do this, the TNUoS generation residual (TGR) should be removed from the methodology.

Additionally, ESO currently uses the TGR to maintain compliance with Part B of EC Regulation 838/2010. The solution to comply with Ofgem's direction letter must not preclude ESO compliance with 838/2010 while charging generators all applicable charges. CMP317 is currently assessing how to best incorporate these changes into the CUSC and this proposal must work with the existing CMP317 modification proposal to achieve the above.

What

Section 14 of CUSC currently allows the ESO, when setting tariffs for Generator Users, to apply a negative residual charge to bring total expected TNUoS recovery from Generator Users into the €0-2.50/MWh range. The methodology should change to remove a residual element to Generator TNUoS tariffs.

To achieve this the Authority, on 21st November 2019, directed the ESO to *"….modify the Use of System Charging Methodology, Section 14 of CUSC to set the TGR to £0, subject to ensuring ongoing compliance with EU Regulation No 838/2010 (in particular, the requirement that average transmission charges paid by producers in each Member State must be within prescribed ranges – which for Ireland, Great Britain and Northern Ireland is 0 to 2.50 EUR/MWh). This should be achieved by charging generators all applicable charges (having factored in the correct interpretation of the connection exclusion as set out in EU Regulation 838/2010), and adjusted if needed to ensure compliance with the 0 to 2.50 EUR/MWh range."*

Additionally the Authority have specified that: *"NGESO must work in conjunction with the relevant industry workgroup(s) in place for CMP317 (and provide such input as*

appropriate) to seek to ensure that any impact on that modification proposal by the TCR Decision is addressed in a manner that does not undermine NGESO's ability to comply with its obligations under this Direction. In doing so, the Proposal(s) must set out proposals for an appropriate adjustment charge to ensure compliance with the EU Regulation 838/2010, if NGESO considers it necessary (see paragraphs 4.76 to 4.78 of the TCR Decision).

Why

The ESO has a Licence obligation to comply with Directions issued by the Authority. The rationale for removal of the TGR has been outlined in the Targeted Charging Review (TCR) SCR decision document and direction letter.

How

Assess this CMP alongside CMP317 given the significant interdependencies and, subject to CMP317 providing a means to maintain compliance through the use of a non-cost-reflective adjustment to tariffs on an ex ante basis, remove the TGR from Section 14 in so far as it relates to Generator charges.

3 Proposer's solution – CMP317 and CMP327

Section 3 (Proposer's solution) are sourced directly from the Proposer and any statements or assertions have not been altered or substantiated/supported or refuted by the Workgroup.

As per Ofgem's Targeted Charging Review Significant Code Review (TCR SCR) direction letter[5], the ESO has proposed a consolidated solution for CUSC modification proposals CMP317 and CMP327. This reflects the Authority's clear position within their direction letter to the ESO that "*NGESO [ESO] must work in conjunction with the relevant industry workgroup(s) in place for CMP317 (and provide such input as appropriate) to seek to ensure that any impact on that modification proposal by the TCR Decision is addressed in a manner that does not undermine NGESO's [ESO] ability to comply with its obligations under this Direction*".

Therefore, the consolidated solution encompasses the requirements of CMP317 and CMP327 and is detailed below:

[5] Ofgem final decision and impact assessment – Targeted Charging Review: https://www.ofgem.gov.uk/system/files/docs/2019/12/full_decision_doc_updated.pdf

1. The proposer's solution will set the transmission generation residual to 0. This will in preference be achieved through the removal of the relevant sections of the CUSC that require the use of a transmission generation residual.
2. The proposer's solution will establish a definition of Assets required for connection and the charges (revenues) associated with these. These will be excluded from the calculation of average generation charge within the CUSC. The proposer considers that a straightforward approach to this is to exclude all local charges and assess compliance with the range against the wider charges within the charging methodology.
3. The proposer's solution will not establish a target within the range of the Limiting Regulation rather it will only adjust charges if required to maintain compliance as per Ofgem's direction that generators should pay all applicable charges.
4. The proposer's solution will include an ex-ante tariff adjustment that will be applied if the average charge to generators falls outside of the range within the Limiting Regulation when tariffs are produced.
5. The proposer's solution will include an error margin calculated in the same manner as today. The need for an ex-ante tariff adjustment will be assessed against the error margin adjusted range to ensure that ex-post adjustments are not necessary.
6. The proposer's solution will stipulate that an ex-post adjustment to users charges must be carried out as soon as possible. In practice this will be carried out as part of generator and demand reconciliation to ensure that correct monies are returned to and billed from parties within the same charging year.

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

In 2017 Ofgem launched their Targeted Charging Review Significant Code Review (TCR SCR) which assessed how the cost recovery elements (commonly known as the residual charges) of network costs could be more effectively recovered. This was done in line with their principles of removing harmful distortions, ensuring fairness and promoting practicality and proportionality.

A component of the TCR SCR was focussed on the Transmission Generation Residual (TGR). This mechanism of the charging methodology was previously used to ensure cost recovery from Generators was in line with the target proportions within the CUSC but has latterly been used to ensure that the ESO is compliant with EU Regulation 838/2010 (the Limiting Regulation) when setting generation TNUoS tariffs.

Ofgem concluded their TCR SCR in November 2019 and directed the ESO to raise CUSC modifications to give effect to their decision. This has led directly to the raising of CMP327 and the alteration of the ESO's original proposal for CMP317 to fully reflect Ofgem's direction.

As these two modifications relate to a direction given to the ESO as a result of an SCR conclusion Ofgem's permission to amalgamate CMP317 and CMP327 was required. This was given on the 30th January 2020 and as such a single set of solutions giving effect to Ofgem's TCR SCR decision and maintaining the compliance of the charging arrangements with the Limiting Regulation will be presented to Ofgem in this document.

Other elements of Ofgem's TCR SCR decision are being fulfilled through other CUSC modification proposals[6].

Consumer Impacts

Consumer TNUoS values may be affected as where Generator TNUoS increases/decreases there is a commensurate decrease/increase in Demand TNUoS. However, this is not expected to translate into an immediate consumer impact as the Proposer's intention is for a minimal change and appropriate notice and/or staggered implementation approach of these changes to be given to all Parties allowing consideration of these costs within Users' businesses.

This change will increase the proportion of charges paid by Generator Users and may result in lower costs to consumers if the full scale of these cost increases are not passed through.

4 Workgroup Discussions

The Workgroup convened 9 times between June 2019 and February 2020 to discuss the perceived issue, detail the scope of the proposed defect, devise potential solutions and assess the proposal in terms of the Applicable CUSC Objectives. The Workgroup will in due course conclude these tasks after this consultation (taking account of responses to this consultation).

The Workgroup discussed a number of the key attributes under CMP317/CMP327 and these discussions are described below.

1. Context of CMP317

1.1 Why has this modification been raised?

1.1.1 The ESO raised CMP317 in June 2019 because its TNUoS forecasts indicated that it would not be in compliance with the Limiting Regulation for the charging year 2021/2 unless it changed the charging formula in the CUSC. The Limiting Regulation requires that the average annual transmission charge for all generators must be within a range of €0-2.50/MWh in Great Britain.

1.1.2 In July 2016, Ofgem approved the implementation of CMP224 *'Cap on the Total amount of TNUoS to be recovered from Generation users'*[7]. At the time of approving CMP244, there were 2 interpretations for assets required for connection, with the physical assets required for connection being undefined. At that time, Ofgem did not provide a concluded interpretation of the Limiting Regulation. This led to ambiguity in regards to whether the range was breached or not.

[6] See CMP332, CMP333, CMP334, CMP335 and CMP336.

[7] https://www.nationalgrideso.com/document/6946/download - Ofgem decision on CMP224

1.1.3 In charging year 2015/16, it was alleged that the ESO had breached the upper value of the Limiting Range, resulting in an alleged over recovery from Generation TNUoS of £120m. CUSC modification CMP261 *'Ensuring the TNUoS paid by Generators in GB in Charging Year 2015/16 is in compliance with the €2.5/MWh annual average limit set in EU Regulation 838/2010 Part B (3)'* was raised by SSE Plc, to remedy this alleged breach. The solutions raised during the Workgroup process for CMP261 concentrated on rebates to generators, for varying amounts and for the alleged overpayment to be returned to those impacted in varying timescales.

1.1.4 Ofgem decided[8] to reject CMP261 on the grounds that the range of the annual transmission charge for all generators was not breached during this time period. Ofgem concluded "*connection charges", as defined by the CUSC, clearly fall within the scope of the connection exclusion in the Regulation. In addition, we take the view that, properly construed, the connection exclusion also covers most, if not all, local charges that pay for local assets required to connect the generator to the MITS. This is on the basis that the latter also amount to "charges paid by producers for physical assets required for connection to the system" within the meaning of the Regulation*"[9].

1.1.5 The CMP261 decision that Ofgem reached was subject to an appeal to the Competition and Markets Authority (CMA) brought about by the proposer of CMP261, and EDF Energy. In February 2018, the CMA upheld Ofgem's initial decision. The CMA's decision created the need for an explicit definition of Charges paid by producers for physical assets required for connection to the system (referenced to throughout this document as 'excluded Charges') for the purposes of applying the Limiting Regulation.

1.2 What are the benefits of establishing which assets are required in the CUSC?

1.2.1 The ESO has highlighted throughout the CMP317 (and CMP327) Workgroup process that defining the Charges for assets required for connection within the CUSC for the purposes of the Limiting Regulation would serve to remove any ambiguity in regards to which Charges for assets are included in the calculation on Generator TNUoS, and as such enable the calculation of this charge to remain compliant with the Limiting Regulation.

1.2.2 The ESO also highlighted to the Workgroup concerns around how the current TNUoS charging methodology works. The Workgroup was advised by the ESO that under the status quo, issues around how the residual element of TNUoS is applied to generators could give rise to instances where the lower end of the range for generation TNUoS Charges (€0/MWh) could also be breached. The ESO's position is that the 'residual' element (or any other element having the same effect) of Generator TNUoS

[8] Ofgem decision letter on CMP261, July 2017 - https://www.nationalgrideso.com/document/98011/download

[9] Ibid, p1.

Charges should be calculated after the costs of the assets required for connection have been calculated and removed from the calculation in CUSC 14.14.15(v).

1.2.3 The ability to set tariffs on an ex-ante basis which are compliant with the Limiting Regulation is the key reason for the ESO to raise CMP317. The ESO set out during the Workgroup phase that in addition to this, a mechanism to adjust any breaches of the range ex-post would also need to be considered, in case there were instances which caused a breach in the range.

1.3 Context of CMP327

1.3.1 CMP327 was raised as a result of The Authority's final decision on the Targeted Charging Review SCR in November 2019[10]. In that decision, The Authority directed The Company to raise a modification to change TNUoS Charging Methodology such that the Residual element of Generator TNUoS is £0 and ensure that the correct interpretation of 838/2010 is incorporated.

1.3.2 CMP327 was raised at the CUSC Panel in November 2019. It was decided by the CUSC Panel to apply to have CMP327 amalgamated with CMP317, due to the two modifications dealing with extremely similar subject matter. When the ESO raised the CMP327 modification, it made it clear that it felt that that modification should be assessed by the same Workgroup which had been assessing CMP317, and had by this stage held six Workgroup meetings. This was due to that fact that some of the work required under CMP327 would have already been undertaken by the CMP317 Workgroup. As such, work on CMP327 began with the same Workgroup, with new Workgroup members also afforded the opportunity to join the Workgroup to assess CMP327.

1.3.3 Ofgem decided to grant the CUSC Panel's request on 29 January 2019, stating that they had "come to the conclusion that the Proposals are sufficiently proximate to justify amalgamation on the grounds of efficiency and are logically dependent on each other"[11].

2. Assets Required for Connection

2.1 Definition of charges for physical assets required for connection to the system

2.1.1 In the earlier stages of the Workgroup, various avenues were discussed in regards to defining the physical assets required for connection to the system and their associated TNUoS Charges. In an initial analysis, the ESO established their view that

[10] Ofgem final decision and impact assessment – Targeted Charging Review: https://www.ofgem.gov.uk/system/files/docs/2019/12/full_decision_doc_updated.pdf

[11] Ofgem Letter to CUSC Panel, granting permission for the modifications to be amalgamated - https://www.nationalgrideso.com/document/162076/download.

the tariffs for physical assets required for connection for the purposes of the Limiting Regulation are those currently charged to generators in the form of Onshore local substation tariffs, Offshore local substation tariffs and local circuit Charges, both onshore and offshore, to the extent that the local circuit and Charges relating are for a Generator only spur.

2.1.2 The Workgroup debated whether this definition of connection Charges was the only definition that could be used, or whether there were other considerations to take into account when considering compliance with the Limiting Regulation.

2.1.3 One area of discussion was in the interpretation of the 'transmission system' for the purpose of the Limiting Regulation. While the Workgroup agreed that the National Energy Transmission System (NETS) defines the transmission system for domestic purposes there were differing opinions in the Workgroup on what definition should apply for the Limiting Regulation. The Workgroup noted the CMA's examination of this matter as set out in paragraph 5.82 of their decision[12].

2.1.4 In the course of its work, the Workgroup has identified three options for potential definitions of physical assets required for connection to the system, any one of which could be used to construct a modification to address the defect:

i) All Local Circuits and Substations Charges;
ii) Local Charges which relate to a Generator only spur; and
iii) Charges that relate to all local circuits & local substations except for pre-existing assets and shared assets.

2.1.5 It was accepted that other definitions could be developed to define the assets and costs that could be excluded from the calculation of average generation Charges. It was the view of the Workgroup that the three groupings of assets should be considered further.

2.2 Definition – All Local Circuits and Substations

2.2.1 In its original solution, the ESO considers that all Charges for the local circuits and substations are excluded Charges for the purposes of the Limiting Regulation. This approach is the most straightforward option available in order to define physical assets required for connection to the system, as it aligns with current CUSC methodology for charge setting.

[12] "5.82 The parties agreed that the interpretation of an EU instrument could not ordinarily depend on the approach taken in domestic law. We were referred to the Monsanto judgment of the CJEU, in which it was said that*: The need for the uniform application of Community law and the principle of equality require that the terms of a provision of Community law which…makes no express reference to the law of the Member States for the purpose of determining its meaning and scope must normally be given an autonomous and uniform interpretation throughout the Community, which must take into account the context of that provision and the purpose of the legislation in question*."

2.2.2 Some Workgroup members considered this definition to be too broad as it meant that more assets would be considered as assets required for connection than was actually the case for legal compliance with the Limiting Regulation.

2.2.3 There was debate in the Workgroup around how current GB market infrastructure compares to other Member States that are also subject to the Limiting Regulation. The ESO put across the point of view that as every Member State would have its own local structure of Charges, drawing comparisons would not be practical.

2.2.4 One Workgroup member disagreed with the ESO's view on practicality. In their view, a comparison could be made by referencing the transmission charging methodology that each Member State was required by the Third Package to have in place.

2.2.5 One Workgroup member developed a definition that applied to a similar amount of excluded assets. The definition is '*wires or cables connecting node A and node B on the NETS together with all other transmission assets at node A and those assets required to connect those wires or cables to the rest of the NETS at node B when the flow of electricity along A-B is not affected by a change in demand or generation at node B'*. The Workgroup continues to analyse this definition to understand if there is a difference between it and 'all local circuit and local substations' definition.

2.2.6 Some Workgroup members considered that excluding the Charges for local circuits and substations in respect of island links, or other physical assets, used by demand, or other Generators, was not compliant with the Limiting Regulation.

2.3 Definition - Generator Only Spur

2.3.1 A Generator only spur was defined by Ofgem and the CMA as an asset that is solely required for a specific generator concerned and therefore one that would fall within the "Connection Exclusion" of the Limiting Regulation. This would apply equally to offshore and offshore onshore assets essentially depending on whether an asset is shared or not. It was argued that if the assets were only required for the specific generator, then they should be classed as connection assets for the Limiting Regulation.

2.3.2 Similarly, if a Generator only spur became an asset used by more than one generator, or shared with demand, it would be considered as wider network, and would cease to be regarded as a Generator only spur. It would therefore no longer be classed within the Connection Exclusion for the purposes of the Limiting Regulation.

2.4 All local circuits & local substations except for pre-existing assets and shared assets

2.4.1 The term "pre-existing system" was first used by Ofgem in its CMP261 Decision document then was used subsequently by the CMA in its decision, at paragraph 5.94, on the Appeal of CMP261:

2.4.2 *"It seems to us that 'the system' here must mean the system as it exists at the point that a new Generator wishes to be connected to it. Any assets that are then required by that new Generator for connection to that pre-existing system (such as*

Offshore GOS in the case of a new windfarm) are ones that fall within the Connection Exclusion, and such assets continue to be required by that Generator for connection to the pre-existing system even once the Generator is operational. We therefore accept GEMA's submission that connecting equipment continues after the initial act of connecting to be 'required for connection to the system'[13].

2.4.3 The majority of the Workgroup members thought that identification of the pre-existing system would be a substantial task. Some thought it would not necessarily be required especially in regards to the use of a Generator only spur as physical assets required for connection to the system, and if they were pre-existing or not. Other Workgroup members considered that the difficulty of the task should not be a barrier, if it were necessary for the correct implementation of the Limiting Regulation. It was recognised that this task would be significant at implementation but likely then to be less onerous on an ongoing basis, as only new generator connections to the pre-existing system would need to be considered.

2.4.4 One Workgroup member stated that his understanding was that the pre-existing system was the NETS. As such, if a physical asset, such as a cable, was built to connect a new Generator to the NETS system, the new cable was not pre-existing and therefore only the Charges for that new asset should be excluded from the compliance calculation in terms of the Limiting Regulation.

2.4.5 It was noted that the CMA decision considered the exclusion of the offshore Generator only spurs, namely the 15 licensed OFTOs that existed at the time, in calculating the average transmission charge for generators was the reason for the decision that the upper level of limiting range (€2.50/MWh) had not been breached in 2015/16 Charging Year.

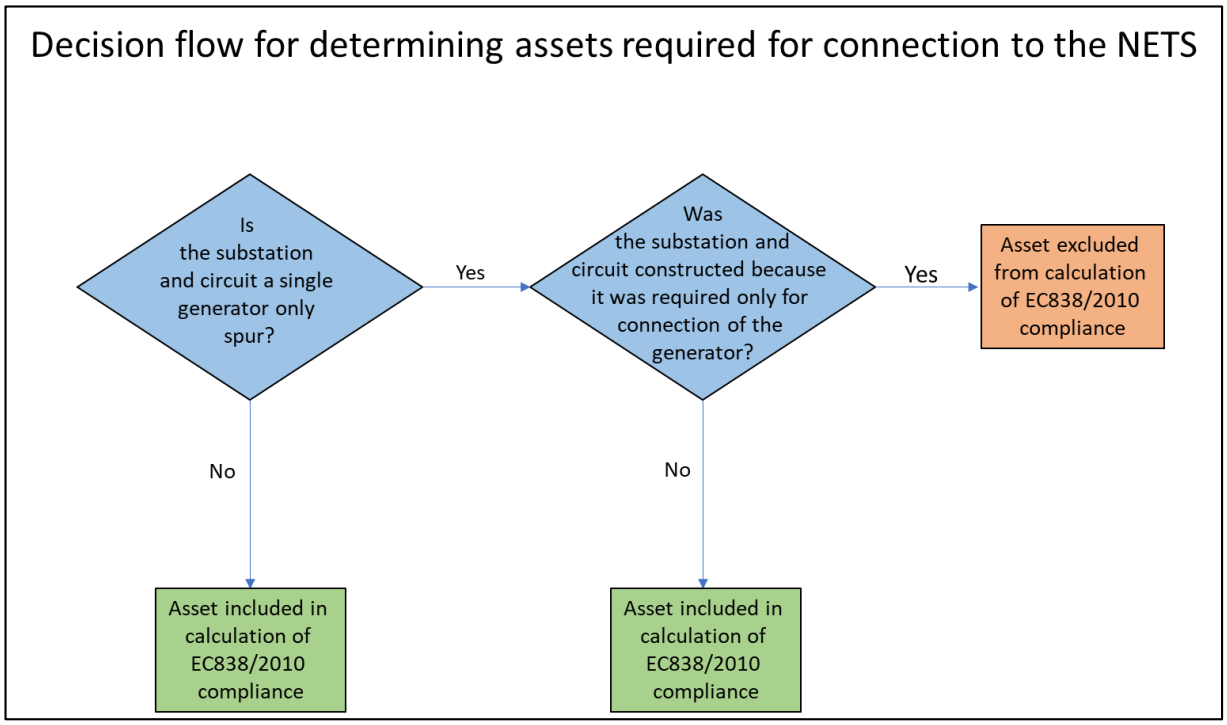
2.4.6 Workgroup members discussed an example whereby there could be an exclusion if a generator uses a pre-existing, but not used, spur to connect to the transmission system. Some Workgroup members argued that in this instance, the assets would not be within the Connection Exclusion in terms of the Limiting Regulation. However, there were other points of view which saw this as not practicable in application so for this reason there are alternative solutions without identification of the pre-existing system in respect to this matter.

2.4.7 A Workgroup member suggested that the below test be applied to determine whether a physical asset is pre-existing or not.

(Diagram overleaf)

[13] CMA decision on CMP261, P61 - https://assets.publishing.service.gov.uk/media/5a95295de5274a5b849d3ad0/EDF-SEE-decision-and-order.pdf

2.4.8



2.4.9 The Workgroup member in question believed that this outlined process is congruent with the definition of pre-existing system in regards to the CMA decision. It was put forward that this test could be applied to test compliance with the Limiting Regulation on a case by case basis. The proponent of this process believes that this offers a more sustainable and enduring solution.

2.4.10 The CMA report, at paragraph 5.96, was considered by some Workgroup members to offer a counterview to that illustrated in the diagram in 2.4.8.

2.4.11 It was also pointed out that CMA report, at paragraph 5.96, simply restates the last line of paragraph 5.94 as: *"We therefore accept GEMA's submission that connecting equipment does not cease to be an asset required for connection, following the initial act of connecting[14]".*

2.4.12 The proponent pointed out the wording in CMA report, at paragraph 5.98, which supports the requirement for the identification of the pre-existing system by stating: "*The question is simply whether it should be confined to the pre-existing system as faced by a Generator wishing to connect to it (GEMA's position) or include the infrastructure put in place to connect the Generator to the pre-existing system, once the act of connecting that Generator has taken place (the Appellants' position). We cannot see how GEMA's interpretation, which requires asking what assets are required for the connection of that new Generator to the extant system, could (as the Appellants submit) lead to almost all charges paid by Generators being capable of falling within the Connection Exclusion*".

2.4.13 The Workgroup recognised that there were differences in interpretation, and as such have looked at potential alternative solutions some of which do encompass the use of the pre-existing concept and some of which don't.

2.4.14 The Ofgem Workgroup representative was asked if they could provide any further clarity on the pre-existing system requirement and in answer highlighted paragraph 5.94 of the CMA report, noting that other references could also be relevant.

2.4.15 Some Workgroup members asked the Workgroup chair to request that the CMA release the CMP261 Appeal hearing transcripts to the Workgroup, as they may contain relevant additional information that would help the Workgroup better understand the terms used by Ofgem and the CMA and so assist in delivery of compliant solutions. This request was dismissed, as the chairs view was that the CMA document was sufficient to explain their decision and advised Workgroup members that any party to the appeal could make this request.

2.4.16 The feasibility of a test to define shared assets was also examined. The ESO advised that they would work with their revenue team to find a way to be able to do this for the purpose of the two modifications if required. For the original solution, it was not necessary to consider the physical assets specifically as this used the current structure of Charges in the CUSC methodology. Some workgroup members felt that the current MITS map could be useful for the consultation, and the ESO agreed to publish this alongside the consultation document. In addition, the Workgroup discussed some theoretical examples which are also published in Annex 4.

2.5 Potential impacts on TNUoS Charges

2.5.1 The Workgroup developed an estimate of the impacts on TNUoS Charges for Generators depending on the different definitions of excluded Charges.

[14] Ibid

2.5.2 The following table shows how the ESO Original proposal would impact generation TNUoS tariffs based on the current ESO published forecasts. These numbers are based on the exclusion of all local circuits and local substations.

£/kW impact	**2021/22**	**2022/23**	**2023/24**	**2024/25**
Current Forecast of Generator residual tariff	-5.56	-6.66	-8.56	-9.91
TCR Proposed Generator residual tariff	0.00	0.00	0.00	0.00
Compliance Adjustment for EU cap with assumed €2.50/MWh target, existing error margin and exclusion of all local asset costs	0.00	-0.58	-2.03	-2.21
Additional cost to transmission connected generators	**5.56**	**6.08**	**6.52**	**7.70**

2.5.3 To assist the Workgroup the ESO provided a further estimate that removed Charges for shared local assets from the exclusion (including island links) and took into account Charges for physical assets that are part of the pre-existing system. The ESO did not consider that the difference was significant between this further estimate and the original proposal but other Workgroup members disagreed, noting that by Charging Year 2023/24 the difference is £0.55/kW which equates to an 8% increase of the differential.

£/kW impact	**2021/22**	**2022/23**	**2023/24**	**2024/25**
Current Forecast of Generator residual tariff	-5.56	-6.66	-8.56	-9.91
TCR Proposed Generator residual tariff	0.00	0.00	0.00	0.00
Compliance Adjustment for EU cap with assumed €2.50/MWh target, existing error margin and exclusion of all local asset costs	0.00	-0.71	-2.49	-2.75
Additional cost to transmission connected generators	**5.56**	**5.95**	**6.07**	**7.15**

3.0 Where in the range should be targeted to achieve compliance?

3.1.1 The Workgroup considered what value within the range (of €0-2.50/MWh) in the Limiting Regulation should be targeted (as required by the CUSC Panel in the ToR) in order to achieve compliance. The proposer clearly stated that they did not see that a target was necessary as the calculation for compliance could be performed without targeting a specific value in the range of the Limiting Regulation. Other workgroup members believed a review of the target would be necessary as a part of any solution.

3.1.2 Some Workgroup members noted that that GB connection regime is similar with other Member States in Europe, albeit the range set in the Limiting Regulation that applied to most other Member States in Europe are is €0-€0.50/MWh. It was stated within the Workgroup that if the top of the range were reduced and this remained the target, it would follow that Charges to transmission connected generators would have to reduce as well.

3.1.3 The ESO identified that a specific target may reduce the ability to apply all GB transmission charging arrangements as per the TCR SCR direction from Ofgem, although other Workgroup members noted that it was legally permissible to do so to maintain compliance with the Limiting Regulation.

3.1.4 Workgroup members noted that in 7.14 (g) of the CMA decision that Ofgem (GEMA) had stated that *"€2.5/MWh is a cap, rather than a target. GEMA does not have a policy of imposing the maximum transmission charges possible under the Regulation. GEMA submitted that it had been seeking to prevent a breach of the Cap rather than aim for a charge of €2.5/MWh*." Some workgroup members, including the proposer, believe this supports not targeting a specific figure within the range of the Limiting Regulation. Others believe this supports the justification of aiming for a specific target below the top of the range of the Limiting Regulation.

No Target within the range of €0-2.50MW/h.

3.1.5 The ESO, in their original solution, have put forwards that there should be no targeting within the range. The reasons for this are two-fold. The main principle of the argument behind this is to apply the wider locational tariffs calculated by the current CUSC charging methodology. A reconciliation process would be required under any iteration of a solution, including an appropriate error margin which would minimise the risk of ex-post reconciliation (as discussed in paragraph 4 of this section) if the wider location Charges applied to generation are above the upper end of the range in the Limiting Regulation (subject to the error margin). The ESO argued that having no target would lead to less need for such adjustments in the future.

3.1.6 Workgroup members identified that the effect of setting "no target" is in practice to set a target of €2.50/MWh (subject to any adjustment). Without a target figure in the CUSC calculation the effect will be maximised average generation Charges of €2.50/MWh (subject to any adjustment) except in charging year 2021/22.

3.1.7 Secondly, as a result of not targeting anywhere specifically in the range, the ESO argued that this facilitates generators to face more cost reflective Charges. Other members of the Workgroup noted that the current cost recovery from generation is an artefact of the modelling process, particularly in relation to the treatment of the reference node in the Model. The ESO pointed out that having no target meant that any changes to the locational charging methodology for Generators would be fully passed through. If there was a target, there is a risk that some elements of the change subject to the cap.

3.1.8 One Workgroup member suggested that it would lead to more economic costs across the industry if the figure targeted in the range is fixed. This would be beneficial, for example, when generators bid in the Contracts for Difference or Capacity Market

auctions and need to forecast their future TNUoS Charges. It was also highlighted that in many Member States, this figure is fixed, albeit lower than current GB network Charges. Several Workgroup members supported the argument that fixing would result in forecasting benefits for stakeholders.

€0.00/MWh

3.1.9 A Workgroup member undertook a review of relevant referenced historic documents in regards to targeting the range at €0/MWh[15]. Following this review the Workgroup member argued that targeting €0 would achieve comparability with other transmission markets across the European Union. Comparability with the GB Embedded Generation market was also highlighted as a reason to target €0/MWh, given the CMP264/5 decision[16], which in the workgroup members view, resulted in average locational Charges of €0/MWh to Embedded Generators.

3.1.10 Other members of the Workgroup agreed with the principle that targeting €0/MWh (or another value close to €0/MWh) would also prove beneficial in as much as the likelihood of breaching the upper limit (€2.50/MWh) would be significantly less when the bottom of the range is targeted. It would be less likely that the Charges would ever fall below the range, so it would be prudent to target there given that this would address part of the defect set out in the original CMP317 proposal.

3.1.11 Targeting €0/MWh would also likely give some leeway in achieving compliance with the Limiting Regulation in scenarios where some Workgroup members consider there to be potential for Charges for more assets being in the excluded Charges in terms of the Limiting Regulation than should be, as the potential alternative solutions discussed later in the Workgroup meetings detail.

3.1.12 An argument was also put forwards by the Workgroup member that targeting €0/MWh would mean similar revenue recovery from transmission connected generators as we see today for the ESO. This was backed up by comparing the current forecast of total generation Charges of £405.7m in the 2021/2 Charging Year with the total local Charges for generators forecast to be £430m in that same 2021/22 period. The Workgroup member argued this difference would be within the limits of reasonable forecast uncertainty and so lead to a smooth transition between the two charging approaches.

3.1.13 The Workgroup member also highlighted that the range in the Limiting Regulation was set prior to local circuit and local substation Charges being defined in the CUSC, noting that between 2004 and 2009, the GB energy market had a shallow connection boundary but no local TNUoS charge. In 2020, these local circuit and local substations Charges now in part offset significant negative wider locational Charges, which according to the Workgroup member gives less weight to the argument that

[15] This Analysis, undertaken by Waters Wye, is available in Annex 6 of this report

[16] CMP264/5 Decision - https://www.ofgem.gov.uk/system/files/docs/2017/06/cmp264265.docx.pdf

targeting the upper limit in the range means that transmission generators will be paid material amounts by the ESO under the suggested TNUoS charging arrangements.

3.1.14 Whilst most Workgroup members agreed with the principle and wider benefits of targeting €0/MWh (or another value close to €0/MWh), others disagreed. A Workgroup member said that although the cost to generators may be lower if targeting €0/Wh, there is a chance that Charges for consumers may increase.

3.1.15 Another Workgroup member also undertook some analysis[17] at a later stage of the Workgroup deliberations, which highlighted that a target limit of €0/MWh (or close to €0/MWh) would ensure that average transmission Charges for generation in GB are closer to the limit set for the majority of Member States under the Limiting Regulation. It was argued in this analysis that targeting €0.00/MWh would be beneficial to cross border trade.

The Workgroup also noted that there were no transmission Charges paid by generators in 17 of the 27 other Member States. In terms of cross border trade, it was argued that targeting €0/MWh would level the playing field in terms of comparability with other Member State markets.

3.1.16 The analysis undertaken by the Workgroup member in question also included arguments to justify aiming for the lowest possible point in the range by changing the calculation to use distributed generation as the Reference Node in the transport model. The Workgroup member highlighted that in the context of CMP317/CMP327 Ofgem had previously stated that the reference node "drives the proportion of the forward-looking transmission Charges which are recovered from generation and demand parties"[18].

3.1.17 The analysis undertook further highlighted that Ofgem would review "the reference node used in the model used to calculate transmission Charges".

Ofgem further noted that the choice of reference node "can change the costs allocated to different users[19]". The Workgroup member highlighted that Ofgem concluded that "*the impact is that overall revenues from the locational demand charges sum to zero [€0/MWh], whereas the revenues from locational large generation charges are positive. We think that this could potentially be distorting competition between those providers who face negative demand charges (such as DSR providers and onsite generators) and those who face positive generation charges. We intend to undertake further analysis on*

[17] RWE Paper on CMP317/327, available in Annex 6 of this report.

[18] Ofgem Targeted Charging Review Executive Summary - https://www.ofgem.gov.uk/system/files/docs/2019/12/winter_2019_-_working_paper_-_exec_summary_note_publish_0.pdf

[19] Transmission Charges Discussion note - https://www.ofgem.gov.uk/system/files/docs/2019/12/winter_2019_-_working_paper_-_tnuos_reforms_publish_0.pdf

the extent to which this is an issue[20]". A Workgroup member suggested that this analysis concluded that as such, targeting €0/MWh would compare preferably with no target whatsoever as it was an outcome from a rather arbitrary decision on the choice of Reference Node in the transport model that was the basis for setting the base point for wider locational charges without affecting the relative cost between different GB locations on the network.

€0.50/MWh

3.1.18 Some Workgroup members saw benefit in considering targeting €0.50/MWh. A number of the benefits of this are similar to the targeting of €0.00MW/h: it provides predictability for forecasting and consistency with most other Member States[21] where it forms the top of their limiting range in the Limiting Regulation, so it would place GB generators in a more appropriate competitive position with other European generators.

3.1.19 Targeting €0.50/MWh also provides a "buffer" in instances where forecasting of physical assets required for connection to the system are miscalculated, meaning that Charges falling below the range is less likely than if it is targeted at €0. Therefore, it was argued that the need for ex post reconciliation of transmission Charges paid in future is lower when targeting €0.50/MWh over €0/MWh as it acts in place of an error margin.

3.1.20 When scoping the original solution, the ESO calculated Charges for physical assets required for connection to the system, using the figure of €0.50/MWh as opposed to the upper limit as is used today. This resulted in a reduction in total payment made by generators of some £95m. The ESO however changed their original solution to target no value within the range, due to the reasoning mentioned above.

€1.25/MWh

3.1.21 The merits of targeting the middle of the range (€1.25/MWh) were also discussed. The Workgroup noted that targeting the middle of the range would provide an equal margin either side of the initial forecast which would minimize the risk of the outturn Charges breaching either end of the range. Similar to other fixed targets, it would also offer stability for forecasting future generator Charges.

4.0 Should there by an error margin included?

4.1. Yes – there should be an error margin

[20] Ibid, p16

[21] ENTSO-E Synthesis Report https://docstore.entsoe.eu/Documents/MC%20documents/190626_MC_TOP_7.2_TTO_Synthesis2019.pdf, p9. Table detailing Main characteristics of TSO tariffs in Europe

4.1.1 The Workgroup discussed the benefits of including an error margin to minimise the likelihood of Charges being outside of the €0.00-€2.50/MWh range. Currently, in CUSC 14.14.15 (v), an error margin is applied to mitigate against the risk of forecasting errors causing Charges to breach the range. This is necessary because the existing charging formula targets the top of the range for GB in the Limiting Regulation, so without applying an error margin there would be a high probability of outturn Charges exceeding the range in many Charging Years.

4.1.2 Although the inclusion of a reconciliation process, discussed in section 5.0 of this report, means that if Charges were to exceed the range, it could be corrected to maintain compliance, the use of an error margin would reduce the likelihood of a reconciliation being required and therefore make Charges more predictable.

4.1.3 The ESO stated that they would be most comfortable if an error margin existed, and it presented a mechanism to better ensure compliance, as opposed to not having one at all. Other Workgroup members argued that a pragmatic approach would be to use a limiting range of approximately €0.50-€2.00/MWh, building in a buffer either side which would account for any errors in forecasting.

4.1.4 The Workgroup discussed whether having a lower error margin would be useful. The methodology is currently based around the approach of limiting Charges from exceeding the top end of the limiting range. If this error margin was applied to the lower end of the range, some Workgroup members consider the likelihood of exceeding the bottom of the range would reduce. This could mean a smaller error is applied at the bottom of the range compared to the top of the range while maintaining a similar likelihood of staying within the range. This could result in a limiting range of €0.20-€2.00/MWh for example.

4.1.5 The ESO agreed that an error margin of different sizes could be used either side of the range but that it had not got a proposal for sizing the required error margin at the bottom end of the range.

4.2 No – there should not be an error margin

4.2.1 Various Workgroup members were of the opinion that an error margin would not be required when targeting either €0.00/MWh, €0.50/MWh or €1.25/MWh. This is also discussed within the relevant element of section of 3 for each respective target.

4.2.2 Some Workgroup members made representations that the current function of the error margin is to deal with variances from the forecasts, used for setting tariffs, to the outturn of the exchange rate and the total MWh generated, given the target was set at the top of the limiting range in the existing calculation. These risks were not present when targeting €0/MWh. Those Workgroup members concluded that excluding all local Charges for generators could only bring too many Charges within the excluded Charges, therefore there was no risk that the compliance calculation would exclude too little, only that it could exclude too much. The risk was asymmetric that the compliance test would give a value for outturn average €/MWh that was higher than legal compliance would demand, it could not give one that was too low based on this single criterion. This argument justified setting a target below the maximum end of the limiting range if the excluded Charges were to be defined as ESO proposed in its Original, and

provided a buffer against the outturn compliance calculation ever legally going below €0.00/MWh if that were the target set.

5.0 Reconciliation process

5.1.1 The Workgroup agree that a reconciliation process is a vital component of any solution for the two modifications. The Proposer's preferred solution is to carry out any ex-post changes through the existing CUSC generation and demand reconciliation processes, at the conclusion of the Charging Year. The Proposer felt that this aligned with the CMA's conclusion that monies should be redistributed between parties as soon as possible.

5.1.2 One Workgroup member proposed a solution that would adjust subsequent Charging Years[22] tariffs to bring any non-compliance in outturn Charges back within the range of the Limiting Regulation, but this had no support elsewhere in the Workgroup; as there was concern at the one year plus delay in its application; and a consensus was reached that the existing reconciliation process[23] and approach within the CUSC could be used if required and there was no need to come up with an alternative approach to reconciliation.

6.0 Distributed Reference Node (Transport Model) Solutions

6.1.1 During the course of its work, the Workgroup considered whether the changing of the Reference Node used in the transport model from distributed demand to distributed generation should form an element of any solution. Ofgem confirmed that it was in the scope of the ongoing Access and Forward Looking Charges (AFLC) SCR and if the Workgroup wanted to consider a solution within the scope of that ongoing SCR it would need to request permission from Ofgem to do so.

6.1.2 A number of Workgroup members did want to further consider a potential solution that incorporates a change in the use of the distributed reference node. These Workgroup members considered a change to the distributed reference node as an effective solution to the defect and that it would build on an area already highlighted by Ofgem as having value in being reviewed. The Chair has written to Ofgem[24] requesting the inclusion of the distributed reference node within the scope of the solution(s) for the two modifications. Ofgem have not given any guarantee that this permission would be granted.

6.1.3 Other Workgroup members did not consider changes to the distributed reference node to be required for the modifications. One concern raised was the amount of

[22] A reconciliation for Charging Year T would, with this approach, be reflected in the tariffs in Charging Year T+2.

[23] A reconciliation for Charging Year T would, with this approach, be applied in Charging Year T+1.

[24] Please see Annex 3 of this document

analysis required for any change would be significant and potentially conflict with the timelines of the modification in order to implement for April 2021. A second concern was the potential interactions with other modifications currently progressing, although some Workgroup members considered that this may offer a better overall solution for those modifications as well.

6.1.3 The Workgroup has discussed two potential solutions that change the distributed reference node. The first is to use a distributed generation reference node in place of the current distributed demand node. It is thought that this would result in revenue recovery in the TNUoS wider charge from Generators of near €0/MWh; however, this has not been modeled by the Workgroup.

6.1.4 The second potential change is to move from a distributed reference node to a specific node as being a central reference point for the transport model. It is thought that this would maintain current locational cost differentials but change total revenues recovered; however, this has not been modeled by the Workgroup.

6.1.5 Other Workgroup members noted that in the past senior members of the ESO charging team and an academic had taken the view that changing the reference node would not affect the locational differentials but would affect revenue recovery.

6.1.6 The ESO noted that making changes to the Reference Node may lead to system and billing development which would further put the April 2021 proposed delivery of the modification at risk. In addition, to move to a distributed generation Reference Node the ESO would need to assess whether to use the virtual generation centre created in the peak security or the year round to calculate what the results in the wider tariff would be.

7.0 TGR to €0/MWh

7.1 As a result of Ofgem's direction in their Targeted Charging Review SCR decision, the Transmission Generator Residual (TGR) charge must change to €0. To carry this forward into CUSC charging arrangements, CMP327 was raised. The Workgroup unanimously recognized that the solution for CMP327 must enact the TCR SCR direction, as a module of any solution set out in 8.1.

7.2 The ESO clarified that their preferred solution was to remove the concept of TGR from the CUSC methodology entirely as they felt this brought the most efficiency and still gave effect to Ofgem's direction. The ESO acknowledge that an adjustment mechanism would remain to adjust tariffs on an Ex-Ante basis to adjust tariffs to fall within the range in the Limiting Regulation.

8.0 Solutions – Using a modular approach.

8.1 Table of Modules

Version	Definition of Assets	Amount Targeted	Error Margin
Original i)	All local circuits and substations	No target within range	Yes
ii)	All local circuits and substations	€0.50/MWh	No
iii)	All local circuits and substations	€0.00/MWh	No
iv)	Generator only spur	No target within range	Yes
v)	All local circuits and substations	€1.25/MWh	No
vi)	All local circuits & local substations except for pre-existing assets and shared assets	€0.50/MWh	No
vii)	All local circuits & local substations except for pre-existing assets and shared assets	No target within range	Yes
viii)	All local circuits & local substations except for pre-existing assets and shared assets	€1.25/MWh	No
ix)	All local circuits & local substations except for pre-existing assets and shared assets	€ 0.00	Yes

8.1.1 As detailed in this document, the Workgroup took in to consideration the various options identified by them in regards to creating solutions to the defect of CMP317 and

CMP327. As such, the Workgroup have come to nine separate potential solutions, detailed in the above table. The solutions each vary in terms of: (i) the definition of the physical assets required for connection to the system, (ii) where in the €0-2.50/MWh range should be targeted and (iii) whether an error margin should be included.

8.1.2 These initial thoughts around solutions are not yet formalized, and as such, the Workgroup would welcome thoughts on the viability of these solutions, or whether other solutions or permutations would better address the defect. As such, please see the proceeding section and question 9around the initial thoughts concerning the original solution and the potential alternatives.

5 Workgroup Consultation

The CMP317 /CMP327 Workgroup is seeking the views of CUSC Parties and other interested parties in relation to the issues noted in this document and specifically in response to the questions highlighted in the report and summarised below:

Standard Workgroup Consultation questions:

1: Do you believe that CMP317 / CMP327 Original proposal better facilitates the Applicable CUSC Objectives?

2: Do you support the proposed implementation approach?

3: Do you have any other comments?

4: Do you wish to raise a Workgroup Consultation Alternative request for the Workgroup to consider?

Specific CMP317/CMP327 Workgroup Consultations Questions:

5. Definition of physical assets required for connection to the system
   a. Do you agree with the three options identified in Section 4, Paragraphs 2.1-2.4? If so, which do you prefer, and why?
   b. Is there another option you think should be considered, and why? Please provide evidence if possible.

6. Amount targeted (G average)
   a. Do you agree with the four options highlighted in section 4, paragraph 3 for where in the range set out by the Limiting Regulation should be targeted? If so, which do you prefer and why?
   b. Is there another option you think should be considered, and why? Please provide evidence if possible.

7. Error Margin
   a. Do you agree with the two options highlighted in section 4, paragraph 4 in regards to the inclusion of an error margin?

b. Is there another way to calculate the methodology for an Error margin? Please provide evidence if possible.

8. Implementation

a. The workgroup has identified a phased implementation approach may be preferable. Do you agree with this position or not, and if so, why? Please provide evidence if possible.

9. Modules - The workgroup have identified a number of permutations in Section 4, Paragraph 8 that could work as possible alternative solutions.

a. Do you think any of the modular combinations are incompatible?
b. Is there an additional module combination that you think should be considered? If so, please provide justification.

10. In section 4 paragraph 2.2.6 and 2.5.3, the workgroup has identified its proposed approaches to island links. Do you agree or disagree with any of these suggested approaches? Please provide justification.

11. In section 4 paragraph 6, the workgroup has identified its consideration of the Reference Node.

a) Do you have any evidence that would support solutions which include the Reference Node?

b) Do you have any views on the Workgroup progressing this work alongside the Access and Forward Looking Charges SCR?

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Please send your response using the response proforma which can be found on the National Grid website via the following link:

https://www.nationalgrideso.com/codes/connection-and-use-system-code-cusc/modifications/removing-generator-residual-and-excluding

In accordance with Section 8 of the CUSC, CUSC Parties, BSC Parties, the Citizens Advice and the Citizens Advice Scotland may also raise a Workgroup Consultation Alternative Request. If you wish to raise such a request, please use the relevant form available at the weblink below:

http://www.nationalgrideso.com/uk/Electricity/Codes/systemcode/amendments/forms_guidance/

Views are invited upon the proposals outlined in this report, which should be received by **5pm** on **12 March 2020.**

Your formal responses may be emailed to: cusc.team@nationalgrideso.com

If you wish to submit a confidential response, please note that information provided in response to this consultation will be published on National Grid's website unless the response is clearly marked "Private & Confidential", we will contact you to establish the extent of the confidentiality. A response market "Private & Confidential" will be disclosed

to the Authority in full but, unless agreed otherwise, will not be shared with the CUSC Modifications Panel or the industry and may therefore not influence the debate to the same extent as a non-confidential response.

Please note an automatic confidentiality disclaimer generated by your IT System will not in itself, mean that your response is treated as if it had been marked “Private and Confidential”.

6 CMP317 and CMP327 : Relevant Objectives

CMP317: Impact of the modification on the Applicable CUSC Objectives (Charging):	
Relevant Objective	Identified impact
(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;	None
(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);	None
(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;	Positive
(d) Compliance with the Electricity Regulation and any relevant legally binding decision of the European Commission and/or the Agency. These are defined within the National Grid Electricity Transmission plc Licence under Standard Condition C10, paragraph 1*; and	Positive
(e) Promoting efficiency in the implementation and administration of the CUSC arrangements.	None
*Objective (d) refers specifically to European Regulation 2009/714/EC. Reference to the Agency is to the Agency for the Cooperation of Energy Regulators (ACER).	

CMP327: Impact of the modification on the Applicable CUSC Objectives (Charging):	
Relevant Objective	Identified impact
(a) That compliance with the use of system charging methodology facilitates effective competition in the	Positive – The Authority have

generation and supply of electricity and (so far as is consistent therewith) facilitates competition in the sale, distribution and purchase of electricity;	determined that the removal of the TGR removes an embedded disbenefit (i.e. it is a credit that only transmission-connected Generator Users receive)
(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);	None
(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;	Positive – the ESO has been directed to raise this CMP
(d) Compliance with the Electricity Regulation and any relevant legally binding decision of the European Commission and/or the Agency. These are defined within the National Grid Electricity Transmission plc Licence under Standard Condition C10, paragraph 1 *; and	None
(e) Promoting efficiency in the implementation and administration of the CUSC arrangements.	None
*Objective (d) refers specifically to European Regulation 2009/714/EC. Reference to the Agency is to the Agency for the Cooperation of Energy Regulators (ACER).	

7 CMP317 and CMP327 Implementation

These CMPs must be implemented so that it takes practical effect, in terms of tariffs to be paid by users, from the Charging Year starting on 1 April 2021.

The Workgroup briefly considered whether a phased implementation approach would be appropriate, and recognise that, if so, they would need to provide relevant supporting evidence. A similar approach was undertaken in CMP264/5, where a third of the impact was applied in each subsequent charging year, following the decision. As such the Workgroup is also seeking the views of relevant industry parties in the course of the Workgroup Consultation.

8 CMP317 and CMP327 Legal Text

Legal text will be formulated for the original solution and any potential alternatives post-consultation

9 Annex 1: CMP317 and CMP327 Terms of Reference

Annex can be found at:

https://www.nationalgrideso.com/codes/connection-and-use-system-code-cusc/modifications/removing-generator-residual-and-excluding

10 Annex 2: Legal Text

Legal text will be formulated for the original solution and any potential alternatives post-consultation

11 Annex 3: CMP317 and CMP327 Business Rules

Annex can be found at:

https://www.nationalgrideso.com/codes/connection-and-use-system-code-cusc/modifications/removing-generator-residual-and-excluding

12 Annex 4: ESO Diagrams

Annex can be found at:

https://www.nationalgrideso.com/codes/connection-and-use-system-code-cusc/modifications/removing-generator-residual-and-excluding

13 Annex 5: Analysis - RWE Supply and Trading

Annex can be found at:

https://www.nationalgrideso.com/codes/connection-and-use-system-code-cusc/modifications/removing-generator-residual-and-excluding

14 Annex 6: Analysis – Waters Wye Associates

Annex can be found at:

https://www.nationalgrideso.com/codes/connection-and-use-system-code-cusc/modifications/removing-generator-residual-and-excluding

15 Annex 7: Analysis - TGR to Zero – Impacts

Annex can be found at:

https://www.nationalgrideso.com/codes/connection-and-use-system-code-cusc/modifications/removing-generator-residual-and-excluding

16 Annex 8 - SSE Definitions Analysis

Annex can be found at:

https://www.nationalgrideso.com/codes/connection-and-use-system-code-cusc/modifications/removing-generator-residual-and-excluding

17 Annex 9 – National Grid ESO MITS Map

Annex can be found at:

https://www.nationalgrideso.com/codes/connection-and-use-system-code-cusc/modifications/removing-generator-residual-and-excluding

This map is produced by National Grid ESO as a requirement under Section 13 of the CUSC. Some workgroup members felt that this map would be useful for the development of the modification. The MITS map shows MITS substations, as opposed to "MITS nodes".

For Clarity:

- A MITS substation has more than 4 Tx circuits.
- A MITS node is the above or 2 Tx circuits and a GSP

All MITS substations are also MITS nodes but not all MITS nodes are MITS substations. The charging methodology uses MITS nodes to identify the specific charging arrangement of a circuit.