Stage 05 – Draft CUSC Modification Report

At what stage is this document in the process?

- 01 Proposal Form
- 02 Workgroup Consultation
- 03 Workgroup Report
- 04 Code Administrator Consultation
- **05 Draft CUSC Modification Report**
- 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 Draft Final Modification Report has been prepared in accordance with the terms of CMP317/CMP327. An electronic version of this document and all other CMP317/327 related documentation can be found on the National Grid ESO website via the following link:

https://www.nationalgrideso.com/industry-information/codes/connection-and-use-system-code-cusc-old/modifications/cmp317-cmp327

	The purpose of this document is to assist the CUSC Panel in making its recommendation on whether to implement CMP317/327.
	High Impact: Users liable for Generator TNUoS charges, The Company
	Medium Impact Supplier Users liable for TNUoS
	The Workgroup concludes: • The Workgroup agreed by majority that that 44 of the potential 84 solutions were better than the CUSC baseline, and that 62 of the 83 WACMs were better than the original solution. • The Workgroup did not come to a majority consensus on which option was best. • 4 Members agreed that WACM72 was the best option.

Contents

Any questions?

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Timetable	
The Code Administrator recommends the following timetable:	
Workgroup Report presented to Panel	26 June 2020
Code Administrator Consultation issued to the Industry	30 June 2020
Draft Final Modification Report presented to Panel	23 July 2020
Modification Panel decision	31 July 2020
Final Modification Report issued to Authority	13 August 2020
Decision implemented in CUSC	1 April 2021

1 About this document

This document is the Draft Final Modification Report that contains the discussion of the Workgroup which formed in July 2019 to develop and assess the proposal. In addition, it contains the responses to the Workgroup Consultation, which closed on 12 March 2020 and the voting of the Workgroup held on 9 June 2020.

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 report is 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 4 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 CMP317/327 Workgroup and the specific areas that the Workgroup should consider. The CUSC Panel met on 26 June 2020 and agreed that these terms of reference had been met.

The Workgroup consulted on this Modification and a total of 23 responses were received. A summary of these responses can be viewed in Section 5 of this Report.

<u>Workgroup Conclusions</u>

At the final Workgroup meeting, Workgroup members voted on the Original proposal and WACMs. The Workgroup agreed by majority that that 44 of the potential 84 solutions

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

were better than the CUSC baseline, and that 62 of the 83 WACMs were better than the original solution.

Code Administrator Consultation Responses

16 responses were received to the Code Administrator Consultation. A summary of the responses can be found in Section 10 of this document. The full responses can be located in Annex 19.

Various options were indicated as having merit, but the Original and WACM72 received most support. There was varying levels of support for implementation approaches, with support for April 2021 varying to a phased approach, whereas some respondents disagreed with the implementation approach in its entirety.

This Draft Final Modification Report has been prepared in accordance with the terms of the CUSC. An electronic copy can be found on the National Grid ESO's Website:

Terms of Reference

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 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	Section 4, Paragraph 1 Section 4, Paragraph 2

"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	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 determined in that case, iv. what happens if an Offshore generator	Section 4, Paragraph 2

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	Section 4, Paragraph 1 Section 4, Paragraph 2

of the definitional use of 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	Section 4, Paragraph 2

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 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.	Throughout Section 4
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].

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, at the time of raising this modification, The Company considered

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[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.

[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

that its compliance with the Limiting Regulation was a concern which needed to be addressed within timescales that would not have been feasible under the TCR and therefore change was needed.

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 19 times between June 2019 and June 2020 to discuss the perceived issue, detail the scope of the proposed defect, review responses to the Workgroup consultation, devise potential solutions and assess the proposal in terms of the Applicable CUSC Objectives.

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 regard 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.

1.1.6 In February 2018[10], the CMA upheld Ofgem's CMP261 decision that there had been no breach of the upper value of the limiting range. 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 paid for physical assets required for connection to the system 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 and excluded in the calculation on Generator TNUoS, and as such enable the calculation of annual average transmission charges paid by producers to remain compliant with the Limiting Regulation.

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

[9] Ibid, p1.

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

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 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, in line paragraph 45 of The Direction, 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[11]. 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 set at £0 and ensure that the correct interpretation of the Limiting Regulation (838/2010) is incorporated into the CUSC.

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 2020, 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"[12].

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[11] Ofgem final decision and impact assessment

– Targeted Charging Review:
https://www.ofgem.gov.uk/system/files/docs/2019/12/full_decision_doc_updated.pdf

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

2. Physical Assets Required for Connection

2.1 Definition of 'charges paid by producers for physical assets required for connection to the system'

2.1.1 In the earlier stages of the Workgroup, various avenues were discussed in regard to defining the physical assets required for connection of generators to the system and their associated TNUoS Charges. In an initial analysis, the ESO established their view that 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)[13] 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[14], in as much as domestic law has no impact on the application of EU Law.

2.1.4 In the course of its work, the Workgroup has identified three options for potential definitions of physical assets required for connection of generators 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.

[13] A workgroup member provided examples of instances when NETS has been used as the definition. Please see Annex 18.

[14] "5.82 The parties [Ofgem, NGESO, EdF and SSE] agreed that the interpretation of an EU instrument could not ordinarily depend on the approach taken in domestic law. We [the CMA] 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*."

2.1.5 It was accepted that other definitions could be developed to define the physical 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 (i)-(iii) 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 all 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.

2.2.2 Some Workgroup members considered this definition to be too broad as it meant that more assets would be considered as physical 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. Their 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 analysed this definition to understand if there is a difference between it and 'all local circuit and local substations' definition.

2.2.6 A Workgroup member produced a diagram (Annex 13) which highlighted that excluding certain local island links may be impactful when considering what constitutes the Limiting Regulation definition of the transmission system and the NETS, and what is excluded. The Workgroup concluded that the other definitions highlighted, captured this issue as Generator Only Spur and the shared/pre-existing system alternative definitions of assets required for connection would include these examples when assessing compliance with the Limiting Regulation.

2.2.7 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, and therefore the alternative definitions below would result in an outcome that more properly took account of the Limiting Regulation in the GB charging methodology. For example, in a case where there was demand on an island connected to the transmission system, the below definitions would result in this being captured in average annual charges to generators.

2.2.8 The Workgroup noted that CMP320 'Island MITS Radial Link Security Factor' was ongoing, and that there may be interactions between this modification and CMP320.

2.3 Definition - Generator Only Spur

2.3.1 A 'Generator only spur' (GOS) was defined by Ofgem[15] and noted by the CMA[16] as an asset that is solely required for a specific generator concerned and therefore one that would fall within the physical assets for connection exclusion of the Limiting Regulation. This would apply equally to offshore assets and 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 physical assets for connection for the purposes of the Limiting Regulation Connection Exclusion.

2.3.2 Similarly, if a Generator only spur became an asset used by more than one generator, or shared with demand, it would not be considered as a physical asset required for connection of that generator to the transmission system, 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'*[17].

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 regard to the use of a Generator only spur as physical assets

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[15] Paragraph 1.4 of the Reply.

[16] At paragraph 3.10 "*A typical OFTO's assets consist of (a) an offshore substation (the Offshore Local Substation); and (b) subsea cables, which run from the Offshore Local Substation to an onshore substation, from where electricity can be transmitted towards its ultimate users. Such a link, i.e. the Offshore Local Substation and the subsea cable, was referred to by the Parties as an Offshore Generation Only Spur (Offshore GOS).*"

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

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 their 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 physical asset should be excluded from the compliance calculation in terms of the Limiting Regulation.

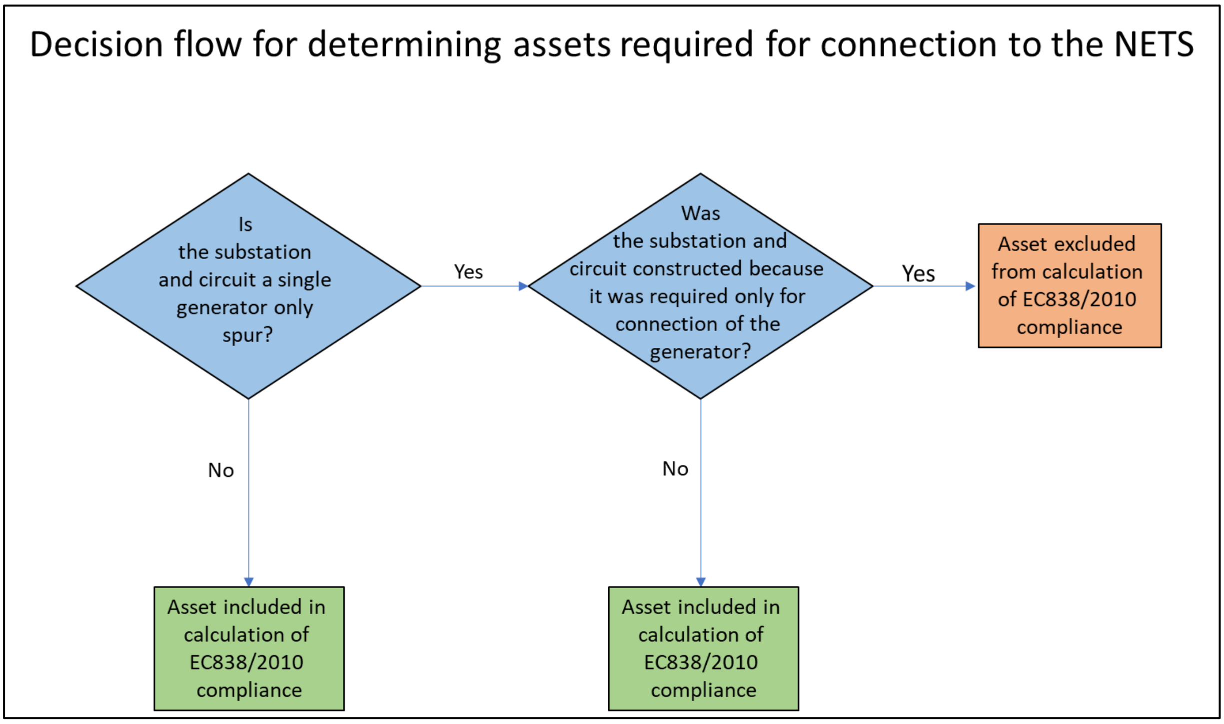
2.4.5 The CMA decision considered that the exclusion of the offshore Generator only Spurs, namely the 15 licensed OFTOs that existed at the time[18], should be excluded when calculating the average transmission charges for generators, and therefore the upper level of the Limiting Regulation (€2.50/MWh)) 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 an unused pre-existing 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.

2.4.7 The Workgroup proceeded to develop modular alternative solutions and legal text without identification of the pre-existing system in respect to this matter.

[18] Being charging year 2015/16 for the purposes of CMP261 and the CMA's decision.

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



2.4.9 The Workgroup member in question believed that this outlined process is congruent with the definition of pre-existing system in regard 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*[19]*".*

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*".

[19] Ibid

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.

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 the 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 arbitrary outcome 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 become 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 regard to targeting the range at €0/MWh[20]. 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[21], which in the Workgroup members view, resulted in average locational Charges of €0/MWh to Embedded Generators.

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

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

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 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 During the discussions around targeting zero, A Workgroup member also undertook some analysis[22]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.

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

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"[23].

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

3.1.18 Ofgem further noted that the choice of reference node "can change the costs allocated to different users[24]". 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 the extent to which this is an issue[25]".* 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[26] 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.

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[23] 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

[24] Transmission Charges Discussion note - https://www.ofgem.gov.uk/system/files/docs/2019/12/winter_2019_-_working_paper_-tnuos_reforms_publish_0.pdf

[25] Ibid, p16

[26] 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

Targeting €0.50/MWh also provides a “buffer” in instances where forecasting of physical assets required for connection of generators 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 CMP317 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.

Reference Node

4.0 Should there by an error margin included?

4.1. Yes – there should be an error margin

4.1.1 The Workgroup discussed the benefits of including (and excluding – see below) 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 for the payers of TNUoS.

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 Connection Exclusion, 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 the 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 agreed 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[27] 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

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

reached that the existing reconciliation process[28] 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 wrote to Ofgem[29] requesting the inclusion of the distributed reference node within the scope of the solution(s) for the two modifications. Ofgem replied that alternatives for CMP317/327 could not include changes to the reference node as this was clearly in the scope of the AFLC SCR.

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 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.

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

[29] Please see Annex 3 of this document

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 in November 2019, 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 regard to creating solutions to the defect of CMP317 and CMP327. As such, the Workgroup came 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 were not yet formalized at the time of publication of the Workgroup consultation, and as such, the Workgroup welcomed thoughts on the viability of these solutions, or whether other solutions or permutations would better address the defect.

9.0 Post Workgroup Consultation Discussions

9.1 Context to discussions and background

9.1.1 Post Workgroup Consultation, the Workgroup convened a further 9 times in order to further develop the original proposals and any potential alternatives. A summary of the Workgroup consultation responses can be found in Section 5 of this Report, and full responses are available in Annex 10.

9.2 Discussions around phased implementation and modular solution approach

9.2.1 Some responses from the Workgroup consultation matched opinions within the Workgroup that some form of phasing may be preferable as part of alternative solutions to CMP317 and CMP327. There was no consensus on how long the phasing of implementation should endure for, either 2 or 3 years, to accompany no phasing as an option in the various permutations for alternatives.

9.2.2The majority of the Workgroup believed that a phasing approach was preferable as it would better allow generator participants in the market to adapt their business models to the changes in the cost base that would occur as a result of the Original Proposal. Other Workgroup members considered that the intended changes had been well signaled by Ofgem since the beginning of the TCR SCR deliberations and therefore phasing was not necessary.

9.2.3 The Workgroup added phasing as a module to approaches for alternative solutions. This increased the number of potential options on the table, but the Workgroup felt that putting a full suite of options in front of The Authority was the best course of action.

9.2.4 The Workgroup chose to use the previous residual tariffs as a proxy for the adjustment creating a Transition Tariff. The Transition Tariff, over 2 years, would be one half of the prior expected residual tariff in the Charging Year 2021/22, and there would be no adjustment made from charging year 2022/23. Workgroup members felt that this would allow Generator Users the opportunity to adapt to the change.

9.2.5 A 3 year transition was also considered by the Workgroup. The Transition Tariff, over 3 years, would be two thirds of the prior expected residual tariff in the Charging Year 2021/22 and one third in the Charging Year 2022/2023, with no adjustment made from charging year 2023/24. Workgroup members also felt that this would allow Generator Users the opportunity to adapt to the change, but over a more staggered timeframe.

9.2.6 The Workgroup agreed that this would not be necessary for all alternatives and would be most appropriate where the expected increase in costs to Generators as a result of the modification proposal was considered material enough to require such phasing.

9.2.7 RWE Supply and Trading produced a paper on perceived implementation issues from their perspective. This can be found at Annex 15 of this report.

9.3 Ofgem's decision on P396

9.3.1 During the Workgroup consultation on 6 March 2020, The Authority published their decision on Balancing and Settlement Code Modification, P396[30], a modification which sought to revise the treatment of BSC charges for Lead Parties of Interconnector Balancing Mechanism Units. The Authority approved this modification for implementation, meaning the exclusion of Interconnector Balancing Mechanism (BM) Units from the Main Funding Share and Supplier Volume Allocation (SVA) (Production) Funding Share BSC Charges would go ahead.

9.3.2 In their decision, Ofgem stated that they *"consider the Main Funding Share and SVA (Production) Funding Share charges recovered via BSC Charges to be network access charges for the purposes of the Electricity Regulation*". This gave rise to discussion within the Workgroup as to whether there would be any implications of this decision to CMP317 and CMP327.

[30] Ofgem Decision on p396 - https://www.ofgem.gov.uk/system/files/docs/2020/03/p396_d_0.pdf

9.3.3 Ofgem also stated that "*after careful consideration and close examination of European Electricity legislation, namely the Electricity Regulation and Commission Regulation (EU) No 838/2010 ("the ITC mechanism"), we have concluded that we should approve the modification proposal. It is our view that the decision to approve the modification proposal is consistent with the objective of the Electricity Regulation*." This led to concern within the Workgroup on the potential impacts that the decision may have on potential solutions for CMP317/327, and compliance with the Limiting Regulation.

9.3.4 In their response to the Workgroup consultation, Drax highlighted that this decision may have implications around whether charges included in the Balancing and Settlement Code and currently within the Balancing Services Use of System Charges (BSUoS) should be considered in the calculation of average Generation transmission charges within the Limiting Regulation.

9.3.5 Commenting on the modular approach the Workgroup had taken on solutions, Drax highlighted that solutions may need to include a module for the inclusion of BSC Charges, and the congestion management element of BSUoS, to ensure accurate calculation of average annual generation charges.

9.3.6 The Workgroup discussed this issue and asked The Authority for direction on whether the decision on P396 would impact the calculation of the Limiting Regulation. Ofgem responded to the Workgroup, advising that it was their view that P396 does not impact on 838/2010 and does not see why BSC costs should be used in the calculation of transmission charges. This email is available at Annex 17 of this report.

9.3.7 A number of Workgroup members were not satisfied with this statement from The Authority and expressed their concern that a material impact on the calculation of annual average transmission charges paid by generators in GB could see a breach of the Limiting Regulation if generators paid BSC funding shares but, for the purposes of the calculations to ensure compliance with the Limiting Regulation, they were not incorporated into the total amount of annual average transmission charges paid by generators in GB .

9.3.8 In terms of BSUoS, the element which was pertinent to the Workgroup discussions was the congestion management element only. As per Regulation 2019/943[31] (Article 2 – Definitions) of the 'Clean Energy Package' (which came into effect on 1st January 2020), congestion is defined as "*a situation in which all requests from market participants to trade between network areas cannot be accommodated because they would significantly affect the physical flows on network elements which cannot accommodate those flows*". Congestion management costs incurred by the ESO are currently recovered under the BSUoS charge paid by generators and suppliers (50:50) in GB.

9.3.9 Ancillary services are defined in Regulation 2019/944[32] - Article 2: Definitions (48). " *'Ancillary Service' means a service necessary for the operation of a transmission or distribution system, including balancing and non-frequency ancillary services, but not including congestion management*." The Workgroup noted that this definition specifically

[31] https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32019R0943&from=EN

[32] https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32019L0944&from=EN

excludes “congestion management”. According to the Limiting Regulation (Part B 2(2)) charges paid by generators related to ancillary services are (like charges paid for physical connection to the system) to be excluded.

9.3.10 RWE Supply and Trading presented a paper to the Workgroup for consideration, which can be found in full at Annex 14 of this report. The paper illustrated the issues around congestion management costs which are pertinent to these two modifications. The paper highlights that “*there is no explicit recognition of congestion charges as network charges in the GB arrangements. However, Balancing Services Use of System (BSUoS) charges include an element of costs associated with “constraints” as well as costs related to ancillary services*[33]”.

9.3.11 The paper also made a distinction between “predictable” congestion costs and “unpredictable” congestion costs, concluding that either an ex ante fixed commodity charge (£/kWh) which reflects to the extent possible the predictable element of congestion costs on users (Generation (50%) and Suppliers(50%)) subject to reconciliation to ensure that it reflects actual costs incurred; or an Adjustment to the demand residual to reflect the costs associated with unforeseen or unforeseeable outages on the GB transmission system. This has been considered by the Workgroup.

9.3.12 The Workgroup asked the Second Balancing Services Task Force if this was in scope of their work. The Second Balancing Services Task Force are currently considering who should pay BSUoS (Demand, Generators or Both), and how the charge should be recovered. Several Workgroup members stated that if Balancing Services Charges were to be charged to demand only, the issue as to whether congestion management charges should be included in the calculation of average generation charges would fall away. At the time of publication of this report[34], the Second Balancing Services Charges Task Force has been paused due to the Covid-19 outbreak and the Workgroup recognized that progression of this potential issue in that forum was unlikely.

9.3.13 The Workgroup believed it prudent to develop additional modules to ensure a compliant solution can be offered to the authority. This would be the options for (i) the BSC funding share charges on their own, (ii) BSUoS charges, to do with congestion management only, on their own and (iii) a combination of (i) and (ii) to be included as alternative options. The logic behind this would be to ensure that Ofgem is presented with a full suite of options it could choose from to ensure compliance with the Limiting Regulation. This approach required additional alternatives which were subsequently agreed as formal WACMs.

9.3.14 In response to Workgroup concerns following consideration of the RWE paper, the ESO representative studied several EU Directives, Regulations and legislative documents in order to establish what ‘congestion management’ is and its relationship with ancillary services to try and determine whether or not costs related to congestion

[33] RWE Paper – “Congestion Costs and Compliance Issues”, p3, Annex 14

[34] May 2020.

management should be an element to be excluded from the calculation of average annual transmission charges referenced in EU Regulation 838/2010.

9.3.15 According to the ESO representative, EU Directives, Regulations and legislative documents studied to date reference the various types of congestion but it appears that there is no clear definition of congestion management. There is also, in the view of the ESO (and some Workgroup members) ambiguity with regards to the definition of ancillary services (an element excluded from the average annual transmission charge paid by generators calculation) with Directive 2009/72/EC (which would have been in place when the 838/2010 Limiting Regulation was drafted) which states; "'*ancillary service' means a service necessary for the operation of a transmission or distribution system*" with another definition then listed in separate EU legislation in a Directive from 2019 (Directive (EU) 2019/944) which then states; *"'ancillary service means a service necessary for the operation of a transmission or distribution system, including balancing and non-frequency ancillary services, but not including congestion management*".

9.3.16 It was the ESO's view that it is therefore dependent on interpretation and the intent of a particular Directive which makes it difficult to reach a decision on whether or not congestion management costs should be excluded from the calculation of annual average transmission charges to generators. However, other Workgroup members suggested that there was no such ambiguity as to what 'ancillary services' were, for the purposes of EU law, as the Clean Energy Package (Directive (EU) 2019/944 and Regulation 2019/944) superseded and thus replaced the definition of 'ancillary services' set out in 2009/72/EC as, for example, was stated in Recital (1) of Directive (EU) 2019/944, which stated "a number of amendments are to be made to Directive (EU) 2009/72/EC of the European Parliament and of the Council. In the interests of clarity, that Directive should be re-cast".

9.3.15 The Workgroup considered the component parts within the current BSUoS charge that could be considered part of the Limiting Regulation (i.e. falling within "congestion management"). They felt that this covered the ESO's activity to manage physical constraints and any market balancing actions the ESO took. The ESO presented some data from the ESO's 2019/20 BSUoS costs report (the MBSS report) illustrating the areas of costs that these aspects covered. The table below illustrates those components the Workgroup considered to be "congestion management" highlighted in yellow. The blue element of RoCoF was detailed by the ESO to contain costs for the largest infeed loss and inertia management and therefore the ESO considered them not to be a "congestion management" item.

Outturn and Forecast Cost £m	Total 19/20
Energy Imbalance	51.9
Constraints - E&W	70.3
Constraints - Cheviot	103.3
Constraints - Scotland	140.2
Constraints - Ancillary	26.7
ROCOF	209.9
Constraints Sterilised HR	164.9
Constraints Total	715.3

9.3.16 The Workgroup debated whether “Constraints Sterilised HR” (which refers to actions taken by the ESO to create headroom so that it can meet its operating requirements) should be considered within “Congestion Management”. Following the Workgroup, the ESO agreed to provide a view. On balance the ESO considered that as the action is taken to manage headroom from behind an otherwise constrained boundary it may meet the definition of “Congestion Management” and should therefore be considered for inclusion.

9.3.17 Due to these issues becoming apparent the Workgroup suggested that more time may be needed to fully consider them and develop a set of robust enduring solutions. The ESO highlighted that they did not believe this to be possible as there was a risk that without changes to the methodology and allowances for costs being made in the 2021/22 charging year that the range in the Limiting Regulation could be breached. The ESO highlighted its recent March 2020 forecast report and the modeling within it that demonstrates that the total cost of the Generator only Spurs are in the region of £444m and the wider recovery will only equal some £375m. This leads to the ESO potentially recovering less than €0/MWh once the exclusions are applied as per the Limiting Regulation.[35]

9.3.18 The Workgroup agreed that if “congestion management” costs should be included in calculating the annual average transmission charges paid by generators in GB as per the Limiting Regulation then an appropriate mechanism would need to be introduced to allow that to be managed within transmission charges (TNUoS).

The ESO representative indicated that changes to the BSUoS methodology and billing processes would not be possible in current timescales, and that to ensure compliance with the TCR SCR Direction and the Limiting Regulation an adjustment made to TNUoS tariffs at the point of tariff setting would be the only possible solution for tariff setting in 2021.

[35] https://www.nationalgrideso.com/document/166761/download

The ESO highlighted that this would not be their preference due to the potential volatility of “congestion management” costs, however, the ESO considered that this would be a short term solution and that developments through the Second BSUoS Taskforce should ensure that any necessary adjustments could be time limited.

Although the Workgroup considered this to be a less than optimal solution the majority agreed that this was a suitable way forward to ensure that the CMP317/327 modification proposal contained suitable alternative solutions that would allow Ofgem to approve a methodology that aligned with their interpretation of the Limiting Regulation, taking into account the Clean Energy Package changes.

Due to the current complexity and uncertainty given that there are 83 WACMs and the Original solution, added to by the Second BSUoS Taskforce delay, a Workgroup member asked that the ESO consider requesting an implementation delay from Ofgem of 12 months to April 2022, with a new minimal change proposal to ensure compliance for 2021/22.

The ESO considered that this was not appropriate and that although additional complexity had been found through the Workgroup process there was a need to ensure that the charging methodology was compliant with the requirements of relevant legislation and that any delay may risk the ESO’s ability to set charges in a manner compliant with the Limiting Regulation. The ESO’s view is that the requisite options have been put forwards to The Authority in order for them to make the minimum changes if required.

9.3.19 The ESO suggested that a new defined term could be created and added to the calculation as per the above to allow for costs of “Congestion Management” to be captured in the calculation of the annual average transmission charges paid by generators in GB. This would allow the appropriate TNUoS charges to be set annually by the ESO and, if there were to be any breach of the range in the Limiting Regulation, an appropriate reconciliation to be made. The majority of the Workgroup agreed that this would be a suitable way forward in the circumstances.

Following some further discussions, the Workgroup agreed that the most straightforward way to capture this term was to link it back to the original exclusion within the Limiting Regulation. As this captured costs related to ancillary services the ESO agreed to define an “Ancillary Services Exclusion” to ensure the methodology could capture the relevant costs.

Some Workgroup members were concerned that this may lead the ESO to set tariffs that did not take into account congestion management, and an amendment was consequently suggested to the legal text and the definitions to provide further clarity.

9.3.20 A Workgroup member suggested that an allowance for the ESO’s operational costs (Opex) that related to congestion management should also be included within calculation of the annual average transmission charges paid by generators in GB. The ESO agreed to ensure that if there was a need to adjust for any costs in BSUoS as a result of this modification that that could be done through the methodology as described above.

9.3.21 The Workgroup summarized their view of the scale of the likely elements to be considered in the scope of each variation to the solution in the below table using costs pre-dominantly drawn from 2019/20.

Element of charges paid by Generators	£m 2019/20 values
TNUoS charges paid by Generators in 2019/20	£403.5m
All Local Charges	£329m
Generator Only Spurs	£326m
Connection Charges (outside of TNUoS charges)	£20m
Costs to Generators potentially within the scope of Congestion Management (constraints (excluding RoCoF) and energy balancing	£279m
BSC Costs	£25m[36]

9.3.22 The Workgroup considered potential methodologies which could enable ESO to take account of other relevant charges paid by generators (e.g. for congestion management and BSC costs) when setting TNUoS tariffs, while avoiding or mitigating any increase in volatility of TNUoS tariffs. The workgroup agreed on using a two-stage calculation which is applied in all of the WACMs that accommodate constraint management costs and/or BSC costs.

9.3.23 Within this two-stage process, the ESO would first calculate TNUoS tariffs disregarding congestion management, or BSC costs and would apply the relevant "target within the range" methodology for each WACM. For the second stage, the ESO would add in the relevant congestion management and/or BSC costs and test whether this would be expected to cause a breach of the Regulation. If this second stage would show a breach of upper end of the range (cap after relevant error margin has been applied), then an "additional adjustment" would be applied to bring the charges paid by generators down to the value of the cap including error margin. Also, if the second stage showed a breach of £zero at the bottom of the range, then an "additional adjustment" would be applied to bring the total charges paid by generators up to £zero to remain within the range.

[36] This is an *indicative estimate* which maybe slightly lower.

9.3.24 An advantage of this two-stage approach with regard to mitigating TNUoS volatility is that if the second stage showed that total charges paid by generators is expected to remain within the range, even after the additional charges were taken into account, then no additional adjustment would be required. The TNUoS tariff calculated from the first stage would therefore remain unchanged by the second stage. This outcome of no impact on volatility would be more likely for WACMs which used a “target within the range” of £zero, £0.25 Euro, or £0.50 Euro because the total charge to generators would be more likely to remain within the range, even after the additional cost of constrain management and BSC costs are taken into account.

9.3.25 However, WACMs which target either the middle of the range at €1.25, or which may in effect set TNUoS tariffs towards the top end of the range because they apply the rule of “no target within the range”, would be more likely to result in higher volatility, even with this two-stage process. This is because for these WACMs, the second stage would be more likely to show that there is a breach of the upper end of the range, so it is more likely that an “additional adjustment” would be required and the magnitude of the additional adjustment would be a function of the ESO forecast of the charges paid by generators relating to constraint management costs and BSC costs. A spreadsheet model which illustrates the operation of the two-stage process for different scenarios is included in Annex 7.

10. Workgroup Alternatives – adjustment to modular approach to solutions

10.1 How did post Workgroup discussions impact the number of solutions?

10.1.1 The addition of BSC charges, Congestion Management and Two Step Ex-Ante adjustment factor lead to the solutions table outlined in section 8 of this report being expanded to be inclusive of these options, and as such, this resulted in 83 alternatives being raised which covered all permutations of these modular options for solutions, alongside the original solution.

10.1.2 The Workgroup took this approach in order to put as many potentially compliant solutions in line with the Limiting Regulation in front of The Authority. **These alternative solutions are outlined in full in Annex 11 of this report, and the associated alternative forms are to be found at Annex 12, with legal text for all options found at Annex 2.**

10.1.3 In the resultant Workgroup vote, all 83 alternatives were voted in to be Workgroup Alternative CUSC Modifications (WACMs) by majority on 3 June 2020 at Workgroup 1.

5 Workgroup Consultation Responses Summary

1.0 Workgroup Consultation Process

The Workgroup consultation for CMP317 and CMP327 was opened on 20 February 2020 for 15 working days, as per standard process. A total of 23 responses were received from a variety of industry parties. The full consultation summaries can be found in Annex 10 of this report.

- The consultation was open for a total of 15 days (as per standard CUSC practise).
- 1 official alternative was suggested as part of this process– however 83 official WACMs have since been raised.

1.1 General Consultation Themes

- The was a mixed response towards the original CMP317 solution against the current CUSC objectives, some responses in support but over half were against.
- There was much contention around definitions of assets required for connection – however all outlined definitions supported in some form by numerous parties
- There was some support for implementation on a phased approach, but TCR implementation date of 2021 also supported
- Concerns around effective competition and compliance raised by some parties
- Some parties suggest further analysis should be undertaken

1.2 Consultation Questions and summaries

- Alongside the 4 standard CUSC Workgroup consultation questions, the Workgroup asked an additional 6 consultation questions.

1.3 Q1. Do you believe that CMP317 / CMP327 Original proposal better facilitates the Applicable CUSC Objectives?

Of the 23 responses received, 6 indicated that they believed that the original solution better facilitated the applicable CUSC objectives, with 12 disagreeing. 5 answers remained neutral:

- Companies who responded positively to this question highlighted that the original proposals were better than baseline for objective c) and d) (Eon, Npower)
- Several companies highlighted that whilst they believed that the original was better than baseline, there were better solutions available (Sembcorp, Uniper)
- **"**A negative TGR (or other adjustment with the same effect) distorts the cost reflective element of the TNUoS tariff. Removing it to the extent possible will help to ensure Generators face the full cost reflective charge" (Centrica)
- "Reducing the TGR to zero in principle better promotes competition, by removing differences between transmission and distribution connected generators" (Uniper)
- Some respondents highlighted that they didn't believe the original proposals would ensure compliance with the limiting regulation (SSE, EDF).
- Definition of system/charges (SSE, EDF)
- Respondents also highlighted negative impacts on generation and cross border competition (RES).

- “Further, the Original proposal uses a very broad interpretation of excluded charges, which includes equipment shared with many other users, including huge numbers of demand customers” (Fred Olsen Renewables).
- “Unless the amount targeted is altered then generators will pay too much” (First Hydro).
- Island groups would be treated differently (Neven Point Wind, Orkney, Highland Council

1.4 Q2. Do you support the proposed implementation approach?

In regard to implementation, there was a somewhat mixed response from the 23 respondents. 9 indicated that they agreed with the implementation approach, whereas 5 did not. 3 opted for a phased implementation approach, whilst 6 remained neutral on the matter.

- Respondents tended to agree that implementation should be in line with the TCR implementation of 2021 to avoid distortions.
- “We support the proposed implementation approach and note that the TCR reforms are a whole package of interconnected and complimentary changes” (Drax)
- Some respondents also noted that 2021 would be better for competition (BRL)
- A minority of respondents highlighted the benefits of a phased approach (First Hydro, RES, Ventient)
- A more substantial minority disagreed with the implementation approach in its entirety, citing reasons such as lack of notice (EDF), disbenefit to competition (Fred Olsen).

1.5 Q3 – Do you have any other comments?

- SSE provided further evidence to the Workgroup – 6 examples supporting their interpretation of what the transmission system is. Please see full response in Annex 10.
- *“We are concerned that there is still ambiguity in interpretation of EU Regulation 838/2010 and lack of direction from Ofgem on whether interpretations considered by the WG will be deemed compliant”.* (ESB)
- *“CMP317 Original and CMP327 Original are both based on a fatally flawed and wholly false assumption that the transmission system, for the purposes of the ensuring compliance with Regulation 838/2010, is the MITS rather than the NETS”.* (SSE)
- *“CMP317/327 should not result in maximising generator charges arbitrarily (therefore aim for €0/MWh rather than €2.50/MWh). This approach would provide symmetry with demand charging and address some charging disparity issues between GB and EU generators which have persisted for some time. The Workgroup report notes these and we agree”*. (Innogy)

- *"We urge the working group to obtain specific legal advice on the correct approach to be taken to the exclusion of charges from the calculation of annual average transmission charges in paragraph 1 part B of the Access Regulation (Regulation 714/2009)".* (Scottish Power Renewables)
- *"The definition of the Connection Exclusion is complicated and, due to the tight timescale for implementation, the immediate practicality of any solution is more important than would normally be expected for a Modification of this impact*". (Sembcorp)
- *"The Original proposal continues the historic discrimination of island projects, which is not in line with current zero carbon and renewable energy targets"*. (OIC)
- *"We are concerned that the amalgamated solution will be developed and assessed within standard SCR modification timelines (6 months from initiation to approval" (ESB)*

1.6 Q4 - Do you wish to raise a Workgroup Consultation Alternative request for the Workgroup to consider?

- One alternative request was raised by Sembcorp. However, an all-encompassing suite of alternative solutions were raised by the Workgroup, resulting in 83 WACMs, which was inclusive of this alternative solution.

1.7 Q5 - 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.

All options presented received some support, RWE stating new definitions not required. ESB provided an extensive interpretation of the definitions available in Annex 10 of this report.

Option	Positives Highlighted	Negatives Highlighted
All Local Substations	All encompassing	Too broad, potentially incompatible with EU Law
GOS	Received most support of the 3 options	Should be in line with CMA
All Local Substations except pre-existing and shared	Excludes pre-existing and shared assets, beneficial for compliance	Could give rise to complexity

1.8 Q6. 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.

Most respondents agreed that there should be a target within the range, with the majority stating that targeting either €0.00 or €0.50 would be preferable. There was minority support for not targeting a figure in the range of the limiting range.

1.9 Q7. Error Margin

a. Do you agree with the two options highlighted in section 4, paragraph 4 in regard 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.

- *"It depends. If a target of zero is set, with an accurate assessment of what constitutes connection charges, then we can see the case for not having an error margin. If a wide definition of connection assets is chosen, such as all local charges, then it is possible that this could negate the use of an error margin for a target at the lower end of the range (i.e. close to zero), as there will be tendency for this to result in overcharging due to overestimating the amount of charges to be excluded from the application of the cap. In a similar manner, if no target is set or one at the top of the range (close to €2.5) then there is a risk that the wide definition could result in a breach of the upper limit due to the inherent overcharge. In this instance it would seem necessary to include an error"* (Uniper)

1.10 Q8 - 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.

- *"Whichever solution is adopted, there is likely to be very significant increase in TNUoS charges payable by many generators and this increase will need to be* *sensitively introduced if it is not to have a detrimental impact on competition in electricity generation. For this reason, we think a phased implementation is correct". (RES)*

- *"A multi-year phased implementation must be the default approach for such a change, given the horizon over which users purchase power and the length of supporting contracts, to minimise the risk of unnecessary market shock". Fred Olsen*
- *"There has not been substantive discussion of this issue in the Workgroup on how a transition would be introduced. We would need to consider the impact on the whole TCR package of reforms and the relevant justification for a transition.*
  As highlighted in response to question two, our preference is for a coordinated approach and that any alteration of timings should be equally coordinated and accompanied by clear benefits analysis". (Drax)

1.11 Q9 - 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.

- Most respondents did not identify any modules which should not be considered. However, Fred Olsen asked for "pre-existing" to be defined further, whilst Drax highlighted that P396 should be taken into consideration by the Workgroup. (Please see Section 4, Paragraph 9.3 onwards detailing the Workgroup's discussion)
- Centrica and Eon highlighted that they did not believe any modular options other than i), iv) and vii) should be considered, whilst Banks conveyed that they thoughts Modules vi, viii and ix could be with 'Generator only Spur'. Sembcorp considered ix) to be unnecessary
- SSE discounted options which differ from their interpretation (see documentary evidence from Q3)

1.12 Q10 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.

Three respondents in particular were concerned around this aspect of the change, namely Highlands and Islands Enterprise (HIE) and Orkney (OIC) and EDF.

- *"The expected Scottish Island links are all, if constructed, to be shared, not sole use. They also are most likely to be connected so as to serve demand, not just generation, and are certainly not for the purpose of a sole connected generator. The Workgroup approach appears to conflict with the approach agreed at the CMA. It is incontrovertibly the case that the cost of local circuit charges related to these island links must be included in the Limiting Regulation compliance calculation".* (EDF)
- *!Agree that excluding the charges for circuits and substations in respect of Island Links, or other physical assets, used by demand or other generators, is not compliant with the Limiting Regulation!* (OIC)

- *While the level of charges would change, i.e. moving the residual elements towards zero, the structure of the charges would remain the same, meaning that the impact on users in the north of Scotland would be low. However, there is limited information in ENAP's working papers to make further comment at this time, but lessons could be learned from CMP284*.

1.13 Q11. 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?

The Authority provided the Workgroup with direction that the Reference Node was in scope of the Access and Forwards Looking Charges SCR and as such should not be addressed by this modification.

6 Workgroup Vote

1.0 Stage 1 - Alternative Vote

If Workgroup Alternative Requests have been made, vote on whether they should become Workgroup Alternative Code Modifications.

1.1 This vote was held during Workgroup meeting 17. Of the 83 alternative solutions that were raised, all 83 were voted to become official WACMs. The full breakdown of this analysis is available at Annex 11 of this report.

2.0 Stage 2 - Stage 2 - Workgroup Vote

2.1 The Workgroup met on 9 June 2020 to carry out their Workgroup vote. 15 Workgroup Members voted, and the full Workgroup vote can be found in Annex 11. T

2.2 The tables below provide:

- a summary of how many Workgroup members believed the Original and each of the WACMs were better than the Baseline;
- a summary of how many Workgroup members believe each WACM was better than the original; and
- a summary of the Workgroup members views on the best option to implement this change.

The applicable CUSC (charging) objectives are:

CUSC charging objectives (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;

(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);

(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;

(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 (e) To promote efficiency in the implementation and administration of the Grid Code arrangements

Workgroup Vote Stage 2a - Assessment of Originals and WACMs vs Baseline

2.3 15 Workgroup members voted in total. The Workgroup voted by majority (8 or more), that 44 of the 84 potential solutions were better than the current CUSC baseline. These options are highlighted in the below table in yellow.

Option	Number of Workgroup members who voted that the option was better than baseline
Original	**4**
WACM 1	**4**
WACM 2	**7**
WACM 3	**5**
WACM 4	**5**
WACM 5	**3**
WACM 6	**3**
WACM 7	**6**
WACM 8	**6**
WACM 9	**10**
WACM 10	**8**
WACM 11	**8**
WACM 12	**6**

WACM 13	**6**
WACM 14	**6**
WACM 15	**6**
WACM 16	**10**
WACM 17	**8**
WACM 18	**8**
WACM 19	**6**
WACM 20	**6**
WACM 21	**4**
WACM 22	**4**
WACM 23	**8**
WACM 24	**5**
WACM 25	**6**
WACM 26	**3**
WACM 27	**3**
WACM 28	**7**
WACM 29	**7**
WACM 30	**12**
WACM 31	**10**
WACM 32	**10**
WACM 33	**8**
WACM 34	**8**
WACM 35	**7**
WACM 36	**7**
WACM 37	**12**

WACM 38	**10**
WACM 39	**10**
WACM 40	**7**
WACM 41	**7**
WACM 42	**4**
WACM 43	**4**
WACM 44	**7**
WACM 45	**5**
WACM 46	**5**
WACM 47	**3**
WACM 48	**3**
WACM 49	**9**
WACM 50	**9**
WACM 51	**14**
WACM 52	**12**
WACM 53	**12**
WACM 54	**10**
WACM 55	**10**
WACM 56	**9**
WACM 57	**9**
WACM 58	**14**
WACM 59	**12**
WACM 60	**12**
WACM 61	**10**
WACM 62	**10**

WACM 63	**4**
WACM 64	**4**
WACM 65	**8**
WACM 66	**6**
WACM 67	**7**
WACM 68	**3**
WACM 69	**3**
WACM 70	**9**
WACM 71	**9**
WACM 72	**14**
WACM 73	**12**
WACM 74	**12**
WACM 75	**10**
WACM 76	**10**
WACM 77	**9**
WACM 78	**9**
WACM 79	**15**
WACM 80	**12**
WACM 81	**12**
WACM 82	**9**
WACM 83	**10**

Workgroup Vote Stage 2b – Which WACMs are better than the original

The Workgroup voted by majority (8 or more) that 62 of the 83 WACMs were better than the original proposal. These are highlighted in yellow in the below table.

Option	Number of Workgroup members who voted that the WACM was better than Original
WACM 1	6
WACM 2	9
WACM 3	8
WACM 4	8
WACM 5	7
WACM 6	7
WACM 7	7
WACM 8	9
WACM 9	10
WACM 10	9
WACM 11	9
WACM 12	8
WACM 13	8
WACM 14	7
WACM 15	9
WACM 16	10
WACM 17	9
WACM 18	9
WACM 19	8
WACM 20	8
WACM 21	3

WACM 22	**6**
WACM 23	**9**
WACM 24	**8**
WACM 25	**8**
WACM 26	**7**
WACM 27	**7**
WACM 28	**8**
WACM 29	**10**
WACM 30	**11**
WACM 31	**10**
WACM 32	**10**
WACM 33	**9**
WACM 34	**9**
WACM 35	**8**
WACM 36	**10**
WACM 37	**11**
WACM 38	**10**
WACM 39	**10**
WACM 40	**9**
WACM 41	**9**
WACM 42	**3**
WACM 43	**4**
WACM 44	**8**
WACM 45	**7**
WACM 46	**7**

WACM 47	**6**
WACM 48	**6**
WACM 49	**10**
WACM 50	**11**
WACM 51	**12**
WACM 52	**11**
WACM 53	**11**
WACM 54	**10**
WACM 55	**10**
WACM 56	**10**
WACM 57	**11**
WACM 58	**12**
WACM 59	**11**
WACM 60	**11**
WACM 61	**10**
WACM 62	**10**
WACM 63	**3**
WACM 64	**4**
WACM 65	**8**
WACM 66	**7**
WACM 67	**7**
WACM 68	**6**
WACM 69	**6**
WACM 70	**10**
WACM 71	**11**

WACM 72	**12**
WACM 73	**11**
WACM 74	**11**
WACM 75	**10**
WACM 76	**10**
WACM 77	**10**
WACM 78	**11**
WACM 79	**12**
WACM 80	**11**
WACM 81	**11**
WACM 82	**10**
WACM 83	**10**

Stage 2c – Workgroup Vote - Which option is the best?

The Workgroup did not come to a majority consensus on which option was best. 4 members agreed that WACM72 was the best option.

Workgroup Member	Company	BEST Option?	Which objective(s) does the change better facilitate? (if baseline not applicable)
Joseph Dunn/Chris Coates	**Scottish Power Renewables**	**WACM 74**	**(b), (d)**
Alan Currie	**Ventient Energy**	**WACM72**	
Jon Wisdom	**National Grid ESO**	**Original**	**(a), (c), (d)**
Grace March	**Sembcorp UK**	**WACM79**	**(a), (c) and (d)**
Paul Youngman	**Drax**	**WACM73**	**(a) (b) and (d)**
Andy Rimmer	**ENGIE**	**WACM 9**	**(a), (d), (e)**
Paul Jones	**Uniper**	**WACM9**	**(a) and (d)**

John Tindal	**Keadby Generation Ltd**	**WACM79**	**(a), (b), (c), (d)**
Dennis Gowland	**Neven Point Wind (for EMEC)**	**WACM81**	**(a), (d)**
Robert Longden	**Enenco**	**WACM8**	**(a) and (d)**
Garth Graham	**SSE Plc**	**WACM72**	**(a), (b), (c), (d)**
Simon Vicary	**EDF Energy Customers Limited**	**WACM83**	**(a) and (e)**
Bill Reed	**RWE Supply and Trading**	**WACM72**	**(a), (d)**
Dan Hickman	**Npower**	**WACM2**	**(a), (d)**
John Harmer	**Waters Wye Assoc.**	**WACM72**	**(d)**

7 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 generation and supply of electricity and (so far as is consistent therewith) facilitates competition in the sale, distribution and purchase of electricity;	Positive – The Authority have 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).	

8 CMP317 and CMP327 Implementation

These CMPs must be implemented so that it takes practical effect, in terms of TNUoS 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.

During the development of the Workgroup, several options for phased implementations were put forwards as alternatives, namely phasing over 2 and 3 years. These are discussed in further detail in 4 of this report.

9 CMP317 and CMP327 Legal Text

Legal text can be found at Annex 2 of this report.

10 CMP317 and CMP327 Code Administrator Consultation Response Summary

The Code Administrator Consultation ran from 29 June 2020 to 5pm on 20 July 2020 with 16 responses received. No issues with the legal text were identified.

Please see below for themes and quotes from the responses for each question.

Question 1: Do you believe that the CMP317/327 Original solution, or any WACMs better facilitate the Applicable CUSC Objectives?

There were a variety of different preferences indicated by respondents. Please see below table.

Respondent	Preference
ESB	No Preference indicated
RES	WACM 72
Engie	WACM 9
EDF	WACM 83
Citizens Advice	Original and WACM 7
Fred Olsen	WACM 72
Centrica	Original
ESO	Original and WACMs with no CAP on generator charges
Statkraft	No Preference indicated
Orsted	WACM 30 WACM 51 WACM 72
Uniper	No Preference indicated
Banks	Status Quo, WACM72 least worst
Zenobe	WACMs with a Target of €0
Ventient	WACMs that target €0-1.25

Drax	WACM73
Keadby Generation	WACM79
Intergen	WACM9

Responses that indicated a preference for the Original:

"We believe that the definition that facilitates compliance with regulation 838/2010 is to exclude "All Local Circuits and Substations". This simple definition most closely matches the need to exclude all "charges paid by producers for physical assets required for connection to the system or the upgrade of the connection", and therefore better facilitates objective (c) by properly taking account of developments in the licensee's business. This definition is also the most future proof, therefore better facilitating objective (e). However, even this definition will need to be kept under review to ensure the correct application of the exclusion is maintained over time". **Centrica**

"Citizens advice believe that defining assets for connection as all local circuits and substations (option 1) or as generator only spurs (option 2) would both result in more cost reflective charges and facilitate competition in generation by removing a market distortion between distributed generation and transmission connected generation". **Citizens Advice**

"Ofgem's Direction letter to the ESO was clear that the solution should only include a limit on generator charges where there was to be a breach of the Limiting Regulation. We consider that that means that the Original solution and WACM's that propose no cap on generator charges (namely WACM1, 7, 8, 14, 15, 21, 22, 28, 29, 35, 36, 42, 43, 49, 50, 56, 57, 63, 64, 70, 71, 77, 78) fit best with Ofgem's direction and allow relevant objective (c) to be met best". **ESO**

Responses that stated a preference for WACM9:

"All of the alternatives are better than the Original. WACM 9 is the best option". **Engie**

"Targeting a low range (between €0 and €0.5/MWh) promotes consistency with most other Member States and so would place GB generators in a more appropriate competitive position with other European generators (paying between €nil and €0.5/MWh) as well as promoting a level playing field for cross border trade". **Intergen**

Responses that indicated some preference for WACM72:

"We think that WACM 72 would best meet the Applicable CUSC Objectives because it would best achieve Applicable CUSC Objective a) with a relative neutral effect on achievement of the other Applicable CUSC Objectives. WACM 72 would introduce stability and transparency that would restore investor confidence whilst also doing most to level the playing field with generator competitors in Europe" **RES**

"However, it has been noted, in the WG and elsewhere, that a target average of 0 can better facilitate competition in respect of European generation (any target above 0.5 £/MWh being a disbenefit to competition), and will provide symmetry with the methodology as applied to demand. We support this view. We have not seen evidence nor a compelling argument to justify allowing the very upper limit of the Regulation to

become the de facto target. Least likelihood of any adjustment (i.e. effective residual) is needed, and no error margin is needed, with a target of". **Fred Olsen**

"For example, WACMs 30, 51, 72 which define assets required for connection as 'Generator Only Spurs', better encapsulate the most accurate interpretation and compliance to EU Regulation 838/2010, and the Electricity Regulation in general. They comply best with the connection exclusion clause under the Limiting Regulation, which states the removal of "charges paid by producers for physical assets required for connection to the system or the upgrade of the connection" from average annual transmission charges paid by producers. This is attributed to the fact that these WACMs further capture that Connection Charges under the Regulation must take into account local charges for Generator Spurs, which is consistent with the findings of the Competition and Markets Authority (CMA)". **Orsted**

Response which supported WACM73:

"We support WACM73 which facilitates applicable objectives D, A and B and we believe fulfils the overall objective of this CUSC modification to ensure compliance with EU legislation. This includes the electricity directive and recast thereof (2019/944) and the limiting regulation EU838/20102. This regulation
defines the lawful range of average generation charges that can be applied to GB generators (€0 - 2.50/MWh)". **Drax**

Response which Supported WACM79

"The alternatives which overall <u>best</u> facilitate the applicable CUSC Objectives are WACM72 and WACM79 because these are would be legally compliant and include the best combination of features. Out of these, WACM79 may be the better of these two". **Keadby Generation**

Response which supported WACM83:

"*In our view the CMP317/327 Original and alternatives that propose an 'assets required for connection' approach that incorrectly excludes both shared and pre-existing local assets from the Limiting Regulation compliance calculation are not compliant with the Limiting Regulation".*

"The Limiting Regulation specifies a range of €0/MWh to €2.50MWh and Ofgem have directed the removal of the Transmission Generation Residual, whilst allowing an adjustment to remain compliant with the Limiting Regulation. This alternative solution proposes that the revenue from generation that falls into the allowed range be set at €1.25/MWh. This reduces the negative adjustment required, and so the distortion identified by Ofgem in the TCR, whilst remaining compliant and reducing material swings to generation charges, especially given that charges are likely to change in 2023 with the Reform of Access and Forward Looking Charges SCR". ***EDF***

Response which supported WACMs with a target of €0:

"€0/MWh would lead to less ex-post and ex-ante adjustments in the future. €0/MWh included would help generators to forecast charges, increasing investment and

deployment of storage and renewable generation. €0/MWh would achieve comparability with embedded generation.

€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
In terms of cross border trade, targeting €0/MWh would level the playing field in terms of comparability with other Member State markets". **Zenobe**

Response which supported WACMs with a target of €0-1.25:

"WACMs that target €0-1.25 in line with many European countries facilitates more effective competition in the generation and sale of electricity within the GB market and cross border trade". **Ventient**

Response that stated support for the Status Quo:

"We do not believe that the Original solution better facilitates the Applicable CUSC Objectives.

We believe that virtually all of the WACMs provide a better solution than the Original proposed solution.

Of the WACMs we believe that WACM 72 is the least worst option. It appears to consider the wider impacts of these proposals in a more thorough fashion than the simplistic Original solution.

We would stress that the status quo is our preferred option". **Banks**

Responses that indicated no preference:

"Some of the options for CMP317/327 better meet the applicable objectives. We do not support a definition of connection assets which is wider than Generator Only Spurs. A connection by definition should be specific to a generator not shared by a number of different users. Using a GOS definition would also be consistent with the approach adopted so far for offshore assets. Indeed, we believe that up to this point the reason that GOS have formed the basis of the definition of connection assets is because they so logically meet the requirements of this. Extending this definition to wider local assets is more of a stretch to rationalise. Local charges were originally defined in order that specific security factors could be used for certain parts of the network, not as a proxy for connection assets. We can understand why the ESO would prefer to use this as the definition, as it makes the arrangements more straightforward to administer. However, we believe that options based around a definition of all local charges as connection assets goes too far and fails to meet the requirements of Regulation EU 838/2010.

All of the options which either target a point on the range of €2.5 to €0, or have no target but ensure that the charges are within the range, would be consistent with Regulation EU 838/2010. However, the option that does not set a target appears to in practice target the upper end of the range. This means that TNUoS paying generators will experience a charge increase which is not necessary to meet the regulation. This would work against competition in the wholesale market. We believe an option should be chosen which *targets closer to zero. This would bring average charging in GB in line with that for most countries in the rest of Europe better promoting cross border competition.*

Therefore, we do not support options which either use all local charges as the definition for connection charges or do not set a target in the range, or do both". **Uniper**

"Interpretations that are have a narrow definition 'system' or excessively wide definition of 'physical assets required for connection' will similarly result in a barrier to effective competition, placing UK generation at a detriment compared to generators in other EU countries. A steep increase in £/kW/annum charges will also put generators who cannot access the Capacity Market, or who are already in long term Capacity Market contracts, at a disadvantage compared to generators that can pass the additional cost on via higher Capacity Market bids. Consequently, WACMs which target or result in a range of 0–0.5€/MWh, do not exclude all local circuit charges, and include the congestion management constraint costs in the total transmission cost calculation better facilitate this objective". **Statkraft**

"We believe that NG ESO and GB in general are compliant with all relevant EU regulations, in particular regulation EU 838/2010."
"None of the modifications better facilitate this objective. In fact, they may have an adverse effect on administration of CUSC as they introduce additional complexities with charging methodologies and compliance monitoring, both ex-ante and ex-post." **ESB**

Q2: Do you support the proposed implementation approach?

Responses that supported the implementation approach:

"Only 2021 implementation in full is consistent with the TCR decision and market participant expectations. As set out above, Ofgem has clearly signalled its intent to remove the negative TGR for a number of years and expressly ruled out transitional arrangements in its minded-to decision for the TCR". **Centrica**

"We consider that implementation in April 2021 is necessary to ensure the ESO's compliance with the Limiting Regulation and to meet the terms as outlined by Ofgem in their TCR Direction." **ESO**

"Citizens advice supports the planned implementation approach of implementation from April 2021. This change has been signalled for a number of years and has been visible since the Authority rejected CMP261. This modification is needed to avoid consumers paying more than their fair share of TNUoS. We would not support any changes that phase in the solution which will mean that consumers continue to pay more in TNUoS past April 2021. Any phase in will also extend the market distortion between embedded distribution and transmission connected generation". **Citizens Advice**

Responses that supported a phased approach:

"If the solution results in a significant £/kW/annum increase to generators, we believe a delayed and phased implementation of 2/3 years would be required to allow at least for the T-1 capacity market bids to adjust". **Statkraft**

"Clause 9.2.6 of the consultation notes on phasing - it may be appropriate but "would not be necessary for all alternatives and would be most appropriate where the expected increase in costs to Generators as a result of the modification proposal was considered material enough to require such phasing.". We agree with this commentary". **Fred Olsen**

"TNUoS charges to the generation community can be significant, for this reason we firmly agree that a phased approach over 2-3 year would be preferable". **Ventient**

"TCR changes of TNUoS and DUoS have been postponed and will be implemented in 2022. TGR implementation date should be compliant with the notice to generators and in line with TCR implementation to avoid distortions". **Zenobe**

Responses that did not support the implementation approach

"No. Ofgem provided industry with a range of possible implementation dates and therefore it was impossible to reflect this uncertainty within commercial arrangements, specifically Capacity Market Auction bids. The proposed implementation date of 1st April 2021 was given in Ofgem's November 2019 TCR Decision. This notice was too late for generators that had already been successful in the Capacity Market auction for the 2021/22 delivery year. We believe that an implementation date of 1st April 2022 is more appropriate, as this would better align with the auctions for the 2022/23 taking place after the TCR decision was published. A delay to April 2022 is also more likely to align with the implementation of further BSUoS reform following conclusion of the second Task Force, which is expected to align charges between Transmission-connected and Distribution-connected generation". **EDF**

"We do not support the proposed implementation. We believe that the timescales are too short and that the wider industry is still largely ignorant of the potential impacts. The proposal for this to be in place by April 2021 seems needlessly swift and will lead to much disquiet in the investment community. Additionally, this appears to ignore the departure from the European Union at the end of the year. Considering the €2.50 cap is a fundamental part of these considerations it feels foolhardy to press on with changes ahead of clarity regarding our future trading arrangements with Europe". **Banks**

"While we do not object to the removal of TGR as it is directed under an SCR, we are concerned that CMP317 part of the modification has considered a broad range of issues that should not be decided upon in short and limited SCR timelines. Instead, the range of issues considered by the WG and specific elements of proposals put forward should be given due consideration with regards to legal, regulatory and policy compliance. More importantly, we believe changes proposed by the original and all of the WACMs have a material impact on all industry stakeholders and should have given sufficient time."
" If changes are implemented in April 2021 they will coincide with a potential recovery of higher BSUoS costs which generators have been exposed to due to Covid-19. Overall, a significant increase in both charges that may occur due to implementation of several cost deferral changes, CMP 345 and potentially CMP 317/217 will have a significant simultaneous impact on generator costs which will translate into prices for end consumers." **ESB**

Q3: Further Comments

"Despite the modular approach taken, we do not think any single WACM represents our views, and in fact there are a range of outcomes that we would support:
i) Targeting in the range of €0–0.5/MWh
ii) Inclusion of Congestion Charges in total transmission charge calculation in line with the EU regulation.
iii) GOS methodology, failing that a solution that doesn't exclude transmission charges for parts of the MITS as defined by the SQSS.
iv) An ex-post adjustment if charges fall outside the a targeted or EU compliance range. We do not believe any error margin is necessary unless the chosen solution poses a risk of breaching the compliance cap or floor.
v) We believe in order to achieve compliance with EU regulation No 838/2010, the overhead portion of any local circuit charging should not be excluded from the cap calculation because it cannot reasonably be said to be related to the physical assets required for connection". **Statkraft**

"Ofgem have stipulated through the TCR decision that the TGR be reduced to zero, removing residual charges from generators making "residual charges simpler and more transparent". The ESO original proposed solution for CMP 317-327 has no target value within the €0-2.5 range and highlights that an "Adjustment" factor (residual by another name) will be utilised when the €2.5 cap is breached, currently forecast charging years 22/23 onwards. This solution must be untenable by Ofgem given it does not remove a residual correction factor whilst adhering to the €2.5 MWh European price cap as per the TCR directive". **Ventient**

"We cannot support

i) …All Local Circuit…:

[this..] uses a very broad interpretation of excluded charges, which includes equipment shared with many other users, including huge numbers of demand customers. We think this stretches the possible interpretation of 'physical assets required for connection' beyond reasonableness, against the principle intent of the Limiting Regulation. This is a challenge for, and we believe a failure to comply with, objective (d), compliance with relevant binding decisions". **Fred Olsen**

"It would be ill-advised to make fundamental changes to the Transmission Charging methodology with relation to the range, that go beyond what is required for compliance, given the uncertainty surrounding how long the €0 – 2.50/MWh range will endure". **Centrica**

"The TCR SCR and FLAC SCR has the potential to deliver material changes in a number of areas of use of system charges over a period of several years. These changes could give rise to a high level of volatility, potentially giving rise to wildly varying trends in final use of system charges. We strongly encourage Ofgem to consider the likely cumulative effect of the pending change scenarios and to take account of the possible adverse impacts upon effective competition in electricity generation". **RES**

“In our view these modifications will deliver a sub-optimal solution, and may not be necessary for compliance with the EU limiting regulation, if the work planned under the review of access and forward-looking charges (RAFLC) to review the reference node is not taken forward to the same timeframe”. **EDF**

“The Authority should assess the alternatives in the context of the Access and Forward Looking Charges SCR regarding potential changes to the TNUoS Reference Node. Changes to the Reference Node could provide a complimentary, or alternative method for facilitating compliance with Regulation 838/2010”. **Keady Generation**

“As outlined above, we believe that ‘transmission charges’ referred to in the EU Reg 838/2010 represent a much broader category of network access charges. We do support the view of some WG members that congestion charges should be included in the calculation of this network access tariff which is subject to the Limiting Regulation.” **ESB**

11 Annex 1: CMP317 and CMP327 Terms of Reference

The Annex can be found here, under the Draft Final Modification Report Tab.

12 Annex 2: Legal Text

The Annex can be found here, under the Draft Final Modification Report Tab.

13 Annex 3: CMP317 and CMP327 Business Rules

The Annex can be found here, under the Draft Final Modification Report Tab.

14 Annex 4: ESO Diagrams

The Annex can be found here, under the Draft Final Modification Report Tab.

15 Annex 5: Analysis - RWE Supply and Trading

The Annex can be found here, under the Draft Final Modification Report Tab.

16 Annex 6: Analysis – Waters Wye Associates

The Annex can be found here, under the Draft Final Modification Report Tab.

17 Annex 7: Analysis - TGR to Zero – Impacts

The Annex can be found here, under the Draft Final Modification Report Tab.

18 Annex 8 - SSE Definitions Analysis

The Annex can be found here, under the Draft Final Modification Report Tab.

19 Annex 9 – National Grid ESO MITS Map

The Annex can be found here, under the Draft Final Modification Report Tab.

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.

20 Annex 10 – Workgroup Consultation Responses

The Annex can be found here, under the Draft Final Modification Report Tab.

21 Annex 11 – Alternatives Raised and Workgroup Alternative Vote

The Annex can be found here, under the Draft Final Modification Report Tab.

22 Annex 12 – Workgroup Alternative CUSC Modification Forms

The Annex can be found here, under the Draft Final Modification Report Tab.

23 Annex 13 – Diagram – Waters Wye Associates

The Annex can be found here, under the Draft Final Modification Report Tab.

24 Annex 14 – Paper – RWE Supply and Trading – Congestion Costs and Compliance Issues

The Annex can be found here, under the Draft Final Modification Report Tab.

25 Annex 15 – Paper – RWE Supply and Trading – Implementation Issues

The Annex can be found here, under the Draft Final Modification Report Tab.

26 Annex 16 – Workgroup Voting Statements

The Annex can be found here, under the Draft Final Modification Report Tab.

27 Annex 17 – Ofgem Email on Reference Node

The Annex can be found here, under the Draft Final Modification Report Tab.

28 Annex 18 – SSE Generation – Examples of use of NETS

The Annex can be found here, under the Draft Final Modification Report Tab.

29 Annex 19 – Code Administrator Consultation Responses

The Annex can be found here, under the Draft Final Modification Report Tab.