

Workgroup Consultation

CMP330:

Allowing new
Transmission Connected
parties to build
Connection Assets
greater than 2km in
length

Overview:

To amend the definition of Connection Assets in Section 14 of the CUSC to allow cable and overhead line lengths over 2km to be contestable where agreed between the Transmission Owner and the User.

Modification process & timetable

Proposal Form

1 28 November 2019

Workgroup Consultation

26 January 2021 - 16 February 2021

Workgroup Report

3 26 March 2021

2

4

5

Code Administrator Consultation

06 April 2021 – 27 April 2021

Draft Modification Report 20 May 2021

Final Modification Report

6 10 June 2021

Implementation

01 April 2022

Have 5 minutes? Read our Executive summary

Have 20 minutes? Read the full Workgroup Consultation

Have 30 minutes? Read the full Workgroup Consultation and Annexes.

Status summary: The Workgroup are seeking your views on the work completed to date to form the final solution(s) to the issue raised.

This modification is expected to have a: Medium impact on New Transmission connected sites; Transmission Owners.

Governance route	This modification will be assessed by a Workgroup and Ofgem will make the decision on whether it should be implemented.	
Who can I talk to about the change?	Proposer: Andy Pace, Energy Potential	Code Administrator Chair: Ren Walker
	Andy.pace@energy-potential.com	Lurrentia.walker@nationalgrideso.com
	Phone: 07881 840 007	Phone: 07976 940 855
How do I respond?	Send your response proforma to cusc.team@nationalgrideso.com by 5pm on 16 February 2021.	



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Executive summary

To amend the definition of Connection Assets in Section 14 of the CUSC to allow cable and overhead line lengths over 2km to be contestable where agreed between the Transmission Owner and the User.

What is the issue?

The definition of Connection Assets in the CUSC limits the length of cable and overhead lines to 2km or less. This restriction places an artificial constraint on connectees when the length of the Connection Assets required is in excess of 2km as the Transmission Owner would then need to undertake the works and potentially forms a barrier for new connectees.

What is the solution and when will it come into effect?

Proposer's solution: It is proposed to remove the 2km restriction where requested by the connectee and approved by the Transmission owner to allow for more connectees to benefit from contestability on the Connection Assets required to connect their site.

Implementation date: 1 April 2022.

What is the impact if this change is made?

This Modification will have an impact on New Transmission connected sites and Transmission Owners.

Interactions

The workgroup discussed interactions with other codes and changes to the STC were identified. These would need to be implemented in September 2021 (to align with CUSC charging changes from April 2022) to allow Transmission Owner's to account for this in their charging statement and processes.

The Workgroup also discussed the potential impacts this modification could have on the SQSS. The Workgroup concluded that as the TO completes the connection design there will be no impacts to the SQSS. This is irrespective of who builds the connection (ie the Transmission Owner or the User). The Workgroup also highlighted that this modification has the potential to impact Ofgem's Access & Forward-Looking Charges Significant Code Review (AFLC SCR).



What is the issue?

The definition of Connection Assets in the CUSC limits the length of cable and overhead lines to 2km or less. This defined commercial charging boundary places a constraint on connectees when the length of the Connection Assets required is in excess of 2km as the Transmission Owner would then need to undertake the works as Infrastructure Assets. The current definition means that connectees are not able to procure cable and overhead lines >2km, via a third-party contracting partner, who may be able to provide the Connection Assets at a potentially lower cost and faster timeline than the Transmission Owner.

A further issue with the 2km restriction is that it is not applied consistently across Great Britain. This is because the restriction applies at all transmission voltages which includes 132kV in Scotland but 132kV is not a transmission voltage in England and Wales, although. this is however a function of primary legislation rather than a defect on CUSC arrangements.

Why change?

This change modification proposes to amend the current definition of Connection Assets to enable greater competition in contestable connections which may give rise to lower cost and faster connections for connectees. The change will require agreement from both the Transmission Owner, NGESO and User and therefore will only apply to connections where the user requests and all parties agree to not apply the 2km limit.

The limitation of allowing contestability for only 2km of cable and overhead lines is limiting competition by preventing new connectees from procuring and constructing these assets and allow more flexibility in the construction of these assets. Contestability is a common principle in the provision of new networks to enable new connections and is used widely at transmission and distribution. It should be noted that Independent Connection Parties frequently construct 132kV network in England and Wales (where this voltage level is defined as distribution).

The Workgroup discussed the applicability of this proposal to 132kV assets as these assets are classed as Distribution assets in England and Wales whilst they are classed as Transmission assets in Scotland. To ensure full consistency of treatment across Great Britain, a corresponding DCUSA change would be needed as this CUSC proposal will only affect Transmission assets. The Workgroup agreed that an alternative that treats the connection boundary for 132kV transmission assets differently from other transmission voltage assets would be within scope of CMP330 and could be judged on its own merits. As an example, the 2km restriction could stay in place for 275kV and 400kV transmission assets but could be revised to a different number for 132kV transmission assets.



What is the solution?

Proposer's solution

The proposed solution is to enable connectees to procure the construction of connection assets in excess of 2km. The proposal is to remove the 2km limit altogether. Once the connection asset is complete, the asset will be adopted by the incumbent Transmission Owner (TO) and an adoption payment made to the connectee in respect of this asset. The connectee will have the option to make a capital contribution towards the asset cost as is currently the case under the CUSC.

Workgroup considerations

The Workgroup convened 4 times to discuss the perceived issue, detail the scope of the proposed defect, devise potential solutions and assess the proposal in terms of the Applicable Code Objectives.

Where is the 2km limitation listed in the CUSC?

In CUSC section 14.2.6 – there is a limitation of a 2km length of transmission cable which the modification is looking to alter.

The workgroup queried when the limit was introduced to the CUSC but as of this point in time been unable to identify the answer to that question. The workgroup determined that the 2km restriction was introduced as part of BETTA, but this originated from a pre-existing England and Wales requirement; no further information was available to determine the origins of this England and Wales requirement.

Whilst the historic reason why the exact 2km value was chosen may be unclear, and could equally have been some alternate value, it is clear from available published documents¹ that the intent was for a common distance limitation to apply to all Users with single user circuits, to ensure a consistent connection charging boundary and thereby avoid discrimination through excessive exposure to connection charges for long radial circuits and avoid variability of exposure from User to User.

What are connection assets

Connection assets are assets installed for and only typically capable of use by an Individual user. These assets may become sharable at a later date and arrangements in the CUSC take account of this scenario, but this does not happen often. All sharable assets are classed as Infrastructure assets and the costs associated with them are recovered through TNUoS charges.

 ¹ https://www.ofgem.gov.uk/ofgem-publications/54843/9096-27504.pdf



Proposer's preferred solution

The Proposer's preferred solution is to leverage existing processes where possible but include an option for connections assets over 2km to be built (which in turn could be built by Users) with the agreement of the User, Transmission owners and NGESO. As an example, if the first User were to build a 10km overhead line, the TO would then purchase the overhead line from the User for the asset value and apply connection asset charges on the newly bought asset in the same manner as if the TO had built the asset. Anything post purchase would be treated as per normal, separate processes, for example the separate transacting of capital contributions through the CUSC BCA against adopted contestable connection assets.

The Workgroup discussed what the maximum length of the Transmission link could be. It was agreed that the length could be unlimited but with the approval of the User, Transmission Owners and NGESO.

Workgroup Consultation question: The Workgroup is considering what the length beyond 2km might be appropriate and would welcome views as to whether it should be prescribed as

- i) as a set length; or
- ii) to the nearest economic point of connection to the NETS; or
- iii) be unlimited; or
- iv) another option (if so please explain).

Which of these four options do you believe is appropriate and in respect of option 1 do you have a view as to what the set length should be?

Workgroup consultation question: Should there be a clearer limit on the length of a Connection Asset construction?

Workgroup consultation question: Should the 2km cap be removed or a new cap be put in place. Please justify a new cap and to what level?

Workgroup consultation question: Should the commercial charging boundary limitation of 2km vary from one connection to another dependent on basis of construction choices of a User?

Workgroup consultation question: Should approval be required from the Transmission Owner and NGESO for connections in excess of 2km? Please provide rationale as to on what basis the approval would be denied?

The workgroup spoke about the complexities of defining the value of asset. There was a discussion that the value assigned to the assets should be the TO's defined 'book' purchase costs so any additional costs incurred (e.g. speed up construction of the asset) should be incurred by the building party and excluded from the asset value. Any



additional costs required for it to operate in the manner intended (e.g. snagging costs), should be agreed between the TO and User.

The Workgroup noted that with respect to the additional costs that maybe incurred from an individual User own build, that the impact on other Users would need to be reflected in the solution. Using a simple, illustrative, example, if with such an option the TO says it could build it in, say, 3 years' time, was £1M but the User wished to build it themselves in 18 months but this were to result in an additional cost, to the TO, of £100K (so £1.1M overall) then in this example the extra £100K would either fall on the TO and / or the individual User concerned and not on other Users. This, it was noted, would be the quid pro quo whereby any savings, if they were to arise, from the User own build would be received by the TO and / or the individual User and not other Users.

Workgroup consultation question: Should additional costs incurred over and above the cost the TO would have incurred be fully paid for by the User concerned? Are there any circumstances where the TO should fund some/all of these costs?

The preferred solution of the proposer and workgroup after having discussed other options is the Transmission Owner adopting the asset with an associated asset payment; other options were considered and discounted by the workgroup are described later in this consultation

Implementation and Transitional Arrangements

The Workgroup noted that if CMP330 is approved by the Authority, the implementation would be the following charging year (which was anticipated to be the one starting 1st April 2022). Whilst the proposal doesn't directly affect the charging methodologies (I.e. how connection asset or TNUoS Local Circuit charges are calculated), it does affect which methodology is applied to those assets. As the choice between User or TO built connection assets is the choice of the User, it does mean the User can influence which methodology is applied to those assets.

The Workgroup also noted that Parties would need to complete a Modification Application and opt in for this arrangement, subject to prior discussion and agreement with the ESO and Transmission Owner.

Consideration of the proposer's solution

Connection Design

Concerns were raised in the workgroup over the potential scalability or size of a user-built asset and the potential for Users to ignore the needs of future connectees when building connection assets, they would use. Although it is currently possible for connection assets under 2km in length to become shared (and reclassified as infrastructure assets), under the current arrangements it was stated that there would be very few circumstances where this would occur. The workgroup agreed that as the length of user-built connection assets increased, this would become more likely.



It was clarified that ultimately it is the TO who designs the network (and the User builds to the TO's design), and therefore the TO can prescribe what assets are acceptable to that connection design, which would include ratings of cables etc. This concern would be mitigated further if the TOs were to produce an approved item/vendor list or similar, but it would be extra level of detail on top of what the current process has. This could then lead to the need for an asset contribution from the TO should the connection design require an asset to be of a greater capacity (over-specified) than required by the individual user.

Contestability

The workgroup discussed and gave consideration on the potential overlap between competition in transmission for infrastructure versus contestable construction of sole use assets.

Existing practice for transmission is that contestable works are limited to connection assets and so limited to 2km in length by the current definition of connection assets as a commercial charging boundary demarcation from infrastructure assets fund through TNUoS. Connection assets and infrastructure assets also have different charging methodologies and so the asset classification does impact on how the asset is ultimately paid for and by whom.

Because the proposal is introducing the construction of longer connection assets, with a higher probability of them becoming shared in future, the proposal has the possibility of impacting upon competition in transmission. Therefore, there should there be a clear boundary on contestable construction (i.e. being connection assets at the point of construction), so that it doesn't conflict with competition in transmission.

What happens to later connections and Capital Contributions?

The workgroup discussed what would happen should a new second User connection need to use the connection assets built by the original User. The NGESO and TO representatives stated it was possible to reclassify a connection asset to infrastructure and update contracts accordingly; however, the exact process would depend on whether the connection assets had been capitally contributed by the original User or not. If there was no capital contribution, then it is a simple contractual and administrative change however if there was a capital contribution there would need to be additional financial reconciliations and transactions.

For context of the report Capital contributions are lump sum payments that can reduce the liability for portions of the charge either in full or partially. These contributions can be made either during construction, at the point where the assets are commissioned, or at a point of choosing during the lifetime of the connection agreement. An analogy is in respect to a mortgage where a lump sum is paid to reduce monthly payments for the same duration, reduce the duration of the mortgage or a combination of the two.

The workgroup suggested that an appropriate solution could be where a Transmission Connection Asset had been capitally contributed, and a second Party wished to connect to those Assets;



- 1. the assets should be re-classified as infrastructure assets.
- 2. arrangements similar to the 'second comer rule' used at distribution could be introduced. However, the commonly referred to 'second comer rule' is set out in primary legislation, the "Electricity Connection Charges Regulations"². The Workgroup discussed whether or not the introduction of a similar framework for transmission connection charges would require similar primary legislation to be implemented.

Workgroup Consultation Question: Where a Transmission Connection Asset has been capitally contributed and a second Party wishes to connect to those Assets, it is proposed to re-classify those assets as infrastructure assets. It is proposed to implement arrangements similar to the second comer rule for the capitally contributed element. Do you agree with this suggestion?

Workgroup Consultation Question: Do you foresee any legal or regulatory barriers of introducing a second comer rule equivalent into the CUSC for this purpose?

So, using an example where the original User has built 30km of connection assets and a second user wishes to connect at the 10km point, the first 10km would remain for sole use the original User and the remaining 20km that would then become infrastructure assets and recovered via the TNUoS methodology.

	Pre 2 nd connection	Post 2 nd connection
Connection Assets (Original User)	30km	10km
Connection Assets (Second User)	0km	0km
Infrastructure Assets	0km	20km
Total	30km	30km

There would be no payment made by the 2nd User to the 1st User, instead the TO would refund a proportion of the capital contribution back to the first User and both Users are then free to choose if/what capital contributions to make (if any).

For calculating the value to be returned to the first User by the Transmission Owner, it would depend on a number of factors such as;

- The proportion of the total distance that becomes shared. In the example above, the refund would only apply to the 20km that are reclassified, not the full 30km length
- Amount of time between the 1st and 2nd connections. No refunds would be given back to the first User if the 2nd connection is 10 years later or more.
- Years of usage between 1st and 2nd connections. The value refunded will exclude the number of years where the assets have been used.

² https://www.legislation.gov.uk/uksi/2017/106/contents/made



- Connection asset and one-off works. Refunds will only be given against the connection asset value and not One-Off Works values
- Value refunded is based on the value capitally contributed, not the value of the asset. Connections Assets values are index linked and so over time, the value of the asset and amount paid will diverge.

Transmission Owner adoption process

The method and contracts of how an asset was transferred from a User to a Transmission Owner was discussed. Only one transmission owner had experience with this and shared details of a how this has worked previously. The workgroup concluded that this is beyond the scope of CUSC but encouraged the TOs to implement a consistent process and commercial arrangements to the adoption process. This was to be developed by the subsequent STC modification.

Other aspects considered by the Workgroup

The aspect below were discussed by the workgroup and queried if they were acceptable under the regulatory regime.

Aspect 1 - Adoption with no asset payment

As per the proposer's preferred solution but with the assets given to the Transmission Owner for free. The Workgroup concluded that this option would not work, as the original User would be implicitly netting off capital contributions payable against asset purchase payments received, two processes covered under two different contractual mechanisms, TO adoption contract and ESO BCA. Annex 4 outlines the necessity for gross input and output VAT transactions for adoption payments and capital contribution transactions respectively, and for maintenance charge arrangements based on real non-zero gross asset values inclusive of asset adoption and related TO costs. Although not implementable for the above reasons, zero asset value adoption would not support any 'second comer payments' from the second User to the original User via the TO when connection assets are reclassified.

Aspect 2 – Contracted route

The User is appointed as the Transmission Owner's contractor to build the assets. Further discussions were held regarding the implications this option could have on connection revenues for TO's, as well as maintaining a bespoke approach for each connection could cause uncertainty.

Aspect 3 – Reclassifying the Scottish 132kV Network

The Workgroup flagged this as unrealistic but was included for completeness and consideration. Reclassifying the 132kV network in Scotland as distribution so the 132kV contestability rules are consistent across GB would require a significant amount of regulatory and legal changes to enable this option (e.g. changes to the Electricity Act).

Aspect 4 – User Owned Transmission Circuits

The Workgroup discussed the scope for User owned Transmission Circuits. They concluded that this option wasn't viable because it would result in non-compliance with



EU legislation and the license requirements and so would require a significant amount of regulatory and legal change to make it possible.

Aspect 5 – Utilise OFTO Transfer process

There were considerations in the workgroup that the methods used for Offshore builds could work for this modification and they were discussed along with a 'Connection Roles' presentation (attached as Annex 3) created by a workgroup member. This presentation compared the responsibility during connection (onshore not contested vs offshore) and also the responsibility during connection (onshore not contested vs contested) but the conclusion reached was that this approach would not be practical for a number of reasons;

- 1. It would require Ofgem or another party to coordinate an auction or procurement event to finder a suitable bidder for the user-built assets.
- 2. Likely to be a low level of interest from parties other than the incumbent TO due to the small value of the assets (compared to new OFTO networks) in remote parts of GB whilst having requirements to operate/maintain these assets.
- 3. The CATO (Competitively Appointed TO) arrangements are still under development.

Draft legal text

Legal text will be drafted after the Workgroup Consultation has been completed.

What is the impact of this change?

Proposer's assessment against Code Objectives

CUSC Charging objectives;

Impact of the modification on the Applicable Objectives:	
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 removal of the 2km limit creates flexibility for new connectees who can potentially connect more quickly and at lower cost than would otherwise be the case. This therefore facilitates competition in the generation and supply 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	Positive - The use of system charging methodology will be amended to ensure that those connectees whose



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);	connection assets exceed 2km are charged cost reflectively for those assets, including second comer provisions, where applicable.
(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 extension of contestability proposed under this change modification improves competition in the construction of new connections. This is consistent with the development of transmission licensees' transmission businesses where the number of connections is increasing due to the GB zero carbon target.
(d) Compliance with the Electricity Regulation and any relevant legally binding decision of the European Commission and/or the Agency *; and	None
(e) Promoting efficiency in the implementation and administration of the system charging methodology.	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).	

Standard Workgroup consultation question: Do you believe that CMP330 Original proposal better facilitates the Applicable Objectives?

When will this change take place?

Implementation date

The cost implementation date for CMP330 would be April 2022, but the corresponding STC modification would have to be September 2021.

Date decision required by

A decision is required by January 2022 to implement to the CUSC change. The consequential STC modification would need to be implemented by the end of September 2021.

Implementation approach

No system changes are required as a result of this modification.

Standard Workgroup consultation question: Do you support the implementation approach?



Interactions			
☐Grid Code	□BSC	⊠STC	□SQSS
□European	☐ EBGL Article 18	□Other	⊠Other
Network Codes	T&Cs ³	modifications	

How to respond

Standard Workgroup consultation questions

- Do you believe that CMP330 Original proposal better facilitates the Applicable Objectives?
- 2. Do you support the proposed implementation approach?
- 3. Do you have any other comments?
- 4. Do you wish to raise a Workgroup Consultation Alternative request for the Workgroup to consider?

Specific Workgroup consultation questions

- 5. What, if any role should Ofgem have in this proposed new process?
- 6. Should there be a clearer limit on the length of a Connection Asset construction?
- 7. Can you identify/list scenarios in which this agreement shouldn't be given?
- 8. The Workgroup is considering what the length beyond 2km might be appropriate and would welcome views as to whether it should be prescribed as
- i) as a set length; or
- ii) to the nearest economic point of connection to the NETS; or
- iii) be unlimited; or
- iv) another option (if so please explain).

Which of these four options do you believe is appropriate and in respect of option 1 do you have a view as to what the set length should be?

- 9. Should there be a clearer limit on the length of a Connection Asset construction?
- 10. Should the 2km cap be removed or a new cap be put in place. Please justify a new cap and to what level?
- 11. Should the commercial charging boundary of 2km be a distance that varies from one connection to another dependent on basis of construction choices of a User?
- 12. Should the cap on length of Connection Assets be removed or revised?
- 13. Should approval be required from the Transmission Owner and NGESO for connections in excess of 2km? Please provide rationale as to on what basis the approval would be denied?
- 14. Should additional costs incurred over and above the cost the TO would have incurred be fully paid for by the User concerned? Are there any circumstances where the TO should fund some/all of these costs?

³ If the modification has an impact on Article 18 T&Cs, it will need to follow the process set out in Article 18 of the European Electricity Balancing Guideline (EBGL – EU Regulation 2017/2195) – the main aspect of this is that the modification will need to be consulted on for 1 month in the Code Administrator Consultation phase. N.B. This will also satisfy the requirements of the NCER process.



- 15. Where a Transmission Connection Asset has been capitally contributed and a second Party wishes to connect to those Assets, it is proposed to re-classify those assets as infrastructure assets. It is proposed to implement arrangements similar to the second comer rule for the capitally contributed element. Do you agree with this suggestion?
- 16. Do you foresee any legal or regulatory barriers or introducing a second comer rule equivalent into the CUSC for this purpose?

The Workgroup is seeking the views of CUSC Users and other interested parties in relation to the issues noted in this document and specifically in response to the questions above.

Please send your response to cusc.team@nationalgrideso.com using the response proforma which can be found on the CMP330 modification page.

In accordance with Governance Rules if you wish to raise a Workgroup Consultation Alternative Request please fill in the form which you can find at the above link.

If you wish to submit a confidential response, please note that information provided in response to this consultation will be published on National Grid ESO's website unless the response is clearly marked "Private & Confidential", we will contact you to establish the extent of the confidentiality. A response marked "Private & Confidential" will be disclosed to the Authority in full but, unless agreed otherwise, will not be shared with the CUSC Modifications Panel or the industry and may therefore not influence the debate to the same extent as a non-confidential response. Please note an automatic confidentiality disclaimer generated by your IT System will not in itself, mean that your response is treated as if it had been marked "Private and Confidential".

Acronyms, key terms and reference material

Acronym / key term	Meaning
BETTA	British Electricity Trading and Transmission Arrangements
BSC	Balancing and Settlement Code
CMP	CUSC Modification Proposal
CUSC	Connection and Use of System Code
EBGL	Electricity Balancing Guideline
GAV	Gross Asset Value
NETS	National Electricity Transmission System
SQSS	Security and Quality of Supply Standards
STC	System Operator Transmission Owner Code
STCP	System Operator Transmission Owner Code Procedures
T&Cs	Terms and Conditions
TNUoS	Transmission Network Use of System
ТО	Transmission Operator

Reference material



Published on 26 January 2021 respond by 5pm on 16 February 2021

- Second comer regime
- STCP 14-1 Issue 0010 Data Exchange for Charge Setting
- NGC Original charging proposals https://www.ofgem.gov.uk/ofgem-publications/54843/9096-27504.pdf
- https://www.legislation.gov.uk/uksi/2017/106/contents/made

Annexes

Annex	Information
Annex 1	Proposal form
Annex 2	Terms of reference
Annex 3	Connection Roles' presentation
Annex 4	Contestable asset adoption and capital contribution payments
	presentation
Annex 5	Summary of NGC's proposed GB electricity transmission
	charging methodologies