

Final Modification Report

CMP298

Updating the Statement of Works process to facilitate aggregated assessment of relevant and collectively relevant embedded generation

Overview: The current Statement of Works process can be inefficient and time-consuming where there are concurrent multiple applications. Network Operators have for a number of years trialled and refined a more efficient aggregated assessment (widely known as the “Appendix G” process) of Distributed Generators (DG) that have or may have an impact on the National Electricity Transmission System (NETS). CMP298 seeks to introduce this process into the CUSC, which will sit alongside the current Statement of Works process.

Modification process & timetable



Have 5 minutes? Read our [Executive summary](#)

Have 20 minutes? Read the full Final Modification Report

Have 30 minutes? Read the full Final Modification Report and Annexes.

Status summary: This report has been submitted to the Authority for them to decide whether this change should happen.

Panel Recommendation: The Panel recommended unanimously that all options better facilitated the CUSC Objectives than the current CUSC and there was a strong preference (8 out of 9 votes) for WACM3.

This modification is expected to have a: **Medium impact** on Distribution Network Operators (DNOs), Transmission Owners (TOs), Embedded generators and the ESO

Governance route Standard Governance Route with Workgroup.

Who can I talk to about the change?

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Contents

Contents	2
Executive summary	3
Implementation date:.....	4
What is the issue?	6
What is the solution?	7
Proposer’s solution	7
Workgroup considerations	7
Workgroup Consultation Summary	15
Workgroup Alternatives	17
Legal Text	18
What is the impact of this change?	19
Proposer’s assessment against Code Objectives	20
Workgroup Vote	21
Code Administrator Consultation summary	22
Panel recommendation vote	23
Panel Conclusion	27
When will this change take place?	28
Implementation date:.....	28
Date decision required by	28
Implementation approach	28
Interactions	32
Acronyms, key terms, and reference material	33
Reference material.....	33
Annexes	33

Executive summary

The current Statement of Works process can be inefficient and time-consuming where there are multiple concurrent applications. Network Operators have for a number of years trialled and refined a more efficient aggregated assessment (widely known as the “Appendix G” process) of Distributed Generators (DG) that have or may have an impact on the National Electricity Transmission System (NETS). CMP298 seeks to introduce this process into the CUSC, which will sit alongside the current Statement of Works process.

What is the issue?

Under section 6.5 of the Connection and Use of System Code (CUSC)¹, Distribution Network Operators (DNOs) have an obligation to not connect DG where they determine the DG to be a Relevant Embedded Small² or Relevant Embedded Medium Power Station³ and may have an impact on the NETS.

The definition of Relevant Embedded Small (and Relevant Embedded Medium) Power Station currently refers to individual power stations which may have a significant system effect on the NETS with such significant impact being identified as an expenditure of more than £10,000. This caters for single connections, viewed in isolation. However, aggregated assessment of DG that have or may have an impact on NETS is needed given increasing amounts of embedded generation.

Network Operators have for a number of years trialled and refined a more efficient aggregated assessment (widely known as the “Appendix G” process) of Distributed Generators (DG) that have or may have an impact on the NETS. This process needs to be incorporated within the CUSC.

¹ The CUSC is available to view here - <https://www.nationalgridNGESO.com/codes/connection-and-use-system-code-cusc?code-documents>

² "Relevant Embedded Small Power Station" is an Embedded Small Power Station that the User who owns or operates the Distribution System to which the Embedded Small Power Station intends to connect reasonably believes may have a significant system effect on the National Electricity Transmission System

³ "Relevant Embedded Medium Power Station" is an Embedded Medium Power Station which is an Exempt Power Station, and does not intend to be the subject of a Bilateral Agreement

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

Proposer’s solution:

<p>Update CUSC Section 6.5 and definition of “Relevant” to facilitate assessment of relevant embedded small or medium power stations or ‘collectively relevant’ power stations on an aggregated basis in line with the “trials” that have been undertaken over the past few years and link the definition of “Relevant” to a defined level of MW.</p>	<p>Introducing the high-level process between National Grid ESO and DNOs for Appendix G updates (currently outlined in the BCAs for GSPs involved in the trials undertaken over the past few years.</p>	<p>Update CUSC exhibits currently used for the Statement of Works (and Project Progression) process to facilitate the aggregated application and assessment process to be introduced.</p>	<p>Retain existing Statement of Works & Project Progression process for where single applications are still required; however, make a small change to clarify that multiple projects can be applied for at the same time (i.e. bulk Statement of Works applications.</p>
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Implementation date:

10 working days after Authority Decision. However, there will be a 24 month transition period to allow existing Appendix G contracts to be transferred to the new Transmission Impact Assessment arrangements.

Summary of potential alternative solution(s) and implementation date(s):

Alternative Solution(s)	Details	Implementation Date
WACM1	As per Original but DNO updates to Appendix G are deemed to be accepted unless ESO confirm otherwise rather than ESO Approve/Reject process	As per Original
WACM2	As per Original but to remove the need for a re-work fee to be charged by the ESO to DNOs to confirm requirements of Transmission Impact Assessment are met	As per Original
WACM3	Combination of WACM1 and WACM2	As per Original

What is the impact if this change is made?

This change allows more efficient operation and management of the NETS as there would be more efficient DNO/ESO connection interactions.

CMP298 will provide long term benefits to consumers (by, in the view of the Proposer, allowing more projects to connect and so provide more competition in the generation market). However, an alternative view is that whilst this change speeds up the current process, that does not necessarily equate to more projects connecting.

This change will have a high importance to DNOs and their customers who will get certainty of the Transmission implications earlier and whose connections could be accelerated by the modification.

CMP298 should also ensure consistency in treatment of new connectees across the country where DNOs choose to offer Transmission Impact Assessments (TIAs).

Interactions

Current thinking is that a new System Operator Transmission Owner Code Procedure (STCP) will need to be introduced into the System Operator Transmission Owner Code (STC).

There will also need to be changes to the Connection Site Specification which will need to include the TO – ESO equivalent of the Appendix G and would become a “live” document and therefore updated more frequently.

The Workgroup also highlighted the potential interaction between CMP298 and [GC0117](#). Currently, the Statement of Works and Confirmation of Project Progression processes are only applicable to 'Small' or 'Medium' generators; the proposed Transmission Impact Assessment process will mirror this. One of the options that GC0117 is considering is to reduce the threshold for a 'large' generator to align it across the whole of GB, as it is currently different between the respective Transmission Owner areas. Should the GC0117 option to reduce the threshold for a “Large” Generator be approved, this will mean fewer projects will be able to use the Statement of Works / Confirmation of Project Progression or Transmission Impact Assessment processes compared to today without further CUSC modification changes to create additional products and/or revise existing projects to accommodate the new, lower 'Large' threshold. This is currently not in the scope of CMP298 due to GC0117 still being under development.

The Workgroup also briefly discussed whether or not there was interaction between CMP298 and [CMP376](#), which is seeking to implement the queue management process in to CUSC including introducing a right for the Electricity System Operator (ESO) to terminate contracted projects which are not progressing against agreed milestones. The CMP298 Workgroup do not believe there is any interaction as the queue management process looks at terminating the Transmission or Distribution projects that have not met their agreed milestones rather than the ESO-DNO contractual arrangements.

There is no expected impact on the EBR Article 18 T&Cs.

What is the issue?

Under section 6.5 of the Connection and Use of System Code (CUSC)⁴, Distribution Network Operators (DNOs) have an obligation to not connect DG where they determine the DG to be a Relevant Embedded Small⁵ or Relevant Embedded Medium Power Station⁶ and may have an impact on the NETS.

The definition of Relevant Embedded Small (and Relevant Embedded Medium) Power Station currently refers to individual power stations which may have a significant system effect on the NETS with such significant impact being identified as an expenditure of more than £10,000⁷. This reflects single connections, viewed in isolation. However, aggregated assessment of DG that have or may have an impact on NETS is needed given increasing amounts of embedded generation.

Network Operators have for a number of years trialled and refined a more efficient aggregated assessment (widely known as the "Appendix G" process) of Distributed Generators (DG) that have or may have an impact on the NETS. Aggregated assessment enables the ESO to consider the cumulative effect of multiple embedded power stations which might not, on their own, carry a significant impact to the NETS but when viewed collectively will do so. Therefore, the CUSC needs to be updated to formally allow such an aggregated assessment.

⁴ The CUSC is available to view here - <https://www.nationalgridNGESO.com/codes/connection-and-use-system-code-cusc?code-documents>

⁵ "Relevant Embedded Small Power Station" is an Embedded Small Power Station that the User who owns or operates the Distribution System to which the Embedded Small Power Station intends to connect reasonably believes may have a significant system effect on the National Electricity Transmission System

⁶ "Relevant Embedded Medium Power Station" is an Embedded Medium Power Station which is an Exempt Power Station, and does not intend to be the subject of a Bilateral Agreement

⁷ It is difficult to understand what the impact is and whether or not it relates to an expenditure of more than £10,000 until the study has been completed

What is the solution?

Proposer's solution

Update CUSC Section 6.5 and definition of "Relevant" to facilitate assessment of relevant embedded small or medium power stations or 'collectively relevant' power stations on an aggregated basis in line with the "trials" that have been undertaken over the past few years and link the definition of "Relevant" to a defined level of MW	Introducing the high-level process between National Grid ESO and DNOs for Appendix G updates (currently outlined in the BCAs for GSPs involved in the trials undertaken over the past few years	Update CUSC exhibits currently used for the Statement of Works (and Project Progression) process to facilitate the aggregated application and assessment process to be introduced.	Retain existing Statement of Works & Project Progression process for where single applications are still required; however, make a small change to clarify that multiple projects can be applied for at the same time (i.e. bulk Statement of Works applications.
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Workgroup considerations

The Workgroup convened 14 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.

Consideration of the Proposer's solution

Current Process

The ESO Workgroup Member set out the current process that is currently set out in CUSC 6.5 to manage single or 'bulk' applications of specific Distributed Generators at a Grid Supply Point (GSP). In this process, a DNO would need to follow a 'two step' process – Statement of Works (SoW) and Confirmation of Project Progression (CoPP) process where they believe their embedded generation (either <30 MW or <10MW in Scotland and <100MW in England and Wales) will have an impact on the transmission network. DNOs can however choose to proceed straight to the CoPP stage where they have reasonable certainty that there is a transmission impact. The SoW and CoPP processes are explained in the table below:

<p>Statement of Works – a process to determine if a Distributed Generator (or Generators) has a transmission impact. It provides a letter which states a ‘yes’ or ‘no’ answer and does not provide detail as to what the impact is or how the impact can be managed.</p>	<p>Confirmation of Project Progression – a process to determine what impact a Distributed Generator (or Generators) has on the transmission network. Project Progression provides details of how the transmission impact can be managed with any associated costs and timescales for delivery provided via a Construction Agreement, or where a technical requirement only, the variation of the existing Bilateral Connection Agreement and associated technical Appendices.</p>
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These processes are also explained further in the “Evaluation of Transmission Impact Product Document”, which has been produced by the ESO and the DNOs and is set out in Annex 3a. This document has evolved considerably since CMP298 was originally raised, particularly during 2020. It seeks to clarify the processes and products that the ESO and DNOs will follow and remove ambiguity in the terminology used.

The current SoW/CoPP process is defined as the “Statement of Works and Project Progression Product” in the “Evaluation of Transmission Impact Product Document”.

Note that a full review of the current SoW/CoPP process is not within the scope of CMP298; however, formally allowing ‘bulk’ SoW/CoPP applications is within scope. The ESO have no plans to remove this process from the CUSC.

Rationale for new Process

The Workgroup noted the shortcomings of the current Statement of Works (SoW) process as it exists in its current form. There continues to be a tangible growth in Embedded Generation and the current SoW process can be time consuming and cumbersome. In addition, the current SoW process is not fit for purpose (for areas with large amounts of Embedded Generation) due to the fact that it can take up to 12 months to complete from an initial Distributed Generator’s (DG) application to the respective DNO.

The Proposer is therefore proposing the introduction of a new product – a Transmission Impact Assessment. This creates a framework where information on the capability of the NETS is obtained in advance, allowing DNOs to make offers that the DG can accept and therefore provides DG connection customers with greater certainty. This provides visibility to the DNO of works and/or Site-Specific Technical requirements that are required in order to use the capacity identified for each Grid Supply Point (GSP). The DNO can then allocate and reallocate this capacity to DG on its network in line with documented processes and principles agreed between the ESO and the DNO. This is further defined in the “Evaluation of Transmission Impact Product Document” as the “Transmission Impact Assessment Product”⁸. Since CMP298 was raised, the majority of DNOs have been trialling in some degree the more efficient aggregated assessment (widely known as the “Appendix G” process) and the majority of DNOs are seeing the benefits of this improved process. However, this is not detailed in CUSC and it is clear from previous Workgroup discussions that this is being applied inconsistently across different geographic areas, which introduces additional operational overheads, particularly for Transmission Owners (TOs). Therefore,

⁸ Also commonly referred to as the Appendix G process

there is a need for the formalisation of this Transmission Impact Assessment (TIA) process in the CUSC to ensure consistency and universal application of the process nationwide to realise the full benefits of the improvements set out.

The TIA process is in line with the process that was agreed with the Open Networks in [2017](#). A sub-group of CMP298 met separately on 21 April 2021 and 19 May 2021 to ensure consistency between the TIA and the process agreed with the Open Networks and this has been reflected in the Evaluation of Transmission Impact Product Document.

The key components of this new TIA are set out below:

1) **General**

The TIA product creates a framework where information on the capability of the NETS is determined in advance (taking into account the contracted position on both the transmission and distribution networks), allowing complete offers to be made by DNOs for DG connections, setting out the transmission impact, within the DNO offer licence timescales and can be accepted by the DG without further reference to the ESO. This provides visibility to the DNO of works and/or Site-Specific Technical requirements that are required in order to use the capacity identified for each GSP. The DNO can then allocate and reallocate this capacity to DG on its network in line with documented processes and principles agreed between the ESO and the DNO.

Through this approach, it is possible for the NETS impact of a generator to be known by the DNO and so allow the DNO to proactively manage the Distributed Generation capacity at a specific GSP, whilst ensuring that the NETS capacity remains equally accessible for both distribution and transmission customers.

The TIA product consists of three parts;

1. **Initial setup** where the ESO provides a Planning Limit (a “cap”), a Materiality Trigger (a “checkpoint”) and indicative works.
2. **Regular updates** (normally monthly or as otherwise agreed) from the DNO to the ESO on the utilisation of the Materiality Trigger.
3. **Technical Study Review**. The ‘Materiality Trigger’ set at GSP level requires submission of updated technical data from the DNO to the ESO to facilitate a technical review of the status of the NETS by the ESO. The DNO can submit a technical review request for a GSP at any point (i.e. the DNO does not need to wait for the Materiality Trigger to be fully used to request an uplift/increase) subject to accepting either any associated change to the BCA or Connection Offer from the ESO.

2) **Planning Limit / Materiality Trigger**

The two key components are the **Planning Limit** and the **Materiality Trigger** and both of these concepts are defined in the legal text for this change. These concepts are summarised in the table below

	Planning Limit (the “Cap”)	Materiality Trigger (the “Checkpoint”)
What?	The physical capability ⁹ of part of the NETS to accommodate generation connections (including already connected or contracted generation), whether connected directly to the transmission or distribution networks i.e. a Cap <i>This only changes following NETS reinforcement</i>	Acts as a checkpoint to monitor progress before the Planning Limit is reached and the safety/security of the NETS is placed at risk.
Who determines this figure?	Ultimately it is the ESO; however it is the Relevant TO that set the figure <i>It will be for the Transmission Owners to determine how they calculate the Planning Limit. The CUSC change introduces the concept of a “Planning Limit”</i>	Ultimately it is the ESO; however it is the Relevant TO that set the figure
Can DNOs continue to make Offers?	Only up to the amount of the Planning Limit that is unused or uncontracted	Yes; however, when the ‘Materiality Trigger’ is reached the DNO provides updated technical data to the ESO and continues to make offers under existing limits until the ESO advise of changes or the Planning Limit is reached.

Should the ESO receive a transmission application, which would impact typically on the Materiality Trigger (but more rarely the Planning Limit), the ESO will use the Interactivity Process (described below) to determine if (or by how much) these values will be reduced.

⁹ i.e. the maximum power export that the NETS can accommodate (without further reinforcement)

What is the Process when the “Materiality Trigger” is reached?

- When the ‘Materiality Trigger’ is reached the DNO provides updated technical data to the ESO and continues to make offers under existing limits until the ESO advise of changes or the Planning Limit is reached.
- Once the ESO and the DNO agree revised contract terms, the Planning Limits and associated NETS works required are updated and the ‘Materiality Trigger’ is set.

The Proposer noted that how and when a DNO assigns, reassigns, or manages capacity granted by the ESO to DGs connecting to its network is within the gift of the DNO. This does mean the DNO may need to use interactivity and/or queue management processes to assign capacity to DG if the DNO has insufficient capacity for all the offers the DNO has. The ESO will not approve the data provided by the DNOs (such as how available capacity is assigned) but will review the regular updates to ensure the rules agreed between ESO and DNOs are followed.

Whilst the capacity identified as part of the Planning Limit study is not for the DNO’s exclusive use, the ESO will not be able to use or reduce any of the available capacity given to the DNO without first approaching the DNO and triggering an interactivity process.

If the ESO triggers the Interactivity Process, the DNO will assess if any DG are affected and notify ESO within 10 working days. If there is no impact on any DG from the DNO’s assessment (i.e. there is no interactivity), then the Materiality Trigger is updated by the ESO. If there is an impact on any DG, then the interactivity process will be used to determine Transmission/Distribution queue positions.

Further details and worked examples are set out in Annex 3a of this document.

Key Discussion Points

- The Workgroup acknowledged that using the Planning Limit is a cornerstone to this process. However, the term Planning Limit means different things to different people as this is based on engineering judgement and there is no pan-agreed TO application of how the Planning Limit is derived. The process for determining the Planning Limit is complex and the Workgroup noted that a harmonised approach to calculate the Planning Limit and/or Materiality Triggers across all TOs is not within the scope of this change and will be explored as part of the associated STC change.
- The Workgroup noted that the Planning Limit is not a number that can be contractualised in individual BCAs and “Total MW” could be a more appropriate number in an individual BCA but would still need the concept of Planning Limit. A Workgroup Member suggested using new terms such as “Holding Limit” (for the Planning Limit) and “Review Limit” (for the Materiality Trigger); however this was felt to add confusion rather than help clarify.
- Some Workgroup Members believed that the Planning Limits for each GSP should be published – this is discussed further in the “Implementation Approach” section of this document.

3) **Application/Re-Work Fee**

The Proposer's intention is to introduce new fees for the additional work that the Transmission Impact Assessment product places on the ESO. These fees are for:

1. **Initial creation of Transmission Impact Assessment or request to increase the Materiality Trigger; and**
2. **Re-work needed by the ESO as a result of updated data (from the DNO) on the utilisation of the Materiality Trigger not meeting the agreed requirements – the Proposal includes an obligation for the ESO to review the DNO's data to ensure the requirements of the TIA are met. The proposed process includes:**
 - An obligation on the ESO to validate and confirm acceptance or rejection within 5 working days. A Workgroup Member noted that the intent of CMP298 is for the DNO to be able to make offers that the DG can accept without further reference to the ESO, and this approach undermines that intent. The Workgroup Member believes a better approach is for the proposed changes to be deemed to be accepted with an agreed disputes process by exception and therefore submitted Request for Alternative (which became WACM1) to address this – this is further discussed below in the section on “Workgroup Alternatives. The Proposer noted that there isn't currently a disputes process for this purpose.
 - A fee may be payable by the DNO should the data provided not meet these requirements. Details of this fee will be detailed in the ESO's Statement of Use of System Charges. The Proposer initially sought to charge DNOs a fee to validate the DNO monthly submissions. The majority of the Workgroup raised concerns that this was unreasonable as it would be the DNO carrying out the work. The Proposer noted these concerns and confirmed that the 're-work fee' would be a cost reflective value that would only be applied in instances where the DNO has not complied with the requirements of the product and that their only premise to “reject” is if something in Appendix G Schedule 2 has not been followed correctly and so these fees are entirely avoidable should the DNO have accurate data and follow the agreed process. The Proposer confirmed that based on analysis from current Appendix G submissions, the value recovered via this re-work fee would be ~ £65k per annum across all DNOs although the ESO would seek to recover the fee from the individual DNO that causes the re-work. A respondent to the Workgroup Consultation submitted the request for Alternative 3 (this became WACM2) to remove the need this re-work fee. They also submitted the request for Alternative 2 (this was not carried forward as a WACM) which removed the fees associated with initial creation of Transmission Impact Assessment or request to increase the Materiality Trigger as well as the re-work fee - this is further discussed below in the section on “Workgroup Alternatives.

Other Workgroup discussion points not in scope of CMP298

Regional Development Programme (RDP) product

The Workgroup noted that there are ongoing wider trials to solve specific challenges in particular DNO areas.

Workgroup Members were keen that this RDP product was also defined in the CUSC. The majority of the Workgroup challenged the ESO's position on not including the Regional Development Programme (RDP) product within CMP298 given this is what was originally intended and is what stakeholders are expecting.

However, the ESO Workgroup Member considered this to be out of scope of the CMP298 change and noted that RDP is not itself a product but a process which may result in connection requirements to be used in current products or the development of future products. As an example, the TIA product was an evolution of earlier trial products and could include additional requirements for the DNO to manage the embedded generation on their network such as providing enhanced visibility and control. Some Workgroup Members noted that they can see why it is difficult for the ESO to introduce it as there is a commercial and future Distribution System Operator ambition element to consider. They also noted that for the RDP trial, there is some constraint management and added difficulty to implementation. However, other Workgroup Members saw this as an opportunity to add the required wording into the CUSC whilst the RDP trials were progressing rather than wait until they had concluded or were sufficiently far down the track to provide certainty on the CUSC changes required. Workgroup Members enquired when the RDP way of working may be introduced into CUSC. The Proposer clarified that RDP is not a product (like SoW/CoPP or TIA) in itself, but a way of working to find solutions to network issues that can be formalised and delivered via the TIA product.

Bilateral Embedded Generation Agreements (BEGAs) and Bilateral Embedded Licence Exemptible Large Power Station Agreement (BELLAs)

The ESO Workgroup representative confirmed that BEGAs and BELLAs were not within the scope of CMP298 as such agreements are between the ESO and the embedded generator and neither follow the current SoW/CoPP processes. Furthermore, BELLAs are entered into for “Large” (but <100MW) sites and BEGAs provide direct access to the NETS by providing the embedded generator with Transmission Entry Capacity (TEC)¹⁰ and rights to operate in the energy balancing market.

A Workgroup Member noted that Network Operators need to continue to encourage their DG customers to apply as early as possible for the required transmission agreements.

Clock Start Date and Interactivity

In order to “clock start” a connection¹¹ application from a User to the ESO, the application must have been declared technically competent by the ESO and the application fee paid¹². The clock start date will be the latter of these two requirements and ESO will be required to provide an offer to the applicant within 3 calendar months (or 28 calendar days if no works required). Some DNO Workgroup Members noted they declare clock start upon receipt of an application if it is valid rather than when the DNO looks at it, and there is the provision to ‘reset the clock’ if the application is not valid.

In the earlier Workgroup discussions, some DNO Workgroup Members argued that the Clock Start Date was relevant to CMP298 as the Clock Start Date is used in the interactivity process. Interactivity occurs where an offer for connection to a customer is due to be made but the provision of this offer would affect the terms of another offer which is currently open for acceptance or is also due to be made. Interactivity can occur within a DNO’s network (which will be managed by the DNO’s interactivity processes), between DNOs and between Distributed and Transmission Generators (both of which will be managed by the ESO’s interactivity processes). Both the Statement of Works and Project Progression and

¹⁰ A maximum capacity that a generator is allowed to export capacity into the transmission network

¹¹ Could be for a new connection, modification to an existing application or connection or a use of system application

¹² This is set out in the application form which are Exhibits to the CUSC (Exhibits B, D, F and Q)

Transmission Impact Assessment products can be affected by interactivity and so the ESO and all DNOs have processes to manage interactive offers.

The Workgroup since noted that work to harmonise the processes for managing interactivity across transmission and distribution connections (including demand connections) has been carried out separately via the Energy Networks Association and an agreed position has been reached. [CMP370](#) was raised (and was [approved by Ofgem](#) on 20 September 2021 and implemented into CUSC on 4 October 2021) to reflect this and this also confirmed that no STC changes were required in this respect. Given the linkage between Clock Start Date and interactivity, review of the Clock Start Date is not within the scope of CMP298. However, a Workgroup Member noted that if a DG and Transmission Generator submitted a technically competent (and the application fee had cleared) application at the same time, the Clock Start Date for the DG application would be earlier than the Clock Start Date for the Transmission Generator application. This is because the Clock Start Date for the DG application is the date the application was received and the Clock Start Date for the Transmission Generator would be the date when it is assessed.

The current significant impact defined as expenditure of more than £10,000

CUSC Section 11 includes the following definition of “Material Effect”, which equates such an effect to expenditure of more than £10,000.

“Material Effect”

an effect causing **The Company** or a **Relevant Transmission Licensee** to effect any works or to alter the manner of operation of **Transmission Plant** and/or **Transmission Apparatus** at the **Connection Site** or the site of connection or a **User** to effect any works or to alter the manner of operation of its **Plant** and/or **Apparatus** at the **Connection Site** or the site of connection which in either case involves that party in expenditure of more than £10,000;

CUSC 6.5.5.6 and 6.5.5.7 specifically notes that significant impact equates to expenditure of more than £10,000, which is line with the overall “Material Effect” definition within the CUSC.

The £10,000 has been used by DNOs to determine whether a DG is “Relevant” or not. However, some DNO Workgroup Members noted that this figure has remained unchanged for many years and it is a fundamental requirement of CMP298 to review an “inaccurate” figure to determine whether or not a DG is “Relevant” or not. However, the Proposer reaffirmed that the materiality threshold of £10,000 is not in the scope of CMP298 as the TOs would have built in an allowance for a number of works under this threshold and there could be unintended knock on consequences.

The Workgroup also noted that, for the purpose of CMP298, whether or not a DG is “Relevant” would be defined based on a specified capacity size rather than a £ value. The Workgroup considered this to be a positive change as the MW threshold is clear and visible to the applicant in advance as opposed to the historic £10,000 threshold.

Consideration of generation connection Types A, B, C, D

The Workgroup discussed Requirements for Generators (RfG) types A, B, C and D as per the Terms of Reference.

The CUSC currently does not specifically recognise the RfG connection types A, B, C, and D, but it in fact refers to Small, Medium, and Large. Some Workgroup members noted that the challenge is about the amount of embedded generation looking to connect, not the type of generation and therefore this does not sit within the scope of CMP298. In addition, this would need a significant revision of CUSC to reflect the RfG connection types.

Changes to User Commitment

There was a Terms of Reference for the Workgroup to “Consider responses to User Commitment (CMP192) Open Letter by National Grid”. One respondent to the Workgroup Consultation also identified the need for a review of connection securities for Distributed Generation.

This Open Letter was issued in April 2018 and was flagged at the customer seminars in October 2018. This feedback led to a discussion at the Transmission Charging Methodologies Forum (TCMF), which is established under the CUSC to provide a regular forum for discussion on the development of charging methodologies, and a thought paper in April 2019. However, this piece of work was then deprioritised internally by the ESO and transferred to the Energy Networks Association to further develop solutions to the issues identified. The Chair noted that the Energy Networks Association presented their thoughts on these issues to TCMF. Potentially this could lead to CUSC Modifications being brought forward in the area of User Commitment. Therefore, the area of User Commitment does not sit within the scope of CMP298.

Workgroup Consultation Summary

The Workgroup held their Workgroup Consultation between 12 August 2021 and 10 September and received 7 responses, all of which were non-confidential. The full responses and a summary of the responses can be found in Annexes 5 and 6 respectively.

In summary:

- Majority supportive of change and implementation approach although with a clear desire for the Workgroup to develop a more detailed implementation plan to give confidence that the revised contractual arrangements can be all put in place within 24 months of Ofgem decision. The Workgroup considered this in their discussions post Workgroup Consultation and the results of this are set out in the section below on “When will this change take place - Implementation approach”.
- STC changes needed to be understood and developed and sufficiently set out such that minimal risk of having to unpick the CMP298 solution(s). There was also a desire to present the Final Modification Reports for the CUSC and the STC changes at the same time (or as near as possible) to Ofgem for decision. The Workgroup agreed with these views. The STC changes are set out in the section below on “Interactions – Implications on STC”.
- In terms of publication of information to assist stakeholders to understand where the gaps are, respondents welcomed ESO publishing data but noted that interested parties still need to engage with DNOs to understand the options. Also, for the data to be really useful to stakeholders, it needs to show the capacity available. The Workgroup considered this in their discussions post Workgroup Consultation and

the results of this are set out in the section below on “When will this change take place - Implementation approach”.

- Possible alternatives were put forward although it was noted there could be more depending as to whether Workgroup Members wish to combine these or remove certain components. These are further discussed below in the section on “Workgroup Alternatives”. However, in summary those that were raised as part of the responses to the Workgroup Consultation were:
 - As per Original but DNO updates to Appendix G are deemed to be accepted unless ESO confirm otherwise rather than ESO Approve/Reject process; and
 - As per Original but to remove the need for both or either of the application fees associated with initial creation of Transmission Impact Assessment and request to increase the Materiality Trigger and the re-work fee to be charged by the ESO to DNOs to confirm requirements of TIA are met.
- Other
 - There were some points raised on possible interactions with the Access and Forward-Looking Charges SCR proposals, the need for a review of connection securities for Distributed Generation and there were concerns expressed on how “Large” generation in Scotland is treated. These are all out of scope of CMP298.

Workgroup Alternatives

Alternative Solution(s)	How does this differ from the CMP298 Original?
Request for Alternative 1 – this became WACM1	As per Original but DNO updates to Appendix G are deemed to be accepted unless ESO confirm otherwise rather than ESO Approve/Reject process

This alternative proposes that a defined period (5 Working Days) is included for the ESO to dispute a submission from the DNO and then the ESO and DNO would agree a defined timescale to seek resolution and work together to reach resolution. If resolution cannot be achieved, then the updates are not accepted and this will remain the case until a resolution is found (which may be through the Dispute Resolution Procedure set out in CUSC Section 7.4) or the update is superceded.

Alternative Solution(s)	How does this differ from the CMP298 Original?
Request for Alternative 2 – this was not taken forward as a WACM	As per Original but remove the need for application fees to set up the Transmission Impact Assessment or request to increase the Materiality Trigger or a re-work fee to be charged by the ESO to DNOs to confirm requirements of Transmission Impact Assessment are met
Request for Alternative 3 – this became WACM2	As per Original but to remove the need for a re-work fee to be charged by the ESO to DNOs to confirm requirements of Transmission Impact Assessment are met

The Proposer of the Request for Alternative 2 believes that it is appropriate for the costs to be borne and absorbed by the ESO and DNO rather than charged to the DNO especially as it is unclear who the triggering party for a Transmission Impact Assessment would be and therefore the costs would be socialised by the DNO. Another Workgroup Member was in favour of removing application fees across the board.

The majority of Workgroup Members did not support the removal of the application fee for the Transmission Impact Assessment with some noting the current principle and practice that costs should be recovered from those triggering them and not socialised especially as this arguably creates a distortion where BSUoS payers rather than Distribution Use of System payers that end up paying. Although, Workgroup Members did accept that it is difficult to determine which party or parties triggered the need for the Transmission Impact Assessment, some DNO Workgroup Members clarified that they would continue with current practice and simply apportion the fee that the ESO levied on the DNO to all those DG customers who triggered the Transmission Impact Assessment rather than try and establish a “triggering party”.

The majority of Workgroup Members were concerned with the piecemeal nature of removing the application fees associated with the Transmission Impact Assessment but not for other fees that the ESO charge DNOs and the majority of Workgroup Members agreed that this should be looked in a more holistic view of application fee charging. For clarity, the Proposer of the CMP298 Original clarified that the ESO would continue to charge the application fee to set up the Transmission Impact Assessment to DNOs.

One Workgroup Member questioned if there could be separate alternatives for the initial fee to set up the Transmission Impact Assessment and the Modification Application fee (e.g. where materiality trigger is reached). However, there was no appetite within the Workgroup to raise such alternatives as there was not sufficient differentiation between them.

However, there was majority support for removing the re-work fee, which isn't currently charged and is viewed as an administrative process and therefore the Workgroup agreed it would be prudent to include a request for alternative that simply removes the re-work fee – this is Request for Alternative 3, which became WACM3. To provide context, the Proposer of the CMP298 Original noted that current estimates of such a re-work fee would be £60 to £65k per annum across all DNOs based on 7 to 8 Working Days per month of re-work across all DNOs.

To ensure all combinations were included, the following requests for alternatives were also raised:

Request for Alternative 4 – this was not taken forward as a WACM	Combination of Request for Alternative 1 and Request for Alternative 2
Request for Alternative - this became WACM3	Combination of Request for Alternative 1 and Request for Alternative 3

Alternative Vote

On 24 November 2021, the Workgroup voted as to whether or not the proposed Request for Alternatives should become Workgroup Alternative CUSC Modifications (WACM). Majority support was received for the proposed Request for Alternatives 1, 3 and 5 and these became WACM1, WACM2 and WACM3 respectively.

Neither Request for Alternative 2 or 4 (that both have provision to remove the requirement for application fees associated with the Transmission Impact Assessment (either for initial set up or for any modification application initiated by the DNO e.g. where materiality trigger is reached)) received majority support from the Workgroup. The Chair also did not save either of these and, although they noted the concerns raised by the Proposer of these requests for Alternatives, they stated that this could potentially undermine the current charging principle of cost reflectivity and needs a more holistic approach rather than a piecemeal approach looking at just application fees for Transmission Impact Assessments.

Legal Text

The legal text including the new Schedules for this change can be found in Annex 4.

What is the impact of this change?

General

Rapid changes in the industry have led to high volumes of Embedded Generation of varying sizes collectively impacting on the NETS. To assess individual small Embedded Generation in high volumes is both resource intensive and impractical as assessing a new DG whilst many are still in flight in the process leads to difficulty in creating a benchmark background.

Visibility and understanding of the Planning Limit and known transmission constraints provides the DNO with the ability to make complete offers to Generators (which can then be accepted by the DG) at each GSP, without the need for referral to the ESO. This provides DG customers with certainty of the transmission impact.

For Network Operators and Transmission Owners

The majority of Workgroup Members argue that CMP298 will also ensure consistency in treatment of new connectees across the country. Consistent processes and contracts should allow flexibility to resolve geographically specific issues. However, the Workgroup noted that the TO in northern Scotland is not currently in a position to offer the TIA as it believes this process is discriminatory as doesn't consider the impact of "Large" embedded generation. A Workgroup Member raised an alternative view that the TO in northern Scotland not offering the TIA is potentially "discriminatory" for Users connecting in this area and will not allow the full benefits of this change to be realised. However, some Workgroup Members noted that this is not obligatory for TOs to offer TIAs but agreed that it should be made clear to all Users why they are not offering TIAs at this time. The Evaluation of Transmission Impact Product Document has been updated accordingly.

DNOs and ESO would be consistent with their licence/code obligations if CMP298 is introduced e.g. DNOs will be able to meet their obligation to provide a connection offer within 65 working days whilst including the transmission impact in most cases.

The existing SoW/CoPP process is not providing the ESO and TOs with sufficient visibility of what DG is connecting to DNO networks. This impacts on both investment decisions and also system operability. In addition, the existing process is built around the assumption that the NETS will require transmission reinforcement works to accommodate increasing volumes of DG. However, CMP298 will allow ESO, DNOs and TOs to explore alternative options such as operation or technical measures to reduce the reinforcement required and hence potentially reduce cost to consumers.

In implementing this change, there will be increased resource impacts on the ESO, DNOs and TOs as they will need to transition contracts to the new arrangements alongside business as usual activities.

For DG

The majority of the Workgroup believe that CMP298 will provide long term benefits to consumers (by allowing more projects to connect and so provide more competition in the generation market). It has a high importance to individual customers whose connections could be accelerated by the modification.

If CMP298 is introduced, DNOs should receive sufficient information in a timely manner to allow them to provide their customers with a full offer. Customers of DNOs have for some time expressed dissatisfaction with the timeliness of information on the NETS (both cost

and timescales) of their connection applications. This results in them not getting the right information in a timely manner to make an investment decision.

Proposer's assessment against Code Objectives

Proposer's Assessment against CUSC Non-Charging Objectives	
Relevant Objective	Identified impact
(a) The efficient discharge by the Licensee of the obligations imposed on it by the Act and the Transmission Licence;	Positive - A more efficient process should help the efficient discharge of the ESO's obligations.
(b) Facilitating effective competition in the generation and supply of electricity, and (so far as consistent therewith) facilitating such competition in the sale, distribution, and purchase of electricity;	Positive - more timely understanding of transmission impact such that embedded generation have information required to make investment decisions which helps to facilitate effective competition
(c) Compliance with the Electricity Regulation and any relevant legally binding decision of the European Commission and/or the Agency *; and	None
(d) Promoting efficiency in the implementation and administration of the CUSC arrangements.	Positive - This proposal recognises that the process will continue to be refined for some time and as such the suggested solution is one that will not require to be updated often - promoting efficiency in the implementation and administration of the CUSC arrangements.
*Objective (c) refers specifically to European Regulation 2009/714/EC. Reference to the Agency is to the Agency for the Cooperation of Energy Regulators (ACER).	

Workgroup Vote

The workgroup met on 14 January 2022 to carry out their Workgroup Vote. 10 Workgroup Members voted, and the full Workgroup vote can be found in Annex 8. The tables below provide:

- a summary of how many Workgroup members believed the Original and each of WACM1, WACM2 and WACM3 were better than the Baseline (the current CUSC); and
- a summary of the Workgroup Members view on the best option to implement this change.

The Applicable CUSC Objectives are:

CUSC Non-Charging objectives

- The efficient discharge by the Licensee of the obligations imposed on it by the Act and the Transmission Licence;
- Facilitating effective competition in the generation and supply of electricity, and (so far as consistent therewith) facilitating such competition in the sale, distribution, and purchase of electricity;
- Compliance with the Electricity Regulation and any relevant legally binding decision of the European Commission and/or the Agency *; and
- Promoting efficiency in the implementation and administration of the CUSC arrangements.

*Objective (c) refers specifically to European Regulation 2009/714/EC. Reference to the Agency is to the Agency for the Cooperation of Energy Regulators (ACER).

Assessment of the Original, WACM1, WACM2 and WACM3 inclusive vs Baseline

The Workgroup concluded unanimously that the Original and WACM1 better facilitated the CUSC Objectives than the Baseline and concluded by majority that WACM2 and WACM3 better facilitated the CUSC Objectives than the Baseline.

Option	Number of voters that voted this option as better than the Baseline
Original	10
WACM1	10
WACM2	9
WACM3	9

Best Option

8 Workgroup Members voted that WACM3 was the best option with 1 vote cast for each of the Original and WACM1

Workgroup Member	Company	BEST Option?	Which objective(s) does the change better facilitate? (if baseline not applicable)
Grahame Neale	National Grid ESO	Original	a, b, d
Brian Hoy	Electricity North West	WACM3	a, b, d
Grace March	Sembcorp	WACM3	a, b
Andy Colley	SSE Generation Ltd.	WACM3	a, b
Andrew Akani	Western Power Distribution	WACM3	a, d
Robert Longden	Cornwall Energy	WACM3	a, b
Kyran Hanks	Waters Wye	WACM3	a, b, d
Zivanayi Musanhi	UK Power Networks	WACM3	a, b, d
Paul Munday	SSE Power Distribution Limited	WACM3	a, b, d
Matthew Paige-Stimson	NGET	WACM1	a, b, d

Code Administrator Consultation summary

The Code Administrator Consultation was issued on the 31 January 2022 and closed on 21 February and received 4 responses (all non-confidential). A summary of the non-confidential responses and the full non-confidential responses can be found in Annexes 10 and 11 respectively. In summary:

- There was support expressed for all options predominantly on the grounds of efficiency; however, there was a preference (3 out of 4 respondents) for WACM3. The other respondent didn't support WACM3 (or WACM2) as, in their view, the removal of the re-work fee undermines cost reflectivity;
- The majority of respondents (3 out of 4) supported the implementation approach but 2 of these were keen that progress is made as early as possible (e.g. to clarify responsibilities and data requirements and agree the prioritisation). The one respondent, who didn't support implementation noted that the required STC modification ([CM080](#)) to enable implementation of CMP298 has only just been initiated; and
- No Legal Text issues were identified.

Panel recommendation vote

The Panel met on 25 March 2022 to carry out their recommendation vote.

They assessed whether a change should be made to the CUSC by assessing the proposed change and any alternatives against the Applicable Objectives.

Vote 1: Does the Original, WACM1, WACM2 or WACM3 facilitate the objectives better than the Baseline?

Panel Member: **Andrew Enzor**

	Better facilitates AO (a)?	Better facilitates AO (b)?	Better facilitates AO (c)?	Better facilitates AO (d)?	Overall (Y/N)
Original	Yes	Yes	Neutral	Yes	Yes
WACM1	Yes	Yes	Neutral	Yes	Yes
WACM2	Yes	Yes	Neutral	Yes	Yes
WACM3	Yes	Yes	Neutral	Yes	Yes

Voting Statement

ACO(a): All solutions will improve efficiency in the discharge of licence obligations to provide connection offers by replacing multiple individual assessments with aggregated assessments

ACO(b): All solutions will standardise processes across different networks and areas will improve competition between generators seeking to connect to the network at different locations and/or voltages

ACO(c): No impact

ACO(d): All options will improve efficiency by introducing a standard process. The removal of the need for ESO to DNO acceptance is favourable against this objective, so WACM1 and WACM3 are preferable to the Original and WACM2 in this regard. Likewise, the removal of "re-work fees" is favourable against this objective, removing the administrative burden to redistribute a relatively small cost, so WACM2 and WACM3 are preferable to the Original and WACM1 in this regard.

As WACM3 is most favourable against ACO(d) and similar to the other solutions against the other ACOs, it is the best solution.

Panel Member: **Andy Pace**

	Better facilitates AO (a)?	Better facilitates AO (b)?	Better facilitates AO (c)?	Better facilitates AO (d)?	Overall (Y/N)
Original	Yes	Yes	Neutral	Yes	Yes
WACM1	Yes	Yes	Neutral	Yes	Yes
WACM2	Yes	Yes	Neutral	Yes	Yes
WACM3	Yes	Yes	Neutral	Yes	Yes

Voting Statement

This proposal introduces an improved statement of works process into the CUSC to allow for the aggregated assessment of embedded generation. This process improvement is needed as more generation is connecting directly to the distribution network. Allowing the assessment of embedded generation in aggregate results in a more efficient process and a quicker feedback loop to developers for sites under consideration. This new process has also been successfully trialled for a number of years. We therefore assess it as better meeting applicable CUSC objectives (a), (b) and (d) and that the original and all WACMs are better than the baseline.

Our preferred WACM is WACM3 as this results in a more efficient process than the original process by removing the approval/ rejection process of the ESO which adds an unnecessary step. WACM3 also removes the re-work fee which we believe to be an unnecessary additional charge on DNOs.

Panel Member: **Binoy Dharsi**

	Better facilitates AO (a)?	Better facilitates AO (b)?	Better facilitates AO (c)?	Better facilitates AO (d)?	Overall (Y/N)
Original	Yes	Yes	Neutral	Yes	Yes
WACM1	Yes	Yes	Neutral	Yes	Yes
WACM2	Yes	Yes	Neutral	Yes	Yes
WACM3	Yes	Yes	Neutral	Yes	Yes

Voting Statement

The original and proposed options allows for the efficient discharge of NG ESO's obligations. Embedded Generators will have the available information to make commercial decisions.

Panel Member: **Cem Suleyman**

	Better facilitates AO (a)?	Better facilitates AO (b)?	Better facilitates AO (c)?	Better facilitates AO (d)?	Overall (Y/N)
Original	Yes	Yes	Neutral	Yes	Yes
WACM1	Yes	Yes	Neutral	Yes	Yes
WACM2	Yes	Yes	Neutral	Yes	Yes
WACM3	Yes	Yes	Neutral	Yes	Yes
Voting Statement					
<p>I believe that all CMP298 options better facilitate the Applicable CUSC Objectives (ACOs) for broadly the same reasons as provided by the Proposer. Options which differ from Original (WACM1 and WACM3) by ensuring DNO updates to Appendix G are deemed to be accepted are slightly more efficient and thus slightly better facilitate ACO (d). Moreover, options which differ from the Original (WACM2 and WACM3) by removing the re-work fee are slightly more efficient due to the small total sums involved. This therefore better facilitates ACO (d). So taking this all in to account, WACM3 is marginally the best option.</p>					

Panel Member: **Garth Graham**

	Better facilitates AO (a)?	Better facilitates AO (b)?	Better facilitates AO (c)?	Better facilitates AO (d)?	Overall (Y/N)
Original	Yes	Yes	Neutral	Neutral	Yes
WACM1	Yes	Yes	Neutral	Neutral	Yes
WACM2	Yes	Yes	Neutral	Neutral	Yes
WACM3	Yes	Yes	Neutral	Neutral	Yes
Voting Statement					
<p>All four options (the Original and the three WACMs) introduce a more efficient process into the CUSC for embedded generator connections which is better in terms of Applicable Objectives (a) and (b) whilst being neutral in terms of (c) and (d). In respect of these four options, WACMs 1 and 2 both have merit over and above the Original whilst WACM3 with its combination (of WACMs 1 and 2) is Best overall.</p>					

Panel Member: **Grace March**

	Better facilitates AO (a)?	Better facilitates AO (b)?	Better facilitates AO (c)?	Better facilitates AO (d)?	Overall (Y/N)
Original	Yes	Yes	Neutral	Neutral	Yes
WACM1	Yes	Yes	Neutral	Neutral	Yes
WACM2	Yes	Yes	Neutral	Neutral	Yes
WACM3	Yes	Yes	Neutral	Neutral	Yes
Voting Statement					
<p>All solutions create a more efficient process for embedded generators to connect, so help the ESO discharge its obligations (ACO a), allows embedded generators to understand where to connect/make investment decisions so facilitating more efficient and competitive generation (ACO b).</p>					

Deemed acceptance of offers by the ESO would speed up the solution and provide reassurance to DNOS and connectees, without jeopardising system security and is therefore preferable to the Original.

It is not clear within a Distribution area which party triggered the re-work fee and, given the low materiality, socialising the cost within BSUoS seems more appropriate. WACM3 is therefore the most positive against the objectives, although all represent an improvement against the current situation of geographical variations and multiple 'trials'.

Panel Member: **Jenny Doherty**

	Better facilitates AO (a)?	Better facilitates AO (b)?	Better facilitates AO (c)?	Better facilitates AO (d)?	Overall (Y/N)
Original	Yes	Yes	Neutral	Yes	Yes
WACM1	Yes	Yes	Neutral	Yes	Yes
WACM2	Yes	Yes	Neutral	Yes	Yes
WACM3	Yes	Yes	Neutral	Yes	Yes

Voting Statement

I believe that overall, all of the options presented will positively impact the relevant code objectives and be better than the current baseline for the following reasons:

- A more efficient process should help the efficient discharge of NGENSO and DNO's obligations (ACO a)
- A more efficient process should result in a timelier understanding of the transmission impact of embedded generators (and the financial consequence of this) which will inform investment decisions, allowing for increased competition from new connections ACO b).
- This proposal recognises that the process will continue to be refined for some time and as such the suggested solution is one that will not require to be updated often - promoting efficiency in the implementation and administration of the CUSC arrangements (ACO d).

As all of the options are positive against the current CUSC baseline, my opinion is that the Original is the best option as it provides a more controlled process (compared to WACM1 and WACM3) whilst ensuring any errant costs (associated with re-work) are passed to the triggering party (compared to WACM2 and WACM3)

Panel Member: **Joe Dunn**

	Better facilitates AO (a)?	Better facilitates AO (b)?	Better facilitates AO (c)?	Better facilitates AO (d)?	Overall (Y/N)
Original	Yes	Yes	Neutral	Yes	Yes
WACM1	Yes	Yes	Neutral	Yes	Yes
WACM2	Yes	Yes	Neutral	Yes	Yes
WACM3	Yes	Yes	Neutral	Yes	Yes

Voting Statement

All of the original and WACMs better meet ACO a) and d) as the aggregation of the assessment will improve the administration of the process which will in turn enable

licence obligations to be discharged. Improved efficiency will enable better facilitation of ACO b) as an improved process will enhance competition.

Panel Member: **Paul Jones**

	Better facilitates AO (a)?	Better facilitates AO (b)?	Better facilitates AO (c)?	Better facilitates AO (d)?	Overall (Y/N)
Original	Yes	Yes	Neutral	Neutral	Yes
WACM1	Yes	Yes	Neutral	Neutral	Yes
WACM2	Yes	Yes	Neutral	Neutral	Yes
WACM3	Yes	Yes	Neutral	Neutral	Yes

Voting Statement

Improves efficiency of the process for connecting distributed generation and thereby helps promote competition in the wholesale market. The options developed under the WACMs are incremental improvements. It does not seem efficient to recover the rework fee on the basis of expected levels, but this could be revisited if significant costs are incurred in future. The deemed acceptance of appendix J updates should make the process more efficient, as long as this does not lead to over allocation of available capacity to the detriment of other users.

Vote 2 – Which option is the best?

Panel Member	BEST Option?	Which objectives does this option better facilitate? (If baseline not applicable).
Andrew Enzor	WACM3	(a), (b), (d)
Andy Pace	WACM3	(a), (b), (d)
Binoy Dharsi	WACM3	(a), (b), (d)
Cem Suleyman	WACM3	(a), (b), (d)
Garth Graham	WACM3	(a), (b)
Grace March	WACM3	(a), (b)
Jenny Doherty	Original	(a), (b), (d)
Joe Dunn	WACM3	(a), (b), (d)
Paul Jones	WACM3	(a), (b)

Panel Conclusion

The Panel recommended unanimously that all options better facilitated the CUSC Objectives than the current CUSC and there was a strong preference (8 out of 9 votes) for WACM3.

When will this change take place?

Implementation date:

10 working days after Authority Decision. However, there will be a 24 month transition period to allow existing Appendix G contracts to be transferred to the new Transmission Impact Assessment arrangements.

Date decision required by

As soon as possible.

The Workgroup also agreed that it was prudent for the CUSC and STC changes to be issued to the Authority at the same time so the Authority could make a decision with both the CUSC and STC changes in front of them.

Implementation approach

The Workgroup's agreed that there would need to be a 24 month transition period to update the contractual arrangements. The Workgroup also noted that data on each GSP would be published by the ESO for stakeholders to access. There are resource implications therefore on the ESO, DNOs and TOs both on the contractual arrangements and creation and maintenance of the data to be published. Further thoughts on the contractual arrangements and data publication are set out below:

Contractual arrangements

The Workgroup noted that each GSP (unless clearly identified that a SoW is in place instead and/or the DNOs choose not to offer TIAs) would need a TIA in the format prescribed by CMP298 and agreed that for those GSPs which currently have an Appendix G, there would be need to a variation Agreement to move these GSPs to the new TIA requirements. This could be done via a Modification Notice (as per existing CUSC process) or at the same time as the GSP specific Appendix G is updated.

The Workgroup noted that the TOs would need to be involved in this process, predominantly on establishing what the Planning Limits would be, and there would be a resource impact on the ESO, DNOs and TOs to carry out the required studies to define the Planning Limits and put in place contractual arrangements.

The Workgroup therefore believed there would need to be a transition period for those GSPs already on an Appendix G. They noted that some GSPs would be on an Appendix G that is more in line with the new proposed TIA and agreed there would be less effort associated with these than GSPs on an earlier version of Appendix G. The Workgroup compiled the following table to try and establish how the process would work and gauge potential timings.

Scenario	How many?	Effort expected	Changes required	How
GSPs already on an Appendix G that is in line with the TIA process	12	Low	Simply move to the new TIA template	No changes required
GSPs on an Appendix G that not currently in line with the TIA process	~200	High	Data and study work needed from DNOs and TOs, which could take 7-9 months and a further 3 months to get the contracts in place	Updated by a variation as per the agreed implementation plan

The Workgroup agreed that there will be no application fees levied for transitioning these GSPs to the new arrangements.

The Workgroup recognised the need to provide assurance that all contracts (that need to be transitioned across to the new arrangements¹³) will be transitioned over within 24 months of the Authority's decision (if the Authority approve the change). Two options were discussed and these were:

- Update contracts as and when reviewed with checkpoints at 12 months and 18 months in to identify those that haven't been updated yet and ensure they are captured; or
- Split the impacted GSPs into tranches to spread out workload for DNOs. However, DNOs would have the opportunity to input, ahead of setting these tranches as to which of their GSPs to prioritise e.g. they may wish to progress those GSPs, which are nearer their Materiality Trigger.

¹³ As previously identified in this document, some Workgroup Members noted that this is not obligatory for DNOs to offer TIAs. The Workgroup agreed that these GSPs will be separately identified as part of this implementation plan.

The Workgroup favoured the approach to split the impacted GSPs into tranches as these would avoid high peaks of workload and ensure the asks on DNOs are spread out. DNO Workgroup Members welcomed the opportunity to confirm their own priority Grid Supply Points so they can be picked up in the earlier tranches but understood that the groupings will need to be led primarily by the network configuration. The Workgroup also were keen that as much planning as possible is done up front to maximise the chances of success and agreed that the current quarterly ESO/DNO meetings would be a good place to report on progress / priorities.

The Proposer presented a draft Implementation Plan, which is attached as Annex 9. This shows that transition of contracts to the new arrangements is viable and allows time for data gathering and submission, resolving queries, creating offers and offer acceptance.

- The Workgroup welcomed the fact that the 1st couple of tranches are longer to allow for any teething issues and agreed that this learning can be built into future tranches, which could mean some activities e.g. query management could be further shortened;
- The Workgroup also supported the contingency that has been built in as well with a mop up tranche included. One Workgroup Member spoke about the resource challenge this could pose for the Transmission Owners and this was recognised by the Workgroup; however, this could be mitigated with steer from the Transmission Owners on which GSPs should be studied together;
- The Workgroup were keen that agreeing which GSPs are in which tranche was starting as early as possible and DNOs and TOs should start thinking about their own priority order to help shape this; and
- The Workgroup noted that Annex 3B provides an example of the data that would be required to be provided by the DNO for each GSP.

Workgroup also agreed that it would be appropriate for the implementation plan to be managed by the Energy Networks Association (ENA) rather than the ESO, who would be heavily involved themselves in the development of the contractual arrangements and that pre-planning should start as soon as possible. This has been included in the Open Networks' Workstream 2 Project Initiation Document for 2022.

Publication

The Workgroup noted the importance of publishing which GSPs are on SoW/CoPP and which have a TIA. Appendix Gs are currently published by each DNOs but the Workgroup stated that a central list held by the ESO would be a more robust solution. The Workgroup proposed the following:

Grid Supply Point	Distribution Network Operator	Active Power (MW)	Apparent Power (MVA)	Reactive Power (MVar)	Amps (Kiloamp)	Voltage (Kilovolt)	Transmission Impact Assessment or Statement of Works/Confirmation of Project Progression	Materiality Trigger (MW)	Comments – if TIA is for a site below the minimum MW threshold or why a TIA is not currently an option
X	X	[X MW or n/a]	[X MVA or n/a]	[X MVar or n/a]	[X kA or n/a]	[X kV or n/a]	[TIA or SoW/CoPP]	[X MW if on TIA, n/a otherwise]	

This data would be published on a monthly basis by the ESO and time stamped; however the data that would be published may not be updated on a monthly basis by the DNOs. Each DNO would need to as a minimum, every 6 months to tie in with Bi-annual Connection security processes verify that the data is correct. Although, the Workgroup were broadly supportive of the approach for the ESO to host centralised data on the ESO website, some DNO Workgroup Members expressed concern that this may duplicate what is already contained within the DNO Heat maps and there could well be crossover (although DNOs will make a conscious choice to provide such information to help their own customer interactions). The ESO Workgroup noted that they are happy to point to latest DNO Heat maps as part of their publication.

Ideally, “Materiality Trigger” and “Planning Limit” would be added to this table; however, the Workgroup recognised that the “Materiality Trigger” and “Planning Limit” itself would not necessarily be of use to stakeholders as stakeholders want to understand what is available i.e. how close to the “Materiality Trigger” and “Planning Limit” the GSP is. Some respondents to the Workgroup Consultation supported this view; however at this time, the Proposer noted that the ESO are not in a position to manage such a “live” dataset given the challenges to keep such dynamic data “live” and a Workgroup member argued that the publication of such additional data was out of scope.

A Workgroup Member raised a general point that some co-ordination of data would be welcome and asked if there was an ENA taskforce looking into this. Another Workgroup Member providing reassurance that the CMP298 data requirements are being fed into the scope of [GC0139](#) (which looks at enhancing and aligning data requirements between DNOs and ESO) and agreed to add the data requirements for [CMP328](#) into this work.

Interactions

<input type="checkbox"/> Grid Code	<input type="checkbox"/> BSC	<input checked="" type="checkbox"/> STC	<input type="checkbox"/> SQSS
<input type="checkbox"/> European Network Codes	<input type="checkbox"/> EBR Article 18 T&Cs ¹⁴	<input type="checkbox"/> Other modifications	<input type="checkbox"/> Other

Implications on STC

The ESO Workgroup Member noted there would be STC and STCP impacts for the CMP298 Original and all WACMs and discussions are ongoing between the ESO and TOs to flesh out the details.

In summary:

- A new section for the information required to be supplied by the TO on each GSP;
- Modify section D part 4 to be Evaluation of Transmission Impact Assessment and cover both TIA and SOW; and
- There will also be a change to STCP 18-4 to make it an ETI document and cover a number of topics required for the TIA process. This includes the frequency of updates to TOs of allocation of capacity proposed, which is currently proposed to be a minimum of twice a year. Consideration will be given as to whether this should be more often with monthly updates being suggested.

The Chair noted that the STC change has not yet been finalised and asked the Workgroup if there was any risk that the STC change could identify something that would result in having to unpick the CMP298 solutions. The ESO Workgroup Member confirmed to the Workgroup that no showstoppers have been identified and the STC ([CM080](#)) change was formally raised in January 2022.

¹⁴ 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 Regulation (EBR – 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.

Acronyms, key terms, and reference material

Acronym / key term	Meaning
BSC	Balancing and Settlement Code
CMP	CUSC Modification Proposal
CoPP	Confirmation of Project Progression
CUSC	Connection and Use of System Code
DG	Distributed Generator (a generator who is connected or planning to connect to a DNO or Independent DNO)
DNO	Distribution Network Operator
EBR	Electricity Balancing Regulation
ENA	Energy Networks Association
ESO	Electricity System Operator
GSP	Grid Supply Point
NETS	National Electricity Transmission System
SoW	Statement of Works
STC	System Operator Transmission Owner Code
STCP	System Operator Transmission Owner Code Procedure
SQSS	Security and Quality of Supply Standards
T&Cs	Terms and Conditions
TEC	Transmission Entry Capacity
TIA	Transmission Impact Assessment
TO	Transmission Owner

Reference material

None

Annexes

Annex	Information
Annex 1	Proposal Form
Annex 2	Terms of Reference
Annex 3a	Evaluation of Transmission Impact Product Document
Annex 3b	Statement of Works Materiality Trigger Review - Example
Annex 4	CMP298 Legal Text
Annex 5	Workgroup Consultation Responses Summary Table
Annex 6	Workgroup Consultation Responses
Annex 7	Workgroup Alternative CUSC Modifications
Annex 8	Alternative and Workgroup Vote
Annex 9	CMP298 Implementation Plan
Annex 10	Code Administrator Consultation Responses Summary Table
Annex 11	Code Administrator Consultation Responses