

## Final Modification Report

# CM078: Connections Triggering Distribution Impact Assessment

**Overview:** The proposal seeks to make changes to the System Operator Transmission Owner Code to reflect CUSC modification CMP328 relating to Transmission connections that trigger an impact assessment on the Distribution network.

## Modification process &amp; 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 Panel has made their recommendation vote on whether this change should happen.

**Panel recommendation:** The Panel has recommended by majority that the Proposer's solution should be implemented.

**This modification is expected to have a: **Medium impact**** on ESO and Transmission Owners

**Governance route** This modification followed a Standard Governance route and proceeded straight to Code Administrator Consultation. The Panel has made their decision on whether it should be implemented

<b>Who can I talk to about the change?</b>	<b>Proposer:</b> David Halford, National Grid ESO <a href="mailto:David.Halford@nationalgrideso.com">David.Halford@nationalgrideso.com</a> 07812 774065	<b>Code Administrator Contact:</b> Sally Musaka <a href="mailto:Sally.Musaka@nationalgrideso.com">Sally.Musaka@nationalgrideso.com</a> 07814 045448

**Appeals window** If you want to appeal this decision, please send your [appeals form](#) and relevant documentary evidence to [industrycodes@ofgem.gov.uk](mailto:industrycodes@ofgem.gov.uk) by 5pm on 29 April 2022 and ensure you copy in [stcteam@nationalgrideso.com](mailto:stcteam@nationalgrideso.com)

## Contents

<b>Contents</b> .....	<b>2</b>
<b>Executive summary</b> .....	<b>3</b>
<b>What is the issue?</b> .....	<b>5</b>
Why change? .....	5
<b>What is the solution?</b> .....	<b>6</b>
Proposer's solution .....	6
Legal text .....	6
Proposer's assessment against the Applicable Objectives .....	6
Proposer's assessment against STC Objectives .....	6
Code Administrator consultation summary .....	7
Panel recommendation/determination vote .....	9
Panel conclusion .....	11
<b>When will this change take place?</b> .....	<b>11</b>
Implementation date .....	11
Date decision required by .....	11
Implementation approach .....	11
<b>Interactions</b> .....	<b>11</b>
<b>Acronyms, key terms and reference material</b> .....	<b>12</b>
Reference material .....	12
<b>Annexes</b> .....	<b>12</b>

## Executive summary

This modification seeks to make changes to the System Operator Transmission Owner Code to reflect CUSC modification [CMP328](#) relating to Transmission connections that trigger an impact assessment on the Distribution network.

### What is the issue?

Currently within the CUSC there is no mechanism or specific process covering arrangements for Transmission connections that could have an impact on the Distribution system. Impacts are primarily direct physical impacts including but not limited to Fault Level rating, Thermal rating, Voltage control, Power Quality, Control and Protection systems. Impacts are also commercial where explicit Transmission access rights of the Distribution system owner or embedded Users may be impacted. Also, where commercially sensitive data, is held only by the ESO and the relevant CUSC Users and only publicly available in part. Without this modification there is not an appropriate process in place as a means of a Transmission User facilitating connections that trigger Distribution impact assessments that covers both physical impacts and explicit Transmission access rights impacts.

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

#### Proposer's solution:

In the Proposer's view changes will be required to STC Schedules 5 & 6 to ensure the TO is aware if a Distribution Impact Assessment will be required and where in the connection process this will be actioned.

**Implementation date:** This will be dependent on the decision as follows:

**Original Proposal** - 6 months after Authority decision

**WACM1** – 1 month after Authority decision

**WACM2** – 12 months after Authority decision

**Panel determination:** The Panel has determined unanimously/by majority that the Proposer's solution/WACM1 or WACM2 is implemented

### What is the impact if this change is made?

This change will have medium impact on ESO and Transmission Owners.

- It will create an efficient process for connections to the Transmission system that requires a distribution impact assessment,
- provide opportunities for generation to connect at both Transmission and Distribution and also;
- create an efficient process for connections to the Transmission system that require distribution impact assessment.

### Interactions

Grid Code

BSC

CUSC

SQSS

European

Other

Other

Network Codes

modifications

This modification is required as a follow-on from CUSC modification [CMP328](#).

## What is the issue?

Currently within the CUSC there is no mechanism or specific process covering arrangements for Transmission connections that could have an impact on the Distribution system. Impacts are primarily direct physical impacts including but not limited to Fault Level rating, Thermal rating, Voltage control, Power Quality, Control and Protection systems. Impacts are also commercial where explicit Transmission access rights of the Distribution system owner or embedded Users may be impacted. Also, where commercially sensitive data, is held only by the ESO and the relevant CUSC Users and only publicly available in part. Without this modification there is not an appropriate process in place as a means of a Transmission User facilitating connections that trigger Distribution impact assessments that covers both physical impacts and explicit Transmission access rights impacts.

CUSC modification CMP328 aims to address this issue with the introduction of a "Distribution Impact Assessment" (DIA) process, which will establish a transparent process with clear and defined timescales for all parties involved.

As a result of the CUSC modification, it has been identified that changes will be required to the STC to enable and facilitate the changes within CMP328.

The Final Modification report for CMP328 was submitted to the Authority on the 10<sup>th</sup> November 2021 and is awaiting a decision, but it has been confirmed by the Authority that the associated STC/STCP changes will also need to be presented in order for a final decision to be made and implemented.

## Why change?

In the Proposer's view as part of the proposed CMP328 CUSC modification, it has been identified that changes will be required to Schedule 5 and Schedule 6 of the STC to enable and facilitate the changes within CMP328.

Changes are required to the NGENSO Connection Application which is submitted to TOs to support DNO impact assessments.

The NGENSO Connection Application will be amended in order to:

- Inform the TO if a Distribution Impact Assessment will be completed by the relevant DNO(s) and;
- If the Distribution Impact Assessment will be completed by the relevant DNO(s) during the TO Construction Offer process or once the TO Construction Offer has been completed and signed by all parties.

The CUSC modification also contains alternative solutions (WACM1 & WACM2) which have been presented to the Authority and will need to be reflected in the STC/STCP changes (if required).

**WACM1** - Enhancement of the current Third Party Works (TPW) process.

**WACM2** - An applicability criteria is used rather than the original Proposal blanket above 1MVA threshold for all new connecting assets to establish if a DIA is required.

## What is the solution?

### Proposer's solution

#### **Original Proposal and WACM2**

In the Proposer's view, changes will be required to STC Schedules 5 & 6 to ensure the TO is aware if a Distribution Impact Assessment will be required and where in the connection process this will be actioned.

#### **WACM1**

No changes are required to the core STC. This WACM will impact STCP18-6 only. A draft Modification for PM0120 was raised in February but it will be formally submitted to Panel in June which details the STCP changes required to reflect this alternative proposal.

### Legal text

The legal text for this change can be found in Annex 2.

### Proposer's assessment against the Applicable Objectives

<b>Proposer's assessment against STC Objectives</b>	
<b>Relevant Objective</b>	<b>Identified impact</b>
(a) efficient discharge of the obligations imposed upon transmission licensees by transmission licences and the Act	<b>Positive</b> Creates an efficient process for connections to the Transmission system that require a distribution impact assessment
(b) development, maintenance and operation of an efficient, economical and coordinated system of electricity transmission	<b>Neutral</b>
(c) facilitating effective competition in the generation and supply of electricity, and (so far as consistent therewith) facilitating such competition in the distribution of electricity	<b>Positive</b> Creates opportunities for generation to connect at both Transmission and Distribution
(d) protection of the security and quality of supply and safe operation of the national electricity transmission system insofar as it relates to interactions between transmission licensees	<b>Neutral</b>
(e) promotion of good industry practice and efficiency in the implementation and administration of the arrangements described in the STC	<b>Positive</b> Creates an efficient process for connections to the Transmission system that require a distribution impact assessment
(f) facilitation of access to the national electricity transmission system for generation not yet connected to the national electricity transmission system or distribution system;	<b>Positive</b> Provides a clear and documented process for

	generation to connect to the Transmission system
(g) compliance with the Electricity Regulation and any relevant legally binding decision of the European Commission and/or the Agency.	<b>Neutral</b>

### **Code Administrator consultation summary**

The Code Administrator Consultation was issued on the 6 April 2022 and closed on 29 April 2022 and received **2** responses from the ESO. One from the ESO and the other from NGET.

A summary of the responses can be found in the table below, and the full responses can be found in Annex 3.

<b>Code Administrator Consultation summary</b>	
<b>Question</b>	
Do you believe that the CM078 Original Proposal or WACM1/WACM2 better facilitates the Applicable CUSC Objectives?	<p><b>ESO-</b> CM078 has been raised as a result of a consequential CUSC modification which was not proposed by the ESO and requires the complete CUSC/STC/STCP solution to be completed before a holistic decision on the proposal can be made. The ESO does not believe that the Original and WACM2 proposals which this response covers are positive against any of the Objectives ((a), (b),(d),(e) are neutral) but are essential to address the changes required to support the proposed CUSC solutions.</p> <p>No STC changes have been identified in respect of WACM1 from the CMP328 CUSC modification that this modification follows on from. This will require an STCP change only that will be raised as a separate modification.</p> <p><b>NGET-</b> They believe WACM2 better meets the applicable objectives overall. WACM2 is based on GSP specific threshold criteria and so referrals to the DNO will be selective, meaning customer's projects are not delayed due to a DIA referral without objective reasons. This aligns with the proposed approach for CMP298. They do not believe the original proposal and WACM1 better meets the applicable objectives overall.</p>
Do you support the proposed implementation approach?	The ESO does not support the implementation approach for the Original Proposal. The ESO

	<p>believes this would lead to a significant change with internal and external process changes required along with ESO system changes to capture the concept of a DIA. They do support the implementation approach for WACM2.</p> <p><b>For NGET</b>, 10 working days is insufficient for resource changes, training, and communications. They suggest a longer implementation period following approval of CMP328/CM078/PMO120 is needed. For CMP328 implementation 12 months after Authority decision would seem more appropriate.</p>
<p>Do you have any other comments?</p>	<p><b>Yes.</b> While both the Original Proposal and WACM2 look to implement a robust process to address the assessment of potential impacts on the distribution system for transmission connections, (thus representing more of a “whole system”) approach for assessment they believe the proposed process to be slow and inefficient due to the process requiring each party to complete their specific piece of work before handing to the next. This could result in the connections process for transmission applicants taking 6-9 months to conclude under the current licenced timescales.</p> <p><b>Note:</b> After the Code Administrator Consultation was issued, it was identified that a minor amendment needs to be made to the submitted Schedule 6 legal text document as follows:</p> <p style="padding-left: 40px;">A NGESO <del>Connection</del> <b>Modification</b> Application submitted by NGESO to a Transmission Owner pursuant to Section D, Part Two, sub-paragraphs 2.2.1, 2.2.2, 2.2.3, 2.2.4 and 2.2.5 shall contain the following information:</p> <ul style="list-style-type: none"> <li>• Whether a Distribution Impact Assessment (DIA) will be completed by the relevant Distribution Network Operator(s).</li> </ul> <p>Where a DIA is required, whether this will be completed by the DNO(s) during the TO Construction Offer or once TO Construction Offer has been signed.</p>
<p><b>Legal text issues raised in the consultation- Yes (minor error identified)</b></p>	
<p>None</p>	
<p><b>EBGL issues raised in the consultation</b></p>	



None

**Panel recommendation/determination vote**

The Panel met on the 25 May 2022 to carry out their recommendation vote. They assessed whether a change should be made to the STC by assessing the proposed change and any alternatives against the Applicable Objectives.

**Panel comments on Legal text**

Ahead of the vote taking place, the Panel considered the legal text amendments proposed as part of the Code Administrator Consultation and agreed that they were typographical. The changes made can be found in Annex 4.

**Vote 1: Does the Original, facilitate the objectives better than the Baseline?**

Panel Member: **Robert Wilson, (Nationalgrid ESO)**

	Better facilitate s AO (a)?	Better facilitates AO (b)?	Better facilitates AO (c)?	Better facilitates AO (d)?	Better facilitates AO (e)?	Better facilitates AO (f)?	Better facilitates AO (g)?	Overall (Y/N)
Original	Neutral	Neutral	Neutral	Neutral	Yes	Neutral	Neutral	Yes
<b>Voting Statement</b>								
		<p>The requirement for this modification is a direct consequence of CUSC mod CMP328. If Ofgem approve the original or WACM2 of CMP328 then this STC change should also be made; if they approve WACM1 then it is not required. Each of the original and both WACMs also require STCP changes which are represented in modification PM0120.</p> <p>The ESO felt that the original or WACM2 of CMP328 in establishing a Transmission Impact Assessment process made significant changes to the connection process that might be better to be part of a more fundamental review while supporting WACM1 which enhanced the existing 3rd party works process.</p> <p>In this respect the ESO's support or otherwise of this consequential STC mod needs to be contextualised - the ESO supports it, if it is necessary, and assesses it as positive against objective (e) only in allowing efficient administration of the codes process.</p>						

Panel Member: **Neil Bennett, (SHET)**

	Better facilitate s AO (a)?	Better facilitates AO (b)?	Better facilitates AO (c)?	Better facilitates AO (d)?	Better facilitates AO (e)?	Better facilitates AO (f)?	Better facilitates AO (g)?	Overall (Y/N)
Original	Neutral	Neutral	Yes	Neutral	Yes	Yes	Neutral	Yes
<b>Voting Statement</b>								
		<p>SHET position is that WACM 2 should be implemented but cautious that the modifications to the STCPs that will be impacted have not fully been concluded and believe the vote should be held once these have been agreed to</p>						

Panel Member: **Milorad Dobrijevic (SPT)**

	Better facilitate s AO (a)?	Better facilitates AO (b)?	Better facilitates AO (c)?	Better facilitates AO (d)?	Better facilitates AO (e)?	Better facilitates AO (f)?	Better facilitates AO (g)?	Overall (Y/N)
Original	Yes	Neutral	Yes	Neutral	Yes	Yes	Neutral	Yes
Voting Statement								
		SPT are supportive of these changes as we feel it will enhance the current processes associated with connections or changes to the Transmission network						

Panel Member: **Mike Lee, (OFTO)**

	Better facilitate s AO (a)?	Better facilitates AO (b)?	Better facilitates AO (c)?	Better facilitates AO (d)?	Better facilitates AO (e)?	Better facilitates AO (f)?	Better facilitates AO (g)?	Overall (Y/N)
Original	Yes	Neutral	Yes	Neutral	Yes	Yes	Neutral	Yes
Voting Statement								
		The OFTOs are supportive of these changes. Whilst the impact is likely to be small on the OFTOs, there is clearly a weakness in the existing process and the proposals will enhance the current processes associated with connections or changes to the Transmission network						

Panel Member: **Richard Woodward (NGET)**

	Better facilitate s AO (a)?	Better facilitates AO (b)?	Better facilitates AO (c)?	Better facilitates AO (d)?	Better facilitates AO (e)?	Better facilitates AO (f)?	Better facilitates AO (g)?	Overall (Y/N)
Original	Neutral	Neutral	Neutral	Neutral	Yes	Neutral	Neutral	Yes
Voting Statement								
		<p>This modification enables a corresponding CUSC modification to be implemented, if approved by Ofgem. We have expressed our views in relation to the CUSC change and believe there is an appropriate route to implement the changes via WACM2.</p> <p>We note that a certain amount of procedural detail may be required via STC Procedure changes and are disappointed that these have not been brought to Panel at the same time as CM078. This detail may be difficult to agree, and we believe Ofgem need the full picture, including draft versions of STCPs or more preferably STC Panel's determination - prior to making their determination on the package of changes.</p>						

**Vote 2 – Which option is the best?**

Panel Member	BEST Option?	Which objectives does this option better
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		facilitate? (If baseline not applicable).
Robert Wilson	Original	E
Neil Bennett	Original	C, E, F
Milorad Dobrijevic	Original	A, C, E, F
Mike Lee	Original	A, C, E, F
Richard Woodward	Original	E

### Panel conclusion

The Panel, by majority determined that the Proposer's solution should be implemented.

## When will this change take place?

### Implementation date

Implementation timelines in line with CUSC modification CMP328 and STCP modification PM0120.

CMP328 solutions	STC changes required	STCP changes required
Original Proposal and WACM2	STC Schedules 5 & 6 via CM078	STCP18-1 and STCP18-6 via PM0120
WACM1	No STC change required	STCP18-6 via PM0120

It is recommended by the Code Administrator that the STC Panel gives advance approval to implement the corresponding STCP changes to facilitate the CMP328 solution decided by the Authority. The expectation is that the Authority will issue decisions for CMP328 and CM078 on the same day. This will enable an efficient implementation of all three modifications dependant on the decision as follows:

**Original Proposal** - 6 months after Authority decision

**WACM1** – 1 month after Authority decision

**WACM2** – 12 months after Authority decision

### Date decision required by

If the proposed governance route is accepted by Panel, the Final Modification Report for CM078 will be submitted to the Authority on 6 June 2022. The decision is required as soon as possible to enable CMP328 - if this is not implemented by November 2022, the benefits of this would be reduced.

### Implementation approach

No systems or processes will need to be amended as a result of this proposal.

## Interactions

- |   |  |  |                               |
|---|--|--|-------------------------------|
| <input type="checkbox"/> Grid Code              | <input type="checkbox"/> BSC                 | <input checked="" type="checkbox"/> CUSC | <input type="checkbox"/> SQSS |
| <input type="checkbox"/> European Network Codes | <input type="checkbox"/> Other modifications | <input type="checkbox"/> Other           |                               |

This modification is required as a follow-on from CUSC modification CMP328.

## Acronyms, key terms and reference material

Acronym / key term	Meaning
BSC	Balancing and Settlement Code
CM	Code Modification
CUSC	Connection and Use of System Code
MVA	Mega Volt Ampere
STC	System Operator Transmission Owner Code
SQSS	Security and Quality of Supply Standards
DIA	Distribution Impact Assessment
DNO	Distribution Network Operator
ESO	Electricity System Operator
TO	Transmission Owner
TOCO	Transmission Owner Connection Offer
NGESO	National Grid Electricity System Operator

### Reference material

- [CMP328 - Connections Triggering Distribution Impact Assessment](#)

## Annexes

Annex	Information
Annex 1	Proposal form
Annex 2	Legal Text
Annex 3	Code Administrator Consultation responses
Annex 4	Legal Text (Post Code Administration Consultation) with minor change