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CUSC Modification Proposal Form

CMP446: Increasing the lower threshold in England and Wales for Evaluation of Transmission Impact Assessment

Overview: The current connections process can be improved to facilitate the timely connection of distribution projects that have minimal impact on the Transmission Network to help meet net zero and Clean Power 2030. This proposal raises the lower threshold at which an Evaluation of Transmission Impact Assessment[1] must be undertaken[2] in England and Wales.

Modification process & timetable

1. **Proposal Form**
   17 January 2025
2. **Workgroup Consultation**
   04 February 2025 - 10 February 2025
3. **Workgroup Report**
   10 March 2025
4. **Code Administrator Consultation**
   10 March 2025 - 17 March 2025
5. **Draft Final Modification Report**
   28 March 2025
6. **Final Modification Report**
   28 March 2025
7. **Implementation**
   02 May 2025

Status summary: The Proposer is raising a modification and is seeking a decision from the Panel on the governance route to be taken.

This modification is expected to have a: High
Impact on Transmission Owners, Distributed Connected Generators, Distribution Network Operators, Independent Distribution Network Operators, Electricity System Operator and Consumers

Proposer's recommendation of governance route	Urgent modification to proceed under a timetable agreed by the Authority (with an Authority decision)	
Who can I talk to about the change?	**Proposer :** Martin Cahill Martin.Cahill1@nationalenergyso.com 07840722302	**Code Administrator Contact:** Catia Gomes catia.gomes@nationalenergyso.com

[1] https://www.ofgem.gov.uk/sites/default/files/2024-11/Connections_Reform_TMO4%2B_Licence_Changes_Policy_Consultation.pdf - see para 5.6, This mod is made against the current CUSC baseline.

[2] Link to 6.5.1(e) in the CUSC identifies what requires an Evaluation of Transmission Impact Assessment https://www.neso.energy/document/300876/download.

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Contents

What is the issue? 3

Why change? 3

What is the proposer's solution? 5

Proposer's assessment against CUSC Non-Charging Objectives 6

Proposer's assessment of the impact of the modification on the stakeholder / consumer benefit categories 7

When will this change take place? 8

Implementation date 8

Date decision required by 9

Implementation approach 9

Proposer's justification for governance route 9

Interactions 10

Reference material 11

What is the issue?

The Connections Action Plan[3] (CAP) is a joint publication by the Department for Energy Security and Net Zero (DESNZ) and Ofgem. It sets out ambitious plans to significantly accelerate connections. The CAP highlights that over the last five years the volume of connection applications to the Transmission Network has grown approximately tenfold.

Within the CAP, there is a request for networks (under section 3.5b) to "*assess and review the thresholds for Transmission Impact Assessments (TIA)s; to accelerate connection timescales for distribution customers*". This is because distribution connections are increasingly dependent on Transmission reinforcements, resulting in the conditional connection dates offered (which only cover Distribution Network aspects) being revised once the Transmission impacts are identified and factored into the connection dates. These revisions can sometimes change dates by as much as 10 years, frequently making such projects unviable. This uncertainty creates risk for project developers and investors.

Since publication of the CAP in November 2023, the Transmission and Distribution Connection queue has continued to grow; the combined queue has increased from 574GW in November 2023 to 739GW by October 2024. While connections reform[4] will address these challenges and put customers and stakeholders at the heart of change, there is an opportunity to improve the connection process for smaller Distributed Generation (DG) who have minimal impact on the Transmission System.

CUSC Section 11[5] defines the classification of Embedded Power Stations by size (small/medium/large), linking each size to specific requirements. It then identifies by classification as "relevant" that small and medium DG are required to go through an Evaluation of Transmission Impact Assessment ahead of connection. This process assesses the DG impact on the Transmission Network and identifies whether reinforcement is required. Under CUSC the default position for DG to go through an Evaluation of Transmission Impact Assessment for >1MW in England and Wales (E&W) unless notified otherwise. Networks have recently reviewed the suitability of this lower threshold for this process and have concluded that improvements can be made.

Why change?

National Grid Energy Transmission (NGET) with support from National Energy System Operator (NESO), has analysed the impact on the E&W Transmission Network of increasing the lower threshold for the Evaluation of Transmission Impact Assessment process. A paper was taken to the Connections Delivery Board (CDB)[6] and the Connections Policy Advisory Group (CPAG)[7] reviewing the current lower limit. This paper is included in the Reference Material section of this Proposal. The CDB paper sets out the impacts of changing the lower threshold and analyses the effects on the Transmission Network. It explains that the original 1MW threshold has been in place since 2016. This has given Networks increased visibility and experience of these smaller projects going

[3] Connections Action Plan, a joint publication by The Department for Energy Security and Net Zero and Ofgem
[4] Via CUSC modifications CMP434 and CMP435 and STC modification CM095
[5] CUSC Section 11 – Interpretation and Definitions – definition of Distributed Generation
[6] The ENA publish the Connections Delivery Board minutes here CDB minutes 31/10/24
[7] NESO publish the Connections Policy Advisory Group minutes here CPAG minutes 12/09/24

through the Connection Process. This has resulted in greater confidence in the relevant attrition rates and trends. Further there have also been significant changes to the assumptions now being used to assess the impact on the Transmission Network.

The paper concludes that NGET and NESO support increasing the lower threshold from 1MW to 5MW for E&W DG. This would mean that DG projects in E&W between 1MW and 5MW would sit outside the Evaluation of Transmission Impact Assessment process which would likely allow them to connect earlier as they would no longer be linked to Transmission System reinforcement. This would improve the efficiency of the process by allowing the TOs to focus on the projects that have the biggest Transmission impact. It would also improve the customer (both DNO/IDNO and EG) experience as these smaller projects would no longer have to go through the process or wait for an assessment to conclude. This means they would not have the risk associated with Transmission Network build delaying their connection date and adding cost.

Note that while the CDB paper did review lower-level limits across all of GB, the conclusions for the Scottish networks differ. This reflects the differences between the networks (Scotland compared with E&W) as the system voltage at the Transmission/Distribution (T/D) interface are different, the relative size of Grid Supply Points (GSPs) are different and the relative demand requirements at the load centres are different. This impacts the requirements for the Scottish TOs to plan, develop and maintain an efficient, coordinated and economical system of Electricity Transmission. If the same lower limit threshold was set in Scotland, it could mean that Network assets were constructed that were oversized for the demand that they were required to supply. This would be uneconomic and inefficient – and therefore not be in the best interests of customers who ultimately have to bear the costs of this investment. Therefore, it is not proposed to include changes to these limits for DG in Scotland within this CUSC change proposal. The CDB paper explains that:

- Scottish Power Transmission (SPT) / Scottish Power Distribution (SPD) believe that the current lower threshold of 200kW in their area strikes the right balance between accelerating connections ahead of Transmission reinforcements while maintaining a manageable level of risk in both the SPD Distribution and SPT Transmission Scottish Transmission Networks. This is subject to regular review by SP Energy Networks.
- Scottish and Southern Electricity Networks (SSEN) Transmission, working in collaboration with SSEN Distribution, have undertaken a review of the Transmission Impact Assessment threshold across the north of Scotland Transmission Area. The review concluded that the threshold can be raised to 200kW for the majority of GSPs in the SSEN Transmission Network. A four-fold increase in the threshold – from 50kW to 200kW – will see more projects being able to connect without the cost and delay that comes with this assessment needing to be carried out. SSEN Transmission will continue to review the lower limit threshold and assess any future opportunities to further increase it or identify any emerging concerns around network security that might require it to be adjusted.

What is the proposer's solution?

As NGET are unable to raise a CUSC modification, NESO will act as the proposer for this modification. It is expected that NGET will offer significant support to the proposer as the analysis underpinning and justifying this change was conducted by NGET.

It is proposed that that the lower Transmission impact threshold will be raised from 1MW to 5MW and codified[8] within the CUSC for E&W. Doing so will significantly accelerate the connection of DG sized between 1-5MW as they would no longer have to go through an Evaluation of Transmission Impact Assessment or wait for the completion of any Transmission reinforcement identified in the process.

A 5MW lower limit of Evaluation of Transmission Impact Assessment threshold has been identified as having an appropriate balance between improving the efficiency of the process for smaller DG and minimising the risk of impact on the Transmission System in England and Wales.

This would mean that from the CUSC Implementation Date (if this modification is approved):

- Any new sub 5MW DG connection would not require an Evaluation of Transmission Impact Assessment.
- Sub 5MW applications currently in flight or not yet connected projects which are provided for in the CUSC NESO/(I)DNO agreements will no longer be subject to the Evaluation of Transmission Impact Assessment processes or any associated requirements. These projects will effectively be removed and the agreements adapted as required to reflect this.
- Any already connected sub 5MW DG would not be removed from existing BCAs and their existing terms and conditions would be unchanged. While this potentially introduces some differences in the terms and conditions between Generators who connect before and after the new lower limit is in place, the small benefit in changing agreements retrospectively would be significantly outweighed by the complexity in doing so. This is because there are already ~2.5GW of these projects connected and the system impact of removing them would need to be fully evaluated and managed. This could potentially be a subsequent CUSC modification, but to include within the scope of this proposal would mean there would not be time to implement ahead of Connections Reform. This could also have an impact on Regional Development Programmes and Technical Limits.
- Note the interaction with CMP434 and CMP435.

  Further detail on the interaction with CMP435 is included in the implementation section of this proposal.

[8] Section 6.5 of the CUSC

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Draft legal text

Draft legal text to be agreed in the Workgroup phase but initial thoughts are included below. Note that there is an interaction with the Connections Reform CUSC Modifications which the Workgroup would need to consider.

CUSC Section	Summary of proposed changes
6	6.5.1 (f)– Include a threshold for Evaluation of a Transmission Impact in England and Wales in a new sub paragraph[9]
Schedules	Updating the threshold from 1MW to 5MW for DG in E&W in CUSC Schedule 2 Exhibit 1A & Appendix G. 3. For the purposes of the **Evaluation of Transmission Impact** and unless otherwise indicated by **The Company** under **CUSC** 6.5.1(b), **Embedded Power Stations** of 1MW and above will be deemed to have an impact on the **National Electricity Transmission System** and must be included in Appendix G Schedule 1.

What is the impact of this change?

Proposer's assessment against CUSC Non-Charging Objectives	
Relevant Objective	**Identified impact**
(a) the efficient discharge by the licensee of the obligations imposed upon it under the Electricity Act 1989 and by this licence;	Positive A more efficient Transmission/Distribution interface will help the efficient discharge of network licence obligations (NESO, NGET and DNOs)
(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 Quicker connections for viable projects needed to deliver Net Zero. Currently project developers are waiting to connect, and this is hindering progress to deliver Net Zero.
(c) Compliance with the Electricity Regulation and any relevant legally binding decision of the European Commission and/or the Agency *; and	Neutral

[9] This new sub paragraph will avoid any legal text conflicts with CMP434/435.

(d) Promoting efficiency in the implementation and administration of the CUSC arrangements.	Positive The existing process imposes obligations on 1-5MW DG that are disproportionate to their impact on the Transmission System
*The Electricity Regulation referred to in objective (c) is Regulation (EU) 2019/943 of the European Parliament and of the Council of 5 June 2019 on the internal market for electricity (recast) as it has effect immediately before IP completion day as read with the modifications set out in the SI 2020/1006.	

Proposer's assessment of the impact of the modification on the stakeholder / consumer benefit categories	
Stakeholder / consumer benefit categories	**Identified impact**
Improved safety and reliability of the system	Neutral NGET analysis shows the limited Transmission System impact of 1-5MW DG within the design and connection process.
Lower bills than would otherwise be the case	Positive This reduces the risks (and hence costs) on 1-5MW DG developers when developing their projects which will ultimately benefit end consumers by reducing their bills.
Benefits for society as a whole	Positive This societal benefits include lowering bills and reducing environmental damage by reducing the risk on 1-5MW DG developers when developing their projects and speeding up their connection. This would also facilitate the connection of E&W community energy projects which are typically under 5MW.
Reduced environmental damage	Positive The proposal will support quicker connections for viable projects needed to deliver Net Zero. Currently project developers are waiting to connect, and this is hindering progress to deliver Net Zero.
Improved quality of service	Positive This means that 1-5MW DG developers will no longer have to go through the Evaluation of Transmission

	Impact Assessment process. This will improve their connection journey and make it considerably quicker for them to connect and they will have an improved quality of service.

When will this change take place?

Implementation date

The intention would be that this proposal is implemented in advance of the gate 2 submission window (CMP435), and it will apply to relevant generators in the current connection queue. This avoids having to change the connection conditions of existing Generators (~2.5GW), with unknown impacts. However, the potential introduction of connections reform is an opportunity to remove the 1-5MW DG projects from the connections process if this proposal was approved ahead of the implementation of CMP435.

Interaction with CMP434/CMP435

- To realise the full benefit of this modification, it would need to be implemented before the proposed Gate 2 window opens for CMP435*. This would remove those Distributed Generators projects less than 5MW in England and Wales to go through the Evaluation of Transmission Impact Assessment process.
- If CMP434 and CMP435 are not approved or delayed then we would still seek to progress this modification, but the urgency requirement could fall away.
- CMP434/435 proposes that any projects which are under the lower limit Evaluation of Transmission Impact Assessment thresholds will not have to go through any Gate 2 process.
- Implementation of this modification before the Gate 2 window opens will release around 400 DG projects from having to demonstrate Gate 2 compliance or alignment with Clean Power 2030 targets.
- Note that this modification can be implemented after the implementation dates of CMP434 and CMP435 but must be before the Gate 2 window opens.
- If this mod is not implemented before the Gate 2 window opens, prospective projects would still be part of an Evaluation of Transmission Impact Assessment, with associated costs and delays.
- CMP434 WACM1 introduces specific MW sizes under categories to legal text, if taken forward this modification may have to amend this text to reference <5MW generators in England and Wales being exempt from process.
- If this modification is approved and implemented prior to CMP434/435 implementation, the impacted DG projects would be removed as part of the CMP435 process from the BCA's.
- If this modification is approved and implemented after CMP434/435, we would still use the mechanics of CMP435 to remove these DG projects from the BCA's.

*CMP434 and CMP435 propose the implementation of a new connections process based on an annual application window and two formal Gates. Under this, Gate 1 will provide an indicative connection date and location following batched assessment. Gate 1 would also give the right to the capacity and technology applied for (subject to the applicant meeting the Gate 2 criteria). Gate 2 will be used to determine project specific queue position, confirm connection date and location, and include the requirement to provide User Commitment from point of acceptance of their Gate 2 Offer and comply with the Queue Management Milestones.

Date decision required by

A decision date prior to the proposed Gate 2 window in CMP435[10] opening is requested to more cleanly allow the existing 1-5MW DG in the current queue to benefit from this Proposal.

Implementation approach

This Proposal would benefit from being designated as Urgent by the Authority, as it would need to be implemented prior to the proposed Gate 2 window in CMP435 to allow the existing 1-5MW DG currently in the queue to benefit as connections reform is implemented. Additionally, it will ensure that TOs are only assessing projects that have a bigger impact on the Transmission System. If this Proposal is not implemented ahead of connections reform, we would be requiring 1-5MW DG to demonstrate Gate 2 compliance and alignment with the Clean Power 2030 targets unnecessarily.

Proposer's justification for governance route

We believe this is an imminent issue that if not urgently addressed may cause a significant commercial impact on parties, consumers or other stakeholder(s).

We are requesting urgency to align with the connection reform timeline as there is significant commercial benefit for impacted DG of aligning the potential approval of this Proposal with the implementation of CMP435. This proposal is expected to impact existing 1-5MW E&W DG currently in the combined Transmission and Distribution queue. This is estimated to be ~400 DG projects with ~850MW of mainly renewable and storage potential capacity. This will likely include community-based projects as typically community-based projects are smaller than the average DG going through the Evaluation of Transmission Impact Assessment process. In addition, it will also include commercial premises installing larger roof top solar arrays to reduce their demand. These projects will help meet the Government's 2030 Clean Power targets.

As the NGET analysis demonstrates, the existing Evaluation of Transmission Impact Assessment process imposes CUSC obligations on 1-5MW DG in E&W that are disproportionate to their impact on the Transmission System. In addition, there is significant commercial benefit for these developers in not being within scope of the Evaluation of Transmission Impact Assessment process as amended through connections

[10] CMP435 Final Modification Report

reform. For example, the amended Evaluation of Transmission Impact Assessment process will obligate them to meet Gate 2 requirements and be aligned to Clean Power 2030 targets. It will also impose substantial delay if the Evaluation of Transmission Impact Assessment process links the DG projects to Transmission Networks reinforcements. These delays have sometimes been by as much as 10 years. This uncertainty creates risk for project developers and investors and could make projects unviable.

There is also the added benefit that this Proposal increases the efficiency of the Evaluation of Transmission Impact Assessment process by allowing networks (TOs and DNOs) to focus resources on the projects that have the bigger impact on the Transmission Network. This efficiency gain will help implement connections reform which would help given the considerable amount of rework needed by CMP435 to reorder the queue to bring forward connection dates for the benefit of end consumers.

If urgency is not granted it would mean the above benefits may not be realised. It may result in a less efficient connection process with a resource impact on networks (Transmission and Distribution) and developers disproportionate to the impact of these projects on the network. It will also likely delay the impacted projects connecting to the network with the obvious potential consequence to meeting the Governments 2030 Clean Power target.

Interactions

☐Grid Code	☐BSC	☐STC	☐SQSS
☐European Network Codes	☐ EBR Article 18 T&Cs[1]	☐Other modifications	☐Other

Acronyms, key terms and reference material

Acronym / key term	Meaning
BCA	Bilateral Connection Agreement
BSC	Balancing and Settlement Code
CAP	Connections Action Plan
CDB	Connections Delivery Board
CMP	CUSC Modification Proposal
CPAG	Connections Policy Advisory Group
CUSC	Connection and Use of System Code
DESNZ	Department for Energy Security and Net Zero

DG	Distributed Generation
DNO	Distribution Network Operator
EBR	Electricity Balancing Regulation
EG	Embedded Generation
E&W	England and Wales
GSP	Grid Supply Point
IDNO	Independent Distribution Network Operator
NESO	National Energy System Operator
NGET	National Grid Energy Transmission
SPT	Scottish Power Transmission
SSEN	Scottish and Southern Electricity Networks
STC	System Operator Transmission Owner Code
SQSS	Security and Quality of Supply Standards
T/D	Transmission/Distribution
T&Cs	Terms and Conditions
TO	Transmission Owner
TIA	Transmission Impact Assessment

Reference material

Please see following the CDB paper presented at Connections Process Action Group and Connections Delivery Board reviewing the TIA thresholds. This can be found in Annex 1.

Annexes	
Annex 1	Transmission Impact Assessment Threshold position paper