Connection and Use of System Code (CUSC) CMP446: Increasing the lower threshold in England and Wales for Evaluation of Transmission Impact Assessment

Decision	The Authority[1] determines that Workgroup Alternative CUSC Modification (WACM) 1 of this modification be made[2]
Target audience	National Energy System Operator (NESO), Parties to the CUSC, the CUSC Panel and other interested parties
Date of publication:	12 May 2025
Implementation date:	12 May 2025 (or as soon as possible thereafter)

Background

The Evaluation of Transmission Impact Assessment (TIA) is the process by which NESO assesses the impacts that a project seeking to connect to the distribution network will have on the transmission network, in order to identify whether reinforcement work is required to facilitate the connection. If the project is assessed to have sufficient impact, its connection will then be subject to the completion of these works on the transmission network, resulting in increased costs and potential delays.

Under existing arrangements, a TIA is required for projects above 1MW in size in England and Wales and 200kW in Scotland. We refer to this as the "TIA threshold".

Our November 2023 joint Ofgem / Government Connections Action Plan (CAP)[3] set out an action for networks to "*assess and review the thresholds for Transmission Impact Assessments; to accelerate connection timescales for distribution customers*". This was on the

[1] References to the "Authority", "Ofgem", "we" and "our" are used interchangeably in this document. The Authority refers to GEMA, the Gas and Electricity Markets Authority. The Office of Gas and Electricity Markets (Ofgem) supports GEMA in its day to day work. This decision is made by or on behalf of GEMA.
[2] This document is notice of the reasons for this decision as required by section 49A of the Electricity Act 1989.
[3] Connections Action Plan: Speeding up connections to the electricity network across Great Britain

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basis that distribution connections have become increasingly dependent on reinforcements at transmission level, which often has the effect of increasing costs and creating delays to connection dates, sometimes by up to 10 years, and in some cases rendering the projects unviable. This resultantly leads to uncertainty and risks impacting investor confidence in what may otherwise be good quality, viable, clean energy projects.

In the 18 months since publication of the CAP, the transmission and distribution connection queue has continued to grow. The latest data to end March 2025 indicates that the queue has now grown from 574GW in November 2023 to 771GW, comprising 598GW at transmission and 173GW at distribution.

We recently approved CUSC modifications CMP434 and CMP435, as well as associated licence changes and Methodologies, to deliver a reformed connections process.[4] The goal of connections reform is to increase the rate of connection for Clean Power 2030 aligned projects. It achieves this by applying readiness and needed criteria to the connections queue entry requirements to ensure only viable, needed projects receive a connection offer with confirmed terms, and by moving to a gated window process to aid network planning.[5]

The first major step in the process is to apply these new requirements to the entire contracted background (ie the existing connections queue), a process known as "Gate 2 to Whole Queue".[6] We expect this step to take place shortly in summer 2025.

It has been recognised that amending the TIA threshold ahead of that process could improve the connection process for smaller distributed generation projects, which have minimal impact on the transmission system. That is because, if the TIA threshold is increased ahead of Gate 2 to Whole Queue, fewer projects are likely to require transmission reinforcement works, which could lead to accelerated connection dates.

[4] Decision on Connections Reform Package (TM04+) | Ofgem
[5] There will be two gated application windows per year.
[6] Noting that there are protections for certain categories of projects from the new requirements, including those due to connect very soon. For more details please see the connections reform decision package (as per link above).

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An industry group, including representatives from NESO, Transmission Owners (TOs), and Distribution Network Operators (DNOs), began assessing the viability of raising the TIA thresholds in response to the CAP action in early 2025. This led to a paper being taken to the Connections Delivery Board (CDB) in October 2024 recommending that the TIA threshold be raised from 1MW to 5MW in England and Wales, with Scotland remaining unchanged at 200kW due to regional differences, with the aim of making the assessment process more proportionate and efficient.[7]

The paper concluded that both National Grid Electricity Transmission (NGET) (the relevant TO for England and Wales) and NESO supported increasing the lower threshold from 1MW to 5MW for distributed generation projects in England and Wales. This would mean in practice that projects in England and Wales between the current threshold of 1MW and the new uplifted threshold of 5MW would then sit outside of the TIA process, meaning they could no longer trigger reinforcement works as part of their connection. This is intended to facilitate earlier connection dates for projects between 1MW and 5MW and reduced costs, therefore improving the overall customer experience. This is also intended to improve the efficiency of the process by allowing NGET / NESO to focus on the projects that have more significant impact on the transmission system.

Following the paper receiving support at CDB, NESO ("the Proposer") proceeded to raise CMP446 ("the Proposal").

TIA thresholds in Scotland

The TIA thresholds in Scotland, which are lower at 200kW, have not been considered as part of this process and are not within scope of the Proposal. Due to the urgency of the Proposal, which aims to raise the TIA thresholds in England and Wales in time for the Gate 2 to Whole Queue process, combined with the additional complexity of assessing the thresholds in Scotland, we agree with the Proposer that a review of the thresholds in Scotland is a separate defect which can more appropriately be assessed by a separate future modification.

[7] Minutes from that meeting are available here - Microsoft Word - V1 20241031 October Connections Delivery Board Meeting Minutes

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As we set out during the modification development process, and as noted in the Final Modification Report (FMR), we welcome that discussions took place in the Workgroup meetings regarding the threshold in Scotland. We also note and welcome that work is underway separately to review those thresholds and we will review on their merits any such proposals which come to Ofgem for decision.

As a result of the above we have not discussed Scotland further here, as it lies outside the scope of the Proposal.

The Proposal

The Proposal was raised by the Proposer on 14 January 2025.

The Proposal seeks amendments to CUSC Section 6 and CUSC Schedule 2, to raise the lower threshold at which TIA must be undertaken, in England & Wales only. The Original Proposal would change this from 1MW to 5MW by reference to the Registered Capacity of a project, being the full load capacity of a generation facility (less any amount required to power the facility) and not accounting for any on site demand . This would mean that any new connection application under 5MW going forward would not require an Evaluation of TIA, and that projects in the current queue under 5MW that have already gone through the process, but have not yet connected, will no longer be subject to the assessment or any associated requirements that resulted from it. Finally, projects that have already connected would remain subject to the terms of their existing agreements, with terms and conditions unchanged.

The Proposer considers the Proposal to be positive against Applicable CUSC Objectives (ACOs) (a), (b) and (d), and neutral against the ACO (c).[8]

[8] For reference, the Applicable CUSC Objectives are:
a) the efficient discharge by the licensee of the obligations imposed upon it under the Electricity Act 1989 and by this licence;

The CUSC Panel convened on 17 January 2025. Following the Panel meeting, we received a request from the Panel that the Proposal be treated as an urgent modification proposal. We subsequently granted urgency on 22 January 2025, for the reasons set out in the approval letter.[9]

The Workgroup held their Workgroup Consultation between 06 February 2025 and 13 February 2025. The consultation received 21 non-confidential responses and one confidential response.

Following the Workgroup Consultation, seven Alternative Requests were submitted by consultation respondents and Workgroup members. This resulted in five Workgroup Alternative CUSC Modifications (WACMs) being accepted by the Workgroup.

The Code Administrator Consultation (CAC) was issued on 10 March 2025 and closed on 17 March 2025. The CAC received 16 responses.

Alternatives

CMP446 resulted in the following five WACMs:

- WACM 1 - *'Export Capacity' instead of 'Registered Capacity' for measuring the Threshold:*
  As per the Original Proposal but using 'Export Capacity' instead of 'Registered Capacity' for measuring the threshold. Export Capacity measures the maximum amount of power that can be transferred from the generation facility to the distribution system

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;
c) compliance with the Electricity Regulation and any relevant legally binding decision of the European Commission and/or the Agency; and
d) promoting efficiency in the implementation and administration of the CUSC arrangements.

[9] Decision on urgency treatment of 'CMP446: Increasing the lower threshold in England and Wales for Evaluation of Transmission Impact Assessment' | Ofgem

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(therefore accounting for any usage of power pre-export including from on site demand)..

- WACM 2 - *Obligation on NESO to publish a list of each Grid Supply Point (GSP) and actively state the TIA threshold to be used as agreed between the NESO, DNO and TO – using Registered Capacity for measuring the threshold:*
  The default TIA threshold would be set at 5MW unless otherwise stated in the published list.

- WACM 3 - *Capping the capacity of projects benefitting from the higher threshold, per GSP, per 5-year period – using Registered Capacity for measuring the threshold:*
  Limiting the total of 1-5MW projects that can connect without a TIA in England and Wales to 25MW per GSP per 5-year period.

- WACM 4 - *Capping the capacity of projects benefitting from the higher threshold, per GSP, per 5-year period, – using Export Capacity for measuring the threshold*:
  As per WACM 3 but using 'Export Capacity' instead of 'Registered Capacity' for measuring the threshold.

- WACM 5 - *Obligation on NESO to publish a list of each GSP and actively state the TIA threshold to be used as agreed between the NESO, DNO and TO – using Export Capacity for measuring the threshold*:
  As per WACM 2 but using 'Export Capacity' instead of 'Registered Capacity' for measuring the threshold.

CUSC Panel[10] recommendation

At the CUSC Panel meeting on 28 March 2025, the Panel:

[10] The CUSC Panel is established and constituted from time to time pursuant to and in accordance with section 8 of the CUSC.

- recommended unanimously that the Original Proposal, WACM 1, and WACM 2 better facilitated the Applicable CUSC Objectives (ACOs).
- recommended by majority that WACM 3, WACM 4, and WACM 5 better facilitated the ACOs.
- did not reach a consensus on which solution best met the ACOs. Out of nine votes, three voted for WACM 5, and two voted for the Original, WACM 1 and WACM 4 respectively.

Our decision

We have considered the issues raised by the Proposal and the FMR dated 28 March 2025. We have considered and taken into account the responses to the industry consultation(s) on the Proposal which are attached to the FMR, as well as the votes of the Workgroup and the Panel.[11]

Having assessed the Original Proposal and WACMs 1 - 5, we have concluded that:

- the Original Proposal, WACM 1, WACM 2, WACM 3, WACM 4 and WACM 5 better facilitate the achievement of ACOs (a), (b), and (d) as compared to the baseline, and have a neutral impact on better facilitating the achievement of ACO (c).
- overall, implementation of WACM 1 will best facilitate the achievement of the relevant ACOs;[12] and
- directing that WACM 1 be approved is consistent with our principal objective and statutory duties.[13]

[11] CUSC modification proposals, modification reports and representations can be viewed on NESO's website at: https://www.neso.energy/industry-information/codes/connection-and-use-system-code-cusc/cusc-modifications
[12] As set out in Standard Condition E2 of the Electricity System Operator Licence.
[13] The Authority's statutory duties are wider than matters which the Panel must take into consideration and are detailed mainly in the Electricity Act 1989 as amended.

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Reasons for our decision

Consideration of WACM 1 against the ACOs

We consider WACM 1 will best facilitate ACOs (a), (b) and (d) (and have a neutral impact on ACO (c)) for the reasons set out below.

a) the efficient discharge by the licensee of the obligations imposed upon it under the Electricity Act 1989 and by this licence;

We agree with the Proposer that a more efficient transmission/distribution interface will help the efficient discharge of licence obligations on NESO. This will be achieved by increasing the TIA threshold in England and Wales from 1MW to 5MW to ensure more distribution projects that have limited (if any) impact on the transmission system can progress to connection more quickly, without the need for assessment of their impact on the transmission network. This will also focus resources on the assessment of larger projects which have a more significant impact on the transmission system, thereby increasing the efficiency of the processing of those projects. As per the rationale in ACO(d) below, WACM1 better meets ACO(a) than the original proposal, as by using Export Capacity it better reflects the impact a site could have on the transmission network. Both proposals better meet ACO(a) compared to the baseline.

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;

We agree with the Proposer that the Original Proposal would result in quicker connections for projects, which wider reform seeks to ensure are viable projects that are needed to deliver Clean Power 2030 objectives and Net Zero. Enabling more sites to connect in a timely manner will in turn increase competition in the generation of energy, to the benefit of consumers.

We also agree with the proposer of WACM 1 that, as this WACM will have the effect of enabling an even greater volume of timely connections by allowing more projects to progress

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without TIA, this will further facilitate ACO (b) in comparison to the Original Proposal and the baseline.

d) Promoting efficiency in the implementation and administration of the CUSC arrangements.

We agree with the Proposer that the baseline of requiring projects between 1MW to 5MW to undergo TIA imposes obligations on those projects and the NESO/DNOs that are disproportionate to their impact on the transmission system. We therefore consider that raising the TIA threshold from 1MW to 5MW, as proposed in the Original Proposal, will promote efficiency in the implementation and administration of the CUSC arrangements, compared to the baseline, by removing these disproportionate obligations, without going so far as to allow so many through that it increases risk on the transmission system (which would in turn reduce efficiency).

We consider that WACM 1 will even better facilitate ACO (d) relative to the Original Proposal, as this WACM will have the effect of removing these disproportionate obligations on an even greater volume of connections, ie those where the Export Capacity is still in the range 1-5MW (even if the Registered Capacity is higher).

We also agree with the proposer of WACM 1 that this WACM has the additional benefit over the Original Proposal of the TIA threshold being determined by the Export Capacity of the site, as opposed to Registered Capacity. We consider this further increases the efficiency of the process by better reflecting the impact a site could have on the transmission network, ie by reflecting the actual amount of export possible from the site to the grid, as opposed to using Registered Capacity which does not take account of on site demand.

Risks of WACM 1

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We acknowledge the potential risk of gaming the system, in that a large volume of sub-5MW projects could come forward in response to the raising of the TIA threshold and, in aggregate, result in an unforeseen material impact on the transmission system (for example by increasing curtailment risk to other connected projects), and / or result in misalignment with the Clean Power 2030 pathways set out in Government's Clean Power 2030 Plan (as projects that progress without TIA do not contribute to the Clean Power 2030 capacities). This could include developers of projects larger than 5MW seeking to circumvent the TIA process by splitting out their projects to create multiple connections under the 5MW threshold. We consider that these impacts would have a detrimental impact on ACO (a) – "the efficient discharge by the licensee of the obligations imposed upon it under the Electricity Act 1989 and by this licence".

We expect DNOs and NESO to closely monitor the impact of the change. We note the suggestion by a Workgroup Member that the total MW per technology of projects between 1MW to 5MW connecting could be reported by DNOs as part of the Appendix G process. We expect DNOs and NESO to work together to formulate an effective reporting process that enables the impacts of the change to be understood, and consider that, in the event this becomes a concern, this defect could be corrected by a further modification in future.

We are clear that we want to achieve a situation where a TIA threshold is used that strikes the balance of facilitating timely connections for a greater volume of projects that would otherwise have negligible impact on the transmission system / Clean Power 2030 capacities, without going too far and resulting in a process that connects too high a volume of these projects with negative consequences.

Reasons for not selecting WACM 2, WACM 3, WACM 4 and WACM 5

There are in effect three variables that in combination define the WACMs against one another and against the Original Proposal, as follows:

1) Use of Export Capacity vs Registered Capacity
2) Capping the capacity of projects benefitting from the higher threshold at each GSP vs not applying a cap

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3) Introducing an obligation on NESO to publish a list of each GSP and actively state the TIA threshold to be used vs no such obligation

	Definition of Capacity		Cap on projects at each GSP		NESO publish GSP list	
	Registered	**Export**	**Yes**	**No**	**Yes**	**No**
Original Proposal	X			X		X
WACM1		X		X		X
WACM2	X			X	X	
WACM3	X		X			X
WACM4		X	X			X
WACM5				X	X	

Variable 1 – Definition of Capacity

Our assessment above sets out why we consider the use of Export Capacity better facilitates the ACO's relative to the use of Registered Capacity.

Variable 2 – Cap on projects at each GSP

For variable 2), which impacts on WACM 3 and WACM 4, we consider that not introducing a cap on the capacity of projects benefitting from the higher threshold, per GSP, per 5-year period, would better facilitate ACOs (a), (b) and (d) (with (c) remaining neutral) relative to introducing a cap. This is because the cap would limit the volume of projects in the 1MW to 5MW range that would be permitted to progress without TIA at each GSP, and would result in a significant volume of projects, which would otherwise have negligible impact on the transmission system, continuing to require TIA – we consider this would have a detrimental impact on those ACOs for the reasons we set out in our analysis against the ACOs above. We also agree with the assessment of one Panel Member that there is no definitive evidence or assessment to indicate that a cap is necessary, or is necessary at the same level across all GSPs.

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The proposer of WACM 3 and WACM 4 considers that the cap would mitigate the risk of harm to the transmission network of raising the threshold to 5MW unabated. As noted above, whilst we recognise the risk, we consider that if it was to materialise, it could be remedied via a further modification in future.

Therefore, for the reasons set out above where we assess WACM 1 against the ACOs, we consider that reducing the volume of such projects connecting without TIA, which WACM 3 and WACM 4 would do, would have a detrimental impact ACOs (a), (b) and (d)

Variable 3 – NESO to publish GSP list

The proposer of WACM 2 and WACM 5 considers that introducing this requirement would better facilitate ACO (b) relative to WACM 1, by increasing the transparency of the TIA threshold to be used at each GSP. They also consider that it will better facilitate ACO (d) relative to WACM1, by making it easier for the TIA threshold to be revised in future.

We do not agree with this assessment. Firstly, we consider that a single codified TIA threshold value of 5MW Export Capacity provides sufficient transparency for stakeholders, and do not recognise the additional benefit that a published GSP list would provide over the use of one standard figure. Secondly, we consider that if any future revisions were required to the TIA thresholds, this should be progressed through the established code modification process.

Our assessment against the Authority's Principal Objective and wider statutory duties

Ofgem is required to act in accordance with its principal objective and other statutory duties when deciding on code modifications.

We consider approval of WACM 1 to be consistent with our principal objective of protecting the interests of consumers (both current and future), which includes their interests in the Secretary of State's compliance with the duties in sections 1 and 4(1)(b) of the Climate Change Act 2008 (net zero target for 2050 and five-year carbon budgets). It is our

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assessment that this proposed modification is consistent with our principal objective by, amongst other things, enabling work to rapidly decarbonise the energy system efficiently – by increasing the rate of connection of clean power projects in the 1MW to 5MW range in England and Wales. We also recognise that decarbonisation increasingly insulates GB electricity consumers from the future risk of further fossil fuel driven price spikes, enhances security of supply and contributes towards sustainable development.

WACM 1 will promote efficiency and economy on the part of NESO, through ensuring transmission assessments are focussed proportionately on projects that have the greatest impact on the transmission system. It will also help secure a diverse and long-term energy supply (less reliant on fossil fuels).

Finally, we are satisfied that implementation of the reforms is consistent with our statutory duties and in most aspects are considered to further them**.**

Decision notice

In accordance with Condition E2 of the Electricity System Operator Licence, the Authority hereby directs that WACM 1 of CMP446 'Increasing the lower threshold in England and Wales for Evaluation of Transmission Impact Assessment' be made.

Alasdair MacMillan
Head of Policy – Electricity Connections
Signed on behalf of the Authority and authorised for that purpose

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