

## CUSC Modification Proposal Form

# CMP375: Enduring Expansion Constant & Expansion Factor Review

**Overview:** Amend the calculation of the Expansion Constant & Expansion Factors to better reflect the growth of and investment in the National Electricity Transmission System (NETS)

## Modification process & timetable



**Status summary:** The Proposer has raised 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

This proposal will have a high impact on all Users who pay TNUoS charges, ESO and Onshore and Offshore Transmission Owners.

#### Proposer's recommendation of governance route

Standard Governance modification with assessment by a Workgroup. The Proposer recommends that CMP375 is progressed jointly with CMP315 'TNUoS: Review of the expansion constant and the elements of the transmission system charged for'.

#### Who can I talk to about the change?

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## What is the issue?

As approved under [CMP353](#), the CUSC currently specifies that the Expansion Constant (EC) and associated generic onshore Expansion Factors (EF) are currently fixed at the value used in 2020/21 plus relevant inflation for each following year. Without establishing and implementing an enduring solution for the calculation of the EC and EFs there is a risk that the charging methodology will not appropriately reflect the incremental costs of the system to Users.

## Why change?

The EC influences the locational signal in the calculation of TNUoS charges and is recalculated for the start of each onshore TO price control. In October 2020 a modification (CMP353) was raised to stabilise the EC at the value in the 2020/21 charging year (plus relevant inflation) due to concerns raised by the ESO and industry that the value was driving potentially significant and unexpected cost changes.

As part of CMP353 the ESO committed to bring forward a further modification proposal to consider the enduring methodology for calculating the EC and EFs and whether a different approach to their creation and formulation should be considered.

The GB electricity system is undergoing significant change as it adapts to the challenges of net zero. It is incredibly important that the methodology underpinning the locational signal for TNUoS charges is robust and takes into account the changing nature of developments on the transmission system compared to when the arrangements were introduced.

The EC and EF currently used within the calculation of TNUoS tariffs look at a limited scope of development to the NETS. As the nature of NETS development and investment has changed over time, the number of projects eligible for consideration within calculation of the EC and EFs have shrunk. This means that the growth of the NETS may not be accurately captured within the previous calculations. Therefore, in the view of the Proposer, reverting to the prior methodology would not be suitable.

Although it is important for the Workgroup to consider all options, the availability of data to support a solution and the ability of this to be provided by the Transmission Owners (TOs) should also be considered when developing options.

The ESO considers that a wider review of the EC and EF values should be undertaken to consider on a principle basis what the EC and EF should be formed by, identification and scoping of options to support these and consideration of the data and outputs to which these principles lead.

## What is the Proposer's solution?

The ESO does not wish to prescribe a solution at this time as it is clear that there are elements of principle and complexity that will need to be considered by the Workgroup. At a minimum the ESO considers that the scope of works used in the calculation of the EC should be considered and the rationale for the inclusion/exclusion of all works should be clearly explained. Additionally, the EF methodologies should align with these principles.

The ESO propose that the following additional areas should also be considered by the Workgroup. These are:

- Projects that are not yet complete. i.e. prospective projects and those under construction/development in addition to completed projects;

- Works with 'no distance' (i.e. 0km length);
- Works that do not increase capacity but do increase utilisation of existing capacity (e.g. Intertrips);
- Works that extend the duration of existing capacity that would otherwise be removed (e.g. End of Life asset extensions);
- Whether or not works that provide 'non-thermal' capacity (e.g. stability) should be included in the EC/EF methodology;
- If transmission capacity provided by non-TO parties should be included;
- Whether or not the EC/EF should continue to be calculated at the start of the onshore price control and indexed in between or if the EC/EF should be recalculated more/less frequently; and
- Ensuring existing provisions for 'voltage upgrade works' (e.g. where a 275kV circuit is replaced by a 400kV circuit).

## Draft Legal Text

The legal text will be developed by the Workgroup.

## What is the impact of this change?

Proposer's assessment against CUSC Charging Objectives	
Relevant Objective	Identified impact
(a) That compliance with the use of system charging methodology facilitates effective competition in the generation and supply of electricity and (so far as is consistent therewith) facilitates competition in the sale, distribution and purchase of electricity;	<b>Positive</b> Clarity in the development of the EC and its likely direction of travel will provide more certainty to Users' of their costs in future years.
(b) That compliance with the use of system charging methodology results in charges which reflect, as far as is reasonably practicable, the costs (excluding any payments between transmission licensees which are made under and accordance with the STC) incurred by transmission licensees in their transmission businesses and which are compatible with standard licence condition C26 requirements of a connect and manage connection);	<b>Positive</b> Amending the EC will allow the charging methodology to better account for developments in the costs of the NETS.
(c) That, so far as is consistent with sub-paragraphs (a) and (b), the use of system charging methodology, as far as is reasonably practicable, properly takes account of the developments in transmission licensees' transmission businesses;	<b>Positive</b> Amending the EC will allow the charging methodology to better account for developments in the costs of the NETS.

(d) Compliance with the Electricity Regulation and any relevant legally binding decision of the European Commission and/or the Agency *; and	<b>Neutral</b>
(e) Promoting efficiency in the implementation and administration of the system charging methodology.	<b>Positive</b> This modification will remove the temporary EC methodology and implement an enduring solution.

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

<b>Proposer's assessment of the impact of the modification on the stakeholder / consumer benefit categories</b>	
<b>Stakeholder / consumer benefit categories</b>	<b>Identified impact</b>
Improved safety and reliability of the system	<b>Positive</b> By improving the cost reflectivity of the transmission charging methodology system users may be encouraged to site in an economic and efficient manger.
Lower bills than would otherwise be the case	<b>Positive</b> By improving the cost reflectivity of the transmission charging methodology overall costs passed through to consumers should be lower
Benefits for society as a whole	<b>Neutral</b>
Reduced environmental damage	<b>Neutral</b>
Improved quality of service	<b>Neutral</b>

**When will this change take place?****Implementation date**

1 April 2023

**Date decision required by**

Depending on the solution chosen a decision well in advance of charge setting for the 2023/24 charging year should be considered, including required data provision by Transmission Owners under a subsequent STC change.

**Implementation approach**

N/A

**Proposer's justification for governance route**

Governance route: Standard Governance modification with assessment by a Workgroup

As this change will have consequences for all system Users, a Workgroup is the best way to ensure that all areas are considered fully and impacts on all taken into account.

The Proposer considers that this modification proposal does not conflict with the existing modification proposal CMP315 and sees no reason why it could not be progressed jointly or separately through the governance process. This could be through formal amalgamation or progressed side by side.

## Interactions

- |  |   |   |                                |
|--|---|---|--------------------------------|
| <input type="checkbox"/> Grid Code                 | <input type="checkbox"/> BSC                                  | <input checked="" type="checkbox"/> STC         | <input type="checkbox"/> SQSS  |
| <input type="checkbox"/> European<br>Network Codes | <input type="checkbox"/> EBGL Article 18<br>T&Cs <sup>1</sup> | <input type="checkbox"/> Other<br>modifications | <input type="checkbox"/> Other |

TO's currently provide data under requirements in the STC to the ESO for the purposes of charge setting. Depending on the solution chosen by the Workgroup, a change to the STC may be required to ensure that data is received from the relevant TO. Depending on the progression of the solution, the ESO will raise a STC proposal to identify and obtain any relevant data items from the TOs.

## Acronyms, key terms and reference material

Acronym / key term	Meaning
BSC	Balancing and Settlement Code
CMP	CUSC Modification Proposal
CUSC	Connection and Use of System Code
EBGL	Electricity Balancing Guideline
EC	Expansion Constant (an input to the TNUoS charging methodology. It reflects the annuitised £/MW/km cost of 400kV overhead line and acts as a multiplier to the 'nodal' TNUoS prices (the relative costs of adding 1MW of generation at each point on the network, or 'node').
EF	Expansion Factor
ESO	Electricity System Operator
NETS	National Electricity Transmission System
STC	System Operator Transmission Owner Code
SQSS	Security and Quality of Supply Standards
T&Cs	Terms and Conditions
TO	Transmission Owner
TNUoS	Transmission Network Use of System Charges

## Reference material

- None to that already provided within the Proposal form

<sup>1</sup> If your modification amends any of the clauses mapped out in Exhibit Y to the CUSC, it will change the Terms & Conditions relating to Balancing Service Providers. The modification will need to follow the process set out in Article 18 of the European Electricity Balancing Guideline (EBGL – EU Regulation 2017/2195) – the main aspect of this is that the modification will need to be consulted on for 1 month in the Code Administrator Consultation phase. N.B. This will also satisfy the requirements of the NCER process.