

Public

| Third Code Administrator Consultation  |  |  |
|--|--|--|
| <h1>CMP316: TNUoS Arrangements for Co-located Generation Sites</h1> <p><b>Overview:</b> Generation sites which comprise multiple technology types within one Power Station are termed “co-located.” This modification will develop a cost-reflective approach to allow the Connection and Use of System Code (CUSC) charging methodology to accommodate the growing number of such sites.</p>                |  | <h2>Modification process &amp; timetable</h2> <div><div>1</div><div>2</div><div>3</div><div>4</div><div>5</div><div>6</div><div>7</div></div> <div><div>Proposal Form<br/>26 April 2019</div><div>Workgroup Consultation<br/>07 February 2022 – 28 February 2022</div><div>Workgroup Report<br/>18 August 2022</div><div>Third Code Administrator Consultation<br/>30 June 2025 – 28 July 2025</div><div>Third Draft Final Modification Report<br/>04 August 2025</div><div>Second Final Modification Report<br/>07 August 2025</div><div>Implementation<br/>01 April 2026</div></div> |
| <p><b>Have 10 minutes?</b> Read our <a href="#">Executive summary</a></p> <p><b>Have 90 minutes?</b> Read the full <a href="#">Code Administrator Consultation</a></p> <p><b>Have 180 minutes?</b> Read the full Code Administrator Consultation and Annexes.</p>  |  |  |
| <p><b>Status summary:</b> On 13 December 2024, the Authority sent back CMP316 and directed that the Panel re-submit the Final Modification Report (FMR). The Panel on 10 March 2025 agreed next steps and set new Terms of Reference and asked for the Workgroup to reconvene to address these. The Workgroup have addressed these Terms of Reference and we are now consulting on this proposed change.</p> |  |  |
| <p><b>This modification is expected to have a:</b></p> <p><b>Medium impact:</b> Co-located Generators; Low impact: National Energy System Operator</p>   |  |  |
| <b>Governance route</b>  | Standard governance modification assessed by a Workgroup and determined by the Authority.  |  |
| <b>Who can I talk to about the change?</b>   | <b>Proposer:</b> Martin Cahill, NESO<br><a href="mailto:martin.cahill1@neso.energy">martin.cahill1@neso.energy</a>                   | <b>Code Administrator Chair:</b> Lizzie Timmins<br><a href="mailto:elizabeth.timmins@neso.energy">elizabeth.timmins@neso.energy</a>  |
| <b>How do I respond?</b>   | Send your response proforma to <a href="mailto:cusc.team@neso.energy">cusc.team@neso.energy</a> by <b>5pm</b> on <b>28 July 2025</b> |  |

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## Executive summary

Generation<sup>1</sup> sites which comprise multiple technology types within one Power Station are termed “co-located.” This modification will develop a cost-reflective approach to allow the CUSC charging methodology to accommodate the growing number of such sites.

### What is the issue?

Generation sites which comprise multiple technology types within one Power Station are termed “co-located” (which, in the context of the proposal, is also referred to as ‘Multi-Technology’). The Transmission Network Use of System (TNUoS) charging methodology does not adequately accommodate co-located generation sites. This is especially true for sites which have a mixture of technologies that fall into the two different charging categories (e.g., Conventional vs. Intermittent). The charging methodology within Section 14 needs to include a charging approach by which such sites can be recognised and charged consistently with the cost-reflective principles underpinning the broader TNUoS (Generator) Charging Methodology.

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

**Proposer’s solution:** The Proposer is seeking adding a new formula to the TNUoS charging methodology to calculate wider locational charges for ‘co-located’ or Multi-Technology Power Station. A proportion of the Power Stations Transmission Entry Capacity (TEC) will be assigned to each technology type, each with a separate Annual Load Factor (ALF). The solution utilises the current CUSC formula (CUSC 14.15.101) which is based on output per fuel/technology type across a Financial Year divided by the proportion of TEC (to be referred to, in the Original solution as ‘MTEC’) for each technology type. The TNUoS charge(s) for each technology type will be calculated for each technology type individually and then summed to provide the total TNUoS charge for the whole (Multi-Technology) Power Station.

**Implementation date:** 01 April 2026

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<sup>1</sup> Which includes both generation sites with more than one technology (including storage) or storage sites with more than one technology (including generation).

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### Summary of alternative solution and implementation date:

One alternative solution has been raised: WACMI has the same implementation date as the Original proposal but is different to the Original proposal in that:

- The tariff components for each technology type are calculated separately, where:
  - The Peak liability is pro-rated using Peak Installed TEC. A new term MTECP (Multi Technology Power Station TEC Peak) is introduced as the capacity to be used for calculating the peak charge.
  - The Not Shared Year Round is pro-rated using the ALF to give a scaled Not Shared Year Round liability. MTECN (Multi Technology Power Station TEC for Year Round Not Shared) and EALF (Effective ALF) are used for calculating the YRNS charge.
- ALF is calculated using the scaled TEC for the relevant technology type (rather than site TEC).
- Where enough historical consumption data does not exist, Generic ALFs are used to estimate consumption for each technology type and recalculate each ALF using scaled TEC

**Workgroup conclusions:** The Workgroup concluded unanimously that WACMI better facilitated the Applicable Objectives than the Baseline, and by majority that the Original better facilitated the Applicable Objectives than the Baseline.

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

According to the Proposer, a pro rata approach will provide greater cost-reflectivity to the charging arrangements for co-located sites – the Proposer believes this approach could be sufficiently generic to map onto other future changes in the network charging arena such that any broader developments resultant of (inter alia) Ofgem’s Significant Code Review (SCR) into Access & Forward-Looking Charges would not be precluded by, or preclude, CMP316.

It is proposed that revisions are made to CUSC Section 14 to introduce a new formula which calculates the appropriate TNUoS charge per technology type for the Power Station.

### Interactions

None.

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## What is the issue?

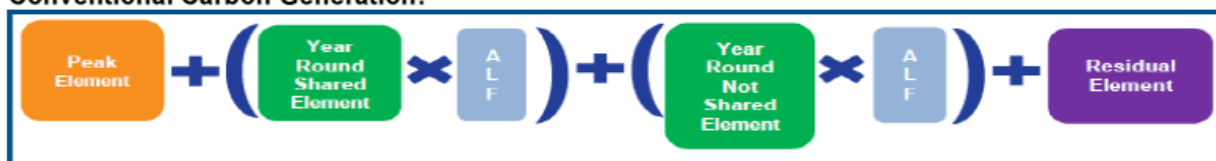
Generation sites which comprise multiple technology types within one Power Station are termed “co-located.” The TNUoS methodology does not adequately accommodate co-located generation sites. This is especially true for sites which have a mixture of technologies that fall into different charging categories (e.g., Conventional vs. Intermittent). Section 14 needs a methodology by which such sites can be recognised and charged consistently with the cost-reflective principles underpinning the broader TNUoS (Generator) Charging Methodology.

To avoid overlap with the scope of on-going Access and Forward-Looking Charges SCR, [CMP316](#) does not aim to introduce a new access product nor modify an existing access product for shared access sites (e.g. two Generator Users sharing one point of connection).

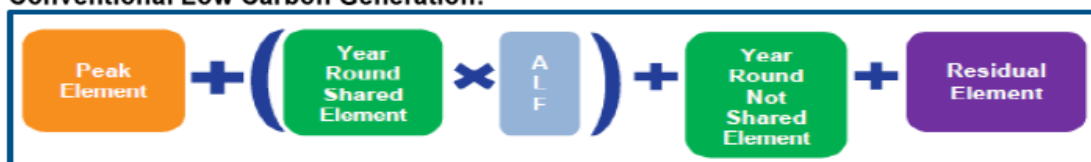
## Why change?

Currently, the TNUoS methodology assesses Power Station technology type and the ‘controllability’ of said technology type. Depending on the outcome, one of the following three formulas forms the basis for the wider TNUoS tariff calculation for that site (per 14.18.7 of CUSC)

### Conventional Carbon Generation:



### Conventional Low Carbon Generation:



### Intermittent Generation



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For co-located sites, especially those which combine technologies in different charging categories i.e., intermittent generation or conventional low carbon, the current methodology cannot produce cost-reflective wider tariffs.

A pro rata approach will provide greater cost-reflectivity to the charging arrangements for co-located sites. The Proposer believes this approach could be sufficiently generic to map onto other future changes in the network charging arena, such that any broader developments resultant of (inter alia) Ofgem's SCR into Access & Forward-Looking Charges would not be precluded by, or preclude, CMP316.

## What is the solution?

### Original

As the solution depends on pro rating TEC, the below should be used as the approach within the existing TNUoS charging methodology by which TEC is apportioned. The Proposed solution is to:

- For a Multi Technology Power Station, include a formula into CUSC Section 14.18
- For a Multi Technology Power Station the Power Station's TEC is allocated across the different Balancing Mechanism Units (BMUs) at the station, specifically:

$$MTEC_{BMU} = \frac{CAP_{BMU}}{\sum_{BMU=1}^n CAP_{BMU}} \times TEC$$

Where;

$MTEC_{BMU}$  = Multi technology Power Station's TEC for a specific BM Unit

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$CAP_{BMU}$  = Installed Capacity for a specific BM Unit (or the average of maximum BM Unit metered values where there is a negative tariff, as per the negative methodology).

TEC = Transmission Entry Capacity (TEC) of Power Station as defined in the Bilateral Connection Agreement (or the average of maximum Power Station metered values where there is a negative tariff, as per the negative methodology).

$n$  = number of BM Units at the multi technology Power Station

When any of the BM Units at a Power Station are initially calculated to have a negative tariff, the final charge will be calculated using different capacity inputs to MTEC.  $CAP_{BMU}$  in the above equation will use maximum metered volumes for each BM Unit instead of Installed Capacity. These will be the average of the capped metered volumes during the three Settlement Periods which have the highest metered volumes for the BM Unit, separated by at least 10 clear Business Days, and between November and February of the relevant Financial Year inclusive. TEC in the equation will also be replaced by maximum metered volumes for the Power Station.

An ALF is calculated for each BMU as follows:

$$ALF_{BMU} = \frac{\sum_{p=1}^{17520} GMWh_{pBMU}}{\sum_{p=1}^{17520} TEC_p \times 0.5}$$

Where:

$ALF_{BMU}$  is the ALF for a **BM Unit** at a multi technology **Power Station**

$GMWh_{pBMU}$  is the maximum of FPN or actual metered output in a **Settlement Period** related to the **BM Unit**

## WACM1

For the WACM1 solution, charges for each BMU are calculated separately by component, with a different calculation for each. The ALF is treated differently, proportioning on MTEC rather than site TEC.

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- MTEC (Multi Technology Power Station TEC) is defined in the same way, and used for calculation of the Year Round Shared charge for each BMU, and the Adjustment charge
- MTECP (Multi Technology Power Station TEC for Peak Security tariff) is introduced for calculating the Peak charge.
- EALF (Effective ALF) and MTECN (Multi Technology Power Station TEC for Year Round Not Shared tariff) are introduced for calculating the Year Round Not Shared Charge

### Annual Load Factor

The Annual Load Factor for WACM1 differs in that the denominator uses MTEC instead of TEC. The calculation is as follows:

$$ALF_{BMU} = \frac{\sum_{p=1}^{17520} GMWh_{pBMU}}{\sum_{p=1}^{17520} MTEC_{pBMU} \times 0.5}$$

### MTECP (Multi Technology Power Station TEC for Peak Security tariff)

MTPSTECP is the sum of Maximum Capacity (MC) for each BMU as long the associated technology attracts a peak tariff component. (Where the associated technology does not attract a peak tariff component then the formula will consider that MC will be zero)

MTPSTECP is capped at the MTEC or BMU Installed Capacity, i.e. the lowest of the value calculated below or BMU Installed Capacity will apply. It is calculated as follows:

$$MTECP_{BMU} = \min \left[ \left( \frac{CAP_{BMU}}{\sum_{BMU=1}^n CAP_{BMU}} \times TEC \right), (CAP_{BMU}) \right]$$

Where:

$MTECP_{BMU}$  = multi technology Power Station's TEC (for Peak Security tariff calculation) for BM Unit



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$CAP_{BMU}$  = Installed Capacity for BM Unit to which peak security tariff applies (or the maximum BM Unit metered values where there is a negative tariff, as per the negative methodology)

$n$  = the number of BM Units that attract peak security tariff

TEC = TEC of Power Station as defined in the Bilateral Connection Agreement or Bilateral Embedded Connection Agreement (or the maximum Power Station metered values where there is a negative tariff element, as per the negative methodology)

$MTECP_{BMU}$  will equal zero for a BM Unit that does not attract a peak security tariff component

MTECN (Multi Technology Power Station Effective Capacity Scaled TEC for Year Round Not Shared tariff) and EALF (Effective Annual Load Factor)

MTECN is calculated as the Installed Capacity of a BM Unit multiplied by the EALF, and then scaled so that the total of MTECN for all BM Units cannot exceed TEC

EALF (Effective ALF) is equal to 1 for all intermittent Intermittent and Conventional Low Carbon technologies, and equal to ALF for Conventional Carbon technologies.

MTECN is calculated as follows:

$$MTECN_{BMU} = CAP_{BMU} \times EALF_{BMU} \times YRNSSCALE$$

$$YRNSSCALE = \min \left[ \left( \frac{TEC}{\sum_{BMU}^n CAP_{BMU} \times EALF_{BMU}} \right), 1 \right]$$

Where:

$MTECN_{BMU}$ =multi technology Power Station's TEC (for Year Round Not Shared tariff calculation) for BM Unit

$CAP_{BMU}$  = Installed Capacity for BM Unit to which Peak Security tariff applies (or the maximum BM Unit metered values where there is a negative tariff, as per the negative methodology below

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TEC = TEC of Power Station as defined in the Bilateral Connection Agreement or Bilateral Embedded Connection Agreement (or the average of maximum Power Station metered values where there is a negative tariff, as per the negative methodology below)

EALF=The effective ALF of a BM Unit and is equal to 1 for Intermittent and Conventional Low Carbon technologies

YRNSSCALE is the Scaling factor uses to ensure that total MTECN does not exceed TEC

### Generic Annual Load Factors

Where enough historical consumption data does not exist, Generic ALFs are used to estimate consumption for each technology type, using:

$$GMWh_{pBMU} = \text{Generic ALF}_{BMU} \times \text{Installed Capacity}_{BMU} \times 8760$$

### Power Station Charge

The charge for a multi technology **Power Station** will be calculated as the summation of all individual **BM Unit** liabilities as calculated using MTEC, MTECP, and MTECN, whereby:

$$\begin{aligned} \text{Peak Charge}_{BMU} &= MTECP_{BMU} \times \text{Peak Tariff} \\ \text{YRS Charge}_{BMU} &= MTEC_{BMU} \times ALF_{BMU} \times \text{YRS Tariff} \\ \text{YRNS Charge}_{BMU} &= MTECN_{BMU} \times \text{YRNS Tariff} \\ \text{Adjustment Charge}_{BMU} &= MTEC_{BMU} \times \text{Adjustment Tariff} \end{aligned}$$

### *Power Station Charge*

$$\begin{aligned} &= \sum_{BMU}^n \text{Peak Charge}_{BMU} \\ &+ \sum_{BMU}^n \text{YRS Charge}_{BMU} + \sum_{BMU}^n \text{YRNS Charge}_{BMU} \\ &+ \sum_{BMU}^n \text{Adjustment Charge}_{BMU} \end{aligned}$$

Approval and implementation of the modification will change the way that co-located generation sites are charged, and this approach will be reflected in an

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updated part within Section 14 of the CUSC. As such, compliance with this change will be mandatory (rather than voluntary). The solution for this modification will necessitate that each technology type for co-located generation sites will require its own BMU/metering. If each technology type for co-located generation sites does not have its own BMU/metering, then the existing TNUoS charging methodology approach will prevail; i.e. the site charge will continue to be based upon the predominant technology type as per the current charging arrangements in Section 14 of the CUSC. (Note that in practice the Workgroup do not currently see any conflict in determining the predominant technology type by using either TEC/installed capacity and they have not needed to define this further. This ambiguity could occur in future projects and this solution is looking to address and provide certainty for future projects.

## What is the impact of this change?

| Proposer's assessment against CUSC Charging Objectives   |   |   |
|--|---|---|
| Relevant Objective   | Identified impact of Original solution  | Identified impact of WACMI  |
| (d) 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><br>Facilitates effective competition by having a charging methodology which appropriately reflects charges for the technology types at a site. This is important as the number of multi technology sites is expected to grow rapidly. | <b>Positive</b><br>This creates a final liability that is more reflective of what different generation types are assumed to do if not co-located, and therefore removes any false incentive or disincentive to co-locate generation, thus improving competition between generator set-ups |

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|  |  |   |
|--|--|---|
| (e) 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 C11 requirements of a connect and manage connection); | <b>Positive</b><br><br>This proposal introduces a more cost reflective way of charging multi technology sites, by having a separate charge component for each technology type. | <b>Positive</b><br><br>The result will use capacities that are more reflective of the fuel-types and their associated costs across the different elements of the tariff |
| (f) 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 and the ISOP business*;  | <b>Positive</b><br><br>This change reflects the growing number of power stations with multiple technologies.   | <b>Positive</b><br><br>This change reflects the growing number of power stations with multiple technologies.  |
| (g) Compliance with the Electricity Regulation and any relevant legally binding decision of the European Commission and/or the Agency **; and  | <b>Neutral</b>   | <b>Neutral</b>  |
| (h) Promoting efficiency in the implementation and administration of the system charging methodology.  | <b>Neutral</b>   | <b>Neutral</b>  |

\* See Electricity System Operator Licence

\*\*The Electricity Regulation referred to in objective (g) 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.

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## Workgroup considerations

This modification was originally raised in April 2019. Two Workgroup meetings were held in 2019 before the Workgroup was put on hold due to Panel Prioritisation of modifications.

The Workgroup then convened 11 times during 2021 and 2022.

To contextualise the number of co-located projects planned to come on to the National Electricity Transmission System (NETS) in the next few years, and therefore ascertain the size and impact of the defect, the Workgroup looked at the latest [TEC register](#) information provided by the Proposer. Upon reviewing the information provided within the Proposer and within the TEC register, the Workgroup noted that the number of co-located projects is increasing.

### **Small Distributed Generators**

The Workgroup noted that both Transmission and Distribution connected Generators with >100MW TEC are impacted by this modification as current payers of TNUoS. It was discussed that small distributed generation sites with <100MW of TEC would not be impacted through this modification as they do not currently pay TNUoS. However, the Workgroup agreed that they should consider how the solution would work if they were included, as they may pay TNUoS in the future. An assumption was made that if TNUoS charges are in the future extended to embedded Generators with <100MW TEC that those TNUoS charges would be based on TEC (even though some currently don't have TEC). It was raised that if those sites were to pay TNUoS in future, a measure of installed capacity for each technology type, in addition to the total site TEC, would need to be provided for all sites <100MW to facilitate the proposed solution.

### **The proposed pro-rata calculation**

The proposed solution looks to apportion TEC between different technology types on co-located sites using a new "Multi Technology Power Station" pro-rata formula.

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## **CAP<sub>BMU</sub>**

The term 'CAP<sub>BMU</sub>' in the pro-rata formula requires Installed Capacity to be broken down by technology type to work out the proportions. The total Installed Capacity for each co-located site is proposed to be used for this, which is already provided to NESO in each connection application form.

The NESO representative explained that some existing co-located sites have provided Connection Entry Capacity (CEC) and this is stored within the Data Registration Code (DRC) in the Grid Code. This data item was discussed to provide capacity for each technology type.

One Workgroup member shared concerns that individual plant CEC is not necessarily information which should be declared by NESO. It was stated that the TEC register is currently published but CEC is not publicly known, and that there may be concerns in sharing site-specific CECs.

It was initially agreed that Maximum Capacity as defined within the Grid Code will be used to provide capacity for each fuel/technology type and captured within the Connection Agreement Appendix C for all co-located sites. This was later updated to use a new Section 11 definition "Installed Capacity" as discussed in Workgroup Discussions following Authority decision.

The Proposer explained that a process would need to be established to ensure that all co-located sites have capacity for every technology type and a transition process established to capture for existing sites too.

## **Analysis: The impact of implementation of CMP316**

The Workgroup noted that implementation of CMP316 will change the TNUoS charging methodology for generation sites which comprise of multiple technology types within one Power Station, meaning that at some sites TNUoS charges will be higher and others lower. The Proposer's view was that this would charge sites consistently with the cost-reflective principles underpinning the broader Generator TNUoS Charging Methodology. The overall revenue collected from Generators via TNUoS will not change with this proposal as any resulting under/over recovery will be shared across all Users. The impact of CMP316 will vary dependent upon technology types, location, and technology type ALFs.

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Eight sets of examples were discussed by the Workgroup. The scenarios were created using the spreadsheet in **Annex 07**, and further narrative on the examples can be found in the first Final Modification Report (**Annex 12**). Please note that these examples were based on historic TNUoS charging data (2021/22 charging year projections).

### **Discussions on installed capacity and co-utilisation of TEC**

The Workgroup held detailed discussions on installed capacity and co-utilisation of TEC. Details of this can be found in the first Final Modification Report (**Annex 12**).

### **Charging for Negative Zones**

The Workgroup considered how multi technology sites in negative tariff zones should be charged, resulting in an addition to both the Original and WACMI methodologies. In both instances, installed capacity and TEC are replaced by the average output of the unit (or Generator for TEC) over the three settlement periods of highest output from November to the end of February each year.

## **Workgroup Consultation Summary**

The Workgroup held their Workgroup Consultation between 7 February 2022 to 28 February 2022 and received eight responses. The full responses and a summary of the responses can be found in **Annex 03**. Key points raised are as follows:

- Two out of eight respondents did not agree with the implementation approach, with one noting that it is not clear that the solution addresses the issue, and the other arguing that the modification introduces a new defect.
- Respondents noted the need for clarity on implementation in how it affects existing and future co-located sites, and noted the challenging implementation date.
- Respondents noted the need for clarity in the solution, particularly around billing, invoicing and obligations associated with MTEC, with

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some respondents stating that MTEC should be published on the TEC register for transparency<sup>2</sup>.

- Most respondents believed the declarations route would lead to an increased admin burden and potential for less accurate data than sourcing from contracts; one respondent supported the declaration (and redeclaration) route to capture varying situations at a site which may be different to what was set out in the Connection Agreement originally.

### **Post Workgroup Consultation discussions**

The Workgroup discussed the Workgroup Consultation responses, with the Proposer noting they had changed the implementation date of the modification to 01 April 2024. They also stated that the appropriate metering must be in place for the solution to apply. Some Workgroup members suggested this could mean future sites could choose not to have separate metering if this was a cheaper option, however there was an expectation that it would be more commercially beneficial for co-located sites to have separate metering in terms of trading separately. There was also a suggestion from a Workgroup member that the Balancing and Settlement Code (BSC) may restrict two technology types from being combined under one meter.

The Workgroup noted the challenging timing of the implementation and also noted that WACM1 (raised following the Workgroup Consultation) addressed some of the concerns raised in the Workgroup Consultation.

### **Workgroup Alternative CUSC Modification (WACM1)**

Following the Workgroup Consultation, WACM1 was raised.

The full WACM form can be found in **Annex 05**, which outlines the differences between the Original Proposal and WACM1. An updated solution for WACM1 can

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<sup>2</sup> Please note that the original response referred to MFSSTEC (Multi Fuel Sites TEC), which is referred to throughout this document as MTEC (Multi Technology Power Station TEC), as acronyms were simplified by the Proposer to aid stakeholder understanding.



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be found in the solution section above. Examples of numerical tariff calculations for the WACM can be found in **Annex 08**.

When discussing WACM1, some Workgroup members believed this Proposal to be more cost-reflective than the Original solution.

## Legal Text

The Legal Text for this change can be found in **Annex 04**, in the following paragraphs:

- 14.15.7;
- 14.15.8;
- 14.15.102;
- 14.15.103;
- 14.18.7.

**Annex 16** also shows the legal text changes made since the Authority send-back, with any changes highlighted and comments provided for context.

## First Workgroup Vote

The Workgroup met on 27 July 2022 to carry out their first Workgroup Vote<sup>3</sup>. The full Workgroup vote can be found in **Annex 06** of this report.

## First Code Administrator Consultation Summary

The First Code Administrator Consultation was issued on 04 October 2022, closed on 01 November 2022 and received 2 responses. The full responses can be found in **Annex 09**.

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<sup>3</sup> The First Workgroup Vote was carried out by assessing the modification against the Applicable CUSC Objectives as at 27 July 2022. These changed on 01 October 2024, so the Second Workgroup Vote was carried out using the current Applicable CUSC Objectives.

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## First Panel recommendation vote

The First Draft Final Modification Report was presented to November 2022 CUSC Panel for Panel recommendation vote. Three Panel Members noted that changes to the legal text for CMP316 WACMI were required as the legal text did not reflect the intent of CMP316 WACMI.

Therefore Panel, under CUSC 8.23.4(iv), asked for the Workgroup to be re-formed to update the legal text for CMP316 WACMI and at the same time update the worked examples, (**Annex 08**) as to how CMP316 WACMI works, to help industry understanding.

## Workgroup Discussions following Panel Send Back

The Workgroup met 3 times between November 2023 and February 2024. Further worked examples were provided to clarify the differences in methodology between WACMI and the Original solution, as there had also been some updates to the methodology for sites in negative zones to align mirror treatment of single technology power stations in negative zones (affecting both WACMI and Original) can be found in **Annex 08**.

The updates for CMP316 WACMI were discussed at length with Workgroup members who were given the opportunity to question, and input to changes made to the WACMI legal text and worked examples.

## Second Code Administrator Consultation Summary

The Second Code Administrator Consultation was run from 25 March 2024 to 24 April 2024, and specifically focused on the updates to CMP316 WACMI, received 4 non-confidential responses and 0 confidential responses. The full responses can be found in **Annex 11**.

One respondent believed that the intent of CMP316 WACMI was not reflected in the legal text and noted that the additional complexity introduced would outweigh the benefits to CUSC parties.

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## Second Panel recommendation vote

The Panel met on 31 May 2024 to carry out their second recommendation vote. This can be found within the First Final Modification Report (**Annex 12**).

## Authority Decision to send back CMP316

On 13 December 2024, the Authority sent back the CMP316 Final Modification Report for further work and directed Panel to revise and resubmit the CMP316 Final Modification Report (**Annex 12**).

## Approach agreed at CUSC Panel to address this

On 10 March 2025, the CUSC Panel agreed the Terms of Reference for the Workgroup to consider ahead of a third Code Administrator Consultation being issued to industry.

## Workgroup Discussions following Authority send back

The Workgroup met 5 times between March 2025 and June 2025 to address the Terms of Reference. The table below outlines how the deficiencies identified in the Authority send back letter have been addressed in this document:

|   |
|---|
| <p>a) Ensure the Original solution legal text addresses the modification defect, the issues identified in the send-back letter, and is legal and operable.</p> <p>The Workgroup reviewed the legal text to ensure it reflected the intent of the Original solution and addressed the issues highlighted in the send-back letter. The legal text was also reviewed by NESO legal to ensure its operability, and reference to maximum capacity was removed and replaced by the new definition of Installed Capacity (introduced into CUSC Section 11 on 10 June 2025 by <u>CMP434</u>). Please see <u>legal text changes since send back</u> and <b>Annex 16</b> for full details of the amendments to the legal text following the second send back.</p> |
| <p>b) Ensure WACM1 legal text addresses the modification defect, the issues identified in the send-back letter, and is legal and operable.</p> <p>The Workgroup reviewed the legal text to ensure it reflected the intent of the WACM solution and addressed the issues highlighted in the send-back letter. As part of this, provision was added into the legal text for scaling of ALFs, which</p>  |

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was missed from the previous version of legal text for WACMI. The legal text was also reviewed by NESO legal to ensure its operability, and reference to maximum capacity was removed and replaced by the new definition of Installed Capacity (introduced into CUSC Section 11 on 10 June 2025 by [CMP434](#)). Please see [legal text changes since send back](#) and **Annex 16** for full details of the amendments to the legal text following the second send back.

c) Investigate whether any simplifications can be made to the legal text so it can be more easily understood by stakeholders.

The Proposer created a simplified methodology for WACMI which would give the same tariff outputs but using different calculations. This could have the benefit of making the process easier to follow both for stakeholders to understand how charges would be calculated and to further simplify the legal text. The Workgroup discussed the merits of this and developed some initial examples. However, after further discussion with the workgroup and Authority, it was decided that taking this approach would go beyond the scope of the sendback, which should focus on simplifying and correcting the legal text within the existing Original and WACMI methodologies. They instead simplified the legal text by using different terminology for the acronyms and outlining some calculations in steps rather than having them presented as one complex calculation. Please see [legal text changes since send back](#) and **Annex 16** for full details of the amendments to the legal text following the second send back.

One Workgroup member queried whether Limited Duration Transmission Entry Capacity (LDTEC) and Short Term Transmission Entry Capacity (STTEC) needed to be covered within the [CMP316](#) solution. The Proposer noted that the charges for STTEC and LDTEC are agnostic of technology type, and calculated from the effective tariff for a generation zone only. This is calculated from the Initial Transport Tariffs for each generation zone and would not change if [CMP316](#) was approved. It was noted that the Annual Load Factor calculation incorporates LDTEC and STTEC, something which exists in the current CUSC baseline.

The Proposer revisited the previous legal text to determine where this could be corrected and simplified. They noted that [CMP424](#) (implemented on 01 April 2025) introduced legal text into CUSC Section 14 in the same paragraph as [CMP316](#) but advised that there was no impact on [CMP316](#). The Proposer advised

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the Workgroup that their intention was to simplify some of the complex acronyms used within the legal text and split one of the complex calculations into two steps, to provide clarity to stakeholders on how the calculation worked. They noted that some terms within the legal text would need to be bolded to show that they are defined terms within Section 11, and advised they would consider whether an additional defined term needed to be added for Maximum Capacity. Following further discussion, the Workgroup decided to use the term Installed Capacity instead, which is already defined within CUSC Section 11. Workgroup members also suggested minor changes to 14.18.7 for clarity.

The Workgroup also discussed the need to modify the ALF within WACM1 to ensure the solution and legal text match, noting that using a Generic ALF without adjustments could lead to tariff inaccuracies. The Proposer suggested scaling the Generic ALF for better accuracy. One member warned that this might lead to an overestimation of the ALF. Another member proposed introducing a term like MALF (multi-technology ALF) to distinguish it from the standard ALF, though upon reviewing the legal text it was agreed that the term used “ALF<sub>BMU</sub>” already distinguished this from a standard ALF. There were also debates about whether the scaling factor should apply to the ALF or capacity.

One Workgroup member noted that in the ALF calculations for the Original and WACM1, there is potential for the total metered output used across all BM Units to exceed the total Power Station metered output where one BM Unit imports from another. The Workgroup discussed whether this was appropriate, or if generation used at another unit should be excluded from the BM Unit ALF calculation. It was decided not to account for this with a change to the methodology, on the basis of:

- Simplifying the calculation where possible.
- That this existing calculation was more in line with existing TNUoS principles – e.g. if 1MW of generation is added to a Power Station, it is still an increase to net generation in that region irrespective of whether it is being provided to a unit on site or the network and should be considered as a marginal cost.

The Proposer suggested an amendment to the adjustment charge, however the Workgroup agreed this was not required.

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The Proposer advised that they had investigated an interaction with CMP444, noting that they expected no impact as the Cap and Floor acts on tariffs and so does not affect the calculations.

### Legal text changes since send back:

| Clause  | What does this clause do?  |  | Changes since Authority send back   |   |
|---------|--|--|---|---|
|         | Original   | WACM1  | Original  | WACM1   |
| 14.15.7 | Introduce multi technology power station definition and technology types | Introduce multi technology power station definition and technology types | Added in missing word "more than <i>one</i> technology" as identified in sendback letter<br><br>Terms bolded and changed to upper case where relevant<br><br>Updated reference to MTPSTEC to new shortened acronym MTEC | Terms bolded and changed to upper case where relevant<br><br>Updated references MTPSTEC, MTPSTECpk and MTPSECS to new acronyms MTEC, MTECP, MTECN |
| 14.15.8 | Refers to existing process for multi technology power stations in        | Refers to existing process for multi technology power stations in        | None – same sentence deleted  | None – same sentence deleted  |

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|           | baseline, text to be deleted,                            | baseline, text to be deleted,                            |   |   |
|-----------|--|--|---|---|
| 14.15.102 | Describe ALF calculation for multi technology generators | Describe ALF calculation for multi technology generators | <p>Equation formatting corrected to include equals sign</p> <p>Bolding and upper case terms for consistency</p> <p>Updated terminology in equation to be clearer, including referencing BM Unit instead of technology type, and updating descriptions</p> | <p>Bolding and upper case terms for consistency</p> <p>Updated terminology in equation to be clearer, including referencing BM Unit instead of technology type, and updating descriptions</p> <p>Included guidance as to how generic ALFs should be used</p> <p>Provided clarity on BM Unit vs Power Station output and why they may not always match</p> |
| 14.15.103 | Describe how output for ALF                              | Describe how output for ALF                              | Included new acronym  | Included new acronym MTEC,  |

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|         | calculation is derived  | calculation is derived  | MTEC, bolded Power Station  | bolded Power Station   |
|---------|---|---|---|--|
| 14.18.7 | Introduce MTEC (previously MTPSETC) equation to pro rata TEC across BMUs, and how this related to overall Power Station charge. Describe methodology for generators in a negative zone. | Calculations included for MTEC, MTECP and MTECN (previously MTPSTEC, MTPSTECpk and MTPSECS) and how these are used to calculate a component charge for each BM Unit. Describe negative methodology when one or more of the tariff components is negative. | Updated terminology in equation to be clearer, including referencing BM Unit instead of technology type, and updating descriptions<br><br>Updated reference to MTPSTEC to new shortened acronym MTEC<br><br>Negative methodology updated to refer to 14.18.14<br><br>Formatting corrections e.g. 's' on separate line removed | Updated references MTPSTEC, MTPSTECpk and MTPSECS to new acronyms MTEC, MTECP, MTECN<br><br>Year Round Not Shared calculation (previously using MTPSECS) has been split into two steps to make it easier to read.<br><br>Updated terminology in equation to be clearer, including referencing BM Unit instead of technology type, and updating descriptions<br>Brackets moved in |



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|                        |  |  |  |  |
|------------------------|--|--|--|--|
| 14.8.17<br>(continued) |  |  |  | <p>MTECP<br/>(Previously<br/>MTPSTECpk)<br/>equation as<br/>per sendback<br/>letter.</p> <p>Negative<br/>methodology<br/>updated to<br/>refer to 14.18.14</p> <p>New equations<br/>added to make<br/>clearer how<br/>final charge is<br/>calculated.</p> |
|------------------------|--|--|--|--|

**Annex 16** shows the legal text changes made since the Authority send-back, with any changes highlighted and comments provided for context.

## Second Workgroup Vote

Following changes to the legal text after the second send-back, the Workgroup met on 11 June 2025 to carry out their second Workgroup Vote. The full Workgroup vote can be found in **Annex 15** of this report. The table below provides a summary of the Workgroup members view on the best option to implement this change.

The Applicable CUSC (charging) Objectives are:

- d) 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;
- e) That compliance with the use of system charging methodology results in charges which reflect, as far as is reasonably practicable, the costs (excluding

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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 C11 requirements of a connect and manage connection);

- f) 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 and the ISOP business\*;
- g) Compliance with the Electricity Regulation and any relevant legally binding decision of the European Commission and/or the Agency \*; and
- h) To promote efficiency in the implementation and administration of the system charging methodology

\*Objective (g) refers specifically to European Regulation 2009/714/EC. Reference to the Agency is to the Agency for the Cooperation of Energy Regulators (ACER) The Electricity Regulation referred to in objective (g) 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.

The Workgroup concluded by majority that the Original better facilitated the Applicable Objectives than the Baseline, and unanimously that WACMI better facilitated the Applicable Objectives than the Baseline.

| Option   | Number of voters that voted this option as better than the Baseline |
|----------|---|
| Original | 4   |
| WACMI    | 5   |

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## When will this change take place?

### Implementation date:

01 April 2026

### Date decision required by:

30 September 2025

### Implementation approach:

The NESO Billing system and the NESO Tariff Setting and Charging processes would need to be updated. Appendix C of the Connection Agreement will require updating.

NESO TNUoS Guidance note to be updated for industry participants to include co-located examples.

## Interactions

|  |  |   |                                |
|--|--|---|--------------------------------|
| <input type="checkbox"/> Grid Code                 | <input type="checkbox"/> BSC                                 | <input type="checkbox"/> STC                    | <input type="checkbox"/> SQSS  |
| <input type="checkbox"/> European<br>Network Codes | <input type="checkbox"/> EBR Article 18<br>T&Cs <sup>4</sup> | <input type="checkbox"/> Other<br>modifications | <input type="checkbox"/> Other |

CMP316 should have no consumer TNUoS impact as the value recovered via TNUoS would be unchanged. The way the value is allocated across the generation community would change.

The proposed solution assumes that the mapping of fuel/technology types to the wider generation charging categories has already taken place (and will therefore cope with any future changes implemented if the mappings change over time).

<sup>4</sup> 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 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.

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There is no direct impact to the Security and Quality of Supply Standards (SQSS) identified in this modification, however it is noted that the TNUoS Call for Evidence is looking to review links with the TNUoS methodology and SQSS.

This modification only affects co-located Generators. Non co-located Generators will not be required to do anything differently as a result of this modification.

Through the work on this Modification, it is necessary to also change three Exhibits to the CUSC. The three Exhibits to be changed are: CUSC Exhibit B Connection Application; Exhibit D BEGA Application; Exhibit I Modification Application – this is covered under [CMP397](#).

## How to respond

### Code Administrator Consultation questions

- Please provide your assessment for the proposed solutions against the Applicable Objectives?
- Do you believe that the amendments have met the deficiencies of the [Send Back letter](#)?
- Do you support the proposed implementation approach?
- Do you have any other comments?

Views are invited on the proposals outlined in this consultation, which should be received by **5pm on 28 July 2025**. Please send your response to [cusc.team@neso.energy](mailto:cusc.team@neso.energy) using the response pro-forma which can be found on the [modification page](#).

*If you wish to submit a confidential response, mark the relevant box on your consultation proforma. Confidential responses will be disclosed to the Authority in full but, unless agreed otherwise, will not be shared with the Panel or the industry and may therefore not influence the debate to the same extent as a non-confidential response.*

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## Acronyms, key terms and reference material

| Acronym / key term  | Meaning  |
|---------------------|--|
| ALF                 | Annual Load Factor   |
| BMU                 | Balancing Mechanism Unit   |
| BSC                 | Balancing and Settlement Code  |
| CAPI                | Maximum Capacity for Technology i  |
| CEC                 | Connection Entry Capacity  |
| Chargeable Capacity | Chargeable Capacity is the basis of the generation charge, where Local Annual Liability = Chargeable Capacity x Local Tariff |
| CHP                 | Combined heat and power  |
| CMP                 | CUSC Modification Proposal   |
| CUSC                | Connection and Use of System Code  |
| DRC                 | Data Registration Code   |
| ALF                 | Annual Load Factor   |
| EALF                | Effective ALF  |
| EBR                 | Electricity Balancing Regulation   |
| GC                  | Generation Capacity  |
| GWh                 | Gigawatt hours   |
| LDTEC               | Limited Duration Transmission Entry Capacity   |
| MC                  | Maximum Capacity   |

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|          |  |
|----------|--|
| MTPSECS  | Multi Technology Power Station Effective Capacity Scaled |
| MTPSALFs | Multi Technology Power Station ALF (Annual Load Factor)  |
| MTEC     | Multi Technology Power Station TEC for each technology   |
| MTECP    | Multi Technology Power Station TEC (Peak)                |
| Mod App  | Modification Application (to a Connection Contract)      |
| MWh      | Megawatt hours   |
| NESO     | National Energy System Operator                          |
| NETS     | National Electricity Transmission System                 |
| PV       | Photo Voltaic  |
| RC       | Registered Capacity                                      |
| SCR      | Significant Code Review                                  |
| SQSS     | Security and Quality of Supply Standards                 |
| STC      | System Operator Transmission Owner Code                  |
| STTEC    | Short Term Transmission Entry Capacity                   |
| T&Cs     | Terms and Conditions                                     |
| TDR      | Transmission Demand Residual                             |
| TEC      | Transmission Entry Capacity                              |
| TNUoS    | Transmission Network Use of System                       |
| YRNS     | Year Round Not Shared                                    |
| YRS      | Year Round Shared  |

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## Annexes

| Annex    | Information  |
|----------|--|
| Annex 01 | CMP316 Proposal form                                     |
| Annex 02 | CMP316 Terms of Reference                                |
| Annex 03 | CMP316 Workgroup Consultation responses and summary      |
| Annex 04 | CMP316 Legal Text  |
| Annex 05 | CMP316 WACMI Form  |
| Annex 06 | CMP316 First Workgroup Vote                              |
| Annex 07 | CMP316 Indicative Cost Tool                              |
| Annex 08 | CMP316 Worked Examples for WACMI                         |
| Annex 09 | CMP316 First Code Administrator Consultation responses   |
| Annex 10 | CMP316 Workgroup Action Log (Workgroups 12-14)           |
| Annex 11 | CMP316 Second Code Administrator Consultation responses  |
| Annex 12 | CMP316 First Final Modification Report                   |
| Annex 13 | CMP316 Authority Send-Back Letter                        |
| Annex 14 | CMP316 Workgroup Action Log post Authority send back     |
| Annex 15 | CMP316 Second Workgroup Vote                             |
| Annex 16 | CMP316 Legal text changes made since Authority send-back |