

CMP316: TNUoS Arrangements for Co- located Generation Sites

Workgroup 15, 31 March 2025

Online Meeting via Teams

WELCOME

Agenda

Topics to be discussed	Lead
Introductions	Chair
Authority Send-Back Update	Chair
Objectives and Timeline	Chair
Review Terms of Reference	All
Proposer presentation	Proposer
Cross Code Impacts	All
AOB & Next Steps	Chair

Workgroup Membership

Role	Name	Alternate	Company
Chair	Lizzie Timmins		Code Administrator, National Energy System Operator
Technical Secretary	Jess Rivalland		Code Administrator, National Energy System Operator
Proposer	Martin Cahill		National Energy System Operator
Workgroup Member (and WACM1 Proposer)	Lauren Jauss		RWE
Workgroup Member	Garth Graham	Edda Dirks	SSE
Workgroup Member	Robert Longden		Cornwall Insight
Workgroup Member	Ryan Ward	Joseph Dunn	Scottish Power
Workgroup Member	Rob Smith		Enso Energy
Workgroup Member	Joe Colebrook	Simon Wragg	Innova
Authority Representative	James Stone		Ofgem

Public Expectations of a Workgroup Member

Contribute to the discussion

Be respectful of each other's opinions

Language and Conduct to be consistent with the values of equality and diversity

Do not share commercially sensitive information

Be prepared - Review Papers and Reports ahead of meetings

Complete actions in a timely manner

Keep to agreed scope

Email communications to/cc'ing the .box email

Your Roles

Help refine/develop the solution(s)

Bring forward alternatives as early as possible

Vote on whether or not to proceed with requests for Alternatives

Vote on whether the solution(s) better facilitate the Code Objectives

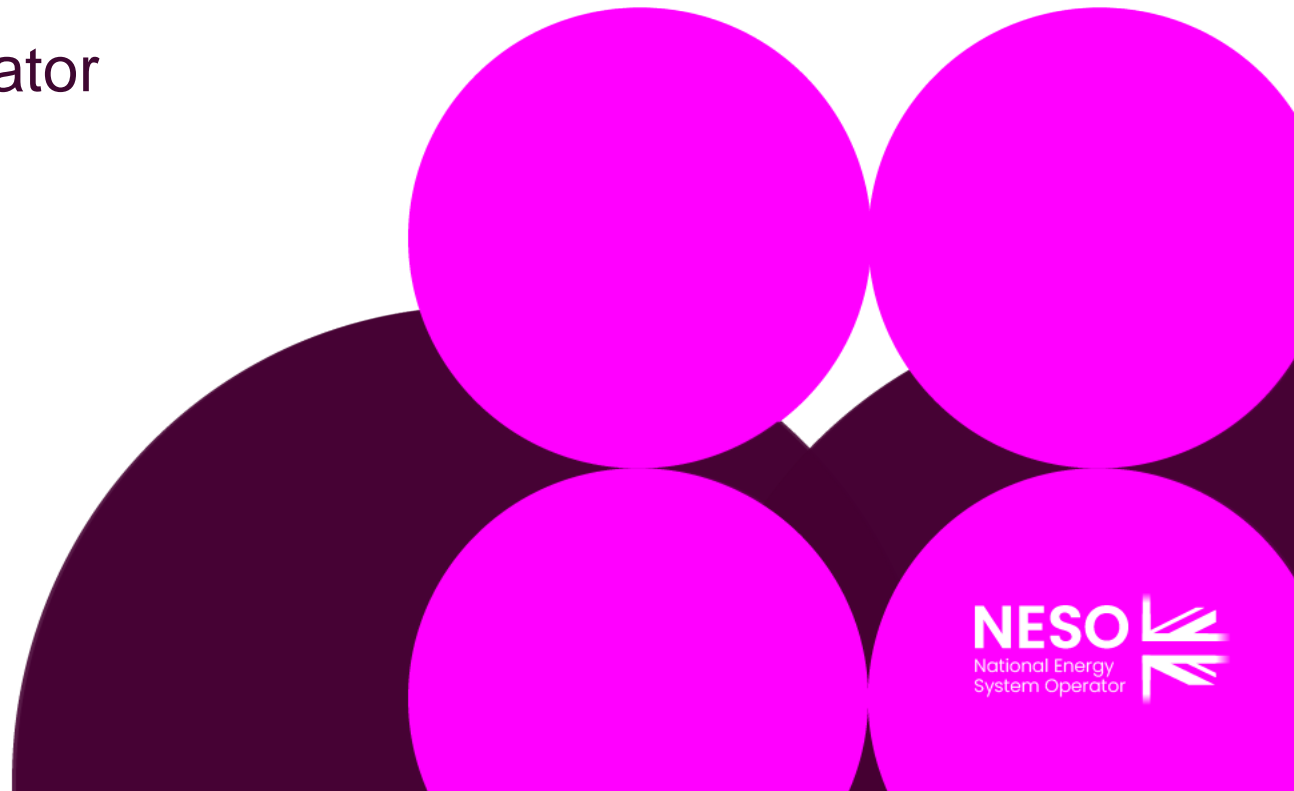
CMP316 Authority Send-Back

On 13 December 2024, Ofgem [sent back](#) the CMP316 Final Modification Report for further work and directed Panel to revise and resubmit the CMP316 Final Modification Report,

- The legal text for the Original Proposal includes a range of formatting and grammatical errors which raise the risk of ambiguity and misinterpretation.
- The legal text for WACM1 has resolved some of the issues present in the Original Proposal. However, it has also repeated other issues and introduced new formatting, grammatical and mathematical errors which raise the risk of ambiguity and misinterpretation which could prevent the intent of the modification from being realised

Objectives and Timeline

Lizzie Timmins – NESO Code Administrator



Timeline for CMP316 as at 26 March 2025

Milestone	Date	Milestone	Date
CUSC Panel agreed next steps for CMP316	10 March 2025	Draft Final Modification Report (DFMR) issued to Panel	19 June 2025
Workgroup 15 – Review simplified worked example and intention of WACM1	31 March 2025	Panel undertake DFMR recommendation vote	27 June 2025
Workgroup 16 – Refine solution and review legal text	22 April 2025	Final Modification Report issued to Panel to check votes recorded correctly	30 June 2025 to 07 July 2025
Workgroup 17 – Finalise solution and legal text, reconfirm Workgroup Vote, finalise Code Administrator Consultation	06 May 2025	Final Modification Report issued to Ofgem	08 July 2025
Code Administrator Consultation issued to Panel for approval	15 May 2025	Ofgem decision	Required by 30 September 2025
Code Administrator Consultation	27 May 2025 to 17 June 2025	Implementation Date	01 April 2026

Review Terms of Reference

Lizzie Timmins – NESO Code Administrator

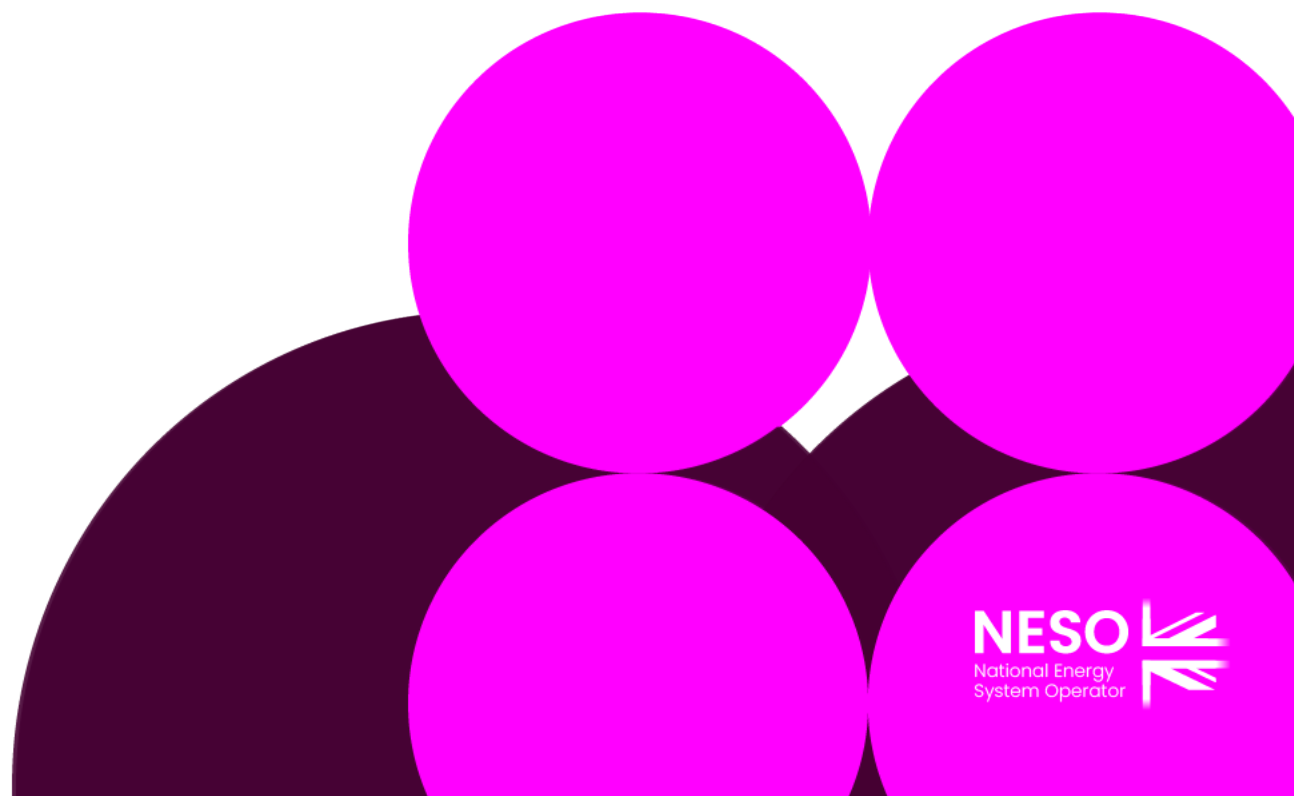
Terms of Reference

CMP316 Send Back Terms of Reference

- a) Ensure the Original solution legal text addresses the modification defect, the issues identified in the send-back letter, and is legal and operable.
- b) Ensure WACM1 legal text addresses the modification defect, the issues identified in the send-back letter, and is legal and operable.
- c) Investigate whether any simplifications can be made to the legal text so it can be more easily understood by stakeholders.

Proposer's Update

Martin Cahill – NESO



Aims for next 3 workgroups

1. Where possible, simplify calculations used in WACM1 so that process is easier for stakeholders to understand
2. Consider any minor changes/clarifications
 - Generic ALFs
 - Definition of installed capacity and child station ALF
 - Child station ALF vs site ALF
 - Other interactions e.g. cap and floor
3. Ensure that solution still meets original intention of WACM
4. Update legal text with new calculations and address any issues in legal text from sendback (for any text which remains)

CMP316 – What is the defect?

Aim is to ensure a more cost reflective charging approach for co-located sites where the technologies fit into more than one charging category – e.g. Intermittent and Conventional Carbon. The current approach just applies a predominant technology type so is not particularly reflect of the make-up of the generator.

CMP316 looks to pro-rata TEC against the different charging categories, applying a separate ALF against each and reflecting the differing impacts of the technology types on the Electricity Transmission System.

Original Solution

TEC pro-rata across child stations using installed capacity for each

ALF calculated for each technology

These are then used to calculate a tariff for each child station, treating it as a separate site

For a Multi Technology **Power Station** the **Power Station's** TEC is allocated across the different technology types, specifically:

$$MTPSTEC_{is} = \frac{CAP_i}{\sum_{i=1}^n CAP_i} \times TEC_s$$

Where:

MTPSTEC_{is} = Multi Technology **Power Station's** TEC for technology i at station s

CAP_i = Maximum Capacity for technology i

TEC_s = TEC of **Power Station** as defined in the Connection Agreement

n = number of different technologies on site

For Multi Technology **Power Station's** wider liability, the Chargeable Capacities associated with each technology type is the MTPSTEC_{is}. The charge for a Multi Technology **Power Station** will be calculated as the summation of all individual technology liabilities as calculated using MTPSTEC_{is}.

14.15.7) where appropriate metering arrangements are in place, an ALF will be calculated for each technology type. Note that the sum of GMWh for a Multi Technology **Power Station** across all technology types will equal the total GMWh for the **Power Station**.

$$ALF_A = \frac{\sum_{p=1}^{17520} GMWh_{Ap}}{\sum_{p=1}^{17520} TEC_p \times 0.5}$$

Where:

A denotes each technology type within a **Power Station**

GMWh_{Ap} is the maximum of FPN or actual metered output in a Settlement Period related to the **BM Unit** associated with MTPSTEC_A

WACM Intention - 1

To update the ALF calculation so that the proportion is based on the scaled capacity of that technology type, rather than the TEC of the entire station.

This will result in a higher ALF and higher charge per technology type.

Take the following theoretical example where the following generator runs 100% of the time, split equally across the technology types.

Wind 40MW Max Capacity

Battery 40MW Max Capacity

TEC 50MW

Using the original solution each technology type would have a 50% ALF against half of the TEC, so the generator as a whole effectively has a 50% ALF applied against the total TEC despite being utilised 100% of the time. In WACM1 each would have a 100% ALF against half the TEC, which is more reflective the full utilisation of the generator

One of the drivers of co-location is to utilise a connection better and get a high load factor by optimising between TEC.

WACM Intention - 2

Aims to reflect likely differing times at which the different technology types at the Power Station run, and as such uses different capacity values to calculate the various tariff elements rather than applying pro-rata TEC uniformly across all tariff elements.

Take the following example:

Wind (Intermittent) – 20MW Max Capacity

Battery (Conventional Carbon) – 40MW Capacity

TEC – 50MW

Intermittent generation does not attract a **peak tariff**. The original would use 33MW to calculate the peak component for the Battery, but it would be more appropriate to base this on the full max capacity i.e. 40MW as this is the only technology type which attracts a peak component. WACM1 does this by using a similar calculation to pro-rata the TEC to be applied to the peak component, but treating anything intermittent as zero. For non-intermittent, the pro-rata TEC to be applied for the peak component is capped at the actual maximum capacity for that technology type, as anything more would not be reflective of what that technology type provides at peak.

WACM1 then also reflect fact that Intermittent and Conventional Low Carbon (e.g. wind, nuclear) generation doesn't share as much when calculating the **Year Round Not Shared element**. It does this by treating the ALF as 100% for these technology types, with Conventional Carbon ALF calculated in the usual way. This is multiplied by the maximum capacity for each technology type, subsequently scaling to ensure that the total pro-rata capacity for each technology type after multiplying by the ALF does not exceed the station TEC.

When first raised, the idea for Year Round Not Shared was that it would be applied to installed capacity of each technology, but capped at TEC x YRNS tariff – which would have the same result.

WACM Intention - 3

WACM1 proposal also included the use of ‘scaled generic ALFs’ to replace the use of generic ALFs in the calculation of the Shared Year Round tariff.

Without this change it is possible that the Original proposal would understate the level of output where the station TEC is less than total installed capacity, (or overstate if TEC higher than installed capacity). This is because the generic ALFs are based on a single technology station, whereas if the two technology types are ‘sharing TEC’ then it would be expected that the ALF should be higher, reflecting the increased utilisation of the Power Station.

This wasn’t included in the solution previously, so plan is to revisit during these Workgroups

Simplified Calculation

The following has been identified as an alternative way of carrying out the calculation. This gives the same result where the tariff is positive, with some minor differences when negative*

1. **Calculate Peak, Year Round Shared, Year Round Not Shared, and Adjustment charges using TEC.** This is done as per the usual equations but broken down into sub sections i.e.

Peak = Peak Tariff x TEC

Year Round Not Shared = YRS Tariff x TEC x ALF

Year Round Shared = YRS Tariff x TEC (assume ALF =1)

(Note ALF = sum of BMU exports/TECx365x24) not site export/TECx365x24 to match with previous method)

2. **Calculate Peak, YRS, YRNS and Adjustment for each BMU using installed capacity** – ensuring that the peak charge is zero for any intermittent technology type, ALF only applied against YRNS charge for Conventional Carbon generation etc. Add these up to give a total figure for Peak, YRS, YRNS and Adjustment.
3. **The final charge is made up of the lower of each calculated figure for Peak, YRS, YRNS and Adjustment.**

*As per previous approach, when tariff is negative, highest metered values are used instead of installed capacity.

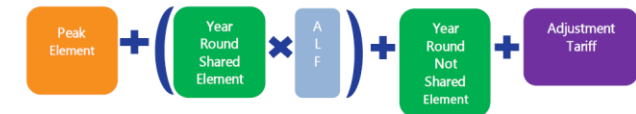
Conventional Carbon Generators

(Biomass, CHP, Coal, Gas, Pump Storage)



Conventional Low Carbon Generators

(Hydro, Nuclear)



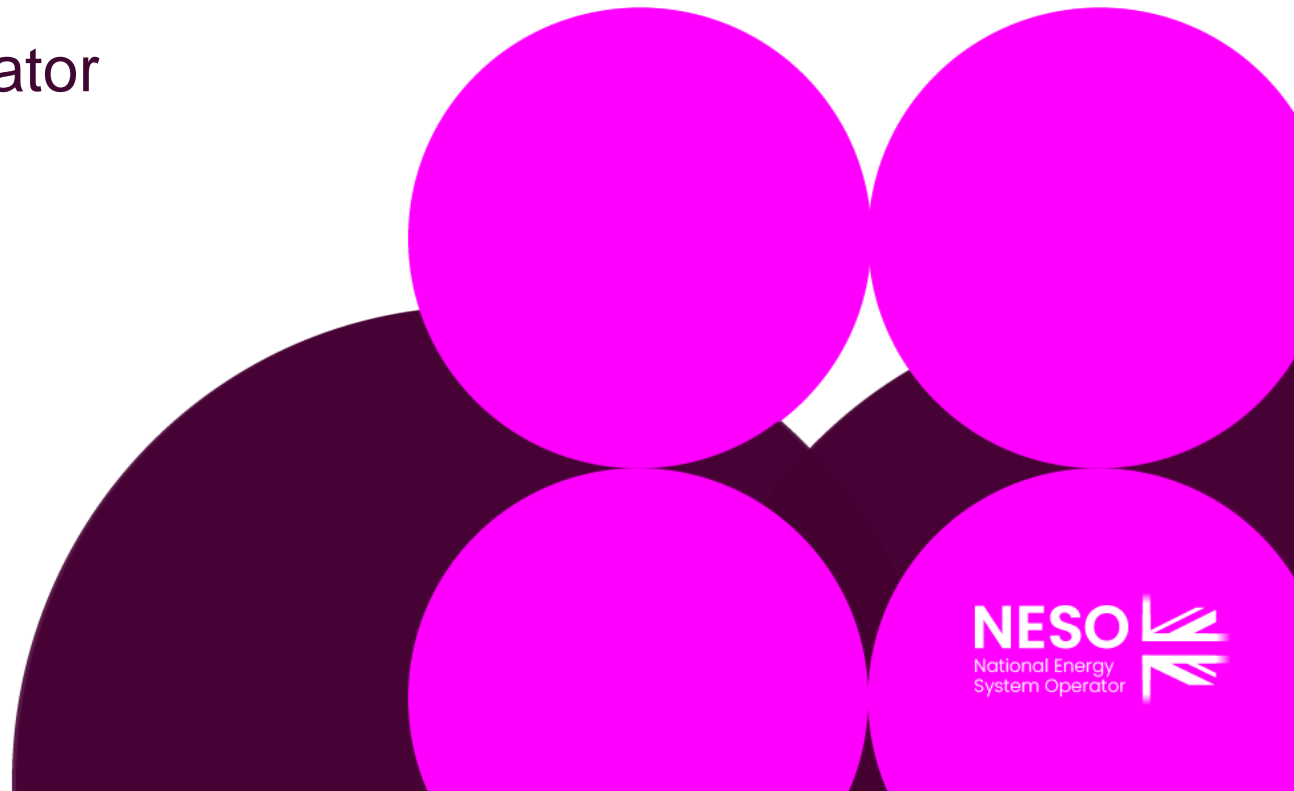
Intermittent Generators

(Wind, Wave, Tidal)



Cross Code Impacts

Lizzie Timmins – NESO Code Administrator



AOB & Next Steps

Lizzie Timmins – NESO Code Administrator

