

CMP316: TNUoS Arrangements for Co- located Generation Sites

Workgroup 16, 24 April 2025

Online Meeting via Teams

WELCOME

Agenda

Topics to be discussed	Lead
Introductions and Objectives	Chair
Review of Actions	Chair
Timeline Review	Chair
Proposer's Update	Proposer
Review Legal Text	Proposer
Review Terms of Reference	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 WACMI 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		Innova
Authority Representative	Daniel Ffrench-Mullen		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

Review of Actions

Lizzie Timmins – NESO Code Administrator

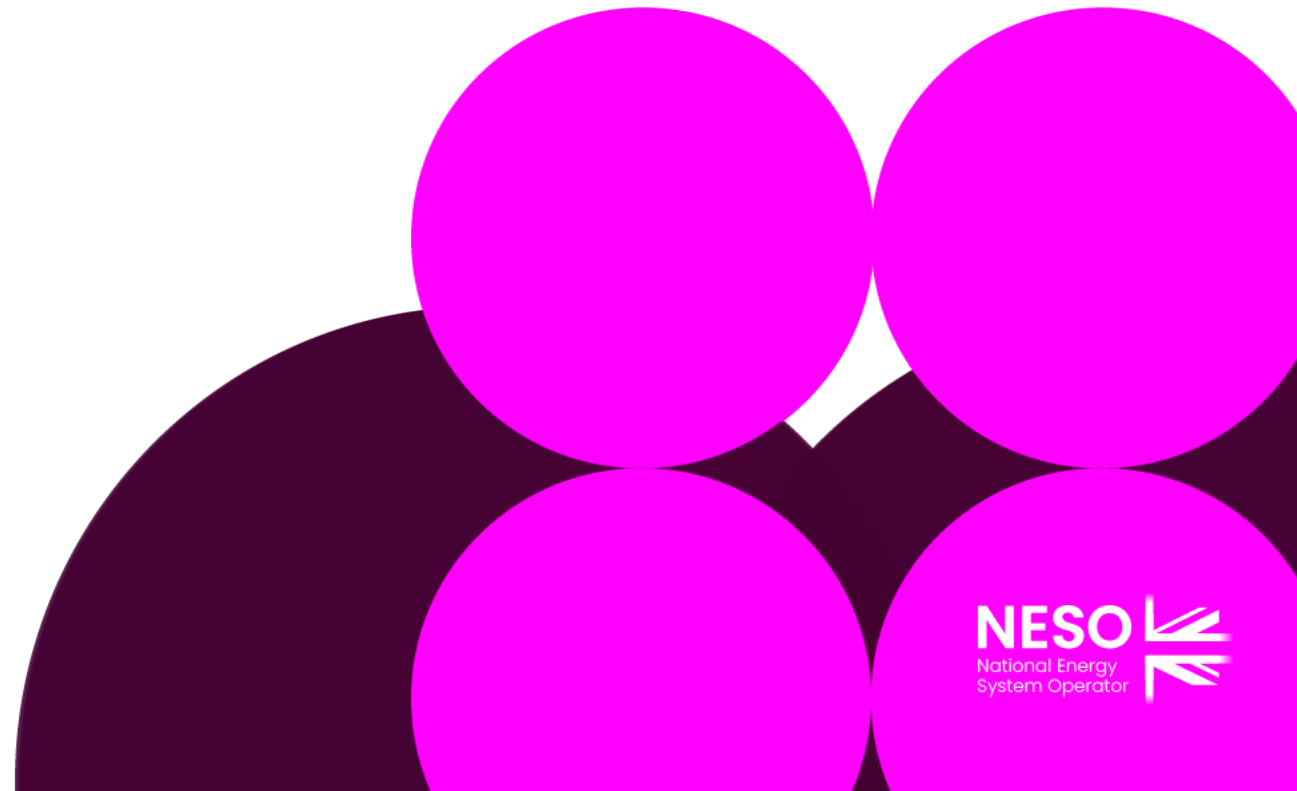


CMP316 Actions Log

Number	Owner	Action	Update	Status
1	MC	Add worked examples into spreadsheet for positive and negative zones, include comparisons for Baseline/Original/WACM1, different capacity values and consider whether to simplify WACM1 further by calculating the ALF based on installed capacity rather than MTPSTEC (step 2)	Examples provided in Workgroup 16 Papers	Open – propose to close
2	MC	Provide comments on LDTEC/STTEC potential issue		Open
3	MC/LJ	Finalise calculations for WACM1	Completed – circulated in Workgroup 16 Papers	Open – propose to close
4	MC/LJ	Look into the consistency of ALFs across the solution. Specifically, ensure that the calculation of ALFs is consistent with the legal text.	Original solution amended slightly and legal text provided in Workgroup 16 Papers	Open – propose to close
5	MC/GG	Liaise regarding the three technology type example	Completed and examples have been updated	Open – propose to close

Timeline Review

Lizzie Timmins – NESO Code Administrator

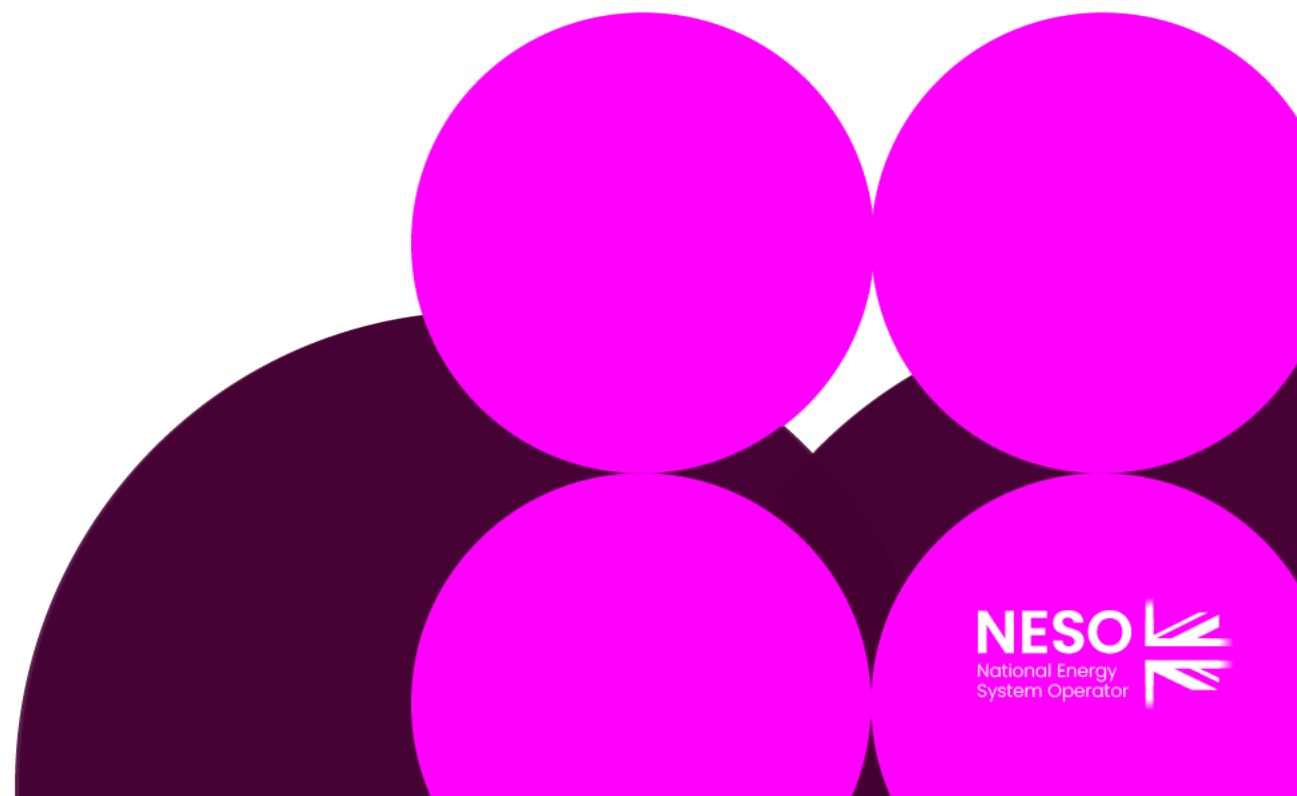


Timeline for CMP316 as at 17 April 2025

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 WACMI	31 March 2025	Panel undertake DFMR recommendation vote	27 June 2025
Workgroup 16 – Refine solution and review legal text	24 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

Proposer's Update

Martin Cahill – NESO



Reminder: Aim for 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)

To cover today

1. Changes
2. Re-run through Calculations
3. Share updated spreadsheet
4. Share scenarios – consider if any others required
5. Other considerations
6. Legal Text

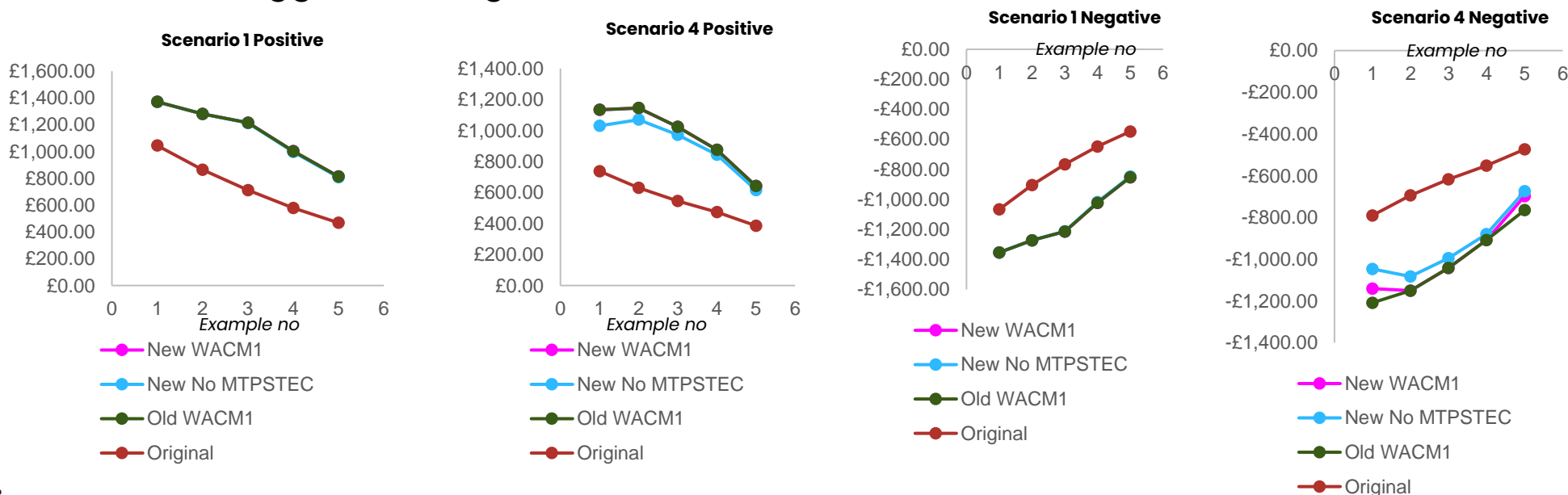
Potential Changes to Solutions

1. ALF Calculation for WACM1

Updated WACM1 calculation uses the lower for each component of charge calculated using PS TEC and sum of charges for each BMU calculated using installed capacity. To give the most similar results to the previous iteration of WACM1 (always the same when positive, small differences possible when negative), the ALF calculation is the same – $\text{Export}/\text{MTPSTEC} \times 24 \times 365$

A further simplification is possible by calculating the ALF as $\text{Export}/\text{Installed Capacity} \times 24 \times 365$

This will slightly increase differences in results, but only ever reduce the tariff (as the denominator for ALF could be bigger resulting in a smaller ALF).



Potential Changes to Solutions

2. Adjustment treatment

Examples and legal text were previously written so that the trigger for using maximum metered outputs instead of TEC/installed capacity is when the tariff component is negative.

Strictly this would mean doing so for the adjustment charge which is expected to be negative – this is probably adding unnecessary additional administration for generators which sit in ‘positive zones’?

Change could specifically exclude the adjustment charge from having to use the negative methodology

Wider Tariffs (£/kw) For illustrative purposes only				
	Peak Security	YRS	YRNS	Adjustment
	-5	5	-12	-1

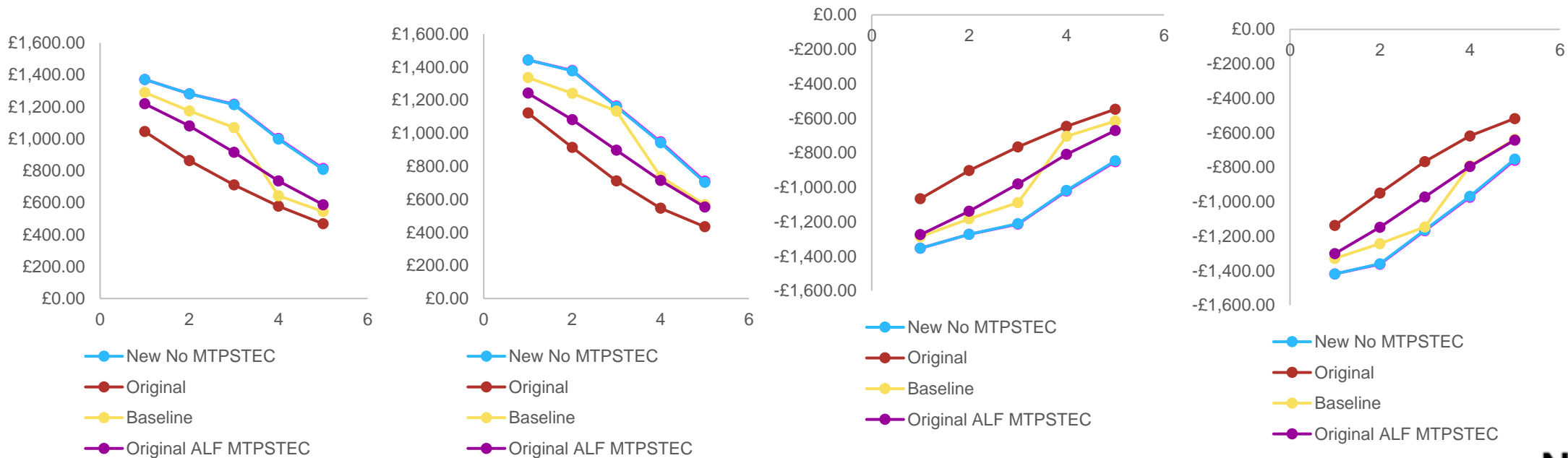
Negative methodology is to replicate process used in baseline for power stations in negative zones. This avoids generators being able to get a more negative charge by increasing TEC, and applies only when the tariff is negative. However, as components are calculated separately in WACMI it can only be applied when a component is negative.

Potential Changes to Solutions

3. ALF Calculation for Original

Previously the Original calculated the ALF for a BMU as $\text{export}/\text{TEC} \times 365 \times 24$, whereas WACM calculated it as $\text{export}/\text{MTPSTEC} \times 365 \times 24$. As it is being applied to a BMU which has a pro-rata amount of 'TEC', it may be more logical to use MTPSTEC for the Original ALF.

The Workgroup previously identified the WACM as being more cost reflective, and while the Original would still usually result in a cheaper tariff, this change would bring it closer to the WACM results.



Potential Changes to Solutions

4. Generic ALFs

This was identified as something that could potentially skew the tariffs – e.g. if a generic ALF was used which was based on a single technology site which isn't 'sharing' TEC. This would mean understating the ALF/export where installed capacity is higher than TEC.

E.g. A BMU which had typical export for it's installed capacity should have a higher ALF when calculating using MTPSTEC than a generic ALF would suggest, as MTPSTEC would typically be lower than the installed capacity.

Solution: Calculate an 'annual export' from the generic ALF.

Calculate Export MWh as:

$\text{Export} = \text{Generic ALF} \times \text{Installed Capacity} \times 365 \times 24$

Then use as an input to the same equations as before

Calculation: Original

1. **Pro Rata Capacity for each BMU as 'MTPSTEC'**
This is equal to BMU installed capacity/Sum installed capacity x TEC
 2. **Calculate ALF for each BMU as export/MTPSTECx365x24**
 3. **Calculate a charge for each BMU** treating it as a separate Power Station and using the relevant technology type charging equation, but setting the Chargeable Capacity as MTPSTEC (step1) and using the ALF calculated in step 2
- *As per previous approach, when tariff is negative, highest metered values are used instead of installed capacity.

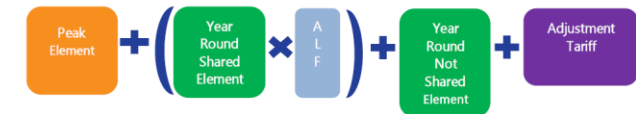
Conventional Carbon Generators

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



Conventional Low Carbon Generators

(Hydro, Nuclear)



Intermittent Generators

(Wind, Wave, Tidal)



Calculation: WACM1

- 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)

- 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.

(Note ALF used at BMU level in this stage is BMU export/installed capacityx365x24)

- 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)



Other Considerations

Cap and Floor

No interaction identified with this. The cap and floor is applied to each tariff component, not the final charge. So the impact of any restrictions in place through the cap and floor would simply be an input to the charge calculation for a multi technology power station

Site ALF vs Child Station ALF

Original only uses child station ALF

Legal text for WACM1 updated to include separate definition for Site ALF and BMU ALF

$$ALF_{PS} = \frac{\sum_{p=1}^{17520} GMWh_{pBMU1} + \sum_{p=1}^{17520} GMWh_{pBMU2} + \dots \sum_{p=1}^{17520} GMWh_{pBMUn}}{\sum_{p=1}^{17520} TEC_p \times 0.5}$$

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

Other Considerations

Definition of Installed Capacity and ALF

ALF definition included in legal text

Is a clearer definition of installed capacity required? Grid Code definition for Maximum Capacity applied to a BMU?

Maximum Capacity or Pmax

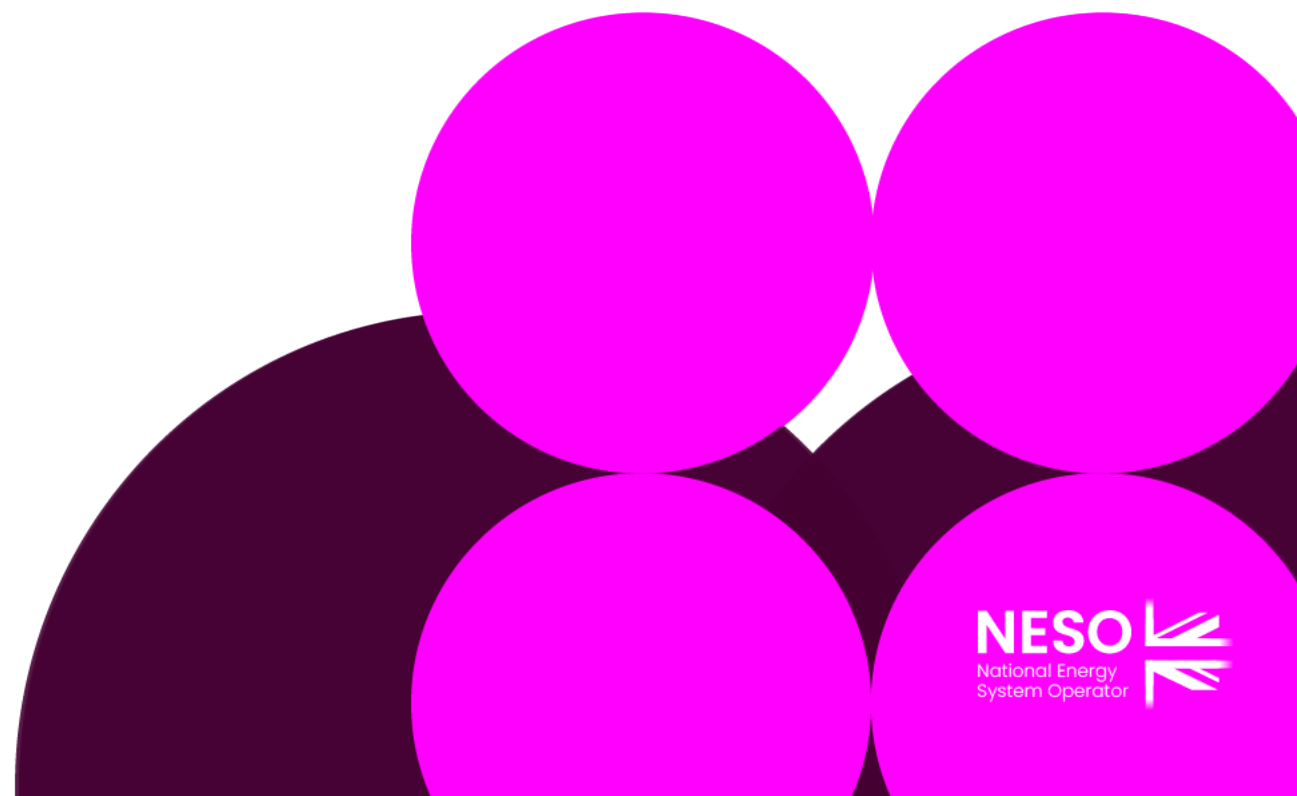
The maximum continuous Active Power which a Power Generating Module can supply to the Total System, less any demand associated solely with facilitating the operation of that Power Generating Module and not fed into the System. In the case of an Electricity Storage Module, the Maximum Capacity is the maximum continuous Active Power which an Electricity Storage Module can export to the Total System less any demand associated with facilitating the operation of that Electricity Storage Module when fully charged and operating in a mode analogous to Generation.

Acronyms

MTPSTEC – shorter acronym? TEC_{BMU} ?

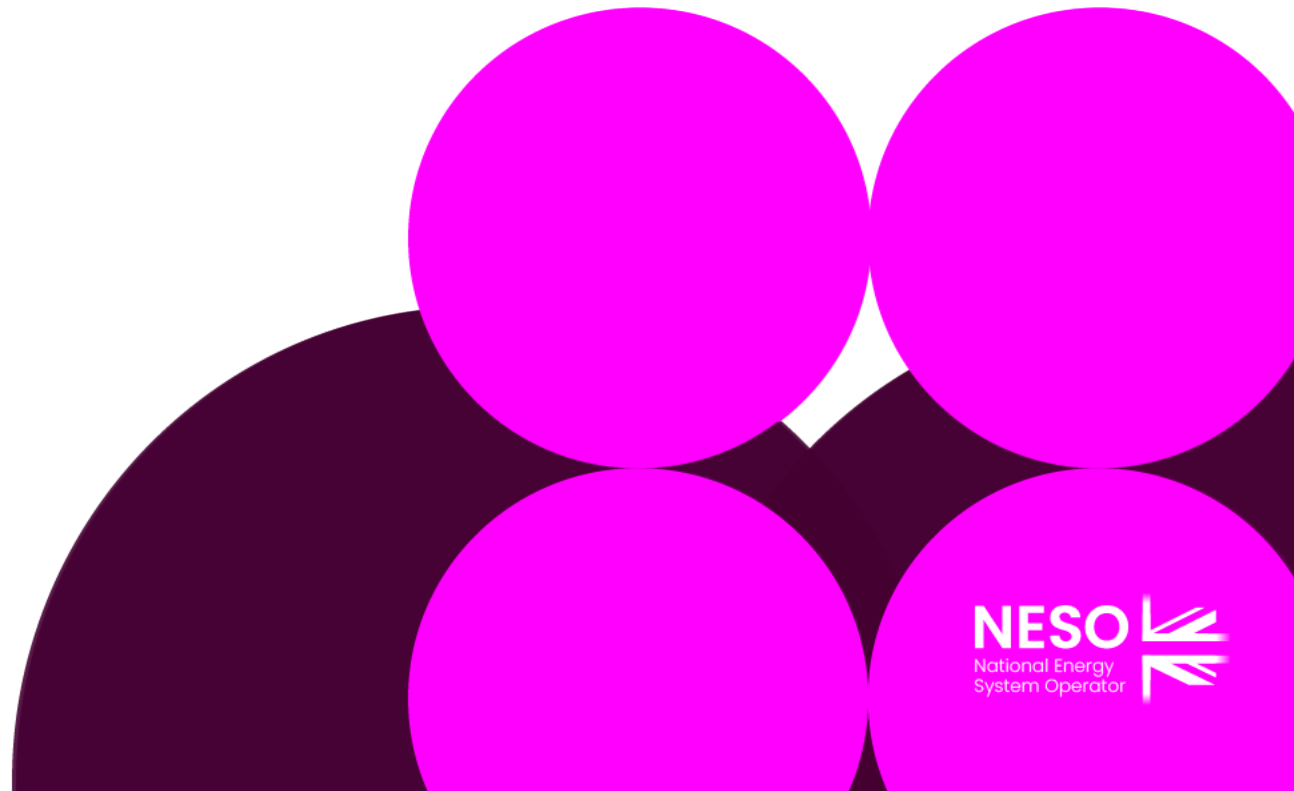
Review Legal Text

Martin Cahill – NESO



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.

AOB & Next Steps

Lizzie Timmins – NESO Code Administrator

