Workgroup Report

CMP331:

Option to replace generic Annual Load Factors (ALFs) with site specific ALFs

Overview: To provide new generators with the option to replace the generic Annual Load Factors (ALFs) used to determine their TNUoS charges with a user-provided ALF. The user-provided ALF will be based on the generators expected output and require approval from the ESO.

Modification process & timetable

1. **Proposal Form**
   28 November 2019
2. **Workgroup Consultation**
   12 December 2022 – 11 January 2023
3. **Workgroup Report**
   20 April 2023
4. **Code Administrator Consultation**
   09 May 2023 – 31 May 2023
5. **Draft Modification Report**
   22 June 2023
6. **Final Modification Report**
   12 July 2023
7. **Implementation**
   01 April 2024

Have 5 minutes? Read our Executive summary

Have 30 minutes? Read the full Workgroup Report

Have 60 minutes? Read the full Workgroup Report and Annexes.

Status summary: The Workgroup has finalised the proposer's solution. It is now seeking approval from the Panel that the Workgroup has met its Terms of Reference and can proceed to the Code Administrator Consultation.

This modification is expected to have a:
Medium impact on new transmission connected Generators.
Low impact on existing transmission connected Generators and the ESO

Governance route	This modification is being assessed by a Workgroup and Ofgem will make the decision on whether it should be implemented.	
Who can I talk to about the change?	**Proposer:** Andy Pace, Energy Potential Ltd andy.pace@energy-potential.com Phone: 07881 840007	**Code Administrator Chair:** Paul Mullen paul.j.mullen@nationalgrideso.com Phone: 07794537028

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Executive summary

CMP331 seeks to provide new generators with the option to replace generic Annual Load Factors (ALFs) used to determine their Transmission Network Use of System (TNUoS) charges with user-provided ALFs. The user-provided ALF will be based on the generators expected output and require approval from the ESO.

What is the issue?

Applying generic ALFs results in a less cost reflective TNUoS charge as it may be materially different from the actual load factor at which the new generator is operating. This means that a new generator may incur a wider TNUoS charge over the first three years of operation that does not reflect the actual usage of the site or the enduring wider TNUoS charge once the generic ALF is no longer used.

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

Proposer's solution:

- A new transmission connected generator (including "retrofit"[1] plant?) will have a choice to submit a user-provided ALF, which will be a forecast instead of the default to use the generic ALF to determine the TNUoS charges that apply to the site.
- They will exercise this choice ahead of connection (as part of the Operational Notification and Compliance Process (ONCP)[2] facilitated by the ESO in respect of new generation connections) to the National Electricity Transmission System (NETS)
- This forecast value must be determined by an independent third party and the evidence submitted to the ESO for agreement/verification.
    - Where the ESO does not agree with the user-provided ALF provided, they will provide the reason for such rejection and the User can raise a Charging Dispute under CUSC Section 14.15.114[3] if they wish to challenge this decision.

Implementation date:
10 working days after decision date and effective from 1 April 2024 (if decision received by 30 September 2023).

Summary of potential alternative solution(s) and implementation date(s):
No alternative solutions have been raised.

Workgroup Conclusions: The Workgroup by majority concluded that the Original better facilitated the Applicable CUSC Objectives than the Baseline.

[1] Retrofit plant here is installing (new or modified parts or equipment) in something previously constructed
[2] https://www.nationalgrideso.com/industry-information/connections/compliance-process#:~:text=The%20customer%20signs%20and%20submits,to%20issue%20the%20Operational%20Notification.
[3] CUSC Section 14.15.114: For new and emerging generation plant types, where insufficient data is available to allow a generic ALF to be developed, The Company will use the best information available e.g. from manufactures and data from use of similar technologies outside GB. The factor will be agreed with the relevant Generator. In the event of a disagreement the standard provisions for dispute in the CUSC will apply.

What is the impact if this change is made?

The proposer argues that this modification will increase the cost reflectivity of TNUoS charges for new transmission connected generators for the first three years of their operation where they select to use a user-provided ALF. However, in practice, this is expected to be more applicable to intermittent generation where the generator is unable to control its output.

Unlikely that modification will materially impact consumers TNUoS charges as any reduction in generation TNUoS for a site with a user-provided ALF will be spread across other generators and this impact is shown in the "Analysis to show the benefits and impacts on existing TNUoS parties" section of this document. Additionally any impact will be limited as there is expected to be few new transmission connected generators selecting a user-provided ALF.

There could be a small benefit to consumers as it assists new generators, particularly renewable generation, to correlate their TNUoS charge against their load factor and therefore their expected income from the wholesale market which could reduce the risk for new market entrants.

Interactions

This modification has no interactions with any other current modifications, codes/standards, or other industry-wide work. However, the Workgroup noted CMP213, which has previously covered this issue and this is explored further below:

CMP213 - Project Transmit TNUoS Developments:

The Workgroup discussed the work previously carried out on ALFs and taken forward in CMP213 - Project Transmit TNUoS Developments and noted that Workgroup Alternative CUSC Modification (WACM) 2 was approved by Ofgem. This used user-provided ALFs, but where historic data did not exist generic ALFs were used instead. The Proposer highlighted that WACM 1 was rejected by Ofgem because of its complexity and would have given Power Stations the option to either submit their own forecast ALF or accept the ALF calculated by the ESO. Where the difference between the Power Station's actual ALF and forecast ALF was less than 2% (tolerance band) no further action would have taken by National Grid. However, if at the end of the charging year the difference between the Power Stations forecast and their actual ALF was more than 2% then this would have been recovered from the Power Stations. The excess above 2% would have been charged at 1.5 times the Power Station's applicable TNUoS charge in that charging year.

The Proposer stated that the Workgroup should bear this in mind, before raising any complex alternatives for CMP331 and also highlighted that the solution under CMP331 was different to the WACM 1 proposed in CMP213 which was a more complex solution from an implementation perspective, particularly with regard to TNUoS reconciliations

The ESO Workgroup Member argued that it was unclear what has materially changed since CMP213 was implemented that would warrant this change given that CMP213 made a consideration between accuracy of charges and simplicity/efficiency of applying the methodology. They also felt that no material negative impact of the current methodology has been quantified and evidenced in the CMP331 Workgroup.

This modification has no interactions with Electricity Balancing Regulation (EBR) Article 18 Terms and Conditions.

What is the issue?

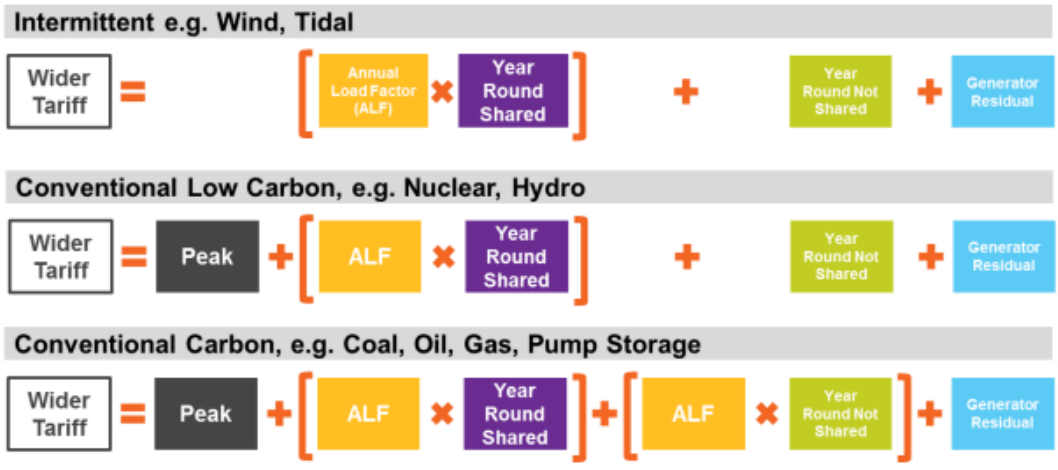
Under the current charging arrangements, the Transmission Network Use of System (TNUoS) charges for transmission connected generation are applied based on a generator's average Annual Load Factor (ALF) in previous years. The ALF is calculated each year and the value used to determine the TNUoS charge is based on an average of three years of historical ALF data (extracted from a data set of up to five years where the highest and lowest years are discarded or the lowest discarded if only four years of data is available).

For a new site, the data required to determine the ALF does not exist and a generic ALF value is used. Where some ALF data exists, but not the minimum three-year period, the generic ALF is used to replace missing data to make up the full three years of ALF data required for TNUoS charging purposes.

Applying generic ALFs results in a less cost reflective TNUoS charge as it may be materially different from the actual load factor at which the new generator is operating. This means that a new generator may incur a wider TNUoS charge over the first three years of operation that does not reflect the actual usage of the site or the enduring wider TNUoS charge once the generic ALF is no longer used.

Why change?

ALFs are used within TNUoS as a proxy to determine the extent to which a generator uses the wider transmission network and form part of the calculation of a generator's wider TNUoS charge. The degree to which ALFs impact the wider TNUoS charge for a generator depend on the generation type and the generation charging zone within which it is situated. The formula for calculating the wider TNUoS charge is shown below:



The generic ALFs are calculated from the ten most recently commissioned generators for each technology (where this is available). Where a new generator connects to the transmission network whose expected load factor is likely to be materially different from the generic ALF the generator will incur a TNUoS charge that does not reflect the proportion of the wider network used.

To illustrate the range of ALFs for onshore wind, the values for 2019-20 range from 25.7% to 52.0% and the generic ALF applied is 38.5%.

The Proposer argues that the use of generic ALFs for setting TNUoS charges is not cost reflective for new generation. It may be beneficial for some generators where the generic ALF is lower than the actual ALF and conversely it may impose excessive costs on new generators where the generic ALF is higher than the actual ALF. This introduces a risk for new generators that they may not be able to mitigate and potentially does not reflect the enduring arrangements where generators are charged based on their actual ALF.

What is the solution?

Proposer's solution

- A new transmission connected generator (including "retrofit"[4] plant?) will have a choice to submit a site-specific ALF, which will be a forecast instead of the default to use the generic ALF to determine the TNUoS charges that apply to the site.
- They will exercise this choice ahead of connection (as part of the Operational Notification and Compliance Process (ONCP)[5] facilitated by the ESO in respect of new generation connections) to the National Electricity Transmission System (NETS)
- This forecast value must be determined by an independent third party and the evidence submitted to the ESO for agreement/verification.
    - Where the ESO does not agree with the site-specific ALF provided, they will provide the reason for such rejection and the User can raise a Charging Dispute under CUSC Section 14.15.114[6] if they wish to challenge this decision.

Workgroup considerations

The Workgroup convened 5 times to discuss the perceived issue, detail the scope of the proposed defect, devise potential solutions and assess the proposal in terms of the Applicable Code Objectives.

Consideration of the proposer's solution

1 A new transmission connected generator (including "retrofit"[7] plant?) will have a choice to submit a site-specific ALF, which will be a forecast instead of the default to use the generic ALF to determine the TNUoS charges that apply to the site.

The key question here was whether or not this included retrofit plant i.e. a power station removes previously constructed plant and installs new plant on their site as they are changing their technology. The ESO Workgroup Member confirmed that a generic ALF would apply under the current TNUoS methodology to this plant and therefore, under the

[4] Retrofit plant here is installing (new or modified parts or equipment) in something previously constructed
[5] https://www.nationalgrideso.com/industry-information/connections/compliance-process#:~:text=The%20customer%20signs%20and%20submits,to%20issue%20the%20Operational%20Notification.
[6] CUSC Section 14.15.114: For new and emerging generation plant types, where insufficient data is available to allow a generic ALF to be developed, The Company will use the best information available e.g. from manufactures and data from use of similar technologies outside GB. The factor will be agreed with the relevant Generator. In the event of a disagreement the standard provisions for dispute in the CUSC will apply.
[7] Retrofit plant here is installing (new or modified parts or equipment) in something previously constructed

CMP331 Original, they are eligible to opt for site-specific ALF (i.e. a site-specific can always be used when a generic ALF would be applied according to the CUSC 14.15.113[8]).

Transition from a generic to a user-provided ALF as more data becomes available

A Workgroup member questioned how they would manage the transition from a generic to a user-provided ALF as more data become available and a generator realised that their generic is higher than their expected ALF. The Proposer recommended that the normal process of replacing the generic (or the user-provided ALF if this proposal is implemented) with actual data should continue and would allow the transition to the use of actual data in a transparent manner

2 They will exercise this choice ahead of connection to the National Electricity Transmission System (NETS)

The Workgroup noted that new generator connections to the NETS are required to demonstrate compliance with the relevant requirements of their connection agreements with the ESO together with the relevant requirements of the Grid Code prior to receiving Operational Notifications for their connection. This Operational Notification and Compliance Process (ONCP)[9] is facilitated by the ESO in respect of new generation connections to the National Electricity Transmission System (NETS). The ESO Workgroup Member was asked to consider whether a step in the ONCP could be added for the User to confirm if they are seeking a user-provided ALF and agreed that this will be added.

The ESO Workgroup Member confirmed that they will require the User to make their choice and provide data to them by 30 September for the user-provided ALF (if approved) to come into effect the following charging year. However, if the effective date is 1 April 2024, the ESO are happy to accept user-provided ALF submissions until 31 October 2023 (if CMP331 is approved by Ofgem), reverting to 30 September for the subsequent years. This has been added to the CMP331 Legal Text.

Adding this step to the ONCP means there will need to be a "housekeeping" change to the Grid Code Data Registration Code (DRC). Given that this change would only be required if CMP331 is approved and there will be sufficient lead time before CMP331 is implemented, this "housekeeping" change will be raised after and if CMP331 is approved.

3 This forecast value must be determined by an independent third party and the evidence submitted to the ESO for agreement/verification.

The CMP331 Original proposes that the ESO are the body who would independently assess whether the forecast ALF provided can be used instead of the generic ALF.

[8] Under CUSC 14.15.113 "If a User can demonstrate that the generation plant type of a Power Station has changed, consideration will be given to the use of relevant generic ALF information in the calculation of their charges until sufficient specific data is available." The ESO's current practice is to identify stations which have converted to a new plant type and consider on a case-by-case basis what is the most appropriate data to use.

[9] https://www.nationalgrideso.com/industry-information/connections/compliance-process#:~:text=The%20customer%20signs%20and%20submits,to%20issue%20the%20Operational%20Notification.

Workgroup members questioned how the process would work, who would carry out the independent assessments, what information would they provide, how would they be verified and how they could ensure they were fair and equal across the board. The Workgroup requested examples of historic independent assessments to see what information was contained within these documents to help understand if they were a suitable replacement and if they would produce more cost reflective charges. They could also aid their understanding of what kind of process they needed to put in place and how much of it needed to go within the CUSC or elsewhere.

The Proposer explained that these assessments are confidential documents that are already presented to banks when trying to obtain financing for projects and include independent feasibility studies on the predicted long-term export units for sites. Therefore, there is already a high onus on them to be independent and correct. In their view, if these studies include ALFs within them, then generators should be allowed to present them to the ESO to be used instead of generic ALFs to work out their TNUoS charges. An example of the type of study that could be used would be a Wind Farm Energy Yield Assessment report. This report produces an assessment of the likely annual output from a windfarm that can be used to derive the expected load factor for the site. The report takes into account items such as the types of wind turbines to be used and the long-term wind speeds for a given location. The Proposer explained that it was not possible to share these reports as they are commercially confidential but did share screenshots from a feasibility study demonstrating the possible energy yield (in megawatt hours per annum) for each wind turbine under different configurations, by taking weather forecasts and historic wind speed data into account. The Proposer suggested that these could then be used to work out the annual load factor based on the maximum export capacity of the site. These screenshots can be found in Annex 5.

WT-No.	Gross/'Free' Energy Yield (Excl. All Losses) [MWh/a]	WF Wake Effect Losses [%]	All Other Tech. Losses [%]	Total Efficiency [%]	Net Energy Yield (Incl. Wake Effects & All Other Losses) [MWh/a]
WWK - WT 1	6 675	88.3	96.0	**84.8**	**5 661**
WWK - WT 2	6 681	85.8	96.0	**82.4**	**5 505**
WWK - WT 3	6 691	85.1	96.0	**81.8**	**5 470**
WWK - WT 4	6 678	89.6	96.0	**86.1**	**5 748**
WWK - WT 5	6 697	84.0	96.0	**80.7**	**5 404**
WWK - WT 6	6 621	91.6	96.0	**88.0**	**5 824**
WWK - WT 7	6 598	92.0	96.0	**88.3**	**5 828**
WWK - WT 8	6 630	85.9	96.0	**82.5**	**5 473**
WWK - WT 9	6 558	92.8	96.0	**89.1**	**5 842**
Totals	59 830	88.3	96.0	**84.8**	**50 756**

Figure 1: Expected output by wind turbine per annum (MWh), including wake effects for configuration 1

WT-No.	Gross/'Free' Energy Yield (Excl. All Losses) [MWh/a]	WF Wake Effect Losses [%]	All Other Tech. Losses [%]	Total Efficiency [%]	Net Energy Yield (Incl. Wake Effects & All Other Losses) [MWh/a]
WWK - WT 1	6 675	88.1	96.0	**84.6**	**5 647**
WWK - WT 2	6 681	85.7	96.0	**82.3**	**5 500**
WWK - WT 3	6 691	85.0	96.0	**81.6**	**5 463**
WWK - WT 4	6 678	89.6	96.0	**86.0**	**5 745**
WWK - WT 5	6 697	83.9	96.0	**80.6**	**5 395**
WWK - WT 6	6 621	91.4	96.0	**87.8**	**5 814**
WWK - WT 7	6 598	91.9	96.0	**88.3**	**5 823**
WWK - WT 8	6 630	85.9	96.0	**82.5**	**5 467**
WWK - WT 9	6 558	92.7	96.0	**89.1**	**5 840**
Totals	59 830	88.2	96.0	**84.7**	**50 695**

Figure 2: Expected output by wind turbine per annum (MWh), including wake effects for configuration 2

One Workgroup member highlighted that the criteria required by financial investors may be very different to the criteria that the ESO would want to apply to these independent assessments.

The Workgroup agreed that the CUSC should not be too prescriptive regarding what would be acceptable evidence/report and this can vary for different fuel types i.e. windfarms are likely to have standard yield assessment reports but that may not the case for other fuel types. The responses to the Workgroup Consultation also highlighted the range of evidence, which could be provided and Workgroup agreed it wasn't prudent to define an exhaustive list of acceptable evidence and the Workgroup were content that the Legal text on this topic would be light touch rather than provide an exhaustive list of acceptable evidence provided it is:

- Independent;
- Provides a fair assessment of the expected output of the power station that takes account of the variables that are likely to impact the annual output and load factor; and
- The cost for the independent assessments would be picked up by the party applying to use site-specific ALFs.

The majority of the Workgroup also agreed that it would be useful for consistency to include a template for a User, seeking a user-provided ALF, to complete. This is attached in Annex 10. However, the ESO Workgroup member argued that they do not know if the elements contained in Annex 10 amount to the particular ALF value.

A Workgroup Member also suggested that the ESO create a publically available tool that Users could use to calculate what their ALF may be to help with their decision as to whether or not to elect for a user-provided ALF. It was noted that there is a tool used for Users, seeking connections to the NETS, to identify what their application fee would be for their proposed connection project, depending on MW and location. However, the tool to calculate a user-provided ALF would be more complex given the number of variables and arguably is not cost or time effective at this time given how many sites are expected to seek a user-provided ALF.

The ESO Workgroup Member expressed concerns as to how they would verify the evidence and this was also referenced in some responses to the Workgroup Consultation.

4 Analysis to show the benefits and impacts on existing TNUoS parties

Ahead of the Workgroup Consultation, the Proposer presented some analysis to show what the TNUoS charges for each type of generation for 100MW may be, along with the impact a 1% reduction in ALF could have on their bill in pounds and percentage terms. Please see the "TNUoS impact" tab within Annex 4 for more information on this. The Proposer also provided some graphs (which can be found on the "stats" tab within Annex 4) to compare the difference in ranges between the minimum, maximum and generic ALFs for different generation types between 2015/2016 and 2019/20. To show how varied the ranges were, the Proposer explained that for nuclear generators the minimum and maximum ALFs varied from 0% up to 80% and had a generic ALF of around 70%. To illustrate this further, the Proposer highlighted that the "data" tab also displayed the step change in ALFs for when sites moved from generic to specific ALFs. The Proposer felt that all this analysis provided an idea of the scale of the problem and that bigger impacts were seen in some areas over others.

Workgroup members questioned whether the "data" tab could be updated to include more recent ALFs as it was now 2022, so that they could understand the current scale of the problem. They also questioned whether the actual generic values needed to be inputted on to the "data" tab, rather than zeros. As they felt that zeros would affect the mean and make the analysis less reliable for the Workgroup report.

The Proposer explained that this was the most recent information and latest ALF data published by the ESO but agreed to replace the zeros with the actual generic data. These changes did not have a noticeable impact on the analysis as some of the zeros were in fact really low load factors such as 0.2% and did not need replacing.

The Proposer also provided an example of the savings an onshore windfarm could make within its first three years if this modification was implemented. This example showed a possible cost reduction of over £424k (6.5%) over three years for a 100MW onshore windfarm that operates at a 25% load factor compared to a generic ALF of 38.5%. This example can be seen in figure 3 below and in Annex 4.

							TNUoS Based on Current Methodology		TNUoS Based on actual ALF		
Generation Tariffs		System Peak Tariff	Shared Year Round Tariff	Not Shared Year Round Tariff	Adjustment Tariff	ALF Used	Intermittent Rate	Intermittent Charge	Intermittent Rate	Intermittent Charge	Difference
Zone	Zone Name	(£/kW)	(£/kW)	(£/kW)	(£/kW)	%	(£/kW)	(£)	(£/kW)	(£)	(£)
2020-21	North Scotland	2.7563	20.8766	15.0138	-4.8491	35.5%	17.577149	£1,757,715	15.383813	£1,538,381	£219,334
2021-22	North Scotland	4.1261	19.8491	18.8455	-0.4326	32.0%	24.765410	£2,476,541	23.375151	£2,337,515	£139,026
2022-23	North Scotland	4.0379	18.7723	17.5406	-0.2287	28.5%	22.662394	£2,266,239	22.004975	£2,200,498	£65,742
2023-24	North Scotland	4.7707	19.7989	18.6167	-0.9585	25.0%	22.607948	£2,260,795	22.607948	£2,260,795	£0
										Total Difference	**£424,101**

Figure 3: The table above is an example of onshore windfarm with an ALF of 25% compared to generic ALF of 35.5%, and it looks at the impact over the 4-year period in Zone 1

Impacts on other TNUoS parties:

The Proposer explained that if generators choose to exercise this option under CMP331 and incurred lower TNUoS charges than originally anticipated, then that difference in

TNUoS revenue may need to be recovered from other transmission connected generators. The Proposer stated that cashflow for new generators within the first few years was very important and that it was vital that they paid more cost reflective TNUoS charges, even if this meant other generators may end up paying more as a result.

The Proposer presented some analysis to show how the difference in TNUoS could be recovered from other transmission connected generation, please see the "Impact on generation TNUoS" tab within Annex 4 for more information on this. The analysis showed the impact of adjusting the revenue recovered through wider TNUoS for generation by different amounts and the impact this may have on the residual element of generation wider TNUoS (which gets less negative). This included 4 scenarios with a possible cost reduction of between £2.5m and £10m, which could be recovered across all transmission connected generators. The proposer included a scenario of up to £10m but recognised that this is an extreme scenario, as most generators are likely to have load factors close to the generic ALF and the proposal is aimed at the situation where a new generator is disadvantaged when its actual load factor is likely to be substantially lower than the generic ALF.

Following the Workgroup Consultation, the Workgroup agreed that further analysis was needed to show what the full impact may be on other TNUoS parties if this modification was implemented. This analysis, produced by the ESO and set out below, shows what would've happened to TNUoS charges if all new generators of the past 3 years had adopted a site-specific ALF instead of a generic ALF. The ESO Workgroup Member noted that changed over the generic ALFs in their calculation to their actual ALFs, but advised there would be limitations on accuracy as a site-specific ALF will also vary from the actual ALF and be different from year to year.

The ESO's analysis used the 83 new generation sites on the Transmission Entry Capacity register (as of 31 October 2022) that would have a generic ALF applied to them if connecting in 2023/2024. These 83 generation sites are split by the following technology types:

Generator Type	Number of generators with Generic ALF for 23/24 (and contracted > 0MW)
Battery	34
Reactive Compensation	2
Solar	15
Onshore Wind	14
CCGT_CHP	12
Biomass	1
Gas Oil	1
Offshore Wind	4

Note: as discussed, this table refers to the sites that use generic ALF only (not a mix of partial real data and generic) and does not take into account ESO's best view of connected sites for the year.

ESO then took these 83 generation sites and applied their internal "best view" on which of the 83 generation sites would connect. For the remaining new generation sites, ESO then replaced the current generic ALF with a % decrease or increase to show the impact on the 2023/2024 TNUoS final tariffs. The ESO Workgroup Member noted that locational TNUoS is not impacted and the only impacts are to the Adjustment Tariff (in place to ensure

compliance with the Limiting Regulation[10]), which is smoothed across all generation customers.

The summary findings on the change to the Adjustment Tariff are shown below:

Test	**Replacing all purely generic ALFs used within the 23/24 tariff setting (i.e. only those used where there is no real data for a site, not those used where there is partial data) by a range of values and testing the impact to tariffs.**		
Test	**ALFs used in calculation**	**Adjustment Tariff (£/kW)**	**Change (£/kW)**
23/24 Calculation	23/24 generic ALFs	-0.928179	
Reduce generic ALFs by 75%	23/24 generic ALFs * 0.25	-0.731975	0.196204
Reduce generic ALFs by 50%	23/24 generic ALFs * 0.50	-0.797376	0.130803
Reduce generic ALFs by 25%	23/24 generic ALFs * 0.75	-0.862777	0.065402
Increase generic ALFs by 25%	23/24 generic ALFs * 1.25	-0.99358	-0.065401
Increase generic ALFs by 50%	23/24 generic ALFs * 1.50	-1.058981	-0.130802
Increase generic ALFs by 75%	23/24 generic ALFs * 1.75	-1.124383	-0.196204

5 Should there be any obligations on Users to be fully open and transparent with the independent third party and the ESO where a suitable site-specific ALF is available

The Workgroup discussed this Term of Reference set by the CUSC Panel. Some Workgroup members felt that this referred to Users being open and transparent about anything they already know, or if anything changes and not withholding information. However, they acknowledged that this may be difficult to enforce, or check if parties were compliant, even if the requirement was embedded in the CUSC.

Other Workgroup members felt that this referred to the ESO being open and transparent and publishing any decisions where they allow site-specific ALFs to be used instead of generic ALFs, along with some justification/evidence on how this decision was reached. This would then provide transparency to other Users on what kind of evidence they may need to submit in order to also get this approved. As well as allowing parties the opportunity to check that they were valid and appropriate decisions, which was consistent with other submissions.

The Workgroup agreed that they needed to explore a way of sharing this information if parties were going to be treated differently and it would also provide visibility to other parties who may want to explore this option.

[10] *The Limiting Regulation provides that, in calculating annual average transmission charges paid by producers, "transmission charges shall exclude…charges paid by producers for physical assets required for connection to the system or the upgrade of the connection". This is referred to as the 'Connection Exclusion'. Note that, following the end of the post-Brexit Transition Period, the relevant parts of the Limiting Regulation continue to apply in Great Britain as retained EU law, pursuant to s.3 of the European Union (Withdrawal) Act 2018 (subject to non-material amendments)*

The Proposer highlighted that the reports may contain confidential information which cannot be published in the public domain. A Workgroup member explained that there were ways around this such as the sandbox derogation process under the BSC, where visibility is provided to industry without necessary sharing all the confidential data but this was felt to be complex and introduce risk.

The Workgroup agreed the following:

- User-provided ALFs (that are agreed) will be published by the ESO.
- The reports and/or accompanying data provided by the Users will not be published due to commercial confidentiality but the ESO will aim to publish headline data in the normal ALF publications about user-provided ALFs adopted.
- Where user provided ALFs are rejected by the ESO, the ESO will not publically share why rejected (although a Workgroup Member queried if they should) and may instead use existing communication channels, such as TCMF, to share any learnings with the industry.
- There will be an obligation on Users to update the ESO if their user-provided ALF is no longer accurate.

Consideration of other options

The Workgroup discussed the following possible alternate approaches detailed below:

Zonal ALFs

The ESO Workgroup Member initially suggested that an alternative solution could be that they look at generic ALF's by region/zone. This could make the generic ALF's more accurate, which would result in more cost reflective charges and solve the same defect.

However, upon further investigation it was established that there was already a provision within the CUSC for zonal generic ALFs to be used if they are materially different to the GB wide ALF. But as there were currently only 3 zones with 10 or more plants of the same technology types, a zonal generic ALF could only be calculated for onshore wind in zones 1, 10 and 11. When the averages were compared against the GB wide generic ALFs, this showed onshore zonal generic ALFs would be around 39.1%, 41.1% and 37.0% respectively compared to a GB-wide 35.5% for the 2022/23 charging year. Please refer to Annex 6 for further information on this.

Therefore no Workgroup Alternative was raised here.

Using a site-specific ALF, but then reconciling it to the actual ALF

The Proposer suggested that another alternative solution may be to use site-specific ALFs and then reconcile them later with the actual ALFs. This would remove the issue currently faced in relation to generic ALFs, as they would no longer be used. However, the Proposer recognised that it may be problematic from a charging perspective to do these reconciliations.

The Workgroup went on to discuss the following Term of Reference set by the CUSC Panel "Consider if any annual reconciliation process might be appropriate for cost reflectivity purposes if the outturn is more than the forecast (and if so, should this be capped by the generic load factor?)".

The Workgroup concluded that they did not see any justification for capping this if the outturn is “significantly different” than the forecast. Therefore no Workgroup Alternative was raised here.

The Proposer, taking on board Workgroup feedback that the value is outweighed by the complexity, confirmed their Original proposal would not include such a reconciliation process.

Legal Text

The legal text for this change can be found in Annex 7.

Workgroup Consultation Summary

The Workgroup held its Workgroup Consultation between 12 December 2022 and 11 January 2023 and received 7 responses, none of which were confidential. A summary of the responses and the full responses can be found in Annexes 8 and 9 respectively.

In summary:

- **There was mixed support for the change and mixed views on who should be able to make this choice**. The key question here was would retrofit (fundamentally changing characteristics of plant) sites already be included in the current methodology?

- **Mixed views on whether or not a reconciliation (of Generic or site-specific ALFs to actual ALFs) process is necessary**. Initial Workgroup view was that the value is outweighed by the complexity and the Proposer has no plans to include in their Original proposal.

- **There were also lots of suggestions on the evidence requirements to support the request for a user-provided ALF but there were challenges that it would be difficult to define an exhaustive list.** Some concerns were also expressed as to how the ESO would verify the evidence.

- **Call for further analysis on the impacted on existing Users as a result of a party selecting a user-provided ALF.** Workgroup agreed that further analysis was required to show how TNUoS charges for existing generators would be impacted by this change.

What is the impact of this change?

Proposer's assessment against Code Objectives

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;	**Positive** Could align the TNUoS charge more closely with the amount of expected export from the generator and therefore the extent to which the generator is using the wider transmission network. This could allow the cost base of a new generator to vary in line with its expected revenue. e.g. a new generator operating with a low ALF will be likely to have a lower wholesale income and lower TNUoS charge than a new generator that operates with a higher ALF. This could facilitate more effective competition in generation.
(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);	**Positive** Could result in more cost reflective TNUoS charges for new transmission connected generators as their wider TNUoS charge will be based on their forecast export profile and reflect the individual characteristics of the generator rather than on a generic value e.g. a windfarm situated in a low wind area would incur a TNUoS charge based on the lower expected windspeeds rather than a generic value.
(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;	**Neutral**
(d) Compliance with the Electricity Regulation and any relevant legally binding decision of the European Commission and/or the Agency *; and	**Neutral**
(e) Promoting efficiency in the implementation and administration of the system charging methodology.	**Neutral**

*The Electricity Regulation referred to in objective (d) 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.

Workgroup Vote

The Workgroup met on 27 March 2023 to carry out their workgroup vote. The full Workgroup vote can be found in Annex 11. 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:

CUSC charging objectives

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) 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);
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;
d) Compliance with the Electricity Regulation and any relevant legally binding decision of the European Commission and/or the Agency *; and
e) To promote efficiency in the implementation and administration of the system charging methodology

*The Electricity Regulation referred to in objective (d) 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.

Assessment of the Original vs Baseline

The Workgroup concluded by majority that the Original better facilitated the applicable CUSC Objectives than the Baseline.

Of the 5 votes, how many voters said this option was better than the Baseline.

Option	Number of voters that voted this option as better than the Baseline
Original	4

Best Option

Workgroup Member	Company	BEST Option?	Which objective(s) does the change better facilitate? (if baseline not applicable)
Andy Pace	Energy Potential	Original	a, b
Rein de Loor	National Grid ESO	Baseline	n/a
Paul Youngman	Drax	Original	b, e
Andy Colley	SSE Generation	Original	b, e
Ryan Ward	Scottish Power Renewables	Original	a, b

When will this change take place?

Implementation date
10 working days after decision date and effective from 1 April 2024 (if decision received by 30 September 2023).

Date decision required by
30 September 2023

Implementation approach
It is possible that ESO will update their current systems if this change is implemented. If this is implemented before system changes (if any) are completed, ESO will continue to run this process manually until such system changes (if any) are completed.

If the effective date is 1 April 2024, the ESO are happy to accept user-provided ALF submissions until 31 October 2023 (if CMP331 is approved by Ofgem), reverting to 30 September for the subsequent years. Note that if the effective date is 1 April 2024, users would not have visibility of how any accepted user-provided ALFs will impact tariffs (in particular the adjustment tariff) until the final tariffs are published as this will not be captured in the draft tariffs.

Grid Code Data Registration Code (DRC) "housekeeping" change to add a step in the ONCP will be raised if CMP331 is approved

Interactions

☑Grid Code	☐BSC	☐STC	☐SQSS
☐European Network Codes	☐ EBR Article 18 T&Cs[11]	☐Other modifications	☐Other

[11] 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.

Acronyms, key terms and reference material

Acronym / key term	Meaning
ALF	Annual Load Factor
BSC	Balancing and Settlement Code
CMP	CUSC Modification Proposal
CUSC	Connection and Use of System Code
EBR	Electricity Balancing Guideline
STC	System Operator Transmission Owner Code
SQSS	Security and Quality of Supply Standards
T&Cs	Terms and Conditions
TNUoS	Transmission Network Use of System charges

Reference material

- A summary of the CMP331 Workgroup meeting summaries and presentations are available on the ESO modification page which is available via the following link.

https://www.nationalgrideso.com/industry-information/codes/connection-and-use-system-code-cusc-old/modifications/cmp331-option

Annexes

Annex	Information
Annex 1	Proposal form
Annex 2	Terms of reference
Annex 3	Proposer's Presentation
Annex 4	Proposer's Analysis
Annex 5	Screenshots of feasibility studies
Annex 6	ESO calculation of zonal generic ALFs
Annex 7	Legal Text
Annex 8	Workgroup Consultation responses summary
Annex 9	Workgroup Consultation responses
Annex 10	Template for requesting a user-provided Annual Load Factor
Annex 11	Workgroup Vote