

CUSC Modification Proposal Form		At what stage is this document in the process?												
<h1 style="color: #00a651;">CMP331:</h1> <p>Mod Title: Option to replace generic Annual Load Factors (ALFs) with site specific ALFs</p>	<table border="1" style="width: 100%; text-align: center;"> <tr> <td style="background-color: #00a651; color: white; border-radius: 5px;">01</td> <td style="background-color: #00a651; color: white; border-radius: 5px;">Proposal Form</td> </tr> <tr> <td style="border-radius: 5px;">02</td> <td style="border-radius: 5px;">Workgroup Consultation</td> </tr> <tr> <td style="border-radius: 5px;">03</td> <td style="border-radius: 5px;">Workgroup Report</td> </tr> <tr> <td style="border-radius: 5px;">04</td> <td style="border-radius: 5px;">Code Administrator Consultation</td> </tr> <tr> <td style="border-radius: 5px;">05</td> <td style="border-radius: 5px;">Draft CUSC Modification Report</td> </tr> <tr> <td style="border-radius: 5px;">06</td> <td style="border-radius: 5px;">Final CUSC Modification Report</td> </tr> </table>		01	Proposal Form	02	Workgroup Consultation	03	Workgroup Report	04	Code Administrator Consultation	05	Draft CUSC Modification Report	06	Final CUSC Modification Report
01	Proposal Form													
02	Workgroup Consultation													
03	Workgroup Report													
04	Code Administrator Consultation													
05	Draft CUSC Modification Report													
06	Final CUSC Modification Report													
<p>Purpose of Modification: The purpose of this modification is to provide new generators with the option to replace the generic Annual Load Factors (ALFs) used to determine their TNUoS charges with a site-specific ALF. The site-specific ALF will be based on the generators expected output and require approval from the ESO.</p>														
	<p>The Proposer recommends that this modification should be:</p> <ul style="list-style-type: none"> assessed by a Workgroup and determined by the Authority <p>This modification was raised 28 November 2019 and will be presented by the Proposer to the Panel on 13 December 2019. The Panel will consider the Proposer's recommendation and determine the appropriate route.</p>													
	<p>High Impact:</p>													
	<p>Medium Impact: New Transmission connected generators</p>													
	<p>Low Impact: Existing Transmission connected generators; National Grid ESO</p>													

Contents		 Any questions?
1 Summary	4	Contact: Code Administrator Paul Mullen
2 Governance	5	 email address Paul.J.Mullen@nationalgrideso.com
3 Why Change?	5	 telephone 07794537028
4 Code Specific Matters	6	Proposer: Andy Pace
5 Solution	6	 email address Andy.pace@energy-potential.com
6 Impacts & Other Considerations	6	 telephone 0788 184 0007
7 Relevant Objectives	7	National Grid ESO Representative: Jon Wisdom
8 Implementation	8	 email address. jon.wisdom@nationalgrideso.com
9 Legal Text	8	 telephone 07929 375010
10 Recommendations	8	
Timetable		
The timetable will updated with relevant dates after the first workgroup meeting.		
The Code Administrator recommends the following timetable:		
Initial consideration by Workgroup	dd month year	
Workgroup Consultation issued to the Industry	dd month year	
Modification concluded by Workgroup	dd month year	
Workgroup Report presented to Panel	dd month year	
Code Administration Consultation Report issued to the Industry	dd month year	
Draft Final Modification Report presented to Panel	dd month year	
Modification Panel decision	dd month year	
Final Modification Report issued the Authority	dd month year	
Decision implemented in CUSC	dd month year	

Proposer Details

Details of Proposer: (Organisation Name)	Energiekontor UK Ltd
Capacity in which the CUSC Modification Proposal is being proposed: (i.e. CUSC Party, BSC Party or "National Consumer Council")	CUSC Party
Details of Proposer's Representative: Name: Organisation: Telephone Number: Email Address:	Andy Pace Energy Potential Limited 0788 184 0007 Andy.pace@energy-potential.com
Details of Representative's Alternate: Name: Organisation: Telephone Number: Email Address:	Lambert Kleinjans Energiekontor UK Ltd 07415 793 367 Lambert.Kleinjans@energiekontor.co.uk
Attachments (Yes/No): Yes, spreadsheet analysis: "ALFs vs generic ALFs v0.2 (11Sep19).xlsx"	
If Yes, Title and No. of pages of each Attachment:	

Impact on Core Industry Documentation.
Please mark the relevant boxes with an "x" and provide any supporting information

BSC	<input type="checkbox"/>
Grid Code	<input type="checkbox"/>
STC	<input type="checkbox"/>
Other	<input type="checkbox"/>

This change modification is not expected to impact on any other industry Codes

1 Summary

Defect

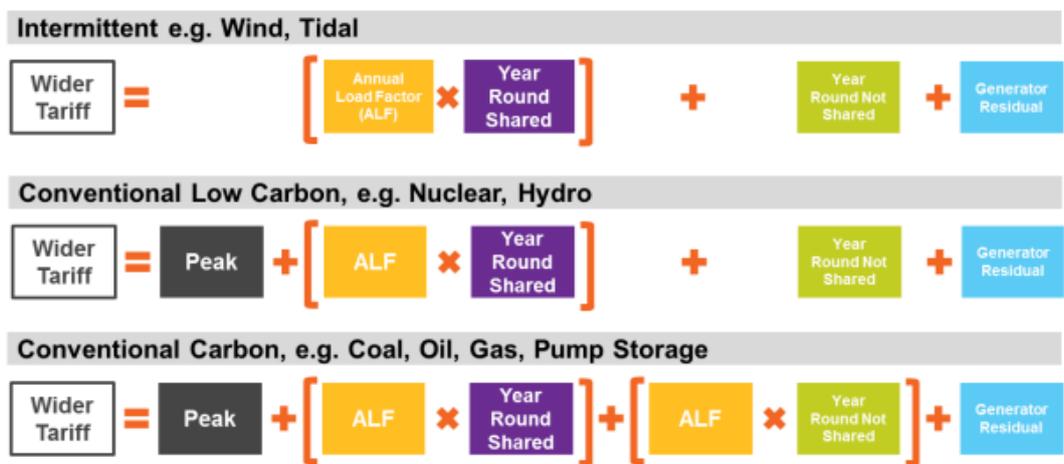
Under the current charging arrangements, the Transmission Network Use of System (TNUoS) charges for transmission connected generation are applied based on a generator’s average Annual Load Factor (ALF) in previous years. The ALF is calculated each year and the value used to determine the TNUoS charge 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.

The defect identified in this modification is that applying a generic ALF 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

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%.

Why

This change results 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. For example, a windfarm situated in a low wind area would incur a TNUoS charge based on the lower expected windspeeds rather than a generic value.

In addition, it aligns the TNUoS charge with the amount of expected export from the generator and therefore the extent to which the generator is using the wider transmission network. This allows the cost base of a new generator to vary in line with its expected revenue. For example, 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 facilitates more effective competition in generation.

How

Under this proposal a new transmission connected generator would be able to submit a forecast of the ALF for their site to National Grid ESO. The value must be determined by an independent third party and form part of a report used for financing the project. If National Grid ESO agrees that the site specific ALF has been independently calculated then the site specific ALF will be used instead of the generic ALF to determine the TNUoS charges that apply to the site.

2 Governance

Justification for Normal Procedures

This modification should follow the normal governance procedure.

Requested Next Steps

This modification should:

- be assessed by a Workgroup

3 Why Change?

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 cannot be mitigated and does not reflect the enduring arrangements where generators are charged based on their actual ALF.

The impact of using generic ALFs has been assessed and can be material. The impact will depend on the difference between the outturn ALF and the generic ALF and varies by generation zone. The analysis undertaken calculated the biggest annual impact for a 100MW plant under each generation category by charging zone. In each case the wider TNUoS charge was derived from the highest outturn and the lowest outturn ALF for each generation technology compared to the generic value. The largest TNUoS increase was £1.06m and the largest TNUoS decrease was £1.7m. However, we note that this analysis looks at extremes and we would expect the impact to be much lower in practice. The analysis is provided in a spreadsheet attachment to this proposal.

The proposal is to allow the generic ALF to be replaced with a site specific ALF where the value has been determined by an independent third party and forms part of a report used for financing the project.

This modification aligns the TNUoS charge for a new generator with the amount of power expected to be exported and therefore reflects the individual characteristics of the site. This results in a more cost reflective wider TNUoS charge and also mitigates the risk for a new generator as the level of the TNUoS charge will more closely correlate with the wholesale income for the generator. It will also more closely align with the enduring arrangements for applying ALFs once three years of ALF data is available.

4 Code Specific Matters

Technical Skillsets

N/A

Reference Documents

N/A

5 Solution

The proposal is to allow the generic ALF to be replaced with a site-specific ALF where the value has been determined by an independent third party and form part of a report used for financing the project.

6 Impacts & Other Considerations

This change will potentially impact all new transmission connected generators who would be able to submit a site-specific ALF to replace the generic ALF applied to their site. However, in practice, we expect this to be more applicable to intermittent generation where the generator is unable to control its output.

The Future Energy Scenarios (FES) forecasts a substantial increase in transmission connected generation, particularly for renewable power over the next 30 years. Over the four FES scenarios, the increase in renewable generation is between 15GW and 53GW. The implementation of a more cost reflective charging methodology through the use of site-specific ALFs instead of generic ALFs will result in more efficient investment decisions and potentially a lower cost of capital.

Does this modification impact a Significant Code Review (SCR) or other significant industry change projects, if so, how?

We do not expect this change to impact on the network access and forward-looking charges SCR. The SCR is undertaking a review of TNUoS charges focusing primarily on charges for distributed generation and reviewing the design of forward-looking TNUoS charges for demand users. This change modification should therefore fall outside the scope of the SCR.

Consumer Impacts

We do not expect this modification to materially impact on consumers TNUoS charges as any reduction in generation TNUoS for a site with a site-specific ALF will be spread across other generators. There is a small benefit to consumers from the modification 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 will reduce the risk for new market entrants.

7 Relevant Objectives

Impact of the modification on the Applicable CUSC Objectives (Charging):	
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
(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
(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	None

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. These are defined within the National Grid Electricity Transmission plc Licence under Standard Condition C10, paragraph 1 *; and	None
(e) Promoting efficiency in the implementation and administration of the CUSC arrangements.	None
*Objective (d) refers specifically to European Regulation 2009/714/EC. Reference to the Agency is to the Agency for the Cooperation of Energy Regulators (ACER).	

This modification better meets charging objectives (a) and (b) by increasing the cost reflectivity of the TNUoS charge for new generations for the first three years of operation.

Relying on generic ALFs for determining TNUoS charges for the first three years may result in charges that are materially different from the charges that the generator would be expected to face on an enduring basis over the longer term. Introducing a site specific ALF would result in a more cost reflective charge, better meeting objective (b). More cost reflective charges will also result in more effective competition in the generation and supply of electricity, better meeting objective (a).

8 Implementation

The proposal should be implemented the first complete charging year following approval by the Authority.

9 Legal Text

The legal text will be developed by the working group

10 Recommendations

Proposer's Recommendation to Panel

Panel is asked to:

- Agree that Normal governance procedures should apply
- Refer this proposal to a Workgroup for assessment.