








Stage 02 Code Administrator Consultation Following Authority Send Back		At what stage is this document in the process?								
<h1>CMP301: Clarification on the treatment of project costs associated with HVDC and subsea circuits</h1>		<table border="1"> <tr> <td>01</td> <td>Initial Written Assessment</td> </tr> <tr> <td>02</td> <td>Code Administrator Consultation</td> </tr> <tr> <td>03</td> <td>Draft CUSC Modification</td> </tr> <tr> <td>04</td> <td>Final CUSC Modification Report</td> </tr> </table>	01	Initial Written Assessment	02	Code Administrator Consultation	03	Draft CUSC Modification	04	Final CUSC Modification Report
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04	Final CUSC Modification Report									
<p>Purpose of Modification: CMP213 introduced specific expansion factors for HVDC and subsea circuits however the existing legal text is open to interpretation – this proposal would cement the interpretation made by The Company to ensure consistency with onshore circuits</p>										
	<p>The purpose of this document is to re-consult on CMP301 with CUSC Parties and other interested industry members. Parties are requested to respond by 5pm on 27 February 2019 to cusc.team@nationalgrid.com using the Code Administrator Consultation Response Pro-forma which can be found via the following link:</p> <p>https://www.nationalgrideso.com/codes/connection-and-use-system-code-cusc/modifications/clarification-treatment-project-costs</p> <p>Published on: 20 February 2019</p> <p>Length of Consultation: 5 Working Days</p> <p>Responses by: 27 February 2019</p>									
	<p>Low Impact CUSC Parties who are subject to TNUoS charges</p>									

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7 Legal Text	8	 harriet.harmon@nationalgrid.com
Timetable		 07970458456
The Code Administrator recommends the following timetable:		
Code Administration Consultation Report issued to the Industry	02 July 2018	National Grid ESO Representative: Harriet Harmon
Draft Final Modification Report presented to Panel	24 July 2018	
Modification Panel decision	27 July 2018	
Final Modification Report issued to Authority (25 WD)	10 August 2018	
Decision Date	5 November 2018	
Second Code Administrator Consultation following send-back issued to Industry (15 Working Days)	20 February 2019	
Second Code Administrator Consultation- closes	27 February 2019	
Draft Final Modification Report presented to Panel	21 March 2019	
Modification Panel decision	29 March 2019	
Final Modification Report issued to Authority (25 Working Days)	3 April 2019	
Indicative Decision Date	8 May 2019	
Decision Implemented in CUSC	1 April 2020	

1 About this document

CMP301 was proposed by National Grid ESO and was submitted to the CUSC Modifications Panel for its consideration on 29 June 2018. The Panel decided to send the Proposal to a Code Administrator Consultation and the Final Modification Report was submitted to the Authority on 10 August 2018.

On 5 November 2018, the Authority decided to send back CMP301. The Authority determined that they cannot form an opinion on CMP301 based on the Report submitted and directed that a revised version of the Report should be re-submitted for consideration. The Proposer of CMP301 has therefore submitted further information to support the Authority with their decision.

This second Code Administrator Consultation has been prepared in accordance with the terms of the CUSC. An electronic copy can be found on the National Grid ESO website, <https://www.nationalgrideso.com/codes/connection-and-use-system-code-cusc/modifications/clarification-treatment-project-costs> along with the CUSC Modification Proposal Form.

2 Original Proposal

Defect

The CUSC currently includes, in its consideration of expansion factors, different elements depending on whether the circuit is subsea, HVDC, onshore or offshore. The differing costs mean that AC subsea and HVDC circuits are not treated consistently with onshore circuits, to which they are most similar. CMP301 has been raised to address legal text interpretation off the back of a previous CUSC modification, namely CMP213, which introduced specific expansion factors for HVDC and subsea circuits. The existing legal text is open to interpretation and this proposal would cement the interpretation made by The Company to ensure consistency with onshore circuits.

What

Currently the CUSC states:

- 14.15.75 AC sub-sea cable and HVDC circuit expansion factors are calculated on a case by case basis using actual project costs (Specific Circuit Expansion Factors).
- 14.15.76 For HVDC circuit expansion factors both the cost of the converters and the cost of the cable are included in the calculation.
- 14.15.80 Offshore expansion factors (£/MWkm) are derived from information provided by Offshore Transmission Owners for each offshore circuit. Offshore expansion factors are Offshore Transmission Owner and circuit specific. Each Offshore Transmission Owner will periodically provide, via the STC, information to derive an annual circuit revenue requirement. The offshore circuit revenue shall include revenues associated with the Offshore Transmission Owner's reactive compensation equipment, harmonic filtering equipment, asset spares and HVDC converter stations.

We propose to alter 14.15.76 such that it is clear that the elements listed in 14.15.80 as being included in the offshore circuit revenue are not included in the expansion factors for HVDC or AC subsea circuits.

Why

We believe that the existing wording is open to interpretation and does not provide appropriate clarity to Users in relation to the calculation of expansion factors. We further consider it appropriate to align the treatment of expansion factors for HVDC and AC subsea circuits to that of onshore circuits, on the basis that these circuits connect to onshore rather than offshore assets. Circuits are modelled in the transport model to set the locational TNUoS tariffs, and are “stretched” by the ‘expansion factor’ to account for different types and voltages of circuits. Onshore circuits use a table of standard expansion factors defined each price control. HVDC circuits and AC Subsea circuits have significantly different costs, therefore, a specific expansion factor was introduced by CMP213 for these circuits. We believe that there is potential for different interpretations of the CUSC wording introduced under CMP213, especially when considered against the more prescriptive offshore wording and therefore consider it necessary to change Section 14 to reflect the ESO’s interpretation of the original CMP213 text. This would cement existing arrangements into the CUSC, rather than being a change to how expansion factors are/will be calculated. **It would ensure clarity in treatment of equivalent assets between onshore circuits whether they are HVDC, AC subsea or standard lines or cables (Objective 2).**

We believe that removing any ambiguity or potential ambiguity from charging methodologies is necessary to ensure that all connectees and chargeable CUSC Parties have a clear understanding of their financial liabilities, and how such liabilities are calculated, thus aiding in creating a level playing field where all Users have a common understanding of charging. We believe that common understandings of charging arrangements better facilitate competition by ensuring that Parties have the information relevant to them when setting market prices, and prevent any one Party (or group thereof) being disadvantaged by misconceptions regarding their charges.

The result of the modification is that cost reflective costs can be passed on specifically to individual parties using the AC or HVDC subsea costs. Without this modification, the different interpretations could lead to charges being less cost reflective and calculated differently to other circuit charges leading to potentially discriminatory treatment between generations (charging objective 1).

How

A legal text change to Section 14 to treat 14.15.76 as a complete list, and apply the same principle to subsea circuits, therefore for HVDC/Subsea Circuit Specific Expansion Factors, cost:

Include: • Cables • Converters (for HVDC) • Pro-rata % of the total other project costs

Do not include: • Switchgear • Transformers • Reaction compensation • Harmonic filtering

3 Governance

CMP301 was proposed by National Grid ESO and was submitted to the CUSC Modifications Panel for its consideration on 29 June 2018. The Panel decided to send the Proposal to a Code Administrator Consultation and the Final Modification Report was submitted to the Authority on 10 August 2018.

On 5 November 2018, the Authority decided to send back CMP301. The Authority determined that they cannot form an opinion on CMP301 based on the Report submitted and direct that a revised version of the Report should be re-submitted for consideration.

4 Proposer's solution

- 14.15.75 AC sub-sea cable and HVDC circuit expansion factors are calculated on a case by case basis using actual project costs (Specific Circuit Expansion Factors).
- 14.15.76 For HVDC circuit expansion factors both the cost of the converters and the cost of the cable are included in the calculation.
- 14.15.80 Offshore expansion factors (£/MWkm) are derived from information provided by Offshore Transmission Owners for each offshore circuit. Offshore expansion factors are Offshore Transmission Owner and circuit specific. Each Offshore Transmission Owner will periodically provide, via the STC, information to derive an annual circuit revenue requirement. The offshore circuit revenue shall include revenues associated with the Offshore Transmission Owner's reactive compensation equipment, harmonic filtering equipment, asset spares and HVDC converter stations.

We propose to alter 14.15.76 such that it is clear that the elements listed in 14.15.80 as being included in the offshore circuit revenue are not included in the expansion factors for HVDC or AC subsea circuits.

The legal text for CMP301 can be found within Section 9 of this report.

5 Impacts and Other Considerations

No cross-code implications are foreseen by the Proposer, nor do we consider there to be any risks to any existing pieces of work, including the Targeted Charging Review.

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

Whilst this Proposal relates to the locational signal, which is being considered under the Access & Forward-Looking Charges work stream in Ofgem's TCR, we do not believe that this change directly affects or inhibits any development in that area.

Consumer Impacts

There are currently no circuits in GB which are HVDC/AC Subsea and therefore there is no change to any Party’s charges or expansion factors as a result of this proposal. In future, when HVDC/AC Subsea circuits are established, the expansion factors created under this methodology will determine the locational element of TNUoS charges. As this proposal seeks only to codify the ESO’s existing interpretation of 14.15.76, there is no ‘baseline’ cost against which to compare this CMP – if this modification were to be rejected, ESO would need to consider, based on the Authority rejection, how else to interpret the relevant paragraphs of Section 14 and would only then be able to draw a comparison between this CMP301 interpretation and any other approach. There is, in effect, no counterfactual and therefore the costs/benefits of this proposal cannot be quantified as they are the status quo.

This modification seeks to ensure a better cost reflective signal for HVDC/AC Subsea circuits, that ensures that charging methodology is in line with development of the GB transmission network (Objective 3). Proper cost reflective charging signals contribute to the efficient development of the electricity transmission network, and build and dispatch of generation. A more competitive and more fluid electricity market – in which parties are exposed to the costs they cause - will ultimately drive benefits for end consumers through lower overall prices through a competitive market.

6 CMP301: 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 – a level playing field in terms of knowledge & understanding of the components of expansion factors supports competition
(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);	None

(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;	None
(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).	

7 Implementation

It is the Proposer's view that CMP301 should be implemented on 01 April 2020.

8 Code Administrator Consultation: How to respond

If you wish to respond to this Code Administrator Consultation, please use the response pro-forma which can be found under the 'Industry Consultation' tab via the following link;

<https://www.nationalgrideso.com/codes/connection-and-use-system-code-cusc/modifications/clarification-treatment-project-costs>

Responses are invited to the following questions;

1. Do you believe CMP301 better facilitates the Applicable CUSC Objectives? Please include your reasoning.

2 Do you support the proposed implementation approach?

3. Do you have any other comments?

Views are invited on the proposals outlined in this consultation, which should be received by **5pm on 27 February 2019**. Please email your formal response to: CUSC.team@nationalgrid.com

If you wish to submit a confidential response, please note the following;

Information provided in response to this consultation will be published on National Grid's website unless the response is clearly marked 'Private & Confidential', we will contact you to establish the extent of this confidentiality. A response marked 'Private & Confidential' will be disclosed to the Authority in full by, unless agreed otherwise, will not be shared with the CUSC Modifications Panel or the industry and may therefore not influence the debate to the same extent as a non-confidential response.

Please note an automatic confidentiality disclaimer generated by your IT System will not in itself, mean that your response is treated as if it had been marked 'Private & Confidential'

9 Legal Text

The proposed legal text can be found below, this is in Section 14 (Charging Methodologies) of the CUSC.

Onshore Wider Circuit Expansion Factors

- 14.15.70 Base onshore expansion factors are calculated by deriving individual expansion constants for the various types of circuit, following the same principles used to calculate the 400kV overhead line expansion constant. The factors are then derived by dividing the calculated expansion constant by the 400kV overhead line expansion constant. The factors will be fixed for each respective price control period.
- 14.15.71 In calculating the onshore underground cable factors, the forecast costs are weighted equally between urban and rural installation, and direct burial has been assumed. The operating costs for cable are aligned with those for overhead line. An allowance for overhead costs has also been included in the calculations.
- 14.15.72 The 132kV onshore circuit expansion factor is applied on a TO basis. This is to reflect the regional variation of plans to rebuild circuits at a lower voltage capacity to 400kV. The 132kV cable and line factor is calculated on the proportion of 132kV circuits likely to be uprated to 400kV. The 132kV expansion factor is then calculated by weighting the 132kV cable and overhead line costs with the relevant 400kV expansion factor, based on the proportion of 132kV circuitry to be uprated to 400kV. For example, in the TO areas of National Grid and Scottish Power where there are no plans to uprate any 132kV circuits, the full cable and overhead line costs of 132kV circuit are reflected in the 132kV expansion factor calculation.
- 14.15.73 The 275kV onshore circuit expansion factor is applied on a GB basis and includes a weighting of 83% of the relevant 400kV cable and overhead line factor. This is to reflect the averaged proportion of circuits across all three Transmission Licensees which are likely to be uprated from 275kV to 400kV across GB within a price control period.
- 14.15.74 The 400kV onshore circuit expansion factor is applied on a GB basis and reflects the full costs for 400kV cable and overhead lines.
- 14.15.75 AC sub-sea cable and HVDC circuit expansion factors are calculated on a case by case basis using actual project costs (Specific Circuit Expansion Factors).
- 14.15.76 ~~For Calculation of HVDC circuit expansion factors, and AC sub-sea circuit expansion factors, shall include only: both~~ the cost of the converters (where applicable); and ~~and~~ the cost of the cable; and a percentage of the total overhead project costs, defined as the combined costs of the cables and converters (as relevant) divided by the total capital cost of the project are included in the calculation.