

CUSC Modification Proposal Form		At what stage is this document in the process?
<h1>CMP271</h1> <h2>Improving the cost reflectivity of demand transmission charges</h2>		<div style="display: flex; flex-direction: column; align-items: flex-start;"> <div style="margin-bottom: 5px;">01 Modification</div> <div style="margin-bottom: 5px;">02 Workgroup Report</div> <div style="margin-bottom: 5px;">03 Draft Modification Report</div> <div style="margin-bottom: 5px;">04 Final Modification Report</div> </div>
<p>Purpose of Modification: This CUSC modification proposal aims to improve the cost reflectivity of demand transmission charges. It is proposed that the transmission charging methodology should include a Peak Security demand tariff levied at Triad, a Year Round demand tariff and revenue recovery levied on year round supplier demand.</p>		
	<p>The Proposer recommends that this modification should be:</p> <ul style="list-style-type: none"> assessed by a Workgroup <p>This modification was raised 20 September 2016 and will be presented by the Proposer to the Panel on 30 September 2016. The Panel will consider the Proposer's recommendation and determine the appropriate route.</p>	
	<p>High Impact: Generators, Suppliers, Embedded Generators.</p>	
	<p>Medium Impact None</p>	
	<p>Low Impact None</p>	

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Timetable		 Any questions?
<i>The Code Administrator will update the timetable.</i>		Contact: Code Administrator
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		Proposer: Bill Reed Insert name
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		 telephone
The Code Administrator recommends the following timetable: <i>(amend as appropriate)</i>		
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	

1 Summary

The following section provides a summary of the modification proposed – i.e. what is the identified defect/change in the existing code (the baseline) that needs to be rectified, why this change needs to be made, and how the defect should be addressed.

What

The CUSC charging methodology sets out the basis for deriving TNUoS Tariffs in Section 14 “Charging Methodologies”.

- Section 14:15 “Derivation of Transmission Network Use of System Charges” states the basis of demand TNUoS charges. The charging model is based on two background and creates both an initial transport demand tariff for the Peak Security background (ITTDiPS) and an initial transport demand tariff for the Year Round (ITTDiYR). These are combined with the residual to create an effective demand tariff (ETDI). It is envisaged under this modification that the Peak and Year Round charges derived from the charging model form the basis of the locational Peak Tariff and Year Round Tariff. In addition to the locational charges the demand residual tariff (RTD) in section 14.15.133 ensures the recovery of the allowed revenue.
- Section 14 .17 sets out the basis for demand charges. In particular this section identifies the relevant chargeable demand capacity. 14.17.3 states that demand charges will be based on a de minimus £/kW charge for half hourly and £/kWh for non-half hourly metered demand. This section will require amendment to reflect the charging base envisaged under the modification proposal so that the Peak Tariff is applied to supplier demand at the Triad, the Year Round Tariff is applied to Supplier demand in each half hour across the year and the residual tariff is applied to Supplier demand in each half hour across the year.
- Further changes to the CUSC section14 may be required to ensure the delivery of the proposed modification proposal.

The **locational tariffs** will be based on two separate tariffs: one for peak and one for year round based on the demand tariffs derived from the current charging methodology.

The **demand charging base** for peak charges will relate to the drivers of investment: the peak the Peak Security criterion in the Security Standard and the Economy Criterion in the Security Standard).

To ensure **revenue recovery** for the transmission owners a separate charge is created based on a year round demand tariff charged to suppliers for each MWh of consumption throughout the year (a net year round commodity tariff). The net year round commodity tariff is consistent with the approach adopted for the recovery of BSUoS costs from suppliers (and customers).

It is envisaged that subject to the development of appropriate supplier systems associated with billing the proposed solution should be implemented **no earlier than of 1st April 2020 or 3-years** following a decision from the Authority to implement the modification proposal.

Why

The approach towards the **locational tariffs** is consistent with the CUSC arrangements for generation tariffs. Peak charges will relate to the drivers of investment at the peak (the Peak Security criterion in the Security Standard). Year round charges will relate to the year round drivers of investment (the Economy Criterion in the Security Standard).

The approach towards the **demand charging base** will better reflect the drivers of investment in the NETS SQSS. The peak charging base better reflects the peak conditions on the transmission system. The year round charging base better reflects the year round conditions on the transmission system.

The approach towards **cost recovery** ensures fair and equitable apportionment of costs to customers.

How

It is proposed that the transmission charging methodology in Section 14 of the CUSC is modified so that it comprises the following components:

- A Peak Security demand tariff is introduced;
- A Year Round demand tariff is introduced ; and
- Revenue recovery for the transmission owners is ensured through the introduction of a Year Round demand tariff.

It is proposed that the **charging base** for the demand tariffs in Section 14 of the CUSC will comprise:

- a Triad peak demand charging base (half hourly and non-half-hourly metered);
- half hourly net demand (half hourly and non-half-hourly metered) in each settlement period for the year round tariff; and
- half hourly net demand (half hourly and non-half-hourly metered) in each settlement period for the year round residual charge.

2 Governance

Justification for [Normal, Urgent, Self-Governance or Fast Track Self-Governance] Procedures

This modification should follow the normal governance procedure.

Requested Next Steps

This modification should be assessed by a Workgroup

3 Why Change?

This CUSC modification proposal aims to improve the cost reflectivity of demand transmission charges.

The proposal will better address the following effects of the defects in the current demand charging arrangements:

- **Inefficient Locational Signals from current demand TNUoS arrangements:** The current CUSC Transmission Network Use of System methodology distorts locational signals (the demand residual in effect swamps demand locational signals);
- **Increasing constraints consequential inefficient transmission investment:** Inefficient locational incentives may enhance constraints, increasing the need for potentially inefficient investment in the GB transmission system or stranded assets;
- **Self-Reinforcing effects:** Over incentivising peak demand reduction will reduce demand resulting in self-reinforcing effects as the half-hourly demand charging base reduces in size;
- **Inefficient generation investment:** Inefficient demand charging arrangements will over reward investment in new embedded generation and result in inefficient closure of transmission connection generation;
- **Distorted energy markets:** An embedded generator that chooses to generate to earn the current Triad avoidance payment can result in the embedded generator dispatching out of merit. Similarly DSR may also be incentivised to dispatch out of merit. In turn this distorts wholesale electricity prices; and
- **Distorted competition in capacity markets:** The peak charging incentives distorts the capacity market by creating incentives for inefficient investment in small scale peaking embedded generators and demand side management at the expense of existing transmission connected generation.

The proposal will better reflect the investment costs in the transmission system.

The growth in intermittent generation connecting to the transmission system has changed the nature of investment planning in the Security Standard and the locational signals (National Electricity Transmission System Security and Quality of Supply Standard Version 2.2 March 5th, 2012). Traditionally, transmission investment has been driven by the need to ensure peak security in an environment dominated by conventional generators. However, due to intermittent generators, significant transmission investment now relates year round conditions on the transmission system and the need to avoid increasing year round constraint costs.

The Security Standard was updated to reflect the shift in transmission investment priorities in 2011. The standard now includes two sets of criteria setting out the assumptions to be used when assessing the required level of transmission capacity. Transmission Owners must build transmission capacity determined by the following two conditions:

- **Demand Security criterion** – the minimum transmission capacity required to ensure that conventional generators can meet demand at times when intermittent generators cannot run (it is assumed that there is no reliable intermittent generation at the peak).
- **Economy criterion** – the additional transmission capacity needed above that to meet peak demand to efficiently manage the system taking into account the need to manage constraint costs in an effective and economic manner. The Economy Criterion requires sufficient transmission system capacity to accommodate all types of generation in order to meet varying levels of demand efficiently.

Under the CUSC the Security Standard is reflected into Generation tariffs through a:

- **Peak Security tariff** – only conventional generators will be charged this component. This is because, under the SQSS Demand Security criteria, it is assumed that intermittent generators do not contribute to peak security and therefore do not drive investment for this reason; and
- **Year Round tariff** – all generators will receive the year round tariff adjusted for their output. This is designed as a proxy for the impact a generator has on investment to manage constraint costs in an economic way.

However, the Security Standard is not properly addressed in the application of the charging methodology to demand tariffs, resulting in locational demand charges that are not cost reflective.

The proposal will ensure the recovery of residual transmission costs in a fair and equitable manner

The demand residual component is currently added to the locational component of the tariff to ensure cost recovery. This significantly distorts transmission charges and results in non-cost reflective outcomes. The issue was highlighted under CUSC Modification Proposals CMP264 and CMP265:

- CMP264 “*The existence of large non-cost reflective Triad avoidance values is likely to distort investment decisions by favouring small generation units over large ones that may be more efficient. This could cause more efficient investments which do not benefit from Triad avoidance to be abandoned or deferred while less effective ones, which do so benefit, go ahead. This would increase total system costs, which is likely to lead to higher costs for consumers. Cost reflective charges would lead to better investment decisions and lower costs for consumers*”.

- *CMP265 “A residual element added on a capacity basis (£/kW, irrespective of location) to ensure TNUoS charges recover the correct revenue. This element does not reflect cost” and “The effect of the net demand charging basis is thus that the value of the demand residual charge element is credited to the embedded generation, where there is an association with an embedded generator as part of that Supplier’s portfolio in that GSP group. This is not cost-reflective, as there is no logical reason for that credit, which is growing, to be given”.*

This modification is different from CUSC Modification Proposals CMP264 and CMP265 since it addresses

- the cost reflectivity of the locational demand tariff; and
- the cost recovery arrangements for the residual component of the demand tariff; and
- the demand charging base for the relevant tariff components.

This modification proposal is based on cost reflective locational tariffs derived from the transmission investment drivers and efficient cost recovery that follows existing industry practice (net BSUoS-type charging).

The proposed implementation date is the later of 1st April 2020 or 3-years following a decision from the Authority to implement the modification proposal.

The proposed 3 year implementation after decision date will provide a sufficient lead time for adjusting billing and charging systems on part of NGET and suppliers. It also provides sufficient time to reflect the TNUoS changes into non-pass through customer contracts / tariffs. Typically suppliers offer contracts / tariffs for 1, 2 and 3 years. It is only at the point of renewal that the new costs can be reflected into customer contracts. The 3 year delay implementation date therefore means that most customers will have their contract renewed after the decision date, resulting in cost reflectivity of TNUoS in customer prices. It also ensures that demand and generation investor certainty is maintained.

4 Code Specific Matters

Technical Skillsets

Expertise will be required from the CMP264 and CMP265 workgroups, including suppliers and embedded generators.

Reference Documents

None.

5 Solution

It is proposed that the transmission charging methodology in Section 14 of the CUSC is modified so that it comprises the following components:

- A Peak Security demand tariff based on the current Demand Peak Security Tariff;
- A Year Round demand tariff based on the current Demand Year Round tariff; and
- Revenue recovery for the transmission owners through a commoditised net year round residual demand tariff.

It is proposed that the **charging base** for the demand tariffs in Section 14 of the CUSC will comprise:

- a Triad peak demand charging base (half hourly and non-half-hourly metered);
- half hourly net demand (half hourly and non-half-hourly metered) in each settlement period for the year round tariff; and
- half hourly net demand (half hourly and non-half-hourly metered) in each settlement period for the year round residual charge.

The proposed solution should be implemented by **the later of 1 April 2020 or 3-years** following a decision from the Authority to implement the modification proposal.

6 Impacts & Other Considerations

The modification proposal will promote cost reflectivity and efficiency in the demand charging arrangements. This should result in a positive impact on consumer welfare, enhanced security of supply and improved investment signals for renewable generation.

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

The modification proposal may impact on consideration of CUSC modification Proposals CMP264 and CMP265.

Consumer Impacts

The modification proposal will promote cost reflectivity and efficiency in the demand charging arrangements. This should result in a positive impact on consumer welfare.

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 developments in transmission licensees' transmission businesses*;	Positive
(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.	Positive
*Objective (c) refers specifically to European Regulation 2009/714/EC. Reference to the Agency is to the Agency for the Cooperation of Energy Regulators (ACER).	

The modification proposal will better meet the following of the CUSC Objectives for the following reasons:

Objective (a): The underlying rationale of the proposed modification is to improve the CUSC Transmission Network Use of System methodology so that efficient economic signals are provided to Users when services are priced to reflect the incremental costs of supplying them. As a result of the proposed change transmission tariffs will better reflect the impact that Users of the transmission system at different locations on the

Transmission Owner's costs, if they were to increase or decrease their use of the respective systems. The improved cost reflectivity of the transmission charges 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

Objective (b): The proposal will improve the CUSC Transmission Network Use of System methodology to better reflect the investment costs in the transmission system, maintenance of the transmission system and maintaining a system capable of providing a secure bulk supply of energy. Consequently, the use of system charging methodology as a result of the proposal will result in charges which reflect, as far as is reasonably practicable, the costs (excluding any payments between transmission licensees which are made under and in accordance with the STC) incurred by transmission licensees in their transmission businesses.

Objective (c): The proposal will align the transmission charging methodology with the Security Standard and will better reflect that fact that the transmission licensees are required to plan and develop the National Electricity Transmission System to meet these standards. The proposal will mean that the charging methodology better conforms with the requirement that the system must conform to a particular Security Standard and capital investment requirements are largely driven by the need to conform to this standard. It is this obligation, which provides the underlying rationale for the ICRP approach and the proposal, i.e. for any changes in generation and demand on the system National Grid must ensure that it satisfies the requirements of the Security Standard.

Objective (e): The proposal is based on existing charging principles and arrangements. The demand peak security and demand security tariffs are already calculated in the charging methodology. The proposed commoditised net residual is analogous to the current BSUoS arrangements. Furthermore the proposed arrangements will facilitate the deployment of smart meters. Therefore the proposed will better meet Objective e.

8 Implementation

The proposed implementation date is the later of 1st April 2020 or 3-years following a decision from the Authority to implement the modification proposal.

The proposed 3 year implementation after decision date will provide a sufficient lead time for adjusting billing and charging systems on part of NGET and suppliers. It also provides sufficient time to reflect the TNUoS changes into non-pass through customer contracts / tariffs. Typically suppliers offer contracts / tariffs for 1, 2 and 3 years. It is only at the point of renewal that the new costs can be reflected into customer contracts. The 3 year delay implementation date therefore means that most customers will have their contract renewed after the decision date, resulting in cost reflectivity of TNUoS in customer prices. It also ensures that demand and generation investor certainty is maintained.

9 Legal Text

The Proposer is welcome to put forward suggested legal text. If this is a proposed Fast Track Self-Governance modification then legal text and commentary must be provided. Otherwise the legal text will be provided in conjunction with the Workgroup Report to the CUSC Panel before progressing to the Code Administrator Consultation.

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.