

## Connection and Use of System Code (CUSC)

### Title of the CUSC Modification Proposal

Gross charging of TNUoS for HH demand where embedded generation is in Capacity Market

### Submission Date

26 May 2016

### Description of the Issue or Defect that the CUSC Modification Proposal seeks to address

It is important that costs are allocated fairly as the generation mix evolves. The current TNUoS arrangements will distort the development of an economic generation mix and transmission system, distort the capacity market and continue to provide a cross subsidy between customer groups. We support a review of these arrangements.

However there is a pressing issue related to the next capacity market tender (December 2016) which means that this modification is narrow and focussed to allow the modification to be considered and determined in advance of this auction. We recognise that further changes may be needed to the TNUoS arrangements which are important but less time critical. Ofgem are likely to reach a conclusion on further charging reforms in summer 2016 and further reforms will also be a focus of National Grid's planned charging review.

The issue this modification specifically seeks to address is that half hourly metered (HH) demand for TNUoS purposes is currently charged net of embedded generation. The existing CUSC sets this out as follows: "*Netting off within a BM Unit : 14.17.15 The output of generators and Distribution Interconnectors registered as part of a Supplier BM Unit will have already been accounted for in the Supplier BM Unit demand figures upon which The Company Transmission Network Use of System Demand charges are based.*"

This Net demand charging means that embedded generation is being treated as negative demand for HH TNUoS demand charging purposes. The TNUoS charge can be considered as being made up of two elements :

1. A locational element reflecting the unit cost of transmission investment at a point on the GB system. At a simplified level the locational elements for generation and demand users can be considered broadly equal and opposite. Through its netting, an embedded generator can be considered to have an implicit value equal but opposite to the demand signal, and therefore broadly equivalent to the signal received by a transmission connected generator. Given this, netting off the volume is reasonable.

2. 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.

Charging demand on a net basis means that some of the gross HH demand will not pay the residual, and neither will the embedded generation that nets off that demand.

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.

Netting-off the output of embedded generation for the purpose of calculating these HH demand charges, is causing a distortion in the generation market; to the extent that they run at peak charging times, embedded generators are given an artificial advantage over others, which among other effects, distorts the outcome of the capacity market tenders.

This is most strongly apparent for controllable embedded generators that run at peak times due to the structure of the TNUoS charge. These generators are most likely to secure the majority of the avoided residual charge. It is these controllable embedded generators that are also able to compete in the Capacity Market and run at similar times. Correcting this defect needs to be addressed urgently in advance of the next CM auction (December 2016).

The defect therefore lies in this unwarranted distortion of capacity market tenders. The charging treatment of these generators is not reasonably reflecting transmission network costs and therefore fails against the objectives of the charging methodology. The implication of this is that it distorts competition in generation.

### Description of the CUSC Modification Proposal

It is proposed that half hourly demand residual TNUoS charges on each Supplier in the relevant GSP Group, should be levied according to gross half hourly metered demand, without the volume from embedded generation that is in the capacity mechanism being netted-off. The scope of the modification is limited to only embedded generation with capacity market contracts. Volume associated with embedded generation that does not have capacity market contracts will continue to be netted.

It is proposed that half hourly demand locational TNUoS charges on each Supplier in the relevant GSP Group, should still be levied in relation to the net demand, i.e. with embedded generation still being netted-off as at present to enable this cost reflective signal to be maintained.

As to implementation, we do not propose "grandfathering" which adds complexity and dilutes the effect of a change. We suggest that this change would take effect from 1<sup>st</sup> April 2020, for all such generators. It is likely that a new data flow to National Grid is needed to facilitate this; we are proposing to raise a BSC Modification (possibly preceded by a BSC issues group to identify the best solution) to ensure that this flow exists. This is a significant modification proposal and a lead time of several charging years before the proposed change takes effect may be sensible to allow parties time to adjust, recognising that some future investments have not been made

yet. The next capacity market auction (for winter 2020/21) takes place in December.

### Impact on the CUSC ( This is an optional section)

To be identified at workgroup. New section 11 definitions are likely to be needed; parts of section 14 are likely to need amendment.

### Do you believe the CUSC Modification Proposal will have a material impact on Greenhouse Gas Emissions? Yes / No

Nothing quantified.

### Impact on Core Industry Documentation. Please tick the relevant boxes and provide any supporting information

BSC  Yes

Grid Code

STC

Other   
(please specify)

*This is an optional section. You should select any Codes or state Industry Documents which may be affected by this Proposal and, where possible, how they will be affected.*

### Urgency Recommended: Yes

Yes.

### Justification for Urgency Recommendation

This Modification Proposal is linked to an imminent issue or a current issue that if not urgently addressed may cause a significant commercial impact on parties, consumers or other stakeholder(s). The next capacity market auction (for winter 2020/21) takes place in December; the present arrangements give an artificial advantage to embedded generators, distorting the capacity market. We therefore propose a full but expedited process that ensures that the issues are carefully considered by industry and workgroup, but that the modification proposal reaches Ofgem for decision in September.

*Urgency criteria show on the Ofgem's website at :*

<http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=213&refer=Licensing/IndCodes/Governance>

## Self-Governance Recommended: No

No

## Justification for Self-Governance Recommendation

*A Modification Proposal may be considered Self-governance where it is unlikely to have a material effect on :*

- Existing or future electricity customers;
- Competition in generation or supply;
- The operation of the transmission system;
- Security of Supply;
- Governance of the CUSC
- And it is unlikely to discriminate against different classes of CUSC Parties.

## Should this CUSC Modification Proposal be considered exempt from any ongoing Significant Code Reviews?

Yes, there are no relevant SCRs

## Impact on Computer Systems and Processes used by CUSC Parties:

*This is an optional section. Include a list of any relevant Computer Systems and Computer Processes which may be affected by this Proposal, and where possible, how they will be affected.*

## Details of any Related Modification to Other Industry Codes

We will be raising a relevant BSC modification, or suggesting a BSC issues group be set up to identify formulation of the same, to ensure the necessary data flows are available to National Grid.

## Justification for CUSC Modification Proposal with Reference to Applicable CUSC Objectives for Charging:

**Please tick the relevant boxes and provide justification for each of the Charging Methodologies affected.**

### Use of System Charging Methodology

**Yes** (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;

**Yes (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 in accordance with the STC) incurred by transmission licensees in their transmission businesses and which are compatible with standard condition C26 (Requirements of a connect and manage connection);

**Yes (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.

**No (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.

*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).*

**Full justification:**

The modification would better facilitate competition between transmission-connected and embedded generators with particular reference to the Capacity Market. It would remove an artificial distortion that does not reflect the costs of the transmission business and currently gives extra value to embedded generators. The present arrangements are not cost-reflective as there is no logic to netting-off the output of embedded generators from HH demand as far as the demand residual charge element is concerned. As to developments in transmission licensees' transmission businesses – there has been a marked growth in the amount of embedded generation impacting the ways the system is developed and operated – this distortion may have been a contributory factor to that.

**Connection Charging Methodology (not relevant, so not scored below)**

- (a) that compliance with the connection 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 connection 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 in accordance with the STC) incurred by transmission licensees in their transmission businesses and which are compatible with standard condition C26 (Requirements of a connect and manage connection);
- (c) that, so far as is consistent with sub-paragraphs (a) and (b), the connection charging methodology, as far as is reasonably practicable, properly takes account of the

developments in transmission licensees' transmission businesses;

- (d) in addition, the objective, in so far as consistent with sub-paragraphs (a) above, of facilitating competition in the carrying out of works for connection to the national electricity transmission system.
- (e) 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.

*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).*

**Full justification:**

## Additional details

<b>Details of Proposer:</b> (Organisation Name)	Paul Mott
<b>Capacity in which the CUSC Modification Proposal is being proposed:</b> (i.e. CUSC Party, BSC Party or "National Consumer Council")	CUSC Party
<b>Details of Proposer's Representative:</b> Name: Organisation: Telephone Number: Email Address:	Paul Mott, EDF Energy, 02031262314 <a href="mailto:paul.mott@edfenergy.com">paul.mott@edfenergy.com</a>
<b>Details of Representative's Alternate:</b> Name: Organisation: Telephone Number: Email Address:	Mark Cox EDF Energy 07967151272 <a href="mailto:Mark.cox@edfenergy.com">Mark.cox@edfenergy.com</a>
<b>Attachments (No):</b> <b>If Yes, Title and No. of pages of each Attachment:</b>	

## Contact Us

If you have any questions or need any advice on how to fill in this form please contact the Panel Secretary:

E-mail [cusc.team@nationalgrid.com](mailto:cusc.team@nationalgrid.com)

Phone: 01926 653606

For examples of recent CUSC Modifications Proposals that have been raised please visit the National Grid Website at <http://www2.nationalgrid.com/UK/Industry-information/Electricity-codes/CUSC/Modifications/Current/>

## Submitting the Proposal

Once you have completed this form, please return to the Panel Secretary, either by email to [jade.clarke@nationalgrid.com](mailto:jade.clarke@nationalgrid.com) copied to [cusc.team@nationalgrid.com](mailto:cusc.team@nationalgrid.com), or by post to:

Jade Clarke  
CUSC Modifications Panel Secretary, TNS  
National Grid Electricity Transmission plc  
National Grid House  
Warwick Technology Park  
Gallows Hill  
Warwick  
CV34 6DA

If no more information is required, we will contact you with a Modification Proposal number and the date the Proposal will be considered by the Panel. If, in the opinion of the Panel Secretary, the form fails to provide the information required in the CUSC, the Proposal can be rejected. You will be informed of the rejection and the Panel will discuss the issue at the next meeting. The Panel can reverse the Panel Secretary's decision and if this happens the Panel Secretary will inform you.