nationalgrid

Stage 04: Code Administrator Consultation

Connection and Use of System Code (CUSC)

CMP264: Embedded Generation Triad Avoidance Standstill
and
CMP265: Gross charging of TNUoS for HH demand where Embedded Generation is in the Capacity Market

CMP269: Potential consequential changes to the CUSC as a result of CMP264
and
CMP270: Potential consequential changes to the CUSC as a result of CMP265

What stage is this document at?

01	Initial Written Assessment
02	Workgroup Consultation
03	Workgroup Report
04	**Code Administrator Consultation**
05	Draft CUSC Modification Report
06	Final CUSC Modification Report

CMP264 aims to change the Transport and Tariff Model and billing arrangements to remove the netting of output from those New Embedded Generators who export on to the system, when determining liability for locational and wider HH demand TNUoS charges.

CMP265 aims to change the Transport and Tariff Model and billing arrangements to remove the netting of output from those embedded generators who are in the Capacity Market who export on to the system, when determining liability for the residual HH demand TNUoS charges.

CM269 aims to amend Section 11 of the CUSC to align any changes introduced under CMP264.

CM270 aims to amend Section 11 of the CUSC to align any changes introduced under CMP265.

This document contains the discussion of the Workgroup formed in June 2016, responses to their consultation and the Workgroup's final conclusions

Published on: **25 October 2016**
Length of Consultation: **8 Workings days**
Responses by: **4 November 2016**

The Workgroup concludes:

For CMP264 (CMP269) none of the 22 Workgroup members that voted considered that the Original proposal better facilitated the Applicable CUSC Objectives. WACM 3 received four out of 22 votes as the better option for facilitating the CUSC Objectives, followed by the baseline and WACM 8 receiving three votes respectively as the better option for facilitating the Applicable CUSC Objectives.

For CMP265 (CMP270) one of the 22 Workgroup members that voted considered that the Original proposal did better facilitate the Applicable CUSC Objectives. WACM 10 received four out of 22 votes as the best option followed by the baseline, WACM 3 and WACM 8 receiving three votes respectively as the better option for facilitating the Applicable CUSC Objectives.

High Impact:

Suppliers and embedded generators

Contents

1 Summary of the original Proposals, Terms of Reference and structure of this report 5

2 Summary of progress to date 11

3 High level overview of the original defects proposed under CMP264 and CMP265 12

4 Questions included in the Workgroup Consultation Report 15

5 Summary of responses to Workgroup Consultation questions 17

6 Analysis provided by Workgroup members post the Workgroup Consultation 24

7 Features contained in alternative options 25

8 Key themes within alternatives proposed 28

9 Details of Workgroup Alternative CUSC Modifications (WACMs) 35

10 The approach to determining the legal text changes 45

11 Workgroup voting 47

12 Workgroup conclusions 68

13 Impact and Assessment 72

14 Proposed Implementation and Transition 73

Annex 1 – CUSC Proposal forms for CMP264, CMP265, CMP269 and CMP270 74

Annex 2 – CMP264, CMP265, CMP269 and CMP270 Terms of Reference 100

Annex 3– Workgroup attendance register 124

About this document

The purpose of this document is to consult on CMP264, CMP265, CMP269 and CMP270 with CUSC Parties and other interested industry members. Representations received in response to this consultation document will be included in the Code Administrator's draft CUSC Modification Report that will be furnished to the CUSC Panel for their recommendation to the Authority. Parties are requested to respond by **5pm** on **4th November 2016** to cusc.team@nationalgrid.com using the Code Administrator Consultation Response Proforma which can be found via the following link:

http://www2.nationalgrid.com/UK/Industry-information/Electricity-codes/CUSC/Modifications/CMP264/
http://www2.nationalgrid.com/UK/Industry-information/Electricity-codes/CUSC/Modifications/CMP265/
http://www2.nationalgrid.com/UK/Industry-information/Electricity-codes/CUSC/Modifications/CMP269/
http://www2.nationalgrid.com/UK/Industry-information/Electricity-codes/CUSC/Modifications/CMP270/

Any Questions?

Contact:
Caroline Wright

Code Administrator

caroline.wright@nationalgrid.com

07970 498249

CMP264/CMP269
Proposer
Rupert Steele
Scottish Power
0141 614 2012
Rupert.Steele@Scottish.com

CMP265/CMP270
Proposer
Paul Mott
EDF Energy

0203 1262314
paul.mott@edfenergy.com

Document Control

Version	Date	Author	Change Reference
0.1	20/10/2016	Workgroup	Workgroup report to CUSC Panel
0.2	25/10/2016	Code Administrator	Code Administrator Consultation to Industry

1 Summary of the original Proposals, Terms of Reference and structure of this report

1.1 This document describes the Original CMP264 and CMP265 CUSC Modification Proposals (the Proposal), summarises the deliberations of the Workgroup, responses to the Workgroup Consultation questions, the Workgroup Alternative CUSC Modifications (WACMs) and voting by the Workgroup against the Applicable CUSC objectives.

1.2 As part of the Workgroup analysis for CMP264/265, the Workgroup identified that as these Modifications were charging Modifications (which if approved would require change to aspects of section 14 - Charging Methodologies of the CUSC) there are in fact some references outside section 14 of the CUSC that would require change should CMP264 and/or CMP265 be approved.

1.3 However these could not be addressed via CMP264/CMP265 as these will be assessed against the Applicable Charging Objectives. Consequently Modifications CMP269 and CMP270 have been raised to detail the required changes to Section 11 of the CUSC.

1.4 The CUSC Panel at its August 2016 meeting agreed to align CMP269/270 with CMP264/265 as CMP269/270 were enabling Modifications to support any non-charging changes in the CUSC that may be introduced under CMP264 and/or CMP265.

1.5 At the CUSC Modifications Panel meeting on 25th October 2016, the Workgroup Report was presented to the CUSC Panel and the Panel agreed that the Workgroup had met their terms of Reference and accepted the Workgroup Report. The panel agreed for CMP264, CMP265, CMP269 and CMP270 to progress to Code Administrator Consultation for a period of 8 Working days.

1.6 This Code Administrator Consultation has been prepared in accordance with the Terms of the CUSC. An electronic copy can be found on the National Grid Website, along with the CUSC Modification Proposal form.

http://www2.nationalgrid.com/UK/Industry-information/Electricity-codes/CUSC/Modifications/CMP264/
http://www2.nationalgrid.com/UK/Industry-information/Electricity-codes/CUSC/Modifications/CMP265/
http://www2.nationalgrid.com/UK/Industry-information/Electricity-codes/CUSC/Modifications/CMP269/
http://www2.nationalgrid.com/UK/Industry-information/Electricity-codes/CUSC/Modifications/CMP270/

Workgroup Conclusions

1.7 For CMP264 (CMP269) none of the 22 Workgroup members that voted considered that the Original proposal did not better facilitate the CUSC Objectives. WACM 3 received four out of 22 votes as the best option followed by the baseline and WACM 8 receiving three votes respectively as the best option.

1.8 For CMP265 (CMP270) one of the 22 Workgroup members that voted considered that the Original proposal did better facilitate the CUSC Objectives. WACM 10 received four out of 22 votes as the best option followed by the baseline, WACM 3 and WACM 8 receiving three votes respectively as the best option.

CMP264: Generation Triad Avoidance Standstill

1.9 CMP264 was proposed by Scottish Power and was submitted to the CUSC Modifications Panel for its consideration in May 2016. A copy of this Proposal is provided within Annex 1. The Panel decided to send the Proposal to a Workgroup to be developed and assessed against the relevant CUSC Applicable Objectives.

1.10 The defect for CMP264 is detailed as 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.

1.11 The original solution to this defect is to change the Transport and Tariff Model and billing arrangements to remove the netting of output from those New Embedded Generators who export on to the system, when determining liability for locational and wider HH demand TNUoS charges. The proposal is to apply until such as time as Ofgem has completed its consideration of the current electricity Transmission Charging Arrangements (and any review which ensues) and any resulting changes have been fully implemented.

1.12 Following the Workgroup Consultation, as summarised in this report, the Original Proposal and 15 Workgroup Alternative CUSC Modifications (WACMs) were brought forward.

CMP265: Gross charging of TNUoS for HH demand where Embedded Generation is in the Capacity Market

1.13 CMP265 was proposed by EDF Energy and was submitted to the CUSC Modifications Panel for its consideration in May 2016. A copy of this Proposal is provided within Annex 1. The Panel decided to send the Proposal to a Workgroup to be developed and assessed against the relevant CUSC Applicable Objectives.

1.14 The defect for CMP265 is detailed as 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.

1.15 The original solution to this defect is to change the Transport and Tariff Model and billing arrangements to remove the netting of output from those embedded generators who are in the Capacity Market and export on to the distribution network, when determining liability for the residual HH demand TNUoS charges.

1.16 Following the Workgroup Consultation, as summarised in this report, the Original Proposal and 14 Workgroup Alternative CUSC Modifications (WACMs) were brought forward.

1.17 Due to the commonality between the workgroup discussions, the similarity in topics and for ease of use the Workgroup has prepared a single Workgroup Consultation document but will be treated separately by the CUSC Panel.

Terms of Reference

1.18 The CUSC Panel detailed in the Terms of Reference the scope of work for the CMP264/CMP265 Workgroups and the specific areas that the Workgroup should consider. The table below details these specific areas and where they are referenced in this report. The full Terms of Reference can be found in Annex 2.

1.19 For CMP264 urgency was not requested but accelerated timescales were set such that a decision could be achieved by December 2016 to be in advance of the Capacity Market auction. The CUSC Panel agreed to accelerated timescales.

1.20 For CMP265 the Proposer requested urgency as it considered that if not urgently addressed it may cause a significant commercial impact on parties, consumers or other stakeholder(s). As 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. The CUSC Panel in its deliberations did not consider that it should be

granted urgency as the Modification was considered complicated and could not be addressed fully by the Workgroup using an urgent process. It considered that following an urgent timetable holds an inherent risk of unintended consequences, which may arise due to there being insufficient time for all aspects of a Modification Proposal to be considered. Ofgem[1] agreed with the CUSC Panel's assessment that urgency should not be granted but that an accelerated timetable should be followed.

1.21 The original date for providing the final report to the Authority for decision was 12 October 2016. The Workgroup requested a month extension to allow for further meetings and discussion to be had, whilst remaining on an accelerated timetable and supporting submitting the final report to the Authority no later than 28 November 2016.

1.22 It is part of the standard CUSC modification process for the statement of the defect to be within the gift of the proposer who has identified said defect and determined a possible modification (solution) to address the defect. It was noted that several of the requests for Workgroup alternatives that were submitted to the Working Group provided solutions that were wider than the scope of the defect in that they had an impact outside of the triad benefit to embedded generators. The workgroup had discussed the scope of the defect prior to its consultation (see section 3.2 of the workgroup consultation) and acknowledged the narrow nature of the defect and proposed solution. At the time of the workgroup consultation the workgroup has not agreed on a definitive view of the defect.

1.23 As part of discussions held to narrow down the number of alternatives to be an efficient way forward (as directed by the workgroup terms of reference) the workgroup acknowledged that any proposals which altered the structure of demand TNUoS tariffs would be out of scope of these modifications. See also section 7.12 of this report for more on this matter.

Table 1: CMP264 ToR

CMP264

Specific area	Location in the report
a) The Workgroup should consider whether, on the balance of probabilities, the current level of embedded generation triad avoidance benefit significantly exceeds the actual avoided transmission investment cost, whether this causes a distortion in competition, and whether the proposed temporary removal of such benefits (pending the outcome and implementation of Ofgem's considerations) would better meet the code objectives.	Workgroup consultation Report contains evidence (please refer to volume 2 of this report). The Workgroup noted that it had been considered but with limited analysis and time spent due to the accelerated timescales.
b) The Workgroup should not attempt to resolve the issue of what the most appropriate charging arrangements should be on an enduring basis, as this will be the subject of Ofgem's considerations.	The Workgroup did not consider the issue of what the most appropriate charging arrangements should be.
c) The Workgroup should consider the definition of and criteria for the "disapplication date" in the proposed solution, i.e. the date on which the modification would cease to have effect.	N/A as the Proposer removed disapplication date. Refer to section 3.9
d) The Workgroup should consider whether the	N/A as the Proposer removed disapplication date.

[1] http://www2.nationalgrid.com/UK/Industry-information/Electricity-codes/CUSC/Modifications/CMP265/ Proposal section contains the letter from the CUSC Panel and Ofgem on the urgency request

Workgroup's conclusions would be materially impacted by the length of time between implementation and the "disapplication date".	Refer to section 3.9
e) The Workgroup should consider consumer impacts resulting from the proposal.	Workgroup consultation Report contains evidence (please refer to volume 2 of this report). The Workgroup noted that it had been considered but with limited analysis and time spent due to the accelerated timescales.
f) Consider any link to the Balancing and Settlement Code with particular focus on timescales of any changes.	Workgroup consultation Report contains evidence (please refer to volume 2 of this report). The Workgroup noted that it had been considered but with limited analysis. The BSC Modification P348[2] and P349[3] Workgroups shared a number of Workgroup members with CMP264/265. In addition a BSC representative attended CMP264/265 as an observer.
g) Consider any link to EMR Settlements metering with particular focus on timescales of any changes.	Workgroup consultation Report contains evidence (please refer to volume 2 of this report). The Workgroup noted that it had been considered but with limited analysis and time spent due to the accelerated timescales.

Table 2: CMP265 ToR

CMP265

Specific area	Location in the report
a) This Workgroup should not focus on transmissions connected generators in negative zones.	The Workgroup did not consider the issue of transmission connected generators in negative zones.
b) The Workgroup should not look to amend the existing Capacity Mechanism.	The Workgroup did not consider amending the existing Capacity Mechanism.
c) The Workgroup should consider all Embedded Generation with Capacity Market contracts directly or indirectly.	Workgroup consultation Report contains evidence (please refer to volume 2 of this report). The Workgroup noted that it had been considered but with limited analysis and time spent due to the accelerated timescales.
d) The Workgroup should consider consumer impacts resulting from the proposal.	Workgroup consultation Report contains evidence (please refer to volume 2 of this report). The Workgroup noted that it had been considered but with limited analysis and time spent due to the accelerated timescales.
e) The Workgroup should consider whether, on the balance of probabilities, the current level of embedded generation triad avoidance benefit significantly exceeds the actual avoided transmission investment cost,	Workgroup consultation Report contains evidence (please refer to volume 2 of this report). The Workgroup noted that it had been considered but with limited analysis and time spent due to the

[2] https://www.elexon.co.uk/mod-proposal/p348/

[3] https://www.elexon.co.uk/mod-proposal/p349/

whether this causes a distortion in competition, and whether the removal of such benefits (pending the outcome and implementation of Ofgem's considerations) would better meet the code objectives.	accelerated timescales.
f) Consider any link to the Balancing and Settlement Code with particular focus on timescales of any changes.	Workgroup consultation Report contains evidence (please refer to volume 2 of this report). The Workgroup noted that it had been considered but with limited analysis. The BSC Modification P348 and P349 Workgroups shared a number of Workgroup members with CMP264/265. In addition a BSC representative attended CMP264/265 as an observer.
g) Consider any link to EMR Settlements metering with particular focus on timescales of any changes.	Workgroup consultation Report contains evidence (please refer to volume 2 of this report). The Workgroup noted that it had been considered but with limited analysis and time spent due to the accelerated timescales.

Structure of the report

1.24 The main body of this report is split into 14 sections and 4 annexes. In additional there will be 5 volumes to this report.

Sections:

1. Section 1: summarises the original proposals, where the Terms of Reference have been met in the report and the structure of this report.
2. Section 2 is a summary to date.
3. Section 3 goes through a high level overview of the original defects proposed under CMP264 and CMP265.
4. Section 4 covers the questions posed in the Workgroup Consultation.
5. Section 5 covers responses to Workgroup Consultation questions.
6. Section 6 covers analysis provided by the Workgroup members post the Workgroup Consultation.
7. Section 7 covers the features contained in alternative options.
8. Section 8 covers key themes within alternatives proposed.
9. Section 9 covers WACMs and voting on an alternative to a Workgroup Alternative CUSC Modification (WACM).
10. Section 10 covers the approach to legal text changes to the CUSC.
11. Section 11 covers the voting by the Workgroup.
12. Section 12 summarises the conclusions of the Workgroup.
13. Section 13 covers the impacts and assessment.
14. Section 14 covers the proposed implementation and Transition arrangement.

Annexes

1. Annex 1 contains the CUSC Proposals forms for CMP264, CMP265, CMP269 and CMP270
2. Annex 2 contains the Terms of Reference for CMP264, CMP265, CMP269 and CMP270
3. Annex 3 contains the attendance register

Volumes

1. Volume 1a is this report.

2. Volume 1b, 1c and 1d is the draft legal text changes.

3. Volume 2 contains the Workgroup Consultation report that was issued in 2 August 2016.

4. Volume 3 contains the all the responses received to the Workgroup Consultation report questions and with page references for each respondent.

5. Volume 4 contains the voting statements by Workgroup members, with page references for each respondent.

6. Volume 5 contains presentations from Workgroup members post Workgroup Consultation.

2 Summary of progress to date

2.1 The Workgroup initially met five times to discuss and clarify the defects and the proposed rectification approach. The output from these meetings resulted in the Workgroup Consultation report which was issued in August 2016. The report detailed the work performed to date; the alternative options a number of Workgroup members had raised and posed a number of questions to respondents.

2.2 CMP264 received **47** responses and CMP265 received **46** responses to the questions posed. A number of the respondents provided views on the specific alternatives contained in the report and also proposed alternative ideas. The Workgroup Consultation Report that was issued is contained in **volume 2** of this report.

2.3 The Workgroup has subsequently met seven times to review the responses to the questions and work through the options for WACMs. At its meeting on 19 September the Workgroup voted on which options should become WACMs. In addition the Workgroup Chair also considered that **29** of the alternatives (across both CMP264 and CMP265) to be better than the baseline and facilitates the CUSC charging objective (a) of "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". The Chair considers that the requirement to retain these additional WACMs reflects the composition of the Workgroup and the variety of views. This will allow the CUSC Panel and ultimately the Authority to be provided with a wide range of alternatives that reflects the views of the Workgroup to meet the defects described. This is detailed in sections 6 & 8.

2.4 On 5 October the Workgroup met to vote on which whether the original Proposals or any of the WACMs would be better than the baseline of the CUSC. This is detailed in section 9.

3 High level overview of the original defects proposed under CMP264 and CMP265

3.1 CMP264 aims to change the Transport and Tariff Model and billing arrangements to remove the netting of output from those New Embedded Generators who export on to the system, when determining liability for locational and wider HH demand TNUoS charges.

3.2 CMP265 aims to change the Transport and Tariff Model and billing arrangements to remove the netting of output from those embedded generators who are in the Capacity Market who export on to the system, when determining liability for the residual HH demand TNUoS charges.

CMP264: Generation Triad Avoidance Standstill

3.3 CMP264 was proposed by Scottish Power and was submitted to the CUSC Modifications Panel for its consideration in May 2016. A copy of this Proposal is provided within Annex 1. The Panel decided to send the Proposal to a Workgroup to be developed and assessed against the relevant CUSC Applicable Objectives.

3.4 The defect CMP264 attempts to address is changing the Transport and Tariff Model and billing arrangements to remove the netting of output from those New Embedded Generators who export on to the system, when determining liability for locational and wider HH demand TNUoS charges. The proposal is to apply until such as time as Ofgem has completed its consideration of the current electricity Transmission Charging Arrangements (and any review which ensues) and any resulting changes have been fully implemented. The original proposal had an implementation date of 1 April 2017.

3.5 Following the Workgroup Consultation, as summarised in this report, the Original Proposal and 15 Workgroup Alternative CUSC Modifications (WACMs) were proposed.

CMP265: Gross charging of TNUoS for HH demand where Embedded Generation is in the Capacity Market

3.6 CMP265 was proposed by EDF Energy and was submitted to the CUSC Modifications Panel for its consideration in May 2016. A copy of this Proposal is provided within Annex 1. The Panel decided to send the Proposal to a Workgroup to be developed and assessed against the relevant CUSC Applicable Objectives.

3.7 The defect CMP264 attempts to address is changing the Transport and Tariff Model and billing arrangements to remove the netting of output from those embedded generators who are in the Capacity Market and export on to the distribution network, when determining liability for the residual HH demand TNUoS charges. The original proposal had an implementation date of 1 April 2020.

3.8 The table 3 below summarises the key features in each of the original Proposals.

Table 3: Comparison of the Original CMP264 and CMP265 proposals

	CMP264 Original Proposal	CMP265 Original Proposal
Proposer	Scottish Power	EDF Energy
Proposal	Do not deduct New Embedded Generation from a suppliers' charging volumes, for the purposes of demand TNUoS. Thereby, removing demand TNUoS embedded benefit for those New Embedded Generators.	Do not deduct certain embedded generation (those with Capacity Market agreements[4]) from a suppliers' charging volumes, for the purposes of demand TNUoS. Thereby, removing demand TNUoS embedded benefit for those embedded generators.
Affected Embedded Generators who have a different value of the embedded benefit under the proposal	Embedded generators defined as "New" after 30 June 2017	All Embedded Generators with a Capacity Market agreement.
Demand TNUoS Embedded benefit for the affected generators[5]	New Embedded Generators will receive no demand TNUoS embedded benefit (neither the locational nor the residual)	Affected Embedded Generators would receive the locational demand TNUoS tariffs as an embedded benefit, but not the demand residual.
Implementation Date (for changes to charging methodology)	1 April 2017 (please refer to Table 9) The first affected volumes would be for "new embedded generators" during the 2017/18 November – February Triad season.	1 April 2020
Disapplication	Intended as a 'stop-gap' solution until Ofgem confirms that it has completed its consideration of the issues (and any review which may ensue) and any resulting changes have been fully implemented. (See section 3.9)	No. Enduring solution, unless superseded by an implemented outcome of Ofgem/Grid wider review of charging arrangements that has effect in the same area of the CUSC.
Related BSC Modification	P349 – Facilitating embedded generation Triad Avoidance Standstill	P348 - Provision of gross BM Unit data for TNUoS charging

Amendments to the original CMP264 proposal and removal of the Disapplication Date

[4] CM agreements are commonly described as contracts throughout this report

[5] For SVA registered embedded generators (the majority) the embedded benefit is paid through the supplier, so any changes affect supplier TNUoS charges and so the embedded generator indirectly. For CVA registered embedded generators the demand TNUoS embedded benefit is received directly from National Grid.

3.9 During discussion within the Workgroup, the Proposer for CMP264 has amended the Original Proposal to remove the Disapplication Date. The reasoning behind this was that as it was not possible to predict when a review will take place or indeed what the recommended changes would be/get implemented. This could present problems in defining a Disapplication Date in terms of a specified action by the Authority in the CUSC legal text.

3.10 The Workgroup did discuss an alternative option of defining a firm Disapplication Date but considered that this too was also problematic as the timetable for Ofgem's review and the Modification process which could potentially follow is uncertain. Too short a Disapplication Date could lead to a hiatus between the disapplication of CMP264 and the implementation of Ofgem's conclusions. Too long a Disapplication Date (e.g. in 2026) leaves the provisions subject to the normal modification process and would be in effect meaningless.

3.11 Furthermore it was recognised that the use of a firm Disapplication Date could in no way bind Ofgem to a date for concluding the review and implementation the conclusions.

3.12 On this basis, while continuing to emphasise the intended temporary nature of CMP264, the Proposer has concluded that formal provisions for a Disapplication Date would add little in practice to the proposed Modification. Accordingly, it has decided not to include Disapplication Date provisions in the Original proposal.

4 Questions included in the Workgroup Consultation Report

4.1 Volume 2 of this report contains the full Workgroup Consultation Report and should be read in conjunction with this report. The Workgroup Consultation was issued 2 August 2016, with responses to be received by 24 August 2016.

4.2 The Workgroup in addressing which questions to should be included in the Workgroup Consultation Report considered what information they were seeking directly for CMP264 or CMP265 or those that could be considered to be shared by both Modifications.

CMP264

4.3 The specific questions the Workgroup wanted to understand the views of industry on the 'cut-off' date and definition for those plants that would be classed as 'new Embedded Generation' under the Modification. They also wanted to understand if the date proposed for implementation would be appropriate and if not why. The Modification may introduce a loophole due to the fact that it didn't consider behind the meter or mixed sites and industry views were canvassed on what its views would be regarding a loophole. The Workgroup were also keen to understand what value (if any) industry considered should be appropriate for Embedded Benefits and why.

CMP265

4.4 The specific questions the Workgroup wanted to understand what the implications (if any) would be in respect of mixed sites and what category of Capacity Market CMU should be captured under the Modification.

CMP264 and CMP265 shared questions

4.5 For the shared questions the Workgroup wanted to understand from Suppliers whether charges were set as to the same tariff that National Grid charges on demand customers to understand how embedded benefits were passed through to Embedded Generators. The Workgroup wanted to understand what industry considered to the value of Embedded Generation output and demand side reduction for the 2016/2017 Triad season and whether the values included in the report seemed a fair reflection.

4.6 The Workgroup also wanted to understand what the impact of the demand TNUoS Embedded Benefit may have on decisions relating to the Capacity Market and whether both the locational and residual component of the demand TNUoS should be removed as an embedded benefit (as CMP264 Original) or just the residual component (as CMP265 Original) or some other method

4.7 In addition the standard consultation questions were included for both CMP264 and CMP265 to understand what support or concerns there was from industry in respect of whether the original proposals or any of the associated potential options for change better facilitates the Applicable CUSC Objectives, what implementation date implications may be and whether the respondent wanted to raise an alternative for consideration by the Workgroup.

4.8 It was also noted by Workgroup members that Ofgem had issued its open letter[6] at the time of issuing the Workgroup Consultation Report (the letter was issued 29 July 2016 with a close date of 23 September 2016 for comments). A number of parties indicated to National Grid's Code Administration team that they would not be responding to the CMP264/265 Workgroup Consultation but rather respond to Ofgem's open letter.

6

https://www.ofgem.gov.uk/system/files/docs/2016/07/open_letter__charging_arrangments_for_embedded_generation.pdf

5 Summary of responses to Workgroup Consultation questions

5.1 This section summarises the views of the Workgroup and the Industry that were provided after the Workgroup Consultation responses were received to the Standard Workgroup Consultation questions and the specific questions posed for each Modification. The standard first four questions of the Workgroup Consultation request views on whether the two proposals meets the applicable CUSC Objectives, if the implementation approach is supported and general comments including the requirement of any potential WACMs.

5.2 The responses to the question of whether the Original Proposal better facilitates the applicable CUSC Objectives revealed that for:

CMP264:

5.3 **Six of the 47** respondents supported the proposal (including a response from the Proposer's organisation) and believed it did better meet Objective (a). In addition two respondents were unable to confirm if they believed it did or not as there wasn't enough analysis provided to make this decision. The general view of these respondents was they believed that the Modification introduced discrimination and concerns around investment decisions made or being made and that a wider review should be performed.

CMP265:

5.4 **Seven of the 46** respondents supported the proposal (including a response from the Proposer's organisation) and believed it did better meet Objective (a). In addition three respondents were unable to confirm if they believed it did or not as there wasn't enough analysis provided to make this decision. The general view of these respondents was they believed that the Modification introduced discrimination and concerns around investment decisions made or being made and that a wider review should be performed.

5.5 A number of the respondents highlighted that **both** Proposals fail to address the wider issues associated with the defect for existing generators and also introduces discriminatory treatment between new and existing generation (which in their views continues to receive the growing Triad benefit). There were also a number of views raised about the accelerated timescales and that a partial and potentially discriminatory solution may result in creating more uncertainty into the electricity market.

5.6 Whilst reviewing these responses, the Workgroup also noted that there was support from the industry for a wider review to take place to allow sufficient time for full analysis to be performed.

5.7 A summary of the key themes in responses can be found in tables 4 to 6 below. The full responses by all respondents (excluding any where the respondent has requested it is not published for confidentiality reasons) can be found in Volume 3 to this report.

Table 4: CMP264 specific questions

Question No from Consultation	Question	High-level summary of views from the respondents
1	Do you believe that CMP264 Original proposal or either of the associated potential options for change better facilitates the Applicable CUSC Objectives?	Refer to comments in 5.3 & 5.5
2	Do you support the proposed implementation approach for CMP264? Are the suggested implementation timescales suggested for CMP264 appropriate /	Refer to comments in 5.3 & 5.5

	achievable?	
3	Do you have any other comments for CMP264?	Refer to comments in 5.3 & 5.5
4	Do you wish to raise a Workgroup Consultation Alternative request for the Workgroup to consider for CMP264?	A number of options were put forward; these are covered in sections 6 and 8.
10	i) Do you think a cut-off date for "new embedded generation" of 30 June 2017 is appropriate? What other date would you propose?	The majority of respondents did not consider that this would be sufficient time to allow those that hold CM contracts to consider the investment implications and also the time frame for any system changes. A smaller number of respondents did consider the timeframe to be acceptable but did voice some reservations about the speed to which a system solution could be implemented. Some respondents supported grandfathering and others did not.
	ii) Do you have any views on how mixed sites are being addressed in CMP264 Original?	With respect to mixed sites the responses were concerned that no 'loopholes' were introduced but agreed that the approach would be a pragmatic one until a wider review was undertaken.
	iii) Do you think new-build embedded generation capacity that has entered into long term financial and performance commitment obligations via 2014 and 2015 capacity market or contracts for difference auctions (prior to this modification proposal) should be given exceptions to this cut-off date?	The responses were mixed in opinion with some answering yes to support investor confidence. Those that indicated no based this on the view that that projects should be advanced enough for construction and commissioning before the cut-off date or that a non-cost reflective payment should be made continuously
	iv) Do you agree that ignoring demand behind the meter is unlikely to create a significant "loophole" or material discrimination risk in relation to the CMP264 arrangements in the short term	Concerns were raised that a loophole may be created and that this in itself may be considered discriminatory; others took the view that the loophole would be small and shouldn't be used as a mechanism to delay the Modifications.
	v) Question to suppliers: Do you consider that the wording of your	The majority of responses indicated no comment (as either

	existing contracts allow you to reflect the changes provided by these modifications in a cost reflective manner. For example, these changes will apply to existing PPAs and generators who significantly alter their output (EREC 59).	not Suppliers or not wanting to make information public). A number indicated that they would have flexibility to amend contracts, whilst the counter view was received from others that they had locked in contracts that couldn't be amended in timescales proposed.
	vi) Do you agree with the definition of commissioned and do you agree that it is appropriate? If you do not agree with the definition or that it is appropriate please provide alternative definitions and rationale for this definition	Again the majority did not provide comments but a number indicated that they agreed with the definition whilst others considered that the definition may introduce distortions.
13	Do you have a view of whether implementation for the 2017/18 Triad season is sufficient to allow changes for: i) supplier contracts and billing system; and ii) for other stakeholders?	The predominant sense from responses for both elements was that more time would be needed to allow for system development and time for the industry to accommodate to the changes.
18	Do you have a view if embedded benefits are frozen at a non-zero value, what should that value be as a £/kW tariff (2016/17 value is £45.33 / kW)?	For those that were not supportive of the Modification there was a strong view that they should be frozen to provide the stability to allow investments to deliver security of supply. There were a number of counter views that Embedded Generation tariffs should be broadly equivalent in value to the tariffs applying to Transmission Connected Generators in similar locations. Because transmission connected generator tariffs can (and should) change over time, freezing tariffs for any embedded generation at any level would work against cost reflectivity and effective competition in generation.

Table 5 CMP265 specific questions

Question No from Consultation	Question	Views from the respondents
5	Do you believe that CMP265 Original proposal or either of the associated potential	Refer to comments in 5.3 & 5.5

	options for change better facilitates the Applicable CUSC Objectives?	
6	Do you support the proposed implementation approach for CMP265? Are the suggested implementation timescales suggested for CMP265 appropriate / achievable?	The majority of respondents were concerned with the implementation timescales and the interaction with the Capacity Market and those plants that had prequalified and 'opted in' to the CM auction and that were unable to withdraw as CMUs price takers. It was noted that so as not to affect existing DG CMUs already prequalified for this years CM then the decision would have to be made by Ofgem (and communicated widely) by no later than Friday 18th November to enable prequalified existing DG to make an informed opt out/in decision for the T-4 2016 CM add that auction and date that is (commence 6 Dec).
7	Do you have any other comments for CMP265?	Refer to comments in 5.3 & 5.5
8	Do you wish to raise a Workgroup Consultation Alternative request for the Workgroup to consider for CMP265?	A number of options were put forward; these are covered in sections 6 and 8.
11	*i)* Views are sought on the implication for mixed sites discussed in 3.4.10.{*Workgroup Consultation Report reference}* ii) Views are sought on the preference of categories of capacity Market CMU captured by this proposal, please indicate your preference from the following list and reasons: • All existing and new distribution generation CMUs • All existing and new distribution generation CMUs and DSR CMUs (proven and unproven) • All price maker CMUs • All newbuild/prospective distribution generation CMUs only (defined as >1year contracts)	It was the overwhelming view that the level of complexity would be prohibitive. The majority view of those that did respond to this question that it should be all Embedded CMUs with a CM contract that should be considered in scope as having selective capacity market CMUs may risk distorting the CM clearing prices and creating perverse incentives for certain categories of CMU. Indeed other noted that it should apply to all Embedded Generators and not just those that hold a CM contract. This view was countered in the respect that if a CMU was a price-taker they would be unable to influence the clearing price or distort the CM outcome.

		A number of respondents and Workgroup members also raised the issue of secondary trading. This is addressed in section 10.6
14	Do you have a view of whether implementation for the 2020/21 Triad season is sufficient to allow changes for i) supplier contracts and billing system, and ii) for other stakeholders?	Whilst a number of respondents agreed that there would be sufficient time this was caveated with the view of not supporting the Modification.

Table 6: Questions posed for both CMP264 and CMP265

Question No from Consultation	Question	Views from the respondents
9	i) Suppliers: In setting charges for your demand customers, do you charge them at the same tariff as National Grid charges you (i.e. gross), to enable you to pay the embedded benefit to embedded generators, or please explain the way in which it is funded? ii) Suppliers: Does the estimate that 7.58GW of embedded generation output and 2.5GW of demand side reduction at the time of Triad for 2016/17 seem reasonable based on your knowledge of the UK market? If not what is your estimate of embedded generator output and DSR at time of Triad?	Due to the commercially sensitive nature most responses had no comment or were not Suppliers. One response indicated that the analysis undertaken in the Cornwall and KPMG reports provides a robust estimate of the total de-rated DG capacity that reduces Transmission demand, estimates of demand side reduction are harder to ascertain. NG's estimates of Customer Demand Management (CDM) indicated a similar level of participation.
12	Can you identify – either quantitatively or qualitatively - the impact of the demand TNUoS embedded benefit on your decisions made in making capacity market decisions?	Due to commercial considerations no detail was provided but the majority did note that they would expect the bid price into the CM to raise accordingly if either Modification was approved. A number of responses did provide information such as new-builds in the 2014 and 2015 CM had 100% priced in Triad Embedded Benefits into their CM prices and assumed this would continue without major reform given the regulatory stability and the recent decisions in the NG informal embedded benefits review (the NG decision

		not to change Triad in 2014 specifically references to 'protect investor confidence).
15	i. What are your views on the 2 broad options to enable the reporting of gross export metered data? ii) Would you have the data available required for Option B (both CMP264 and CMP265) for both new contracts and existing contracts where a customer may be partially exempt? iii) Do you believe you can implement the proposed changes by the respective implementation dates? iv) What are the pros and cons of the 2 proposals that ELEXON are considering to implement this (P348 for CMP265/ P349 for CMP264)?	The majority of respondents did not provide information; of those that did there was a split in those that consider a Supplier best placed and those that would rather have the data provided via ELEXON.
16	Do you have any further evidence / comments on the consumer impact of changing the demand TNUoS embedded benefit in either the short-run or long-run?	The overall majority view was that a wider review should be undertaken and that concerns were raised over security of supply during the Triad period. A number noted that the value of embedded benefit payments to generators due to the net charging of the Demand Residual represented a very high cost to customers and that the removal of this benefit would result in a substantial direct reduction in cost to customers. It was also noted that this customer saving may be offset to some degree by higher prices in the wholesale power market and higher clearing price of the Capacity Market.
17	Do you feel that both the locational and residual component of the demand TNUoS should be removed as an embedded benefit (as CMP264 Original) or just the residual component (as CMP265 Original) or some other method?	The majority of respondents considered that neither should be removed. A number highlighted that they considered that a wider review be undertaken on all aspects of demand TNUoS and related

		Embedded Benefits as part of a comprehensive review of network system charging, taking full account of expected developments in system operation, future generation mix and behaviour of demand-side participants. This, it was felt, would best be undertaken as a Significant Code Review. A number of respondents did consider that locational element should remain, with a £x value for the Embedded Benefit.
19	Regarding the proposed alternatives what are your views on the suggested implementation dates? Are these achievable? Please give reasons for your view.	As highlighted before all respondents cautioned 'rushing' the solution and implementation date. By extending the implementation date out this would allow the processes and systems to be considered and implemented.

6 Analysis provided by Workgroup members post the Workgroup Consultation

6.1 Post the Workgroup Consultation a number of the Workgroup members provided presentations to the Workgroup on the alternatives they were proposing and the impact on Suppliers. These are contained Volume 5 to this report.

7 Features contained in alternative options

Background

7.1 The Workgroup considered alternative methods for providing TNUoS embedded benefit. Presently, TNUoS embedded benefit is paid in relation to demand TNUoS charges. Specifically it is associated with charges for demand metered through half hourly (HH) meters. These charges are levied against the average level of HH metered demand which occurs over the "triad". The triad refers to the three settlement periods of highest transmission system demand within a charging year. It consists of the half hour settlement period of system peak demand and the two half hour settlement periods of next highest demand, which are separated from the system peak demand and from each other by at least 10 clear days, between November and February inclusive of the charging year concerned.

7.2 TNUoS embedded benefit is realised in respect of exports from exemptible embedded generation, which is generally generation connected to a distribution network which does not need a generation licence to operate. It is realised in one of two ways depending on how the affected embedded generator is registered in central settlement systems. An embedded generator can be registered in one of two settlement processes: the Supplier Volume Allocation (**SVA**) or the Central Volume Allocation (**CVA**) systems.

7.3 If a generator's meter is registered in SVA then a supplier tends to take responsibility for its exports of power onto the system for the purposes of settlement. The export is treated as negative demand in the calculation of that supplier's demand for a particular demand charging area, so that when the generator generates during the triad period it reduces the supplier's exposure for demand TNUoS charges.

7.4 This is referred to as "**net charging**" as it is the level of net demand during the triad which is charged demand TNUoS. For example, a supplier with 150MW of SVA demand and with 50MW of SVA registered embedded generation on average over the triad in a particular zone would be charged on the net level of 100MW. Under this "net charging" arrangement, embedded generation is seen to reduce metered peak demand which ultimately signals transmission investment need.

7.5 If an embedded generator is registered in the CVA arrangements, the party which has registered it is paid the negative demand TNUoS directly for any output generated during the triad period. That is, it doesn't need to offset any demand to realise the benefit. A supplier or the generator could be responsible for registering the generating station in the CVA arrangements. Suppliers that receive embedded benefits on behalf of generation that they have registered in settlement tend to pass most or all of this benefit to the generators concerned through the contractual arrangements they have with them.

7.6 Regardless of the route through settlement, the value of embedded benefit is effectively the negative demand tariff for the relevant zone. That is, instead of the demand tariff being a payment from the supplier to National Grid, for the embedded benefit the payment flows in the opposite direction.

7.7 The demand tariff is split into two elements: the "**locational charge**" and the "**residual tariff**". The locational charge is the collective term used within the CUSC to describe two individual charges, the "**peak**" and "**year round**" charges, which vary by location and are designed to reflect the costs of capital investment in, and the maintenance and operation of, the transmission system. The residual tariff does not vary by location and is designed to ensure that the correct revenue is recovered overall.

Alternative Approaches

7.8 The Workgroup Consultation report included information on five alternatives options for the treatment of embedded generation and also questions relating to areas that should be considered in pulling together an alternative option.

7.9 For CMP264 and CMP265 eight respondents provided alternatives. From these the Workgroup developed a matrix of features that could be included in any alternatives. Each alternative request was discussed in the Workgroup to ensure that a common understanding was held by all.

7.10 The Workgroup initially considered what could be potential features, recognising that there were multiple permutations and that the discussions that the Workgroup undertook had evolved such that some of the ideas to address the defect had wider impacts than originally envisaged.

Grandfathering:

The Workgroup considered grandfathering to mean an arrangement which preserved a higher level of Embedded Benefit compared with those that are not grandfathered Generators.

Grandfathering options could range from:

- No grandfathering
- Grandfathering existing, with different cut-off dates
- Grandfathering existing, plus those with existing CM/CFD agreements, with different cut-off date for grandfathering
- Grandfathering existing, plus those with existing CM/CFD agreements but no cut-off date
- Grandfathering all except existing CM agreements
- Grandfathering all except existing CM/CFD agreements
- Grandfathering all except existing CM/CFD agreements or CHP generators

New Embedded Benefit:

Alternative options for calculating the embedded benefit were considered. Alternatives to both elements which make up the current embedded benefit, the demand locational charge and the demand residual charge, were considered.

a) Alternatives to the Locational Charge

This could range from:

- No locational element
- Peak plus year round (as now)
- Peak only

b) Alternatives to the Residual Charge

This could range from:

- Zero £
- Using the Cornwall Energy value of c £32
- Using the value at the date of the last Embedded Benefits Review £27
- Using the 2015/16 value + RPI
- Using the 2016/17 value + RPI
- Using the Generation Residual[7]
- Using an approach of avoided infrastructure + avoided Transmission Network connection costs
- Using the average of the past [four] years

[7] For example if a Transmission Connected Generator receive a credit of £2 per kw Embedded Generators would also get a credit of £2 per kw

- Using a local reinforcement credit, wider reinforcement credit, generation residual (if negative)
- No change

Floor to avoid negative tariffs:

The Workgroup considered whether or not it was desirable to have a floor to the total level of Embedded Benefit an Embedded Generator was exposed to. The aim of this was to address concerns that a negative level of Embedded Benefit may lead to a generator not generating at times of peak demand simply to avoid paying a significant negative charge. The majority felt a floor would be appropriate but some felt it would not.

Charging base for Embedded Generators

Presently demand charges are levied over the triad period, but there are alternative periods over which they could be recovered/paid out.

Options considered were:

- Triad – no change
- Using 16:30 to 19:30 for November, December and January and 17:00 to 20:00 in February
- 16:00 to 19:00 Year Round

Implementation Date:

In this instance, the Workgroup meant the point at which the new charges would take effect, rather than when the new text to the CUSC would be implemented. Options considered were:

- 2017/2018
- 2018/2019
- 2020/2021
- A phased implementation

7.11 It was acknowledged by Workgroup Members that this gave rise to an excessive number of potential workgroup alternatives and therefore these were developed into key themes each of which is explained below.

7.12 As part of discussions held to narrow down the number of alternatives to be an efficient way forward (as directed by the workgroup terms of reference) the workgroup acknowledged that any proposals which altered the structure of demand TNUoS tariffs would be out of scope of these modifications. This aligns to the discussions held by the workgroup where a narrow defect should be addressed by any solutions, focused on the Triad TNUoS benefits for embedded generators. However, some workgroup members felt that this was a constraint as it precluded solutions which would otherwise have been more consistent with the underlying objectives of CUSC and could therefore have been more optimal.

8 Key themes within alternatives proposed

8.1 Section 8 'CUSC Modification[8]' details the Modification process. A Workgroup Consultation Alternative Request can be raised by any CUSC Party, BSC Party, the Citizens Advice or the Citizens Advice Scotland. In the instance that a Workgroup Consultation Alternative Request has been received by a party not listed or by a Workgroup member the Workgroup will 'adopt' the alternative request to include in any potential WACMs.

8.2 Tata Chemicals Europe Ltd did submit an alternative request that was taken forward in the WACM voting by the Workgroup member from the Association for Decentralised Energy (the ADE).

8.3 As part of the Workgroup meeting process and Workgroup Consultation responses the total number of alternatives that the Workgroup discussed as alternative methods to resolve the defects identified under CMP264 and CMP265 were:

- CMP264: **53** (including the original Proposal)
- CMP265: **36** (including the original Proposal).

Of these 89 different options, 62 covered both alternatives to CMP264 and CMP265.

8.4 The Workgroup discussed these potential proposals with a view to narrowing them down into formal alternative proposals. It was decided that the best way to structure the alternative proposals was to replace the current net charging of demand TNUoS with a structure whereby demand was charged on a gross basis (i.e. gross imports without Embedded Generation exports being netted from it) and that an alternative explicit embedded benefit tariff would be applied to embedded exports on a gross basis.

8.5 It was agreed that this would take the form of the demand locational tariff[9] (as now) plus a new value to replace the current demand residual. This element of the new tariff was referred to as "X". This is discussed in more detail below

8.6 The following sections details the discussions of the Workgroup on the merits of these alternatives, categorised by attribute type:

Affected Generator

8.7 For the purposes of the options, the Affected Generator described the parties to which the new arrangements would apply. For Modification CMP264 the Affected Generator was defined as all those commissioned after 30 June 2017 and for CMP265 the Affected Generator was defined as any Generator that holds a Capacity Market Contract.

CMP264: A number of the alternative options proposed mirrored the same date range but some different definitions were proposed that looked to either extend the date to those from 31 October 2018 or include all commissioned after 30/06/19 and multiyear-newbuild CM/CFD contracted after 14/15. Further options were proposed to define the Affected Generator as all commissioned after 30/06/17 excluding 14&15 CM/CFD or all new excluding 14&15 CM/CFD.
The rationale for extending the definition was to avoid affecting those users that have already made investment decisions based on the current charging arrangements.

[8] http://www2.nationalgrid.com/uk/industry-information/electricity-codes/cusc/the-cusc/

[9] This would be the negative of the locational tariff so that if the original demand locational tariff resulted in a payment from demand it would result in a payment to exports from generation.

However an alternative view was proposed by a number that it should capture all Generators and not just those commissioned after a specific date.

CMP265: A number of the options proposed looked to define the definition further to have that the Affected Generator as being classed as a Generator with CM Contract excluding 2014&2015 CM/CFD round. However an alternative view was proposed by a number that it should capture all Generators and not just those that held a CM Contract.
The rationale for extending the definition to exclude 2014&2015 CM/CFD contracts was to prevent changing transmission charging for Generators that had committed to their CM/CFD contract; whilst the rationale for extending which class of Generator would be captured under the definition was to prevent transmission charges discriminating between two classes of Embedded Generators.

Grandfathered Generator

8.8 As discussed in section 7, the Workgroup considered grandfathering to mean an arrangement which preserved a higher level of Embedded Benefit compared with those that are not grandfathered Generators. Therefore, Grandfathered Generators were those parties who would presently receive TNUoS triad embedded benefit and were not considered as an Affected Generator. For Modification CMP264 the Grandfathered Generator would be defined as all commissioned before 1 July 2017 whilst CMP265 has the definition as all Generators without a CM Contract. A number of variants were proposed:

CMP264: Include all commissioned before 1 November 2018 or all commissioned before 30 June 2019 excluding those with a multi-year new-build CM/CFD contracted after 2014/2015. Further options were proposed to include all commissioned before 1 July 2017 and with a 2014/2015 CM/CFD contract or all existing with those with a 2014/2015 CM/CFD contract. The final option proposed was to include all commissioned before 1 July 2017 and CHP plants.

CMP265: A number of the options proposed looked to extend the definition to those Generators without a CM contract and those that hold a CM/CFD contract for 2014/2015. A number looked to restrict it to those with a CM/CFD contract for 2014/2015 OR those with a CM/CFD contract for 2014/2015 until 2033. In contrast a number of options proposed that grandfathering should not be applied to any Generators.

8.9 Some of the Proposers of alternatives considered that grandfathering should be incorporated to protect existing investor commitments that were generally made on the assumption of higher triads and could safe-guard against rising cost of capital that may be borne by consumers. Furthermore without grandfathering this may lead to plant closure and security of supply issues and that the benefit of reduced reinforcement costs at transmission level are more attributable to existing plant than future plant. Offering a grandfathering element for those obligated under the 2014 or 2015 CM would cap Triad payments at existing levels to allow for the process of setting a realistic/practical date for commissioning cut off matching the obligations under the CM.

8.10 For those options that included grandfathering Embedded Generators with existing CM/CfD until 2033, the reason was to avoid stranding assets/investments for a sub set of users who were holders of Capacity Market and Contracts for Difference agreements. In principle it will protect investment decisions made in good faith when the newly formulated Electricity Market Reform (EMR) auctions were run during 2014 and 2015. These auctions are designed to secure capacity to deliver security of supply, affordability, de-carbonisation and to attract new investment and reduce cost of capital.

8.11 It was the view of the proposer of these alternatives that the auctions were intentionally designed to be complementary to other revenue streams available in the electricity market and importantly market participants were encouraged to take account of alternative revenues when placing their bids to fulfil the contracted obligations. Newbuild Distributed generation assets in both the CM and CfD auctions prior to the announcement of further

reviews during 2016 by Ofgem are reliant on their investment case to receive Demand TNUoS embedded benefits. These Newbuild capacity obligations are secured for approximately 15 years any failure to meet these obligations would result in significant termination penalties, sterilisation of sites and capacity from entering future auctions and potentially replacement capacity being bought in the T-1 and T-4 auctions at additional expense.

8.12 The various alternatives have been developed to protect these investment decisions for the duration of their EMR obligations to avoid stranding these assets that could place unnecessary additional risks borne by the end consumer. Analysis presented to the Workgroup suggested a potential benefit to the end consumer of up to £1.5bn through the introduction of specific grandfathering to 2033 for this sub set of capacity[10].

Embedded Generator Tariffs

8.13 It was understood by Workgroup Members that affected generators and grandfathered generators could be subject to different Embedded Generator TNUoS tariffs. An Embedded Generator tariff would be made up of a locational element (the demand locational tariffs from the TNUoS transport model) and a residual element.

8.14 X' was used by the workgroup as terminology to capture the replacement value for the residual element of an embedded generator's tariff. Different values of 'X' were considered for the two different groups of Embedded Generator.

Locational Element

8.15 Both the CMP264 and CMP265 originals and all proposed alternatives included keeping in the locational element.

Peak vs. year round

8.16 The Workgroup discussed whether charges should be based on year round or peak. A number of the alternatives proposed to charge the year round locational tariff on a wider charging base as it would be a better reflection of transmission investment than the Triad charging base. The Triad charging base approach, it was argued, overstates the location benefit by giving full credit based on running over just three half hours and that in negative zones the half hourly tariff is unlikely to discourage generation during high demand periods.

8.17 The Workgroup recognised that there may be merit in reviewing this aspect as part of a wider review but that implementation may be too complex to implement in the time allowed by the Authority and the CUSC panel and the narrow scope of the proposer's identified defects.

Affected Generator value of 'X'

8.18 Both originals for CMP264 and CMP265 had this value set at £0. A number of the alternatives provided the value of 'X'. The value of 'x'" all use a common approach that the value of the net element of the Demand Residual is reduced to £0. I.e. the Demand Residual becomes 100% gross. This value of 'x' is a new number to represent a new measure of embedded benefit.

Table 7

[10] Please refer to the presentation from UKPR in section 6.1

Value of 'X'	Description
£32.30 in April 2016 prices + RPI	Based on analysis by Cornwall Energy [11]on the avoided costs of transmission
£45.33 in April 2016 prices + RPI	Maintain the value of demand residual in 2016/17 to prevent further increases
Avoided GSP investment (last estimate £1.62)	Based on a National Grid estimate of the cost of reinforcing a GSP which is avoided by embedded Generators
£20.12 This comprises of £18.50 in April 2019 prices + RPI and Avoided GSP cost (last estimate £1.62)	Based on estimated cost of transmission reinforcement cost calculated by Cornwall Energy[12] and + Avoided GSP cost which is based on a National Grid estimate of the cost of reinforcing a GSP which is avoided by embedded Generators[13]
£34.11 in April 2016 prices + RPI for 1 charging year then £20.12 as calculated above	Four year average of demand residual to 2016/17 which represents the demand residual while recent investment decisions were made; then based on estimated cost of transmission reinforcement cost calculated by Cornwall Energy[14] and + Avoided GSP cost
Generation Residual	Gives the same value of residual for Generators connected to the transmission and distribution system
£27.17 in April 2013 prices + RPI for 5 charging years then Generation Residual	Based on the level that demand residual was at when this issue was last considered in 2013/4 during an National Grid informal consultation.
Generation Residual + Avoided GSP investment (last estimate £1.62)	Gives the same value of residual for Generators connected to the transmission and distribution system and takes account of the avoided cost of reinforcing a GSP as estimate by National Grid
Magnitude of Lowest locational value (Locational including both year round and peak security year HH demand TNUoS tariff elements)	Maintains the full cost differential of the indicative locational signal which represents the value of embedded Generators locating within each demand zone
Demand residual with offshore costs removed	Calculates what the embedded benefit would have been if the cost of offshore transmission were removed

[11] http://www.theade.co.uk/embedded-benefits-review--manufacturing-energy-cost-concerns_4069.html

[12] http://www.theade.co.uk/embedded-benefits-review--manufacturing-energy-cost-concerns_4069.html

[13]See section 4.6 of "Informal Review Paper: Review of the Embedded (Distributed) Generation Benefit arising from transmission charges"
http://www2.nationalgrid.com/WorkArea/DownloadAsset.aspx?id=29996

[14] http://www.theade.co.uk/embedded-benefits-review--manufacturing-energy-cost-concerns_4069.html

Grandfathered Generator value of 'X'

8.19 Both originals for CMP264 and CMP265 had this value set to the existing net charge. A number of the alternatives agreed that this value should be net. Other alternatives had that the value was not applicable or provided a value and timeframe for application.

Table 8

Grandfathered Generator value of 'X'	Description
£34.11 in April 2016 prices + RPI for 10 years then move to Affected Generator	Four year average of demand residual to 2016/17 which represents the demand residual while recent investment decisions were made
£45.33 in April of first applicable charging year of implementation + RPI	Maintain the value of demand residual from 2016/17 to prevent further increases. The hard coded value will be increased by RPI only after the WACM has been implemented
£45.33	Maintain the value of demand residual in 2016/17 to prevent further increases
£45.33 in April 2016 prices + RPI	Maintain the value of demand residual in 2016/17 to prevent further increases

Flooring to £zero

8.20 **CMP264** original and all but one of the alternatives proposed that the total tariff applicable to affected and grandfathered Embedded exports should be floored to £zero because of the view that a negative Triad benefit may provide an incentive for Embedded Generators to turn down to avoid generating during Triad periods. The rationale was that this approach of flooring at £zero would avoid the potential distortionary incentive some Workgroup members considered exists because of the non-cost reflective nature of using the Triad as the charging base for this benefit (i.e. effectively applying a negative Year Round tariff to a measure of peak generation). Furthermore there was a view that this may no longer be required if a different definition of charging periods (e.g. different to Triad) were introduced.

8.21 This approach was shared by all of the potential alternatives proposed except for one option that proposed that there shouldn't be a floor of £zero included. The rationale for this one option was that the proposer of this option considered it was a better reflection of transmission investment and that in negative zones the half hourly tariff is unlikely to discourage generation during high demand periods as the alternative used a longer time window instead of the Triads currently used. The Workgroup discussed how it could distort dispatch and how this may worsen the situation if over a longer period than the Triad. As the alternative was not progressed as a WACM the Workgroup did not consider this issue further.

8.22 For **CMP265** the majority of alternatives had that there should be a floor of £0, the only ones that considered that there shouldn't be a floor of £zero were the original and one of the alternatives (the same proposer as the one for CMP264 that didn't have flooring to £zero). The rationale was as above and also that the proposer of the original did not consider the rationale for flooring to £zero as the locational charge and how it is applied, is supposed to be cost-reflective. If it was considered not to be cost reflective then it should be amended, via a separate change, to become cost-reflective.

3 year phasing

8.23 Both the CMP264 and CMP265 originals did not include a concept of phasing. Whilst the majority of alternatives also did not include the concept of phasing a number of alternates did on the basis that it would stop there being undue disruption to the market. It would limit the impact of a significant change in the tariffs for Embedded Generators and allow National Grid time to understand the implications from a forecasting tariffs perspective. Whilst a number of the Workgroup acknowledged that this approach may reduce the concerns of the 'cliff edge', there was a view that by phasing all that will happen is that industry will delay the 'cliff edge'.

Charging Window – applicable to affected Generator and Grandfathered Generator

8.24 The majority of alternates and the originals had that this should be against Triad. Different Charging Windows were suggested ranging from using 16:00 to 19:00 weekdays November to February or 16:30 to 19:30 weekdays November to January and 17:00 to 20:00 February through to extending the Charging Window out to 16:00 to 19:00 year round.

8.25 Amending the Charging Window for all demand users of the system was discounted as it was considered out of scope of the defect of the Modifications.

Mixed sites

8.26 Whilst the Workgroup discussed whether there should be a separate feature for mixed sites it was agreed that any Affected Generator or Grandfathered Generator that held mixed sites meters would be captured under the definitions.

Provision of data

8.27 It was raised by a number of Workgroup members concerns about using existing BSC Systems data flows and impacts of changing older systems and that dependant on the change new systems may need to be developed. As a result proposals had their dates moved forward, but the Workgroup noted that the governance of BSC systems is under the BSC and implementation may take longer were new systems to be required.

Renewable Obligations (RO)

8.28 A Workgroup member suggested that where the scope of grandfathered generator includes CfDs contracts that this should be extended to RO. However it was recognised that with the closure date of the Renewable Obligation and the implementation dates proposed, it was thought unlikely that any of the proposals with a cut-off date would impact RO plant as they should have all commissioned prior to that date.

9 Details of Workgroup Alternative CUSC Modifications (WACMs)

9.1 The Workgroup voted on the 19 September on which potential alternatives should become Workgroup Alternative CUSC Modifications (WACMs). This resulted in:

- CMP264: **8** alternatives being voted by majority as WACMs
- CMP265: **4** alternatives being voted by majority as WACMs

9.2 During the voting exercise a seven of the alternatives proposed as WACMs were withdrawn by Workgroup members.

9.3 Following the voting by Workgroup Members, the **Chair** exercised the option to retain an additional **29** of the different alternatives that did not receive a majority vote as these are considered by the Chair to be better than the baseline and facilitates the CUSC charging objective (a) of "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".

9.4 In addition the Chair considered that the requirement to save these additional WACMs reflected the composition of the Workgroup and the variety of views.

9.5 The breakdown of WACMs retained was:

- CMP264: **15** alternatives being voted in by the Workgroup Chair as a WACM
- CMP265: **14** alternatives being voted in by the Workgroup Chair as a WACM

9.6 Tables 9 and 10 detail the elements in each WACM and the original Proposals for CMP264 and CMP265.

9.7 More detail on the rationale for the value of 'X' can be found in paragraph 8.18 and 8.19

Table 9 – elements for CMP264 (WACM and original)

WACM No	WACM Proposer	Affected Generator (AG)	Grandfathered Generator (GG)	Affected Generator Value of 'X'	Grandfathered Generator Value of 'X'	Preferred First Charging Year (where specified)	Floored at £0 (Y/N)	3 Year Phasing	Charging Window Applicable to AG & GG
n/a	CMP264 Original – SP	All commissioned after 30/06/17	All commissioned before 01/07/17	£0	Net		Y	N	Triad
WACM 1	Centrica B (CMP264)	All	N/A	Generation Residual	N/A	2020/2021	Y	N	Triad
WACM 2	NG C (CMP264)	All	N/A	Generation Residual	N/A		Y	Y	Triad
WACM 3	Uniper A (CMP264)	All	N/A	Avoided GSP investment (last estimate £1.62)	N/A	2018/19	Y	N	Triad
WACM 4	SSE A (CMP264)	All	N/A	Avoided GSP investment (last estimate £1.62)	N/A		Y	Y	Triad
WACM 5	SSE B (CMP264)	All	N/A	Generation Residual + Avoided GSP investment (last estimate £1.62)	N/A		Y	Y	Triad
WACM 6	NG A (CMP264)	All	N/A	Magnitude of Lowest	N/A	2018/19	Y	N	Triad

				locational value					
WACM No	**WACM Proposer**	**Affected Generator (AG)**	**Grandfathered Generator (GG)**	**Affected Generator Value of 'X'**	**Grandfathered Generator Value of 'X'**	**Preferred First Charging Year (where specified)**	**Floored at £0 (Y/N)**	**3 Year Phasing**	**Charging Window Applicable to AG & GG**
WACM 7	NG D (CMP264)	All	N/A	Magnitude of Lowest locational value	N/A	2018/19	Y	Y	Triad
WACM 8	ADE E (CMP264)	All	N/A	£32.30 in April 2016 prices + RPI	N/A		Y	N	Triad
WACM 9	Infinis A (CMP264)	All	N/A	£34.11 for 1 year then £20.12	N/A		Y	N	Triad
WACM 10	Greenfrog A (CMP264)	All	N/A	£45.33 in April 2016 prices + RPI	N/A		Y	N	Triad
WACM 11	Eider A (CMP264)	All	N/A	Demand residual with offshore costs removed	N/A	2018/19	Y	N	Triad
WACM 12	UKPR F1 (CMP264)	All excluding grandfathered generators	Multi-year 14&15 CM contracts for new build generation & all CFD contracts from 14&15	Generation Residual	£45.33 in April of first applicable charging year of implementation + RPI		Y	N	Triad
WACM 13	UKPR G1 (CMP264)	All excluding grandfathered generators	Multi-year 14&15 CM contracts for new build generation & all	Avoided GSP investment (last estimate £1.62)	£45.33 in April of first applicable charging year of implementation +		Y	N	Triad

			CFD contracts from 14&15		RPI				
WACM No	**WACM Proposer**	**Affected Generator (AG)**	**Grandfathered Generator (GG)**	**Affected Generator Value of 'X'**	**Grandfathered Generator Value of 'X'**	**Preferred First Charging Year (where specified)**	**Floored at £0 (Y/N)**	**3 Year Phasing**	**Charging Window Applicable to AG & GG**
WACM 14	UKPR H1 (CMP264)	All excluding grandfathered generators	Multi-year 14&15 CM contracts for new build generation & all CFD contracts from 14&15	Generation Residual + Avoided GSP investment (last estimate £1.62)	£45.33 in April of first applicable charging year of implementation + RPI		Y	N	Triad
WACM 15	UKPR I1 (CMP264)	All excluding grandfathered generators	Multi-year 14&15 CM contracts for new build generation & all CFD contracts from 14&15	Magnitude of lowest locational value	£45.33 in April of first applicable charging year of implementation + RPI		Y	N	Triad
WACM 16	UKPR J1 (CMP264)	All excluding grandfathered generators	Multi-year 14&15 CM contracts for new build generation & all CFD contracts from 14&15	£20.12 + RPI	£45.33 in April of first applicable charging year of implementation + RPI		Y	N	Triad
WACM 17	UKPR K1 (CMP264)	All excluding grandfathered generators	Multi-year 14&15 CM contracts for new build generation & all CFD contracts	£32.30 in April 2016 prices + RPI	£45.33 in April of first applicable charging year of implementation + RPI		Y	N	Triad

			from 14&15						
WACM No	**WACM Proposer**	**Affected Generator (AG)**	**Grandfathered Generator (GG)**	**Affected Generator Value of 'X'**	**Grandfathered Generator Value of 'X'**	**Preferred First Charging Year (where specified)**	**Floored at £0 (Y/N)**	**3 Year Phasing**	**Charging Window Applicable to AG & GG**
WACM 18	UKPR L1 (CMP264)	All excluding grandfathered generators	Multi-year 14&15 CM contracts for new build generation & all CFD contracts from 14&15	Demand residual with offshore costs removed	£45.33 in April of first applicable charging year of implementation + RPI		Y	N	Triad
WACM 19	SP B	All commissioned after 30/06/17	All commissioned before 01/07/17	£0	£45.33 in April 2016 prices + RPI		Y	N	Triad
WACM 20	Alkane A	All commissioned after 31/10/18	All commissioned before 01/11/18	£27.70 for 5 charging years then Generation Residual	£45.33 in April 2016 prices + RPI until 31/03/33 then move to AG	2018/19	Y	N	Triad
WACM 21	Alkane B	All commissioned after 31/10/18	All commissioned before 01/11/18	Magnitude of lowest locational value	£45.33 in April 2016 prices + RPI until 31/03/33 then move to AG		Y	N	Triad
WACM 22	ADE C	All commissioned after 30/06/19 and multiyear-newbuild CM/CFD contracted after	All commissioned before 30/06/19 excluding multiyear-	£0	£45.33 in April 2016 prices + RPI		Y	N	Triad

		14/15	newbuild CM/CFD contracted after 14/15						
WACM No	**WACM Proposer**	**Affected Generator (AG)**	**Grandfathered Generator (GG)**	**Affected Generator Value of 'X'**	**Grandfathered Generator Value of 'X'**	**Preferred First Charging Year (where specified)**	**Floored at £0 (Y/N)**	**3 Year Phasing**	**Charging Window Applicable to AG & GG**
WACM 23	Infinis B	All excluding grandfathered generators	All commissioned before 01/07/17 and multi-year, new build 14&15 CM/CFD	£34.11 + RPI for 1 charging year then £20.12 +RPI on-going	£34.11 in April 2016 prices + RPI for 10 years then move to AG		Y	N	Triad

Table 10 elements for CMP265 (WACM and original)

WACM No	**WACM Proposer**	**Affected Generator (AG)**	**Grandfathered Generator (GG)**	**Affected Generator Value of 'X'**	**Grandfathered Generator Value of 'X'**	**Preferred First Charging Year (where specified)**	**Floored at £0 (Y/N)**	**3 Year Phasing**	**Charging Window Applicable to AG & GG**
n/a	CMP265 Original - EDF A	Generator with CM Contract	Generator without CM Contract	£0	Net		N	N	Triad
WACM 1	Centrica B (CMP265)	All	N/A	Generation Residual	N/A	2020/2021	Y	N	Triad

WACM No	WACM Proposer	Affected Generator (AG)	Grandfathered Generator (GG)	Affected Generator Value of 'X'	Grandfathered Generator Value of 'X'	Preferred First Charging Year (where specified)	Floored at £0 (Y/N)	3 Year Phasing	Charging Window Applicable to AG & GG
WACM 2	NG C (CMP265)	All	N/A	Generation Residual	N/A		Y	Y	Triad
WACM No	**WACM Proposer**	**Affected Generator (AG)**	**Grandfathered Generator (GG)**	**Affected Generator Value of 'X'**	**Grandfathered Generator Value of 'X'**	**Preferred First Charging Year (where specified)**	**Floored at £0 (Y/N)**	**3 Year Phasing**	**Charging Window Applicable to AG & GG**
WACM 3	Uniper A (CMP265)	All	N/A	Avoided GSP investment (last estimate £1.62)	N/A	2018/19	Y	N	Triad
WACM 4	SSE A (CMP265)	All	N/A	Avoided GSP investment (last estimate £1.62)	N/A		Y	Y	Triad
WACM 5	SSE B (CMP265)	All	N/A	Generation Residual + Avoided GSP investment (last estimate £1.62)	N/A		Y	Y	Triad
WACM 6	NG A (CMP265)	All	N/A	Magnitude of Lowest locational value	N/A	2018/19	Y	N	Triad

WACM No	WACM Proposer	Affected Generator (AG)	Grandfathered Generator (GG)	Affected Generator Value of 'X'	Grandfathered Generator Value of 'X'	Preferred First Charging Year (where specified)	Floored at £0 (Y/N)	3 Year Phasing	Charging Window Applicable to AG & GG
WACM 7	NG D (CMP265)	All	N/A	Magnitude of Lowest locational value	N/A	2018/19	Y	Y	Triad
WACM 8	ADE E (CMP265)	All	N/A	£32.30 in April 2016 prices + RPI	N/A		Y	N	Triad
WACM 9	Infinis A (CMP265)	All	N/A	£34.11 for 1 year then £20.12	N/A		Y	N	Triad
WACM 10	Greenfrog A (CMP265)	All	N/A	£45.33 in April 2016 prices + RPI	N/A		Y	N	Triad
WACM 11	Eider A (CMP265)	All	N/A	Demand residual with offshore costs removed	N/A	2018/19	Y	N	Triad
WACM 12	UKPR F1 (CMP265)	All excluding grandfathered generators	Multi-year 14&15 CM contracts for new build generation & all CFD contracts from 14&15	Generation Residual	£45.33 in April of first applicable charging year of implementation + RPI		Y	N	Triad

WACM No	WACM Proposer	Affected Generator (AG)	Grandfathered Generator (GG)	Affected Generator Value of 'X'	Grandfathered Generator Value of 'X'	Preferred First Charging Year (where specified)	Floored at £0 (Y/N)	3 Year Phasing	Charging Window Applicable to AG & GG
WACM 13	UKPR G1 (CMP265)	All excluding grandfathered generators	Multi-year 14&15 CM contracts for new build generation & all CFD contracts from 14&15	Avoided GSP investment (last estimate £1.62)	£45.33 in April of first applicable charging year of implementation + RPI		Y	N	Triad
WACM 14	UKPR H1 (CMP265)	All excluding grandfathered generators	Multi-year 14&15 CM contracts for new build generation & all CFD contracts from 14&15	Generation Residual + Avoided GSP investment (last estimate £1.62)	£45.33 in April of first applicable charging year of implementation + RPI		Y	N	Triad
WACM 15	UKPR I1 (CMP265)	All excluding grandfathered generators	Multi-year 14&15 CM contracts for new build generation & all CFD contracts from 14&15	Magnitude of lowest locational value	£45.33 in April of first applicable charging year of implementation + RPI		Y	N	Triad

WACM No	WACM Proposer	Affected Generator (AG)	Grandfathered Generator (GG)	Affected Generator Value of 'X'	Grandfathered Generator Value of 'X'	Preferred First Charging Year (where specified)	Floored at £0 (Y/N)	3 Year Phasing	Charging Window Applicable to AG & GG
WACM 16	UKPR J1 (CMP265)	All excluding grandfathered generators	Multi-year 14&15 CM contracts for new build generation & all CFD contracts from 14&15	£20.12 + RPI	£45.33 in April of first applicable charging year of implementation + RPI		Y	N	Triad
WACM 17	UKPR K1 (CMP265)	All excluding grandfathered generators	Multi-year 14&15 CM contracts for new build generation & all CFD contracts from 14&15	£32.30 in April 2016 prices + RPI	£45.33 in April of first applicable charging year of implementation + RPI		Y	N	Triad
WACM 18	UKPR L1 (CMP265)	All excluding grandfathered generators	Multi-year 14&15 CM contracts for new build generation & all CFD contracts from 14&15	Demand residual with offshore costs removed	£45.33 in April of first applicable charging year of implementation + RPI		Y	N	Triad

9.8 Both originals and all approved WACMs require changes to existing metering data flows and demand forecasts to support TNUoS charging. The changes to the metering data flows will be specified under BSC Modifications P348 and P349. The changes to demand forecast are specified in the legal text changes for CMP264 and CMP265. This can be found in Volume 1b, 1c and 1d.

10 The approach to determining the legal text changes

10.1 It was agreed by the Workgroup that a sub-group should be formed to consider the legal text changes to Section 14 the CUSC. This group convened five times. Volume 1b, 1c and 1d details the changes to the CUSC should either an original or a WACM be approved by the Authority for implementation.

10.2 The legal text sub-group considered how best to facilitate the drafting of a large number of WACMs and agreed a modular approach that was in line with the formation of proposals in the main sub group. This approach used one set of changes that took the majority of changes to CUSC into account but was combined with 'bolt on' definitions that would be inserted depending on which original or alternative modification was in question.

10.3 Central to this approach was using the terms Affected Export and Grandfathered Export. These terms are used to refer to users that export onto the distribution system and depending on the particular proposal, would be treated differently to today. For CMP264 and CMP265 originals, grandfathered exports continue to be treated on a net basis as today.

10.4 There are two main approaches for defining the difference between grandfathered and affected exports; these were:

- If the generator held a capacity market (CM) obligation or contract for difference (CFD)
- The commissioning date of the generator according to its G59 certification

10.5 The sub-group discussed what should happen if a CM obligation or CFD were terminated. The group concluded that the generator should be treated as not having a CM obligation or CFD from the beginning of the following charging year.

10.6 The scenario of secondary trading of a CM obligation was raised where one party may have been awarded the obligation at auction but the obligation is then passed the obligation to a third party. The approach for CMP265 original is to define affected embedded exports as generation that holds a CM obligation from either auction or secondary trading. All other proposals that used CM obligations as a differentiator between affected and grandfathered exports do not consider secondary trading; they only define generators according to CM obligations that were awarded at auction.

10.7 The sub-group considered how best to capture the commissioning date of an Embedded Generator and at decided that the use of G59 certification is the most appropriate method. The G59 certificate is a document that is signed by a DNO for any generation connecting that is greater than 3.68kW. While this approach was agreed by the group there were a number of limitations to this method highlighted by sub-group members. These included:

- The G59 certification has a de-minimis level of 3.68kW which will mean that some generators are not captured
- There is a possibility that a DNO may issue a new G59 certificate for reasons other than the replacement or addition of existing generation. The effect of this would be that exports would move from grandfathered to affected exports as a result which is not the intended effect of using G59 certification.
- Concerns were raised that certification could be awarded to generation and dated in relation to the equipment meeting certain standards and not the commissioning of the equipment. The intention of using the G59 certification is only to identify the commissioning date of the generation and not dates of meeting standards unrelated to commissioning.

- There is currently a possibility that G59 certification will be replaced by a new certificate. It was agreed that if this does happen, the appropriate replacement will be adopted as the method of determining commissioning date.

10.8 As CMP264 and CMP265 have been raised as changes to the Charging Methodology of the CUSC and that there may be a need to amend other sections of the CUSC that do not relate to Section 14. Consequential Modifications CMP269 and CMP270 have been raised to detail the potential changes to Section 3 and Section 11 of the CUSC.

10.9 It is suggested that these Modifications are considered together with CMP264 and CMP265 to cover changes to Section 3 and Section 11. Following the legal text sub group meetings it was confirmed that only changes to Section 11 would be required:

- Section 11: the proposals will require new definitions such as New Embedded Generation (i.e. those who qualify for a different value of embedded benefit under the CMP264 Original) [Capacity Market Embedded Generation (i.e. those who embedded generators who hold a capacity market agreement)] in order for these terms to be in Section 14 and Section 11 of the CUSC consistently.

11 Workgroup voting

11.1 The Workgroup met on 5 October and voted on the Original Proposals and the Workgroup Alternative CUSC Modifications. The voting was comprised of the rounds of voting for each Modification.

Vote 1: Does the original or a WACM facilitate the objectives better than the baseline?

11.2 For **CMP264/CMP269** ***WACM11*** received the highest number of votes for vote 1. The votes received are as follows:

Table 11

CMP264/CMP269 Vote 1 Record

WACM Ref	WACM identifier	Workgroup voted yes overall
Original	CMP264/CMP269	5
WACM 1	Centrica B (CMP264)	8
WACM 2	NG C (CMP264)	6
WACM 3	Uniper A (CMP264)	7
WACM 4	SSE A (CMP264)	5
WACM 5	SSE B (CMP264)	6
WACM 6	NG A (CMP264)	5
WACM 7	NG D (CMP264)	5
WACM 8	ADE E (CMP264)	6
WACM 9	Infinis A (CMP264)	6
WACM 10	Greenfrog A (CMP264)	8
WACM 11	Eider A (CMP264)	9
WACM 12	UKPR F1 (CMP264)	2
WACM 13	UKPR G1 (CMP264)	2
WACM 14	UKPR H1 (CMP264)	3
WACM 15	UKPR I1 (CMP264)	4
WACM 16	UKPR J1 (CMP264)	6
WACM 17	UKPR K1 (CMP264)	6
WACM 18	UKPR L1 (CMP264)	7
WACM 19	SP B	4
WACM 20	Alkane A	7

WACM 21	Alkane B	6
WACM 22	ADE C	5
WACM 23	Infinis B	6

11.3 For **CMP265/CMP270** a number of the WACMs received the equal highest number of votes for vote 1. The votes received are as follows:

Table 12

CMP265/CMP270 Vote 1 Record

WACM Ref	WACM identifier	Workgroup voted yes overall
Original	CMP265/CMP270	5
WACM 1	Centrica B (CMP264)	6
WACM 2	NG C (CMP264)	5
WACM 3	Uniper A (CMP264)	6
WACM 4	SSE A (CMP264)	5
WACM 5	SSE B (CMP264)	5
WACM 6	NG A (CMP264)	6
WACM 7	NG D (CMP264)	6
WACM 8	ADE E (CMP264)	7
WACM 9	Infinis A (CMP264)	7
WACM 10	Greenfrog A (CMP264)	7
WACM 11	Eider A (CMP264)	7
WACM 12	UKPR F1 (CMP264)	1
WACM 13	UKPR G1 (CMP264)	1
WACM 14	UKPR H1 (CMP264)	2
WACM 15	UKPR I1 (CMP264)	3
WACM 16	UKPR J1 (CMP264)	5
WACM 17	UKPR K1 (CMP264)	5
WACM 18	UKPR L1 (CMP264)	6

Vote 2: Does the WACM facilitate the objectives better than the Original?

11.4 For **CMP264/CMP269** a number of the WACMs received the equal highest number of votes for vote 2. The votes received are as follows:

Table 13

CMP264/CMP269 Vote 2 Record

WACM Ref	WACM identifier	Workgroup voted yes overall
WACM 1	Centrica B (CMP264)	10
WACM 2	NG C (CMP264)	8
WACM 3	Uniper A (CMP264)	10
WACM 4	SSE A (CMP264)	7
WACM 5	SSE B (CMP264)	7
WACM 6	NG A (CMP264)	9
WACM 7	NG D (CMP264)	8
WACM 8	ADE E (CMP264)	9
WACM 9	Infinis A (CMP264)	8
WACM 10	Greenfrog A (CMP264)	9
WACM 11	Eider A (CMP264)	10
WACM 12	UKPR F1 (CMP264)	4
WACM 13	UKPR G1 (CMP264)	4
WACM 14	UKPR H1 (CMP264)	4
WACM 15	UKPR I1 (CMP264)	5
WACM 16	UKPR J1 (CMP264)	5
WACM 17	UKPR K1 (CMP264)	6
WACM 18	UKPR L1 (CMP264)	6
WACM 19	SP B	9
WACM 20	Alkane A	9
WACM 21	Alkane B	8
WACM 22	ADE C	7
WACM 23	Infinis B	6

11.5 For **CMP265/CMP270 *WACM11*** received the highest number of votes for vote 1. The votes received are as follows:

Table 14

CMP265/CMP270 Vote 2 Record

WACM Ref	WACM identifier	Workgroup voted yes overall
WACM 1	Centrica B (CMP264)	9
WACM 2	NG C (CMP264)	9

WACM 3	Uniper A (CMP264)	9
WACM 4	SSE A (CMP264)	8
WACM 5	SSE B (CMP264)	8
WACM 6	NG A (CMP264)	8
WACM 7	NG D (CMP264)	8
WACM 8	ADE E (CMP264)	8
WACM 9	Infinis A (CMP264)	7
WACM 10	Greenfrog A (CMP264)	10
WACM 11	Eider A (CMP264)	11
WACM 12	UKPR F1 (CMP264)	4
WACM 13	UKPR G1 (CMP264)	4
WACM 14	UKPR H1 (CMP264)	4
WACM 15	UKPR I1 (CMP264)	5
WACM 16	UKPR J1 (CMP264)	5
WACM 17	UKPR K1 (CMP264)	5
WACM 18	UKPR L1 (CMP264)	6

Vote 3: Which option is considered to be the best?

11.6 For **CMP264/CMP269 *WACM3*** received the highest number of votes for vote 3 (with **four of the 22** Workgroup members voting that as the best option). The next highest options voted for was the baseline and WACM 8 with three votes each. The votes received are as follows:

Table 15

CMP264/CMP269 Vote 3 Record

WACM Ref	WACM identifier	Workgroup members voted as BEST
	Original Proposal	0
WACM 1	Centrica B (CMP264)	1
WACM 2	NG C (CMP264)	0
WACM 3	Uniper A (CMP264)	4
WACM 4	SSE A (CMP264)	0
WACM 5	SSE B (CMP264)	1
WACM 6	NG A (CMP264)	1

WACM 7	NG D (CMP264)	0
WACM 8	ADE E (CMP264)	3
WACM 9	Infinis A (CMP264)	1
WACM 10	Greenfrog A (CMP264)	2
WACM 11	Eider A (CMP264)	1
WACM 12	UKPR F1 (CMP264)	0
WACM 13	UKPR G1 (CMP264)	0
WACM 14	UKPR H1 (CMP264)	0
WACM 15	UKPR I1 (CMP264)	1
WACM 16	UKPR J1 (CMP264)	0
WACM 17	UKPR K1 (CMP264)	0
WACM 18	UKPR L1 (CMP264)	0
WACM 19	SP B	2
WACM 20	Alkane A	
WACM 21	Alkane B	1
WACM 22	ADE C	
WACM 23	Infinis B	
Baseline		3
Abstained		1

11.7 For **CMP265/CMP270 *WACM10*** received the highest number of votes with **four of the 22** Workgroup members voting that as the best option. The next highest options voted for was the baseline, WACM 3 and WACM 8 with three votes each. The votes received are as follows:

CMP265/CMP270 Vote 3 Record

Table 16

WACM Ref	WACM identifier	Workgroup members voted as BEST
	Original Proposal	1
WACM 1	Centrica B (CMP265)	1
WACM 2	NG C (CMP265)	0
WACM 3	Uniper A (CMP265)	3
WACM 4	SSE A (CMP265)	1
WACM 5	SSE B (CMP265)	1
WACM 6	NG A (CMP265)	1
WACM 7	NG D (CMP265)	0

WACM 8	ADE E (CMP265)	3
WACM 9	Infinis A (CMP265)	1
WACM 10	Greenfrog A (CMP265)	4
WACM 11	Eider A (CMP265)	1
WACM 12	UKPR F1 (CMP265)	0
WACM 13	UKPR G1 (CMP265)	0
WACM 14	UKPR H1 (CMP265)	0
WACM 15	UKPR I1 (CMP265)	1
WACM 16	UKPR J1 (CMP265)	0
WACM 17	UKPR K1 (CMP265)	0
WACM 18	UKPR L1 (CMP265)	0
Baseline		3
Abstention		1

11.8 With respect to CMP269 & CMP270 the Workgroup discussed as part of their voting how these two modifications are in essence required for the implementation of CMP264 and 265. A view was expressed that the existing governance arrangements which allow for Modifications to be assessed against different applicable CUSC objectives in itself was inefficient. Arguably implementation of any of the original or WACMs under CMP264 and CMP265 cannot be said to be efficient without the corresponding WACM from CMP269 and CMP270. These modifications could therefore be said to better meet applicable objective (d) (where the corresponding modification has been implemented) regardless of their impact on applicable objectives (a)-(c).

11.9 Below details the rationale for vote 3 for each voting Workgroup member. The complete record of voting for each Workgroup member for each vote is contained in Volume 4 of this report.

Table 17

WG member	CMP264/269 Option voted best	CMP264 vote 3 rationale	CMP269 vote 3 rationale	CMP265/270 Option voted best	CMP265 vote 3 rationale	CMP270 vote 3 rationale
James Anderson	WACM 19	WACM19 best meets the defect identified in CMP264 in that it ensures that future Capacity Mechanism auctions will be based on a level playing field and that embedded generation participants will not take account of non cost-reflective Triad avoidance payments in making their bids. Capping the Triad avoidance payment at the 2016/17 level ensures that the detriment to consumers does not increase while an enduring solution to identifying a cost-reflective payment for embedded generation is developed.		WACM 4	WACM4 applies to all embedded generators thus avoiding any discrimination between different classes. It removes a non cost-reflective payment from embedded generation thus improving competition between embedded and transmission connected generation. thus better facilitating Applicable Charging Objective (b). Removing a non cost reflective Triad avoidance payment, retaining the cost-reflective locational signal (floored at zero) and introducing a payment which reflects the avoided cost of transmission investment will best facilitate Applicable Charging Objective (b).	
Tim Collins	WACM 1	Performs best against the relevant objectives. Broadly creates equivalence in TNUoS charging between new DG, existing DG and TG so significant benefits to cost reflectivity and effective competition. Preferred implementation date of April 2020 respects the CM price commitment cycle. Relatively simple to implement compared with other WACMs and decent lead time allowed for system/process changes.	Broadly creates equivalence in TNUoS charging between new DG, existing DG and TG so significant benefits to cost reflectivity and effective competition. Preferred implementation date of April 2020 respects the CM price commitment cycle. Relatively simple to implement compared with other WACMs and decent lead time allowed for system/process changes.	WACM 1	Performs best against the relevant objectives. Broadly creates equivalence in TNUoS charging between new DG, existing DG and TG so significant benefits to cost reflectivity and effective competition. Avoids linking EG TNUoS to the Capacity Market, which is arbitrary and unnecessary. Preferred implementation date of April 2020 respects the CM price commitment cycle. Relatively simple to implement compared with other WACMs and decent lead time allowed for system/process changes.	
Mike Davies	WACM 11	This option has a logical derivation of the costs used to assess the		WACM 11	This option has a logical derivation of the costs used to	

WG member	CMP264/269 Option voted best	CMP264 vote 3 rationale CMP269 vote 3 rationale	CMP265/270 Option voted best	CMP265 vote 3 rationale CMP270 vote 3 rationale
		embedded benefit. New investment in the transmission system largely to support new renewables should be ring-fenced and taken out of the calculation of TNUoS. It is simpler than other proposals to implement and able to be implemented much earlier, particularly in its original form. It allows for further refinement as more costs can be identified and excluded that are associated with technologies where state aid is supporting them. It addresses a major driver of increasing levels of embedded benefit but does not create major changes which may undermine investor confidence in the market or lead to the closure of large volumes of embedded generation, threatening energy security and increasing energy costs for consumers. Finally it preserves a structure of embedded benefits which has been reviewed on many occasions by Ofgem over a period of more than twenty years and found to be robust and fit for purpose. Through a modest change this key embedded benefit structure is made more fit for purpose.. The original form of this proposal was non-discriminatory between *behind the meter* and *in front of the meter* embedded generation and DSR. Whereas today, these parties are treated equally, the ToR of the Working Group prescribed discriminatory proposals for change.		assess the embedded benefit. New investment in the transmission system largely to support new renewables should be ring-fenced and taken out of the calculation of TNUoS. It is simpler than other proposals to implement and able to be implemented much earlier, particularly in its original form. It allows for further refinement as more costs can be identified and excluded that are associated with technologies where state aid is supporting them. It addresses a major driver of increasing levels of embedded benefit but does not create major changes which may undermine investor confidence in the market or lead to the closure of large volumes of embedded generation, threatening energy security and increasing energy costs for consumers. Finally it preserves a structure of embedded benefits which has been reviewed on many occasions by Ofgem over a period of more than twenty years and found to be robust and fit for purpose. Through a modest change this key embedded benefit structure is made more fit for purpose.. The original form of this proposal was non-discriminatory between *behind the meter* and *in front of the meter* embedded generation and DSR. Whereas today, these parties are treated equally, the ToR of the Working Group prescribed discriminatory proposals for change.
Stephen Davies * (Laurence	WACM 8	Continues to treat all embedded generation in a non-discriminatory way allowing effective competition and minimising the additional administrative burden. Whilst not based upon a comprehensive review	WACM 8	Continues to treat all embedded generation in a non-discriminatory way allowing effective competition and minimising the additional administrative burden. Whilst

WG member	CMP264/269 Option voted best	CMP264 vote 3 rationale CMP269 vote 3 rationale	CMP265/270 Option voted best	CMP265 vote 3 rationale CMP270 vote 3 rationale
Barrett)		which we believe would be the best approach, it is based upon analysis which presents a logical case for the proposed value being more cost-reflective and hence it is likely to improve cost reflectivity from the currently spiralling baseline.		not based upon a comprehensive review which we believe would be the best approach, it is based upon analysis which presents a logical case for the proposed value being more cost-reflective and hence it is likely to improve cost reflectivity from the currently spiralling baseline.
Fruzina Kemenes	CUSC Baseline	We would like to highlight the overarching concern that the working group have not had the opportunity to conduct sufficient analysis or evaluate the workings or impacts of any of the proposals. As such voting for any option being better than the baseline is irresponsible and not evidence based. The accelerated timetable and volume of WACMs has been a barrier to informed voting. The reasons for rejecting all the individual options are detailed above. To summarise, the proposals suffer from different variants of the issues listed below: A) Proposals introduce undue discrimination between users that have the same network impact. (Behind the meter and directly connected embedded generation, new/old/CM/non-CM) Proposals therefore risk distortion of competition. Where gross charging is applied to all embedded generation the potential risks of distorting competition now in favour of transmission connected generators has not been examined. B) Treating customers with the same network impact in different ways can never be cost reflective (or an improvement on cost reflectivity).	CUSC Baseline	We would like to highlight the overarching concern that the working group have not had the opportunity to conduct sufficient analysis or evaluate the workings or impacts of any of the proposals. As such voting for any option being better than the baseline is irresponsible and not evidence based. The accelerated timetable and volume of WACMs has been a barrier to informed voting. The reasons for rejecting all the individual options are detailed above. To summarise, the proposals suffer from different variants of the issues listed below: A) Proposals introduce undue discrimination between users that have the same network impact. (Behind the meter and directly connected embedded generation, new/old/CM/non-CM) Proposals therefore risk distortion of competition. Where gross charging is applied to all

WG member	CMP264/269 Option voted best	CMP264 vote 3 rationale	CMP269 vote 3 rationale	CMP265/270 Option voted best	CMP265 vote 3 rationale	CMP270 vote 3 rationale
		While identifying issues with cost reflectivity of current charges the issue remains unresolved by all proposals. Some proposals attempt to freeze net charging levels at a value that is designed by the proposers to be cost reflective. While these are pragmatic approaches for a 'stop-gap' solution - the workgroup has not analysed the basis of the values selected for the frozen tariffs. Some base their proposals on locational signal remaining intact: this does not produce a cost reflective signal as retained locational signals are not reflective of SQSS. Flooring locational signal also produces a further distorted locational signal. E) All proposals have a higher admin burden than the baseline due to level of work to support ring fencing of specified customers and application of different sets of tariffs. Change of supplier process and additional flows / central data store required.		embedded generation the potential risks of distorting competition now in favour of transmission connected generators has not been examined. B) Treating customers with the same network impact in different ways can never be cost reflective (or an improvement on cost reflectivity). While identifying issues with cost reflectivity of current charges the issue remains unresolved by all proposals. Some proposals attempt to freeze net charging levels at a value that is designed by the proposers to be cost reflective. While these are pragmatic approaches for a 'stop-gap' solution - the workgroup has not analysed the basis of the values selected for the frozen tariffs. Some base their proposals on locational signal remaining intact: this does not produce a cost reflective signal as retained locational signals are not reflective of SQSS. Flooring locational signal also produces a further distorted locational signal.	

WG member	CMP264/269 Option voted best	CMP264 vote 3 rationale	CMP269 vote 3 rationale	CMP265/270 Option voted best	CMP265 vote 3 rationale	CMP270 vote 3 rationale
					E) All proposals have a higher admin burden than the baseline due to level of work to support ring fencing of specified customers and application of different sets of tariffs. Change of supplier process and additional flows / central data store required.	
Mark Draper* (Nick Sillito)	WACM 19	This proposal achieves a pause in the incentive to locate new generation on embedded networks allowing for a proper assessment of network charging to take place. It also maintains the incentive to invest in new plant that was awarded 2014 or 2015 CM agreements, the loss of which could cause a supply squeeze in around 2018 and damage competition in the supply and generation of electricity. Its variation over the original proposal of fixing the residual that can be avoided by embedded generation removes the risk of a “price runaway” whilst the assessment is taking place.	Against the current CUSC baseline, no modification provides any improvement. If the Authority were to approve CMP 264 or a CMP 264 WACM then my view would be that the matching CMP 269 modification would better meet the CUSC objectives.	WACM 10	In my view, this option is very marginally better than the current baseline The option protects the embedded new build already in the market and therefore facilitates competition in the supply and generation of electricity for the next few years, whilst preventing a windfall if the residual charge were to rise as forecast. However, the option does not significantly reduce the embedded benefit to uncommitted new generation, and therefore if there is an issue with the current charging regime it will not prevent incorrect investment decisions from being made whilst a proper	Against the current CUSC baseline, no modification provides any improvement. If the Authority were to approve CMP 265 or a CMP 265 WACM then my view would be that the matching CMP 270 modification would better meet the CUSC objectives.

WG member	CMP264/269 Option voted best	CMP264 vote 3 rationale	CMP269 vote 3 rationale	CMP265/270 Option voted best	CMP265 vote 3 rationale	CMP270 vote 3 rationale
		Whilst the modification will make charges to suppliers less cost reflective, its initial impact is relatively low, and this should be balanced by reducing the risk that generation may be locating incorrectly due to issues with the current charging rules.			review takes place. In my view, significantly better alternates exist under CMP 264.	
Kirsten Gardner* (Adam Heffill)	WACM 8	The value of Triad payments has increased significantly in recent years and it seems unlikely that the forecast levels of the payment are matched by cost savings to the National Grid. We would agree that this is an issue that needs to be addressed. However, the CUSC modification, or any alternative modifications that may come forward do not address the real problem. Both modification 264 and modification 265 create further distortions and discriminate against embedded generation. Neither modification is an attempt to create a level playing field The issues surrounding charging arrangements and transmission network costs are far more complex than set out in the defect described by CMP265 and should be addressed by Ofgem through a SCR or via a more suitable modification proposal. However, all parties appear to accept that embedded generation provides some grid cost reduction and the value to be paid to embedded generators proposed by WACM 8 (£32.30) is based on sound analysis by an independent group, whose assessment confirms that this would be a cost reflective payment. As such, we believe that WACM 8 best achieves the CUSC objectives.		WACM 8	The value of Triad payments has increased significantly in recent years and it seems unlikely that the forecast levels of the payment are matched by cost savings to the National Grid. We would agree that this is an issue that needs to be addressed. However, the CUSC modification, or any alternative modifications that may come forward do not address the real problem. Both modification 264 and modification 265 create further distortions and discriminate against embedded generation. Neither modification is an attempt to create a level playing field The issues surrounding charging arrangements and transmission network costs are far more complex than set out in the defect described by CMP265 and should be addressed by Ofgem through a SCR or via a more suitable modification proposal. However, all parties appear to accept that embedded generation provides some grid cost reduction and the value to be paid to embedded generators proposed by WACM 8 (£32.30)	

WG member	CMP264/269 Option voted best	CMP264 vote 3 rationale	CMP269 vote 3 rationale	CMP265/270 Option voted best	CMP265 vote 3 rationale	CMP270 vote 3 rationale
					is based on sound analysis by an independent group, whose assessment confirms that this would be a cost reflective payment. As such, we believe that WACM 8 best achieves the CUSC objectives.	
Jonathan Graham	CUSC Baseline	a) This proposal and all of the alternatives create new distortions between different types of generation (CM and non-CM; exported and on-site) and between generation and demand reduction, applying different charging methodologies for different demand users. No solution to these distortions and discrimination are foreseeable. b) Insufficient analysis was undertaken regarding the long run marginal cost of distributed generation and whether this is reflected by the current locational charge. However, ADE E is the best assessment available to reflect the avoided cost from distributed generation. (c) The proposal and related alternatives do not address the underlying symptom which is creating a growing demand residual, which is caused by both the growing unallocated cost of transmission networks and the need to better allocate and socialise specific network costs to users. d) The proposal and all of the alternatives apply discrimination between different users does not comply with Directive 2009/72/EC. e) The proposal and all of the alternatives will apply different charging methodologies for different users will create significant administrative costs for suppliers, and later application to on-site generators will create significant new inefficiencies for both suppliers and small generators. Further action will be required to address the demand residual, meaning this modification will apply costs which could be avoided.		CUSC Baseline	a) This proposal and all of the alternatives create new distortions between different types of generation (CM and non-CM; exported and on-site) and between generation and demand reduction, applying different charging methodologies for different demand users. No solution to these distortions and discrimination are foreseeable. b) Insufficient analysis was undertaken regarding the long run marginal cost of distributed generation and whether this is reflected by the current locational charge. However, ADE E is the best assessment available to reflect the avoided cost from distributed generation. In lieu of a full review of available analysis, ADE is the most appropriate assessment and better aligns with quantitative evidence provided to the Workgroup by Cornwall Energy, and reduces the risk of changing the charging methodology to a less cost-reflective one. c) The proposal and related alternatives do not address the underlying symptom which is creating a growing demand residual, which is caused by both the growing unallocated cost of transmission networks and the need to better allocate and socialise specific network costs to users.	

WG member	CMP264/269 Option voted best	CMP264 vote 3 rationale	CMP269 vote 3 rationale	CMP265/270 Option voted best	CMP265 vote 3 rationale	CMP270 vote 3 rationale
					d) The proposal and all of the alternatives apply discrimination between different users does not comply with Directive 2009/72/EC. e) The proposal and all of the alternatives will apply different charging methodologies for different users will create significant administrative costs for suppliers, and later application to on-site generators will create significant new inefficiencies for both suppliers and small generators. Further action will be required to address the demand residual, meaning this modification will apply costs which could be avoided.	
Christopher Granby	WACM 8	It is one of the few that has some analysis and has attempted to quantify the problem		WACM 8	Is one of the few mods which actually attempt some analysis.	
John Harmer	WACM 21	This is considered to provide the best balance between maintaining investor confidence in giving existing investments and commitments the revenue they reasonably forecast, so maintaining the largest pool of investors and providing greater competition by maximising the number of players in the market. It contains a gradual ramp down to a reasonable enduring value through the lack of RPI indexation which is therefore expected to reduce the gap between the grandfathered level and the enduring value. The enduring value is set at a level which has some robust logical basis in giving an undistorted locational signal to new EG whilst maintaining zero or above demand charges so as not to give a disincentive to generate at peak. This value is above the level that TG may reasonably see but this reflects market failure in the inability for small players to access medium term super peak pricing to support financing. It is significantly below the benefit for DSR and BTM competition. It has a cut-off date for grandfathering that pragmatically		WACM 10	This is considered to provide the best balance between maintaining investor confidence in giving existing investments and commitments the revenue they reasonably forecast, so maintaining the largest pool of investors and providing greater competition by maximising the number of players in the market. It contains a gradual ramp down to a reasonable enduring value through the lack of RPI indexation which is therefore expected to reduce the gap between the grandfathered level and the enduring value. The enduring value is set at a level which has some robust logical basis in giving an undistorted locational signal to new EG whilst maintaining zero or above demand charges so as not to give a disincentive to generate at peak. This value is above the level that TG may	

WG member	CMP264/269 Option voted best	CMP264 vote 3 rationale CMP269 vote 3 rationale	CMP265/270 Option voted best	CMP265 vote 3 rationale CMP270 vote 3 rationale
		reflects the timescales for delivery of yet to be constructed assets to meet existing commitments. It probably gives a lower cost to consumers than the original 264 mod by limiting the rise in demand residual that would otherwise be received by existing EG, though this is a speculative assertion as it depends on the relative volume of Affected versus Grandfathered EG. It certainty gives a lower cost than the CUSC baseline. It is thus better than the baseline in terms of objective (b). It provides an outcome that does not cause the embedded benefit to rise with increasing OFTO and onshore transmission reinforcement. It therefore is better than the baseline in terms of objective (c). It is no better or worse than the baseline or Original in terms of objective (d). It has no more complexity than other WACMs that require grandfathering and it is demonstrably amongst the simplest in legal drafting. It is no worse than the Original but in common with all WACMs and the Original it is worse than the baseline in terms of objective (e).		reasonably see but this reflects market failure in the inability for small players to access medium term super peak pricing to support financing. It is significantly below the benefit for DSR and BTM competition. It has a cut off date for grandfathering that pragmatically reflects the timescales for delivery of yet to be constructed assets to meet existing commitments. This is considered to provide a compromise that spreads the competitive distortion relatively evenly between TG, EG, behind the meter generation and DSR so is optimum in terms of objective (b). It probably gives a lower cost to consumers than the original 269 mod by limiting the rise in demand residual that would otherwise be received by existing EG, though this is a speculative assertion as it depends on the relative volume of Affected versus Grandfathered EG. It certainty gives a lower cost than the CUSC baseline. It provides an outcome that does not cause the embedded benefit to rise with increasing OFTO and onshore transmission reinforcement. It is no better or worse than the baseline or Original in terms of objective (c). It has no more complexity than other WACMs that require grandfathering and it is demonstrably amongst the simplest in legal drafting. It is no worse than the Original but in common with all WACMs and the Original it is worse than the baseline in terms of

WG member	CMP264/269 Option voted best	CMP264 vote 3 rationale	CMP269 vote 3 rationale	CMP265/270 Option voted best	CMP265 vote 3 rationale	CMP270 vote 3 rationale
					objectives (a) and (d).	
Simon Lord	WACM 3	As has been demonstrated to the working group using the full transport and tariff model there is only a marginal difference between the cost to the transmission system uses of the connection of distributed generation and transmission connected generation at the same location. This proposal that advocate an embedded benefit of a fixed charge of ~£1.62 (the avoided Grid Supply Point reinforcement cost) plus the locational it is seen as cost reflective and we support this proposal		WACM 3	As has been demonstrated to the working group using the full transport and tariff model there is only a marginal difference between the cost to the transmission system uses of the connection of distributed generation and transmission connected generation at the same location. This proposal that advocate an embedded benefit of a fixed charge of ~£1.62 (the avoided Grid Supply Point reinforcement cost) plus the locational it is seen as cost reflective and we support this proposal.	
Graz McDonald* (Jeremy Taylor)	WACM 10	It fixes the problem, it will keep the lights on, it will maintain stability and it will benefit consumers.		WACM 10	It fixes the problem, it will keep the lights on, it will maintain stability and it will benefit consumers.	
Rob Marshall	WACM 6	Does not introduce discrimination between embedded generators • Increases cost reflectivity by removing the non cost reflective demand residual • Uses the indicative locational signal to represent the value of embedded generation avoiding the cost of network reinforcement • Efficient methodology to implement		WACM 6	Does not introduce discrimination between embedded generators • Increases cost reflectivity by removing the non cost reflective demand residual • Uses the indicative locational signal to represent the value of embedded generation avoiding the cost of network reinforcement • Efficient methodology to implement	
Paul Mott	WACM 3	Uniper A uses grid's figure for avoided GSP cost for the true benefit "X". Lacking phasing or grandfathering, giving good benefit – best overall –	I understand that the proposer has included an attempt to identify what he contends to be the "correct" value for benefits (avoided GSP switchgear costs, re-assessed each price control). I am	CMP265 Original	Statement of defect of CMP265 is to address a distortion in the CM. This mod does exactly that, none of the WACMs does as they all affect other plant too, thus less accurately meeting the statement of defect. Against its own statement of defect, it is excellent	

WG member	CMP264/269 Option voted best	CMP264 vote 3 rationale	CMP269 vote 3 rationale	CMP265/270 Option voted best	CMP265 vote 3 rationale	CMP270 vote 3 rationale
		and the lack of grandfathering also slightly eases administration/implementation of this option. I see no rationale for flooring, though, as the locational charge and how it is applied, is supposed to be cost-reflective and its application should just be put right if it were established to be not cost-reflective.	open-minded but warm to this concept; it is better than the other ideas, which seem to lack justification, around what "X" should be. There is no grandfathering, and no phasing, enabling quick consumer benefits, and efficient, simple implementation; therefore best option re : CMP264/269			
Andy Pace	WACM 9	This is the preferred option as it sets the level of the demand residual to be used for embedded generation at a level that provides a reasonable level of compensation to existing and new plant while allowing for a more thorough review of embedded benefits to take place, particularly in the area of connection charges and the calculation of the locational charge.		WACM 9	This is the preferred option as it sets the level of the demand residual to be used for embedded generation at a level that provides a reasonable level of compensation to existing and new plant while allowing for a more thorough review of embedded benefits to take place, particularly in the area of connection charges and the calculation of the locational charge.	
Guy Phillips* (Paul Jones)	WACM 3	Discrimination on basis of being embedded is removed and a more cost reflective charge replaces it. The avoided GSP charge is the only embedded benefit which has been demonstrated to exist over and above the locational charge. Does not have the administrative complexities associated with grandfathering.		WACM 3	Discrimination on basis of being embedded is removed and a more cost reflective charge replaces it. The avoided GSP charge is the only embedded benefit which has been demonstrated to exist over and above the locational charge. Does not have the administrative complexities associated with grandfathering.	
Bill Reed	CUSC Baseline	The proposals and the alternatives will not better meet the relevant CUSC Objectives for the reasons	To the extent both these mods facilitate implementation of other mods then these better meet Objective d. (Administrative efficiency)	CUSC Baseline	The proposals and the alternatives will not better meet the relevant CUSC Objectives for the reasons	To the extent both these mods facilitate implementation of other mods then these better

WG member	CMP264/269 Option voted best	CMP264 vote 3 rationale	CMP269 vote 3 rationale	CMP265/270 Option voted best	CMP265 vote 3 rationale	CMP270 vote 3 rationale
		outlined in relation to each modification proposal. Furthermore, I am concerned that any views against the applicable objectives may be unsafe. In particular I would highlight the following: 1. The modification proposals and their alternatives raise issues associated with discrimination (before/after a date, new/existing, capacity market contracts/non cm contracts, exporting/behind the meter). While the proposers have sought to justify their option, the working group has not evaluated the specific proposals and the potential impact on the wider market arising through the distortions associated with discrimination; introduce significant administrative complexity for suppliers and impact significantly on supplier			outlined in relation to each modification proposal. Furthermore, I am concerned that any views against the applicable objectives may be unsafe. In particular I would highlight the following: 1. The modification proposals and their alternatives raise issues associated with discrimination (before/after a date, new/existing, capacity market contracts/non cm contracts, exporting/behind the meter). While the proposers have sought to justify their option, the working group has not evaluated the specific proposals and the potential impact on the wider market arising through the distortions associated with discrimination; introduce significant administrative complexity for	meet Objective d. (Administrative efficiency)

WG member	CMP264/269 Option voted best	CMP264 vote 3 rationale	CMP269 vote 3 rationale	CMP265/270 Option voted best	CMP265 vote 3 rationale	CMP270 vote 3 rationale
		commercial relationships with customers. These effects have not been assessed fully and we do not have a full understanding of the implications of these changes for the wider electricity market; 3. The modification proposals and their variants introduce further distortions into the electricity market through for example flooring or use of the generation residual for demand customers. It is clear that there is the potential for a significant move away from cost reflectivity in all of the proposals, and I do not believe that this has been well understood by the group; 4. The concentration on developing alternatives has taken away the possibility of properly evaluating the proposals based on evidence and wider consultation given the accelerated timescales;			suppliers and impact significantly on supplier commercial relationships with customers. These effects have not been assessed fully and we do not have a full understanding of the implications of these changes for the wider electricity market; 3. The modification proposals and their variants introduce further distortions into the electricity market through for example flooring or use of the generation residual for demand customers. It is clear that there is the potential for a significant move away from cost reflectivity in all of the proposals, and I do not believe that this has been well understood by the group; 4. The concentration on developing alternatives has	

WG member	CMP264/269 Option voted best	CMP264 vote 3 rationale	CMP269 vote 3 rationale	CMP265/270 Option voted best	CMP265 vote 3 rationale	CMP270 vote 3 rationale
		and 5. The development of options to place in front of the authority is an area of concern. I do not believe that the creation of options is compatible with the CUSC objectives or with the efficiency of the CUSC process.			taken away the possibility of properly evaluating the proposals based on evidence and wider consultation given the accelerated timescales; and 5. The development of options to place in front of the authority is an area of concern. I do not believe that the creation of options is compatible with the CUSC objectives or with the efficiency of the CUSC process.	
John Tindal	WACM 5	Treats all the same Gross demand Residual is more cost reflective Generator residual element better for competition GSP avoidance likely to be more cost reflective 3 year phasing helps implementation		WACM 5	Treats all the same Gross demand Residual is more cost reflective Generator residual element better for competition GSP avoidance likely to be more cost reflective 3 year phasing helps implementation	
Matthew Tucker	WACM10	Halts escalation of demand residual which would otherwise eventually lead to distortions in competition. Treats all DG the same and simplifies administration over the original proposal. Avoids creating winners and losers		WACM10	Halts escalation of demand residual which would otherwise eventually lead to distortions in competition. Treats all DG the same and simplifies administration over the original proposal. Avoids creating winners and	

WG member	CMP264/269 Option voted best	CMP264 vote 3 rationale	CMP269 vote 3 rationale	CMP265/270 Option voted best	CMP265 vote 3 rationale	CMP270 vote 3 rationale
		amongst DG as a result of the proposal.			losers amongst DG as a result of the proposal.	
Joseph Underwood	WACM 3	rom the evidence seen and the given time to review, I believe WACM3 best facilitates the ACOs. Locational and GSP reinforcement costs seems like the most reasonable approximation of the true value for EB. It will therefore better facilitate competition between TG and EG, it will reflect more accurately the true value of EBs and in doing so will reduce the distortion seen through the current excessive EB. I would also like to note that the precedence set under CMP213, the notice for charging changes was one full charging year and therefore under the argument for grandfathering and phasing has not been made in this circumstance and will introduce undue discrimination between generators.		WACM 3	From the evidence seen and the given time to review, I believe WACM3 best facilitates the ACOs. Locational and GSP reinforcement costs seems like the most reasonable approximation of the true value for EB. It will therefore better facilitate competition between TG and EG, it will reflect more accurately the true value of EBs and in doing so will reduce the distortion seen through the current excessive EB. I would also like to note that the precedence set under CMP213, the notice for charging changes was one full charging year and therefore under the argument for grandfathering and phasing has not been made in this circumstance and will introduce undue discrimination between generators.	
Lisa Waters	ABSTAINING	No rating to be provided as no analysis to base a decision on		ABSTAINING	No rating to be provided as no analysis to base a decision on	
Sam Wither	WACM 15	Improves competition, removes discrimination issues of stranding newbuild CM/CfD committed assets from 2014 and 2015 EMR auctions (resulting in savings up to £1.5bn to the end consumer) and improves cost reflectivity with retained locational signals.		WACM 15	Improves competition, removes discrimination issues of stranding newbuild CM/CfD committed assets from 2014 and 2015 EMR auctions (resulting in savings up to £1.5bn to the end consumer) and improves cost reflectivity with retained locational signals.	

* Indicates that the alternate voted

12 Workgroup conclusions

12.1 A number of Workgroup members raised concerns that the accelerated timescales proposed under the updated Terms of Reference may mean that only qualitative and not quantitative detailed analysis could be performed in the timescales given. Whilst analysis was presented on various issues by individual Workgroup members, the Workgroup did not conduct its own analysis or come to a consensus on the evidence presented.

12.2 The Workgroup's Terms of Reference require it to capture its conclusions. Given the nature of these Modifications, Workgroup members were unable to reach conclusions that had the consensus of all members. The key arguments of the workgroup members are summarised in the following paragraphs. It should be noted that these views are only supported by subsets of workgroup members.

Workgroup members who supported stabilisation of charges pending a review and/or grandfathering put forward the following conclusion:

12.3 **Cost reflectivity**. Transmission access charging needs to be as transparent cost reflective and stable/predictable as possible. It is clear that the current arrangements where the locational charge only accounts for about 10% of the allowed transmission revenue and the remaining 90% is allocated into an unexplained residual pot is not satisfactory going forwards. Incorrect pricing signals can lead to sub-optimal investment decisions (either in siting new generation or demand or decisions to retain or close existing generation or demand) and ultimately the costs of suboptimal decisions are reflected in higher costs and ultimately prices for customers. Achieving as cost reflective as possible transmission access pricing is vital to controlling network costs for consumers.

12.4 **Understanding the residual.** Further, the notion that the D-TNUoS charge can be split into the locational element of the charge that is cost-reflective, and the residual charge that represents a charge to recover the “fixed/sunk” costs of the network is entirely unjustified. The locational element of the charge is only designed to signal differences in the cost demand imposes across different locations, not the absolute level of transmission cost that demand imposes. Whilst the total locational charge only accounts for 10% of the allowed transmission revenue, the demand locational charge nets to a £0 recovery. This therefore implies either that there is no capital investment, maintenance or operational costs incurred on the transmission system as a result of demand or, more likely, that this signal is in fact, not cost-reflective.

12.5 Charges to use the transmission system should equally reflect the long run marginal costs incurred or avoided from the connection of demand, embedded generation, and transmission connected generation, which the modifications fail to achieve. While there may be logic in ‘socialising’ specific network costs to all generators and demand users, the working group received no evidence on which specific costs should be included in such an approach and why.

12.6 **Non-discriminatory charging**. Net charging within a GSP (meaning that 1 MW of demand management and 1 MW of embedded generation have the same impact on transmission use and therefore should incur the same charge) appears to be the most cost reflective mechanism for allocating costs within a GSP. The working group evidence shows that a demand user or on-site generator and an embedded generator would face different and therefore discriminatory charging methodologies under the proposed gross charging modifications, despite identical impacts on the network. The work group received no evidence or practical solutions for how these new distortions could be addressed in future. Given the limited analysis undertaken it is likely that there will be further distortions which will create additional unintended consequences. However, it is noted that there are inconsistencies with the current generation charging which should be addressed.

12.7 **Risk to consumers without an evidence-based approach.** Whilst it is self-evident that cost-reflective and non-discriminatory charging is likely to be the most efficient approach, the determination of what is and is not cost reflective should only be based upon analysis and evidence. In the workgroup we have been presented with various pieces of analysis suggesting different costs / values for the use of the transmission system, although notably the proposer and related parties have not provided any evidence on the long run marginal cost impacts of distributed generation. Estimates have also been provided on the risk to security of supply if even a small proportion of the 7.5 GW of embedded generation stops generating at peak demand, and the negative impacts on consumers from higher Capacity Market costs (estimated by Cornwall Energy as a minimum cost of £282m in 2016), higher wholesale power prices, and higher balancing services costs. The work group received no evidence on the cost impacts to suppliers from this change and future necessary interventions, all of which will create significant but un-estimated costs on consumers. Taken together, it is clear that insufficient analysis has been undertaken to the depth suitable to reach a decision on whether the consumer impacts are better than the baseline. In fact, the existing evidence presented to the work group would indicate that these modifications are just as likely to increase as decrease costs to consumers in the short term. It is informative that the vast majority of industry consultation responses responded against these proposed modifications and many indicated a preference for a more thorough, analytical review. Due to the mix of evidence, if action is taken, it should be biased towards a low-risk, low-change approach.

12.8 **Strategic approach is lower-risk.** The benefits of taking a more strategic approach in addressing these related issues are not outweighed by the benefits in implementing a bad solution more quickly. As a result of the current CUSC process alongside Ofgem's open letter the industry is now fully aware of the concerns about transmission charging. Any parties making any investment decision are able to factor this uncertainty into their future investment decisions and it is very difficult to justify grandfathering for any investment made after Ofgem's letter was published.

12.9 **Importance of investor certainty.** Historically, parties have entered into various investments (including CHP, embedded generation and renewable projects) and taken forward looking commitments (15-year capacity market obligations, renewable CfDs etc.) based on the principle that licence exempt generation embedded in the distribution system is charged for its use of the transmission system as negative demand (and the reasonable assumption that this is cost reflective). As noted by a number of consultation respondents, changing this principle, without suitable grandfathering or transitional arrangements, will damage projects potentially reducing security of supply and investor confidence, both of which will ultimately result in higher prices for end users.

Workgroup members who believed an economic case had been made to adjust the residual element of the TNUoS Embedded Benefits put forward the following views:

12.10 Workgroup members supporting reductions in TNUoS Embedded Benefits believed no justification for the current levels had been identified in the Workgroup process. These members felt that the locational tariffs derived from National Grid's transport model reflected the marginal benefit (or cost) of transmission network users, including embedded generators. The members therefore concluded that enduring tariffs for embedded generators should be much closer in value to the tariffs for transmission connected generators in similar geographical locations, because their respective effects on transmission investment costs are essentially the same. Enduring embedded benefits that conferred financial advantage over transmission connected generators would be contrary to the CUSC objectives of cost reflectivity and effective competition.

12.11 The same workgroup members believed their views on TNUoS embedded benefit reform were well grounded in established economic theory. Under non-discriminatory cost reflective conditions, parties aiming to maximise the net benefits of their projects/assets will correctly

account for the impact they have on transmission network costs when making decisions to invest, dispatch, close, compete for contracts etc. All else equal, projects/assets with a lower underlying cost impact on the transmission network will out-compete those with a higher underlying cost impact on the transmission network. This ultimately ensures that consumers pay less for their electricity, because more efficient projects/assets will succeed over less efficient ones when competing against each other. By contrast, non-cost reflective and discriminatory conditions will tend to create "winners" according to who is most favoured by the discrimination. The more discriminatory the conditions, the more market outcomes will move away from a least cost solution, because the discrimination has ever greater potential to distort and reverse underlying cost advantages.

12.12 The same members believe that evidence has been presented to the working group and contained in this report that demonstrated that:

- Flows on the transmission system are identical following the connection of an equal volume of distribution or transmission connected generation at the same location.
- The size of the transmission system (and hence the cost) is effected by the location of the connection point and is independent of the how the generation is connected i.e. distribution and transmission connected generation have the same effect on the transmission system.
- In general a larger transmission system will be needed to accommodate generation if it is connected independently of a locational signal. It is recognised that the current embedded benefit regime does not provide a strong locational signal.
- Demand customers pay an additional premium above the cost required to fund available TNUoS to pay embedded benefits to distribution connected generation

12.13 The group also received a detailed presentation from National Grid on the derivation of the locational element of the TNUoS charge detailing how these costs are derived. All non-locational TO and SO costs are recovered via the residual charge, that represents the balance of costs allowed by Ofgem through the price control. A breakdown of this is publically available.

12.14 The same members opposed WACMs featuring grandfathering of TNUoS rates for similar reasons to the above. TNUoS charges are supposed to be cost reflective and facilitate effective competition. The members believed that allowing certain embedded generators continued access to preferential TNUoS rates for reasons unrelated to their underlying cost impact on the transmission network would be contrary to the CUSC objectives and the interests of consumers. However, to varying degrees, the members were sympathetic to some degree of lag between a decision to reduce TNUoS embedded benefits and the date from which the reductions would apply.

12.15 Workgroup members who believed an economic case had been made felt that the distortions caused by excessive TNUoS embedded benefits are likely to manifest in the following ways:

- Investment decisions are artificially skewed in favour of embedded generation and away from transmission connected generation for reasons unrelated to underlying cost advantages.
- Embedded generation has strong incentives to dispatch over potential TRIAD periods, irrespective of whether they are in a favourable location (from a TNUoS perspective) and irrespective of whether they are in merit in the energy market.
- Embedded generators' ability to out-bid transmission connected generators in the Capacity and ancillary service markets (because of their embedded benefits) means that contracts are likely being allocated to parties out of merit order.

- Innovation in the electricity markets is distorted as market participants are pre-occupied with maximising their embedded benefits instead of focussing on genuine value adding activities that benefit consumers.

Members who believed that insufficient evidence or analysis has been put forward to come to a conclusion identified the following concerns:

12.16 The majority of the Workgroup had concerns that the accelerated timetable for developing the Modifications and proposed alternatives, would not allow for an substantive analysis to be undertaken. While a number of parties tried to provide analysis around specific impacts of the Modifications (for example changes in wholesale prices), this was not work undertaken and reviewed by the Workgroup. A number of Workgroup members believed that the effects of the changes could be so far reaching, that it would be beholden on Ofgem to undertake analysis prior to agreeing to any change

12.17 The lack of robust analysis means that many of the potential impacts of each proposal are not quantified, though the report tries to describe the impacts in a qualitative manner. Many Workgroup members had their own view on the direction of travel of each impact and the group tried to capture these.

12.18 It was noted that locational prices send useful signals but that they are very difficult, if not impossible, to respond to due to the wider issues associated with the lack of capacity (both distribution and transmission) where parties are being signalled to connect.

12.19 It was unclear if the Transmission Owner's networks could cope with a dramatic change in the pattern of flows. In addition the Workgroup did not receive views from Distribution Network Owners and were therefore unable to determine if change of flows would impact their networks.

12.20 The Workgroup also noted that the CUSC objectives are more limited than Ofgem's duties. For example, the Workgroup did not analyse changes in the merit order, and thus the way plants will operate depending on the any change approved. Ofgem would have to consider the effect on competition, as required by the CUSC, but also the impact on emission, as required by its wider duties.

In summary the Workgroup agreed that this report be submitted to the CUSC Panel noting that no consensus was reached within the Workgroup.

13 Impact and Assessment

Impact on the CUSC

13.1 Changes to Section 11 and 14 – please refer to section 10 and Volume 1b, 1c and 1d for the legal text changes.

Impact on Greenhouse Gas Emissions

13.2 The workgroup has not assessed the impact on Greenhouse Gas Emissions.

Impact on Core Industry Documents

13.3 None

Impact on other Industry Documents

13.4 There is likely to be an impact on the Balancing and Settlement Code, to provide the required data flows.

(a) In particular P349: Facilitating embedded generation Triad Avoidance Standstill was raised on 4 July, to accompany CMP264, and P348: Provision of gross BM Unit data for TNUoS charging was raised on 1 July to accompany CMP265. ELEXON are involved in the discussion within the CMP264 and CMP265 Workgroups to improve synergies between CMP264/P349 and CMP265/P348.

(b) There may also be consequential changes to the MRA Data Transfer Catalogue (DTC), identified through the related BSC modifications.

14 Proposed Implementation and Transition

14.1 The Workgroup discussed implementation on a number of occasions particularly in the development of Workgroup alternatives.

14.2 The implementation of any CUSC Modifications is in the gift of the regulator in that its direction will include notice of the required date of implementation. However, implementation can mean different dates depending on the nature of the change.

14.3 Once directed by Ofgem the implementation usually refers to the date that the text of the CUSC itself is changed and becomes the new requirement to which National Grid and CUSC parties must adhere to.

14.4 For National Grid, implementation needs to include sufficient notice of the change in order to set new transmission tariffs. The tariff setting timetable is a licence requirement with draft tariffs published in December and final tariffs at the end of January. There needs to be sufficient notice of the change in order for National Grid to take account of a different charging base in its analysis that takes place prior to these dates.

14.5 Implementation was considered by some to mean the date from which 'new' is defined, however this was kept separate into the detail of the legal text. For parties looking to understand if they are impacted by the change and when this will be a key date.

14.6 A view was expressed that where the Modification is specific to capacity markets agreement holders, implementation could mean the applicable capacity market year but again parties would need to look at the detail of the legal text to understand this.

14.7 Transmission tariffs are currently set in January for the 12 month period commencing the following April. Charges are then billed to Suppliers and Generators from April - March over the course of the year. Implementation could mean the applicable 'triad season' however due to the nature of the charging year it would not be possible to implement from November in any charging year without a impacting bills that are issued from the April of that year.

14.8 The Workgroup discussed the implementation of these modifications as being the first practicable applicable charging year, noting in particular the need for advance notice for the purposes of tariff setting. The group also acknowledged the views from some consultation responses that three year's notice of implementation would allow for sufficient time to update processes and systems for some Suppliers.

14.9 The Workgroup considered that the first practicable implementation date would be the charging year 2018-19. Some of the modifications and alternatives do intend on a later charging year, noting the proposer's original intent for CMP265 of an April 2020 implementation.

Annex 1 – CUSC Proposal forms for CMP264, CMP265, CMP269 and CMP270

CUSC Modification Proposal Form (for Charging Methodology Proposals) CMPXXX

nationalgrid

Connection and Use of System Code (CUSC)

Title of the CUSC Modification Proposal

Embedded Generation Triad Avoidance Standstill proposal – Changes to the Transport and Tariff Model and billing arrangements to remove the netting of output from New Embedded Generators until Ofgem has completed its consideration of the current electricity transmission Charging Arrangements (and any review which ensues) and any resulting changes have been fully implemented.

Submission Date

17 May 2016

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

The registration of embedded generators to a Supplier BM Unit can result in a reduction in TNUoS charges payable by the supplier. The embedded generators do not pay generation transmission charges and may receive a significant benefit from the supplier whose TNUoS charges they reduce – "Triad avoidance".

Due to increasing volume of embedded generation output and the growth in the Transmission Owner Allowed Revenues and other monies recoverable through TNUoS, the likely value of Triad avoidance for embedded generators has increased significantly, and under the current charging arrangements is forecast by National Grid Electricity Transmission ("NGET") to continue to grow. If Triad avoidance (and the future increases) were cost-reflective in terms of the transmission reinforcement avoided by reducing flows from the transmission system to meet demand, then the current arrangements would be in the interest of consumers. However, whilst analysis[1] by NGET suggests that some transmission investment is avoided by such reductions in flows, the savings appear to be around twenty times too small to justify current Triad avoidance values. In that work, NGET determined that the average cost saving was £1.62/kW/year in 2013/14 money, whilst a current estimate[2] of the average value that an embedded generator would receive from Triad avoidance in 2018/19 is around £45/kW/year[3]. Moreover, the results from 5 out of the 18 schemes that were assessed showed cost savings of less than 50p/kW/year.

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.

Ofgem is currently considering these issues[4] and implementation of any resulting changes, eg through a Significant Code Review (SCR), is likely to take some time. In the meantime, distortions to investment could take place based on the current non-cost reflective signals, in part due to Triad avoidance income received during the period of the review. This is likely to lead to inefficient investment in the generation fleet and, over time, higher costs for customers. This risk can be mitigated by suspending access to Triad avoidance for New Embedded Generators until Ofgem's consideration of the current electricity transmission Charging Arrangements (and any review which may ensue) has been completed and any resulting changes have been fully implemented.

This is a proportionate response since current indications are that Triad avoidance values exceed the cost reflective level by a factor of around 20. It follows that temporarily setting them to zero for new embedded generators is likely to be closer to the cost reflective outcome, and more likely to be efficient for consumers, than allowing the current situation to sustain pending Ofgem's consideration of the issues (including any review which may ensue) and implementation of any more comprehensive changes.

[1] National Grid, Review of the Embedded (Distributed) Generation Benefit arising from transmission charges, 20 December 2013.
[2] National Grid outlook January 28th 2015 (http://www2.nationalgrid.com/UK/Industry-information/System-charges/Electricity-transmission/Approval-conditions/Condition-5/)
[3] The current value of Triad management is £30/kW/year, but this is forecast to rise by around £15/kW/year by 2018/19. This estimate excludes the three least lucrative geographical areas - the locational signal may mean that these areas are not targeted by developers.
4 As recently announced by DECC and highlighted in Ofgem's Forward Work Programme 2016-17 paras 2.17 to 2.19

Description of the CUSC Modification Proposal

This modification aims to limit the detriment from the continuing lack of a level playing field between new embedded generators and other generation plant, by suspending access to Triad avoidance for New Embedded Generators until Ofgem has completed its consideration of the issues (including any review which may ensue) and fully implemented any resulting changes.

New Embedded Generator is defined as any half hourly metered embedded generation unit commissioned after 30 June 2017.

Commissioned is defined as having an MPAN registered and having commenced generation.

The suspension is achieved by removing the netting of output from New Embedded Generators when calculating their demand volumes for use in the setting of tariffs for suppliers in the Transport and Tariff model and for actual billing. As the supplier would no longer benefit from netting the output from these generators there will be no "Triad avoidance" to share with the embedded generator.

It is intended that the changes to the charging methodology made by this modification will be temporary and that no enduring difference of treatment between new and existing generation will be created. Accordingly, the provisions of this modification that change the charging methodology will cease to have effect on the "disapplication date, being the date when Ofgem confirms that it has completed its consideration of the issues (and any review which may ensue) and any resulting changes have been fully implemented.

A BSC amendment would amend the metering data reports to provide the information needed in order to remove the netting for all embedded generators commissioned after 30 June 2017.

Impact on the CUSC

Changes will be required to Section 14 of the CUSC (Part 2 The Statement of the Use of System Charging Methodology) including, but not necessarily limited to the following:

Tariff Setting

Changes are required to Section 14.15 (Derivation of the Transmission Network Use of System Tariff) to ensure that total User forecast Metered Triad Demand provided by Users and used to set TNUoS tariffs does not net any output from New Embedded Generation.

Billing & Reconciliation

The basis of Demand Charges should be amended to ensure that output from any New Embedded Generators is not netted from Triad demand in the Supplier forecasts used for monthly billing or in the reconciliation process to actual outturn charges.

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

You can find guidance on the treatment of carbon costs and evaluation of the greenhouse gas emissions on the Ofgem's website:
http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=196&refer=Licensing/IndCodes/Governance

We believe that this Proposal is likely to help reduce greenhouse gas emissions. This is as a result of the creation of a level playing field between small embedded generation and larger transmission connected generation. We believe that this is likely to lead to the deployment of more efficient plant which may lead to a corresponding reduction in the emission of greenhouse gasses.

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

BSC ☒

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.

The data used in the calculation of Triad demand and chargeable supplier demand volumes is calculated under the Balancing & Settlement Code (BSC) and changes will be required to the BSC to enable the identification of meter data from New Embedded Generators. This meter data should then be excluded when generating the data flows used for TNUoS billing. A separate BSC Issue will be raised to consider the potential changes required from this CUSC modification.

For the avoidance of doubt, metered output from embedded generators will still be netted from Supplier's demand volumes for the purposes of imbalance settlement under the BSC.

Urgency Recommended: Yes / No

No.

Justification for Urgency Recommendation

If you have answered yes above, please describe why this Modification should be treated as Urgent. An Urgent Modification Proposal should be linked to an imminent issue or a current issue that if not urgently addressed may cause:

a) *A significant commercial impact on parties, consumers or other stakeholder(s); or*
b) *A significant impact on the safety and security of the electricity and/or has systems; or*
c) *A party to be in breach of any relevant legal requirements.*

You can find the full urgency criteria on the Ofgem's website:
http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=213&refer=Licensing/IndCodes/Governance

Self-Governance Recommended: Yes / No

No.

Justification for Self-Governance Recommendation

If you have answered yes above, please describe why this Modification should be treated as Self-Governance.

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?

Please justify whether this modification should be exempt from any Significant Code Review (SCR) undertaken by Ofgem. You can find guidance on the launch and conduct of SCRs on Ofgem's website, along with details of any current SCRs at: http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=197&refer=Licensing/IndCodes/Governance. For further information on whether this Proposal may interact with any ongoing SCRs, please contact the Panel Secretary.

Yes. We are not aware of any current Significant Code Review (SCR) whose scope overlaps with the scope of this modification. If Ofgem opens an SCR which includes embedded generation Triad avoidance, this modification should be considered exempt because of its temporary/transitional nature.

Impact on Computer Systems and Processes used by CUSC Parties:

Suppliers will need to amend their internal systems to exclude the output from New Embedded Generators when preparing demand forecasts as required under S14 of the CUSC and when validating TNUoS bills received from National Grid.

Details of any Related Modification to Other Industry Codes

A BSC Modification will be required to provide the necessary data to facilitate this charging proposal. We shall raise a BSC Issue for consideration.

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

☒ (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 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 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.
These are defined within the National Grid Electricity Transmission plc Licence under Standard Condition C10, paragraph 1.

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).

Full justification:

Charging Objective (a)

This modification will mitigate the effects of the current lack of a level playing field between investing in embedded generators and transmission connected (and large embedded) generators during the period of Ofgem's review, thus better facilitating competition in the generation and supply of electricity.

Charging Objective (b)
Given the low levels of actual cost savings realised through the Triad management schemes, the suspensory action would ensure that, in respect of New Embedded Generators during the period of Ofgem's review, charges would better reflect costs.

Charging Objective (c)

Developments in the transmission system have led to an increase in Triad values, thus increasing the distortions created by embedded generation Triad avoidance to an unsustainable level. This modification mitigates the effect of this by temporarily removing distortion of investment decisions until Ofgem has completed its consideration of the issues (including any review which may ensue) and fully implemented any resulting changes.

Charging Objective (d)

The proposer believes that the proposal is neutral against applicable charging objective (d).

Connection Charging Methodology

☐ (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 (e) 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 Proposal does not impact on the Connection Charging Methodology

Additional details

Details of Proposer: (Organisation Name)	ScottishPower Energy Management Limited
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:	 Rupert Steele Director of Regulation, ScottishPower 0141 614 2012 Rupert.Steele@ScottishPower.com
Details of Representative's Alternate: Name: Organisation: Telephone Number: Email Address:	 James Anderson ScottishPower Energy Management Limited 0141 614 3006 James.Anderson@ScottishPower.com
Attachments (Yes/No): **If Yes, Title and No. of pages of each Attachment:**	No

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

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 copied to 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.

CUSC Modification Proposal Form (for Charging Methodology Proposals) CMP265

nationalgrid

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 1st 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

Details of Proposer: (Organisation Name)	Paul Mott
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:	 Paul Mott, EDF Energy, 02031262314 paul.mott@edfenergy.com
Details of Representative's Alternate: Name: Organisation: Telephone Number: Email Address:	 Mark Cox EDF Energy 07967151272 Mark.cox@edfenergy.com
Attachments (No): **If Yes, Title and No. of pages of each Attachment:**	

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

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 copied to 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.

CUSC Modification Proposal Form CMP269

nationalgrid

Connection and Use of System Code (CUSC)

Title of the CUSC Modification Proposal

Potential consequential changes to the CUSC as a result of CMP264

Submission Date

19 August 2016

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

In May 2016, CMP264 (Embedded Generation Triad Avoidance Standstill proposal – Changes to the Transport and Tariff Model and billing arrangements to remove the netting of output from New Embedded
Generators until Ofgem has completed its consideration of the current electricity transmission Charging Arrangements (and any review which ensues) and any resulting changes have been fully implemented' was raised by Scottish Power.

As part of the Workgroup analysis, the Workgroup identified that whilst this was a charging modification (which if approved would require change to aspects of section 14 - Charging Methodologies of the CUSC) there are in fact some references outside section 14 of the CUSC that would require change should CMP264 be approved.

However these could not be addressed via CMP264 as it is a charging modification seeking to amend Section 14 of the CUSC and therefore will be assessed against the Applicable Charging Objectives. Any modifications to the CUSC outside of Section 14 – Charging Methodologies are assessed against the CUSC Objectives (not Charging).

Consequently this modification has been raised to detail the required changes to Section 3 and Section 11 of the CUSC. It is suggested that this Modification is amalgamated with CMP264, and the detailed CUSC changes be taken forward should CMP264 be approved.

Description of the CUSC Modification Proposal

Changes to Section 14 (Charging Methodologies) under CMP264 will make changes to the charging methodology to calculate demand tariffs and embedded benefits on the basis of structures proposed under the original and any WACMs.

However, changes will also be required to Section 3 (Use of System) and Section 11 (Interpretation and Definitions). The full details of the legal text changes for CMP264 have not yet been prepared by the workgroup (and they are intending to hold a subgroup to do so, after

the workgroup consultation closes), however, based on discussions at the workgroup we would expect changes to the other sections are as follows:

Section 3: changes will be required to reflect any change in the structure of tariffs in Section 14, and to ensure obligations on suppliers and the Company in terms of data for forecasting and billing are aligned to those required in order to set tariffs.

Section 11: the proposal will require new definitions such as New Embedded Generation (i.e. those who qualify for a different value of embedded benefit under the CMP264 Original) [Capacity Market Embedded Generation (i.e. those who embedded generators who hold a capacity market agreement)] in order for these terms to be in Section 14 and Section 11 of the CUSC consistently.

Changes to other sections (other than 14, 3 and 11) may also be required for consistency but none have been identified to date.

The expectation of the CMP264 Workgroup is that the discussion relating to the solution for the obligations (in Section 3) and definitions (in Section 11) have and will continue to take place under the CMP264 Workgroup and that this new modification proposal is a procedural device to enable the legal text changes to sections of the CUSC not covered by the use of system charging objectives.

Impact on the CUSC

Changes will be required for sections 14, 3 and 11 and there may be other changes required for consistency but none have been identified to date.

Should CMP264 be approved, a number of changes would be required to reflect the CMP264 Proposal or any alternative proposals agreed by the CMP264 Workgroup.

The amendments required are to be developed by the CMP264 Workgroup and depending on whether the Proposer changes its Original Proposal or any alternatives are agreed, the Workgroup may consider with Code Administrator's advice whether any other parts of the CUSC need amendment.

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

No

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

BSC ☐

Grid Code ☐

STC ☐

Other ☐
(please specify)

There may be an impact on the BSC but this may potentially be covered via CMP264.

Urgency Recommended: Yes / No

No

Justification for Urgency Recommendation

n/a

Self-Governance Recommended: Yes / No

No

Justification for Self-Governance Recommendation

n/a

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

There are no relevant SCRs in process.

Impact on Computer Systems and Processes used by CUSC Parties:

No impact

Details of any Related Modification to Other Industry Codes

CMP264 '**Embedded Generation Triad Avoidance Standstill** proposal – Changes to the Transport and Tariff Model and billing arrangements to remove the netting of output from New Embedded
Generators until Ofgem has completed its consideration of the current electricity transmission Charging Arrangements (and any review which ensues) and any resulting changes have been fully implemented'

Justification for CUSC Modification Proposal with Reference to Applicable CUSC Objectives:
This section is mandatory. You should detail why this Proposal better facilitates the Applicable CUSC Objectives compared to the current baseline. Please note that one or more Objective must be justified. **Please tick the relevant boxes and provide justification:** ☒ (a) the efficient discharge by The Company of the obligations imposed upon it by the Act and the Transmission Licence ☒ (b) facilitating effective competition in the generation and supply of electricity, and (so far as consistent therewith) facilitating such competition in the sale, distribution and purchase of electricity. ☒ (c) 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) was added in November 2011. This refers specifically to European Regulation 2009/714/EC. Reference to the Agency is to the Agency for the Cooperation of Energy Regulators (ACER).

Additional details

Details of Proposer: (Organisation Name)	Scottish Power Energy Management Limited
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:	 Rupert Steele Director of Regulation, Scottish Power 0141 614 2012 **Rupert.Steele@ScottishPower.com**
Details of Representative's Alternate: Name: Organisation: Telephone Number: Email Address:	James Anderson Scottish Power Energy Management Limited 0141 614 3006 James.Anderson@ScottishPower.com
Attachments (Yes/No): **If Yes, Title and No. of pages of each Attachment:**	

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

Phone: 01926 654028

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 heena.chauhan@nationalgrid.com and copied to cusc.team@nationalgrid.com, or by post to:

Heena Chauhan
CUSC Modifications Panel Secretary,
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.

CUSC Modification Proposal Form CMP270

nationalgrid

Connection and Use of System Code (CUSC)

Title of the CUSC Modification Proposal

Potential consequential changes to the CUSC as a result of CMP265

Submission Date

19 August 2016

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

In May 2016, CMP265 (Gross charging of TNUoS for HH demand where embedded generation is in the Capacity Market) was raised by EDF Energy.

As part of the Workgroup analysis, the Workgroup identified that whilst this was a charging modification (which if approved would require change to aspects of section 14 - Charging Methodologies of the CUSC) there are in fact some references outside section 14 of the CUSC that would require change should CMP265 be approved.

However these could not be addressed via CMP265 as it is a charging modification seeking to amend Section 14 of the CUSC and therefore will be assessed against the Applicable Charging Objectives. Any modifications to the CUSC outside of Section 14 – Charging Methodologies are assessed against the CUSC Objectives (not Charging).

Consequently this modification has been raised to detail the required changes to Section 3 and Section 11 of the CUSC. It is suggested that this Modification is amalgamated with CMP265, and the detailed CUSC changes be taken forward should CMP265 be approved.

Description of the CUSC Modification Proposal

Changes to Section 14 (Charging Methodologies) under CMP265 will make changes to the charging methodology to calculate demand tariffs and embedded benefits on the basis of structures proposed under the original and any WACMs.

However, changes will also be required to Section 3 (Use of System) and Section 11 (Interpretation and Definitions). The full details of the legal text changes for CMP265 have not yet been prepared by the workgroup (and they are intending to hold a subgroup to do so, after the workgroup consultation closes), however, based on discussions at the workgroup we would expect changes to the other sections are as follows:

Section 3: changes will be required to reflect any change in the structure of tariffs in Section 14,

and to ensure obligations on suppliers and the Company in terms of data for forecasting and billing are aligned to those required in order to set tariffs.

Section 11: the proposal will require new definitions such as New Embedded Generation (i.e. those who qualify for a different value of embedded benefit under the CMP265 Original) [Capacity Market Embedded Generation (i.e. those who embedded generators who hold a capacity market agreement)] in order for these terms to be in Section 14 and Section 11 of the CUSC consistently.

Changes to other sections (other than 14, 3 and 11) may also be required for consistency, but none have been identified to date.

The expectation of the CMP265 Workgroup is that the discussion relating to the solution for the obligations (in Section 3) and definitions (in Section 11) have and will continue to take place under the CMP265 Workgroup and that this new modification proposal is a procedural device to enable the legal text changes to sections of the CUSC not covered by the use of system charging objectives.

Impact on the CUSC

Changes will be required for sections 14, 3 and 11 and there may be other changes required for consistency but none have been identified to date.

Should CMP265 be approved, a number of changes would be required to reflect the CMP265 Proposal or any alternative proposals agreed by the CMP265 Workgroup.

The amendments required are to be developed by the CMP265 Workgroup and depending on whether the Proposer changes its Original Proposal or any alternatives are agreed, the Workgroup may consider with Code Administrator's advice whether any other parts of the CUSC need amendment.

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

No

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

BSC ☐

Grid Code ☐

STC ☐

Other ☐
(please specify)

There may be an impact on the BSC but this may potentially be covered via CMP265.

Urgency Recommended: Yes / No

No

Justification for Urgency Recommendation

n/a

Self-Governance Recommended: Yes / No

No

Justification for Self-Governance Recommendation

n/a

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

There are no relevant SCRs in process.

Impact on Computer Systems and Processes used by CUSC Parties:

No impact

Details of any Related Modification to Other Industry Codes

CMP265 'Gross charging of TNUoS for HH demand where embedded generation is in the Capacity Market'

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

This section is mandatory. You should detail why this Proposal better facilitates the Applicable CUSC Objectives compared to the current baseline. Please note that one or more Objective must be justified.

Please tick the relevant boxes and provide justification:

☒ (a) the efficient discharge by The Company of the obligations imposed upon it by the Act

and the Transmission Licence

☒ (b) facilitating effective competition in the generation and supply of electricity, and (so far as consistent therewith) facilitating such competition in the sale, distribution and purchase of electricity.

☒ (c) 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) was added in November 2011. This refers specifically to European Regulation 2009/714/EC. Reference to the Agency is to the Agency for the Cooperation of Energy Regulators (ACER)

Additional details

Details of Proposer: (Organisation Name)	Paul Mott
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:	Paul Mott, EDF Energy, 02031262314 paul.mott@edfenergy.com
Details of Representative's Alternate: Name: Organisation: Telephone Number: Email Address:	Mark Cox EDF Energy 07967151272 Mark.cox@edfenergy.com
Attachments (Yes/No): **If Yes, Title and No. of pages of each Attachment:**	

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

Phone: 01926 654028

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 heena.chauhan@nationalgrid.com and copied to cusc.team@nationalgrid.com, or by post to:

Heena Chauhan
CUSC Modifications Panel Secretary,
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.

Annex 2 – CMP264, CMP265, CMP269 and CMP270 Terms of Reference

nationalgrid

Workgroup Terms of Reference and Membership

TERMS OF REFERENCE FOR CMP 264 WORKSHOP

CMP264 seeks to change the Transport and Tariff Model and billing arrangements to remove the netting of output from New Embedded Generators until Ofgem has completed its consideration of the current electricity transmission Charging Arrangements (and any review which ensues) and any resulting changes have been fully implemented.

Responsibilities

1. The Workgroup is responsible for assisting the CUSC Modifications Panel in the evaluation of CUSC Modification Proposal **CMP264 Embedded Generation Triad Avoidance Standstill** tabled by Scottish Power at the Modifications Panel meeting on 27 May 2016.

2. The proposal must be evaluated to consider whether it better facilitates achievement of the Applicable CUSC Objectives. These can be summarised as follows:

   Use of System Charging Methodology

   (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 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 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. These are defined within the National Grid Electricity Transmission plc Licence under Standard Condition C10, paragraph 1.).

3. It should be noted that additional provisions apply where it is proposed to modify the CUSC Modification provisions, and generally reference should be made to the Transmission Licence for the full definition of the term.

Scope of work

4. The Workgroup must consider the issues raised by the Modification Proposal and consider if the proposal identified better facilitates achievement of the Applicable CUSC Objectives.

5. In addition to the overriding requirement of paragraph 4, the Workgroup shall consider and report on the following specific issues:

   a) The Workgroup should consider whether, on the balance of probabilities, the current level of embedded generation triad avoidance benefit significantly exceeds the actual avoided transmission investment cost, whether this causes a distortion in competition, and whether the proposed temporary removal of such benefits (pending the outcome and implementation of Ofgem's considerations) would better meet the code objectives.
   b) The Workgroup should not attempt to resolve the issue of what the most appropriate charging arrangements should be on an enduring basis, as this will be the subject of Ofgem's considerations. .
   c) The Workgroup should consider the definition of and criteria for the "disapplication date" in the proposed solution, i.e. the date on which the modification would cease to have effect.
   d) The Workgroup should consider whether the Workgroup's conclusions would be materially impacted by the length of time between implementation and the "disapplication date".
   e) The Workgroup should consider consumer impacts resulting from the proposal.
   f) Consider any link to the Balancing and Settlement Code with particular focus on timescales of any changes.
   g) Consider any link to EMR Settlements metering with particular focus on timescales of any changes.

6. The Workgroup is responsible for the formulation and evaluation of any Workgroup Alternative CUSC Modifications (WACMs) arising from Group discussions which would, as compared with the Modification Proposal or the current version of the CUSC, better facilitate achieving the Applicable CUSC Objectives in relation to the issue or defect identified.

7. The Workgroup should become conversant with the definition of Workgroup Alternative CUSC Modification which appears in Section 11 (Interpretation and Definitions) of the CUSC. The definition entitles the Group and/or an individual member of the Workgroup to put forward a WACM if the member(s) genuinely believes the WACM would better facilitate the achievement of the Applicable CUSC Objectives, as compared with the Modification Proposal or the current version of the CUSC. The extent of the support for the Modification Proposal or any WACM arising from the Workgroup's discussions should be clearly described in the final Workgroup Report to the CUSC Modifications Panel.

8. Workgroup members should be mindful of efficiency and propose the fewest number of WACMs possible.

9. All proposed WACMs should include the Proposer(s)'s details within the final Workgroup report, for the avoidance of doubt this includes WACMs which are proposed by the entire Workgroup or subset of members.

10. There is an obligation on the Workgroup to undertake a period of Consultation in accordance with CUSC 8.20. The Workgroup Consultation period shall be for a period of **15 working days** as determined by the Modifications Panel.

11. Following the Consultation period the Workgroup is required to consider all responses including any WG Consultation Alternative Requests. In undertaking an assessment of any WG Consultation Alternative Request, the Workgroup should consider whether it better facilitates the Applicable CUSC Objectives than the current version of the CUSC.

As appropriate, the Workgroup will be required to undertake any further analysis and update the original Modification Proposal and/or WACMs. All responses including any WG Consultation Alternative Requests shall be included within the final report including a summary of the Workgroup's deliberations and conclusions. The report should make it clear where and why the Workgroup chairman has exercised his right under the CUSC to progress a WG Consultation Alternative Request or a WACM against the majority views of Workgroup members. It should also be explicitly stated where, under these circumstances, the Workgroup chairman is employed by the same organisation who submitted the WG Consultation Alternative Request.

12. The Workgroup is to submit its final report to the Modifications Panel Secretary on **18 August 2016** for circulation to Panel Members. The final report conclusions will be presented to the CUSC Modifications Panel meeting on **26 August 2016**.

Membership

13. It is recommended that the Workgroup has the following members:

Role	Name	Representing
Chairman	Louise Schmitz	National Grid
National Grid Representative	Paul Wakeley	National Grid
Industry Representatives	Rupert Steele	Scottish Power (Proposer)
	James Anderson	Scottish Power
	Paul Mott	EDF
	John Tindal	SSE
	Andy Pace	Cornwall Energy
	Elizabeth Adams/Sam Wither	UK Power Reserve
	Christopher Granby	Infinis
	Bill Reed	RWE
	Lars Weber	Neas Energy
	Michael Davis	Eider Reserve Power
	Joe Underwood	Drax Power
	Simon Lord	Engie
	Tim Collins	Centrica
	Lisa Waters	Waters Wye
	Graz McDonald	Greenfrog Power

	Jonathan Graham Stephen Davies Matthew Tucker Jon Fairchild Guy Phillips John Harmer Natasha Ranatunga Herdial Dosanjh/George Douthwaite Kirsten Gardner	The ADE EON Welsh Power Peakgen Uniper Alkane EDF RWE Npower Stag Energy
Authority Representatives	Donald Smith/Dena Baresi/Dominic Green	OFGEM
Technical secretary	Caroline Wright	National Grid
Observers	Kate Dooley Nick Rubin/Talia Addy/John Lucas Bruno Menu	Energy UK ELEXON Lime Jump

NB: A Workgroup must comprise at least 5 members (who may be Panel Members). The roles identified with an asterisk in the table above contribute toward the required quorum, determined in accordance with paragraph 14 below.

14. The chairman of the Workgroup and the Modifications Panel Chairman must agree a number that will be quorum for each Workgroup meeting. The agreed figure for CMP264 is that at least 5 Workgroup members must participate in a meeting for quorum to be met.

15. A vote is to take place by all eligible Workgroup members on the Modification Proposal and each WACM. The vote shall be decided by simple majority of those present at the meeting at which the vote takes place (whether in person or by teleconference). The Workgroup chairman shall not have a vote, casting or otherwise]. There may be up to three rounds of voting, as follows:

- Vote 1: whether each proposal better facilitates the Applicable CUSC Objectives;
- Vote 2: where one or more WACMs exist, whether each WACM better facilitates the Applicable CUSC Objectives than the original Modification Proposal*;*
- Vote 3: which option is considered to BEST facilitate achievement of the Applicable CUSC Objectives. For the avoidance of doubt, this vote should include the existing CUSC baseline as an option.

The results from the vote and the reasons for such voting shall be recorded in the Workgroup report in as much detail as practicable.

16. It is expected that Workgroup members would only abstain from voting under limited circumstances, for example where a member feels that a proposal has been insufficiently developed. Where a member has such concerns, they should raise these with the Workgroup chairman at the earliest possible

opportunity and certainly before the Workgroup vote takes place. Where abstention occurs, the reason should be recorded in the Workgroup report.

17. Workgroup members or their appointed alternate are required to attend a minimum of 50% of the Workgroup meetings to be eligible to participate in the Workgroup vote.

18. The Technical Secretary shall keep an Attendance Record for the Workgroup meetings and circulate the Attendance Record with the Action Notes after each meeting. This will be attached to the final Workgroup report.

19. The Workgroup membership can be amended from time to time by the CUSC Modifications Panel.

Appendix 1

Proposed CMP264 Revised Timetable

17 May 2016	CUSC Modification Proposal submitted
27 May 2016	CUSC Modification tabled at Panel meeting
31 May 2016	Request for Workgroup members (5 Working days)
14 June 2016	Workgroup meeting 1
21 June 2016	Workgroup meeting 2
4 July 2016	Workgroup meeting 3
11 July 2016	Workgroup Meeting 4
27 July 2016	Workgroup Meeting 5 (teleconference)
~~18 July 2016~~ 29 July 2016	Workgroup Consultation issued ~~(15 Working days)~~ (17 Working Days)
11 August 2016	Workgroup meeting 6
~~8 August 2016~~ 23 August 2016	Deadline for responses
30 August 2016	Workgroup meeting 7 **(WG review Consultation Reponses)**
~~15 or 16 August 2016~~ 1 September 2016	Workgroup meeting 8 (WG to agree options for WACMs)
6 September 2016	Workgroup meeting 9 (WG vote)
~~18 August 2016~~ 22 September 2016	Workgroup report issued to CUSC Panel
~~26 August 2016~~ 30 September 2016	CUSC Panel meeting to discuss Workgroup Report

~~30 August 2016~~ 3 October 2016	Code Administrator Consultation issued (10 Working days)
~~13 September 2016~~ 17 October 2016	Deadline for responses
~~15 September 2016~~ 20 October 2016	Draft FMR published for industry comment (~~5~~ 2 Working days)
~~22 September 2016~~ 24 October 2016	Deadline for comments
~~23 September 2016~~ 20 October 2016	Draft FMR circulated to Panel (late paper)
~~30 September 2016~~	CUSC Panel Recommendation vote

28 October 2016	
~~5 October 2016~~ 1 November 2016	FMR circulated for Panel comment (~~3~~2 Working days)
~~10 October 2016~~ 3 November 2016	Deadline for Panel comment
~~12 October 2016~~ 4 November 2016	Final report sent to Authority for decision
~~26 October 2016~~ 18 November 2016	Indicative Authority Decision due (10 Working days)
2 November 2016 25 November 2016	Implementation date (5 Working days later)

nationalgrid

Workgroup Terms of Reference and Membership

TERMS OF REFERENCE FOR CMP265 WORKSHOP

CMP265 seeks to address the issue that half hourly metered (HH) demand for TNUoS purposes is currently charged net of embedded generation.

Responsibilities

1. The Workgroup is responsible for assisting the CUSC Modifications Panel in the evaluation of CUSC Modification Proposal **CMP265 'Gross charging of TNUoS for HH demand where embedded generation is in Capacity Market'** tabled by EDF Energy at the Modifications Panel meeting on 27 May 2016.

2. The proposal must be evaluated to consider whether it better facilitates achievement of the Applicable CUSC Objectives. These can be summarised as follows:

   Use of System Charging Methodology

   (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 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 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. These are defined within the National Grid Electricity Transmission plc Licence under Standard Condition C10, paragraph 1.).

3. It should be noted that additional provisions apply where it is proposed to modify the CUSC Modification provisions, and generally reference should be made to the Transmission Licence for the full definition of the term.

Scope of work

4. The Workgroup must consider the issues raised by the Modification Proposal and consider if the proposal identified better facilitates achievement of the Applicable CUSC Objectives.

5. In addition to the overriding requirement of paragraph 4, the Workgroup shall consider and report on the following specific issues:

   a) This Workgroup should not focus on transmissions generator in negative zones.
   b) The Workgroup should not look to amend the existing Capacity Mechanism.
   c) The Workgroup should consider all Embedded Generation with Capacity Market contracts directly or indirectly.
   d) The Workgroup should consider consumer impacts resulting from the proposal.
   e) The Workgroup should consider whether, on the balance of probabilities, the current level of embedded generation triad avoidance benefit significantly exceeds the actual avoided transmission investment cost, whether this causes a distortion in competition, and whether the removal of such benefits (pending the outcome and implementation of Ofgem's considerations) would better meet the code objectives.
   f) Consider any link to the Balancing and Settlement Code with particular focus on timescales of any changes.
   g) Consider any link to EMR Settlements metering with particular focus on timescales of any changes.

6. The Workgroup is responsible for the formulation and evaluation of any Workgroup Alternative CUSC Modifications (WACMs) arising from Group discussions which would, as compared with the Modification Proposal or the current version of the CUSC, better facilitate achieving the Applicable CUSC Objectives in relation to the issue or defect identified.

7. The Workgroup should become conversant with the definition of Workgroup Alternative CUSC Modification which appears in Section 11 (Interpretation and Definitions) of the CUSC. The definition entitles the Group and/or an individual member of the Workgroup to put forward a WACM if the member(s) genuinely believes the WACM would better facilitate the achievement of the Applicable CUSC Objectives, as compared with the Modification Proposal or the current version of the CUSC. The extent of the support for the Modification Proposal or any WACM arising from the Workgroup's discussions should be clearly described in the final Workgroup Report to the CUSC Modifications Panel.

8. Workgroup members should be mindful of efficiency and propose the fewest number of WACMs possible.

9. All proposed WACMs should include the Proposer(s)'s details within the final Workgroup report, for the avoidance of doubt this includes WACMs which are proposed by the entire Workgroup or subset of members.

10. There is an obligation on the Workgroup to undertake a period of Consultation in accordance with CUSC 8.20. The Workgroup Consultation period shall be for a period of **15 working days** as determined by the Modifications Panel.

11. Following the Consultation period the Workgroup is required to consider all responses including any WG Consultation Alternative Requests. In undertaking an assessment of any WG Consultation Alternative Request, the Workgroup should consider whether it better facilitates the Applicable CUSC Objectives than the current version of the CUSC.

As appropriate, the Workgroup will be required to undertake any further analysis and update the original Modification Proposal and/or WACMs. All responses including any WG Consultation Alternative Requests shall be included within the final report including a summary of the Workgroup's deliberations and conclusions. The report should make it clear where and why the Workgroup chairman has exercised his right under the CUSC to progress a WG Consultation Alternative Request or a WACM against the majority views of Workgroup members. It should also be explicitly stated where, under these circumstances, the Workgroup chairman is employed by the same organisation who submitted the WG Consultation Alternative Request.

12. The Workgroup is to submit its final report to the Modifications Panel Secretary on **18 August 2016** for circulation to Panel Members. The final report conclusions will be presented to the CUSC Modifications Panel meeting on **26 August 2016**.

Membership

13. It is recommended that the Workgroup has the following members

Role	Name	Representing
Chairman	Louise Schmitz	National Grid
National Grid Representative	Paul Wakeley	National Grid
Industry Representatives	Paul Mott	EDF (Proposer)
	James Anderson	Scottish Power
	John Tindal	SSE
	Andy Pace	Cornwall Energy
	Elizabeth Adams/Sam Wither	UK Power Reserve
	Christopher Granby	Infinis
	Bill Reed	RWE
	Lars Weber	Neas Energy
	Michael Davis	Eider Reserve Power
	Joe Underwood	Drax Power
	Simon Lord	Engie
	Tim Collins	Centrica
	Lisa Waters	Waters Wye
	Graz McDonald	Greenfrog Power
	Jonathan Graham	The ADE
	Stephen Davies	EON
	Matthew Tucker	Welsh Power
	Jon Fairchild	Peakgen
	Guy Phillips	Uniper
	John Harmer	Alkane
	Natasha Ranatunga	EDF

	Herdial Dosanjh/George Douthwaite Kirsten Gardner	RWE npower Stag Energy
Authority Representatives	Donald Smith/Dena Baresi/Dominic Green	OFGEM
Technical secretary	Caroline Wright	National Grid
Observers	Kate Dooley Nick Rubin/Talia Addy/John Lucas Lucas Lilja Bruno Menu	Energy UK ELEXON Intergen Lime Jump

NB: A Workgroup must comprise at least 5 members (who may be Panel Members). The roles identified with an asterisk in the table above contribute toward the required quorum, determined in accordance with paragraph 14 below.

14. The chairman of the Workgroup and the Modifications Panel Chairman must agree a number that will be quorum for each Workgroup meeting. The agreed figure for CMP265 is that at least 5 Workgroup members must participate in a meeting for quorum to be met.

15. A vote is to take place by all eligible Workgroup members on the Modification Proposal and each WACM. The vote shall be decided by simple majority of those present at the meeting at which the vote takes place (whether in person or by teleconference). The Workgroup chairman shall not have a vote, casting or otherwise]. There may be up to three rounds of voting, as follows:

- Vote 1: whether each proposal better facilitates the Applicable CUSC Objectives;
- Vote 2: where one or more WACMs exist, whether each WACM better facilitates the Applicable CUSC Objectives than the original Modification Proposal*;*
- Vote 3: which option is considered to BEST facilitate achievement of the Applicable CUSC Objectives. For the avoidance of doubt, this vote should include the existing CUSC baseline as an option.

The results from the vote and the reasons for such voting shall be recorded in the Workgroup report in as much detail as practicable.

16. It is expected that Workgroup members would only abstain from voting under limited circumstances, for example where a member feels that a proposal has been insufficiently developed. Where a member has such concerns, they should raise these with the Workgroup chairman at the earliest possible opportunity and certainly before the Workgroup vote takes place. Where abstention occurs, the reason should be recorded in the Workgroup report.

17. Workgroup members or their appointed alternate are required to attend a minimum of 50% of the Workgroup meetings to be eligible to participate in the Workgroup vote.

18. The Technical Secretary shall keep an Attendance Record for the Workgroup meetings and circulate the Attendance Record with the Action Notes after each meeting. This will be attached to the final Workgroup report.

19. The Workgroup membership can be amended from time to time by the CUSC Modifications Panel.

Appendix 1

Proposed CMP264 Revised Timetable

17 May 2016	CUSC Modification Proposal submitted
27 May 2016	CUSC Modification tabled at Panel meeting
31 May 2016	Request for Workgroup members (5 Working days)
14 June 2016	Workgroup meeting 1
21 June 2016	Workgroup meeting 2
4 July 2016	Workgroup meeting 3
11 July 2016	Workgroup Meeting 4
27 July 2016	Workgroup Meeting 5 (teleconference)
~~18 July 2016~~ 29 July 2016	Workgroup Consultation issued ~~(15 Working days)~~ (17 Working Days)
11 August 2016	Workgroup meeting 6
~~8 August 2016~~ 23 August 2016	Deadline for responses
30 August 2016	Workgroup meeting 7 **(WG review Consultation Reponses)**
~~15 or 16 August 2016~~ 1 September 2016	Workgroup meeting 8 (WG to agree options for WACMs)
6 September 2016	Workgroup meeting 9 (WG vote)
~~18 August 2016~~ 22 September 2016	Workgroup report issued to CUSC Panel
~~26 August 2016~~ 30 September 2016	CUSC Panel meeting to discuss Workgroup Report

~~30 August 2016~~ 3 October 2016	Code Administrator Consultation issued (10 Working days)
~~13 September 2016~~ 17 October 2016	Deadline for responses
~~15 September 2016~~ 20 October 2016	Draft FMR published for industry comment (~~5~~ 2 Working days)
~~22 September 2016~~ 24 October 2016	Deadline for comments
~~23 September 2016~~ 20 October 2016	Draft FMR circulated to Panel (late paper)
~~30 September 2016~~	CUSC Panel Recommendation vote

28 October 2016	
~~5 October 2016~~ 1 November 2016	FMR circulated for Panel comment (~~3~~2 Working days)
~~10 October 2016~~ 3 November 2016	Deadline for Panel comment
~~12 October 2016~~ 4 November 2016	Final report sent to Authority for decision
~~26 October 2016~~ 18 November 2016	Indicative Authority Decision due (10 Working days)
2 November 2016 25 November 2016	Implementation date (5 Working days later)

nationalgrid

Workgroup Terms of Reference and Membership

TERMS OF REFERENCE FOR CMP 269 WORKSHOP

CMP269 aims for the CMP264 Workgroup to address a number of consequential changes required to non-charging sections of the CUSC to reflect the CMP264 Proposal or any alternative proposals agreed by the CMP264 Workgroup.

Responsibilities

1. The Workgroup is responsible for assisting the CUSC Modifications Panel in the evaluation of CUSC Modification Proposal **CMP269 'Potential consequential changes to the CUSC as a result of CMP264'** tabled by Scottish Power at the Modifications Panel meeting on 26 August 2016.

2. The proposal must be evaluated to consider whether it better facilitates achievement of the Applicable CUSC Objectives. These can be summarised as follows:

Standard CUSC Objectives

(a) The efficient discharge by the Licensee of the obligations imposed on it by the Act and the Transmission Licence;

(b) Facilitating effective competition in the generation and supply of electricity, and (so far as consistent therewith) facilitating such competition in the sale, distribution and purchase of electricity;

(c) Compliance with the Electricity Regulation and any relevant legally binding decision of the European Commission and/or the Agency.

Scope of work

3. The Workgroup must consider the issues raised by the Modification Proposal and consider if the proposal identified better facilitates achievement of the Applicable CUSC Objectives.

4. In addition to the overriding requirement of paragraph 4, the Workgroup shall consider and report on the following specific issues:

a)
b)
c)

5. The Workgroup is responsible for the formulation and evaluation of any Workgroup Alternative CUSC Modifications (WACMs) arising from Group discussions which would, as compared with the Modification Proposal or the current version of the CUSC, better facilitate achieving the Applicable CUSC Objectives in relation to the issue or defect identified.

6. The Workgroup should become conversant with the definition of Workgroup Alternative CUSC Modification which appears in Section 11 (Interpretation and Definitions) of the CUSC. The definition entitles the Group and/or an individual member of the Workgroup to put forward a WACM if the member(s) genuinely believes the WACM would better facilitate the achievement of the Applicable CUSC Objectives, as compared with the Modification Proposal or the current version of the CUSC. The extent of the support for the Modification Proposal or any WACM arising from the Workgroup's discussions should be clearly described in the final Workgroup Report to the CUSC Modifications Panel.

7. Workgroup members should be mindful of efficiency and propose the fewest number of WACMs possible.

8. All proposed WACMs should include the Proposer(s)'s details within the final Workgroup report, for the avoidance of doubt this includes WACMs which are proposed by the entire Workgroup or subset of members.

9. There is an obligation on the Workgroup to undertake a period of Consultation in accordance with CUSC 8.20. The Workgroup Consultation period shall be for a period of **XX working days** as determined by the Modifications Panel.

10. Following the Consultation period the Workgroup is required to consider all responses including any WG Consultation Alternative Requests. In undertaking an assessment of any WG Consultation Alternative Request, the Workgroup should consider whether it better facilitates the Applicable CUSC Objectives than the current version of the CUSC.

    As appropriate, the Workgroup will be required to undertake any further analysis and update the original Modification Proposal and/or WACMs. All responses including any WG Consultation Alternative Requests shall be included within the final report including a summary of the Workgroup's deliberations and conclusions. The report should make it clear where and why the Workgroup chairman has exercised his right under the CUSC to progress a WG Consultation Alternative Request or a WACM against the majority views of Workgroup members. It should also be explicitly stated where, under these circumstances, the Workgroup chairman is employed by the same organisation who submitted the WG Consultation Alternative Request.

11. The Workgroup is to submit its final report to the Modifications Panel Secretary on **xx xxx 2016** for circulation to Panel Members. The final report conclusions will be presented to the CUSC Modifications Panel meeting on **xx xxx 2016**

Membership

12. It is recommended that the Workgroup has the same membership as CMP264.

NB: A Workgroup must comprise at least 5 members (who may be Panel Members). The roles identified with an asterisk in the table above contribute toward the required quorum, determined in accordance with paragraph 14 below.

13. The chairman of the Workgroup and the Modifications Panel Chairman must agree a number that will be quorum for each Workgroup meeting. The agreed figure for CMP269 is that at least 5 Workgroup members must participate in a meeting for quorum to be met.

14. A vote is to take place by all eligible Workgroup members on the Modification Proposal and each WACM. The vote shall be decided by simple majority of those present at the meeting at which the vote takes place (whether in person or by teleconference). The Workgroup chairman shall not have a vote, casting or otherwise]. There may be up to three rounds of voting, as follows:

- Vote 1: whether each proposal better facilitates the Applicable CUSC Objectives;
- Vote 2: where one or more WACMs exist, whether each WACM better facilitates the Applicable CUSC Objectives than the original Modification Proposal*;*
- Vote 3: which option is considered to BEST facilitate achievement of the Applicable CUSC Objectives. For the avoidance of doubt, this vote should include the existing CUSC baseline as an option.

The results from the vote and the reasons for such voting shall be recorded in the Workgroup report in as much detail as practicable.

15. It is expected that Workgroup members would only abstain from voting under limited circumstances, for example where a member feels that a proposal has been insufficiently developed. Where a member has such concerns, they should raise these with the Workgroup chairman at the earliest possible opportunity and certainly before the Workgroup vote takes place. Where abstention occurs, the reason should be recorded in the Workgroup report.

16. Workgroup members or their appointed alternate are required to attend a minimum of 50% of the Workgroup meetings to be eligible to participate in the Workgroup vote.

17. The Technical Secretary shall keep an Attendance Record for the Workgroup meetings and circulate the Attendance Record with the Action Notes after each meeting. This will be attached to the final Workgroup report.

18. The Workgroup membership can be amended from time to time by the CUSC Modifications Panel.

Appendix 1

1 September 2016	Workgroup meeting 8 (WG to agree options for WACMs)
7 September 2016	Workgroup meeting 9 (WG cont. of WACM options)
12 September 2016	Workgroup meeting 10 (WG cont. of WACM options)
19 September 2016	Workgroup meeting 11 (WG WACM vote)
5 October 2016	Workgroup meeting 12 (WG vote)
20 October 2016	Workgroup report issued to CUSC Panel
25 October 2016	Special CUSC Panel meeting to discuss Workgroup Report

25 October 2016	Code Administrator Consultation issued (~~10~~ 8 Working days)
4 November 2016	Deadline for responses
10 November 2016	Draft FMR published for industry comment (~~5~~ 2 Working days)
15 November 2016	Deadline for comments
17 November 2016	Draft FMR circulated to Panel
23 November 2016	Special CUSC Panel Recommendation vote
23 November 2016	FMR circulated for Panel comment (~~3~~2 Working days)
25 November 2016	Deadline for Panel comment
28 November 2016	Final report sent to Authority for decision
12 December 2016	Indicative Authority Decision due (10 Working days)
19 December 2016	Implementation date (5 Working days later)

nationalgrid

Workgroup Terms of Reference and Membership

TERMS OF REFERENCE FOR CMP 270 WORKSHOP

CMP270 aims for the CMP265 Workgroup to address a number of consequential changes required to non-charging sections of the CUSC to reflect the CMP265 Proposal or any alternative proposals agreed by the CMP265 Workgroup.

Responsibilities

1. The Workgroup is responsible for assisting the CUSC Modifications Panel in the evaluation of CUSC Modification Proposal **CMP270 'Potential consequential changes to the CUSC as a result of CMP265'** tabled by EDF Energy at the Modifications Panel meeting on 26 August 2016.

2. The proposal must be evaluated to consider whether it better facilitates achievement of the Applicable CUSC Objectives. These can be summarised as follows:

Standard CUSC Objectives

(a) The efficient discharge by the Licensee of the obligations imposed on it by the Act and the Transmission Licence;

(b) Facilitating effective competition in the generation and supply of electricity, and (so far as consistent therewith) facilitating such competition in the sale, distribution and purchase of electricity;

(c) Compliance with the Electricity Regulation and any relevant legally binding decision of the European Commission and/or the Agency.

Scope of work

3. The Workgroup must consider the issues raised by the Modification Proposal and consider if the proposal identified better facilitates achievement of the Applicable CUSC Objectives.

4. In addition to the overriding requirement of paragraph 4, the Workgroup shall consider and report on the following specific issues:

a)
b)
c)

5. The Workgroup is responsible for the formulation and evaluation of any Workgroup Alternative CUSC Modifications (WACMs) arising from Group discussions which would, as compared with the Modification Proposal or the current version of the CUSC, better facilitate achieving the Applicable CUSC Objectives in relation to the issue or defect identified.

6. The Workgroup should become conversant with the definition of Workgroup Alternative CUSC Modification which appears in Section 11 (Interpretation and Definitions) of the CUSC. The definition entitles the Group and/or an individual member of the Workgroup to put forward a WACM if the member(s) genuinely believes the WACM would better facilitate the achievement of the Applicable CUSC Objectives, as compared with the Modification Proposal or the current version of the CUSC. The extent of the support for the Modification Proposal or any WACM arising from the Workgroup's discussions should be clearly described in the final Workgroup Report to the CUSC Modifications Panel.

7. Workgroup members should be mindful of efficiency and propose the fewest number of WACMs possible.

8. All proposed WACMs should include the Proposer(s)'s details within the final Workgroup report, for the avoidance of doubt this includes WACMs which are proposed by the entire Workgroup or subset of members.

9. There is an obligation on the Workgroup to undertake a period of Consultation in accordance with CUSC 8.20. The Workgroup Consultation period shall be for a period of **xx working days** as determined by the Modifications Panel.

10. Following the Consultation period the Workgroup is required to consider all responses including any WG Consultation Alternative Requests. In undertaking an assessment of any WG Consultation Alternative Request, the Workgroup should consider whether it better facilitates the Applicable CUSC Objectives than the current version of the CUSC.

    As appropriate, the Workgroup will be required to undertake any further analysis and update the original Modification Proposal and/or WACMs. All responses including any WG Consultation Alternative Requests shall be included within the final report including a summary of the Workgroup's deliberations and conclusions. The report should make it clear where and why the Workgroup chairman has exercised his right under the CUSC to progress a WG Consultation Alternative Request or a WACM against the majority views of Workgroup members. It should also be explicitly stated where, under these circumstances, the Workgroup chairman is employed by the same organisation who submitted the WG Consultation Alternative Request.

11. The Workgroup is to submit its final report to the Modifications Panel Secretary on **xx xxx 2016** for circulation to Panel Members. The final report conclusions will be presented to the CUSC Modifications Panel meeting on **xx xxx 2016**.

Membership

12. It is recommended that the Workgroup has the following members as CMP265.

NB: A Workgroup must comprise at least 5 members (who may be Panel Members). The roles identified with an asterisk in the table above contribute toward the required quorum, determined in accordance with paragraph 14 below.

13. The chairman of the Workgroup and the Modifications Panel Chairman must agree a number that will be quorum for each Workgroup meeting. The agreed figure for CMP270 is that at least 5 Workgroup members must participate in a meeting for quorum to be met.

14. A vote is to take place by all eligible Workgroup members on the Modification Proposal and each WACM. The vote shall be decided by simple majority of those present at the meeting at which the vote takes place (whether in person or by teleconference). The Workgroup chairman shall not have a vote, casting or otherwise]. There may be up to three rounds of voting, as follows:

- Vote 1: whether each proposal better facilitates the Applicable CUSC Objectives;
- Vote 2: where one or more WACMs exist, whether each WACM better facilitates the Applicable CUSC Objectives than the original Modification Proposal*;*
- Vote 3: which option is considered to BEST facilitate achievement of the Applicable CUSC Objectives. For the avoidance of doubt, this vote should include the existing CUSC baseline as an option.

The results from the vote and the reasons for such voting shall be recorded in the Workgroup report in as much detail as practicable.

15. It is expected that Workgroup members would only abstain from voting under limited circumstances, for example where a member feels that a proposal has been insufficiently developed. Where a member has such concerns, they should raise these with the Workgroup chairman at the earliest possible opportunity and certainly before the Workgroup vote takes place. Where abstention occurs, the reason should be recorded in the Workgroup report.

16. Workgroup members or their appointed alternate are required to attend a minimum of 50% of the Workgroup meetings to be eligible to participate in the Workgroup vote.

17. The Technical Secretary shall keep an Attendance Record for the Workgroup meetings and circulate the Attendance Record with the Action Notes after each meeting. This will be attached to the final Workgroup report.

18. The Workgroup membership can be amended from time to time by the CUSC Modifications Panel.

Appendix 1

1 September 2016	Workgroup meeting 8 (WG to agree options for WACMs)
7 September 2016	Workgroup meeting 9 (WG cont. of WACM options)
12 September 2016	Workgroup meeting 10 (WG cont. of WACM options)
19 September 2016	Workgroup meeting 11 (WG WACM vote)
5 October 2016	Workgroup meeting 12 (WG vote)
20 October 2016	Workgroup report issued to CUSC Panel
25 October 2016	Special CUSC Panel meeting to discuss Workgroup Report

25 October 2016	Code Administrator Consultation issued (~~10~~ 8 Working days)
4 November 2016	Deadline for responses
10 November 2016	Draft FMR published for industry comment (~~5~~ 2 Working days)
15 November 2016	Deadline for comments
17 November 2016	Draft FMR circulated to Panel
23 November 2016	Special CUSC Panel Recommendation vote
23 November 2016	FMR circulated for Panel comment (~~3~~2 Working days)
25 November 2016	Deadline for Panel comment
28 November 2016	Final report sent to Authority for decision
12 December 2016	Indicative Authority Decision due (10 Working days)
19 December 2016	Implementation date (5 Working days later)

Annex 3– Workgroup attendance register

A – Attended
X – Absent
O – Alternate
D – Dial-in

Name	Organisation	Role	13/06/16 CMP 265 14/06/16 CMP 264	21/06/16	04/07/16	11/07/16	28/07/16 (t-conf)	11/8/16	30/8/16	1/9/16	7/9/16	12/9/16	15/9/16	19/9/16	5/10/16
Louise Schmitz	National Grid	Chair	A	A	A	A	AD	A	A	A	A	A	A	X	A
John Martin	National Grid	Chair (alternate)	X	X	X	X	X	X	X	X	X	X	X	A	X
Ryan Place	National Grid	Technical Secretary	A	X	X	X	X	X	X	X	X	X	X	X	X
Caroline Wright	National Grid		A	A	A	X	A	A	A	A	A	A	A	A	A
Heena Chauhan	National Grid		X	X	X	A	X	X	X	X	X	X	X	X	X
Paul Wakeley	National Grid	National Grid Rep	A	A	A	A	A	A	A	A	X	X	X	X	X
Rob Marshall	National Grid	National Grid Rep	X	X	X	X	X	X	A	A	A	A	A	A	A
John Harmer	Alkane	Workgroup member	A	AD	A	A	AD	A	A	A	A	A	A	A	A
Tim Collins	Centrica	Workgroup member	X	A	A	A	AD	A	A	A	A	A/D	A	A	A

Name	Organisation	Role	13/06/16 CMP 265 14/06/16 CMP 264	21/06/16	04/07/16	11/07/16	28/07/16 (t-conf)	11/8/16	30/8/16	1/9/16	7/9/16	12/9/16	15/9/16	19/9/16	5/10/16
George Moran	Centrica	Workgroup alternate	X	X	X	X	X	X	X	X	X	X	X	X	X
Andy Pace	Cornwall Energy	Workgroup member	A	A	X	A	AD	A	X	A	A/D	A/D	A	A	A/D
Tim Dixon	Cornwall Energy	Workgroup alternate	X	X	AO	X	X	X	X	X	X	X	X	X	X
Tom Edwards	Cornwall Energy	Workgroup alternate	X	X	X	X	X	X	A	X	X	X	X	X	X
Joseph Underwood	Drax Power	Workgroup member	A	A	A	A	AD	A	A	A	X	X	X	X	A
Paul Mott	EDF Energy	CMP265 Proposer	X	A	A	A	AD	A	A	A	A	A	A	A	A
Mark Cox	EDF Energy	Workgroup alternate	AO	X	X	X	X	X	X	X	X	X	X	X	X
Natasha Ranatunga	EDF Energy	Workgroup alternate	AD	X	X	X	X	X	X	X	X	X	X	X	X
Michael Davies	Eider Reserve Power	Workgroup member	A	A	A	AD	X	A	A	A	A	A	A	A	X
Nicholas Rubin	ELEXON	Observer	X	X	A	A	AD	A	A	A/D	X	X	A/D	X	X
John Lucas	ELEXON	Observer	X	A	X	X	X	X	X	X	A	X	X	X	X
Talia Addy	ELEXON	Observer	X	A	X	X	X	X	X	X	X	X	X	X	X

Name	Organisation	Role	13/06/16 CMP 265 14/06/16 CMP 264	21/06/16	04/07/16	11/07/16	28/07/16 (t-conf)	11/8/16	30/8/16	1/9/16	7/9/16	12/9/16	15/9/16	19/9/16	5/10/16
Kate Dooley	Energy UK	Observer	AD	X	AD	X	X	X	X	X	X	X	X	X	X
Simon Lord	Engie	Workgroup member	A	A	A	A	A	A	A	A	A	A	A	A	A
Stephen Davies	EON	Workgroup member	A	X	A	X	X	X	A	A	A	X	X	A	X
Laurence Barrett	EON	Workgroup alternate	X	X	X	X	X	A	X	X	X	A	A	A	A
Brian Tilley	EON	Workgroup alternate	X	X	X	AO	X	X	X	X	X	X	X	X	X
Graz MacDonald	Greenfrog Power	Workgroup member	A	A	A	AD	AD	X	A	A	A	A/D	A/D	A/D	X
Mark Jones	Greenfrog Power	Workgroup alternate	X	X	X	X	X	X	X	X	X	A	A	X	X
Jeremy Taylor	Greenfrog Power	Workgroup alternate	X	X	X	X	X	X	X	X	X	X	X	A	A
Christopher Granby	Infinis	Workgroup member	A	A	X	A	X	X	X	X	X	A	X	A	A
Anthony Collet	Infinis	Workgroup alternate	X	X	X	X	X	X	X	A	X	X	X	X	X
Jon Crouch	Infinis	Workgroup alternate	X	X	X	X	X	X	X	X	A/D	X	X	X	X
Mick Collister	Infinis	Workgroup alternate	X	X	X	X	X	X	A	X	X	X	X	X	X

Name	Organisation	Role	13/06/16 CMP 265 14/06/16 CMP 264	21/06/16	04/07/16	11/07/16	28/07/16 (t-conf)	11/8/16	30/8/16	1/9/16	7/9/16	12/9/16	15/9/16	19/9/16	5/10/16
Lucas Lilja	Intergen	Observer	X	AD	X	X	AD	X	X	X	X	X	X	X	X
Bruno Menu	Lime Jump	Observer	X	X	X	X	X	X	X	X	X	X	X	X	X
Lars Weber	NEAS Energy	Workgroup member	A	A	A	A	X	A	A	A/D	X	X	X	X	X
Dominic Green	Ofgem	Observer	AD	A	A	X	AD	X	A	A	A	A	X	A	A
Dena Barasi	Ofgem	Observer	X	X	X	X	X	A	X	X	A	X	A/D	X	X
Jon Fairchild	Peakgen	Workgroup alternate	A	X	X	X	X	X	X	X	X	X	X	X	X
Mark Draper	Peakgen	Workgroup Member	X	AO	AO	AO	AD	A	A	X	X	X	X	X	X
Nick Stillito	Peakgen	Workgroup alternate	X	X	X	X	X	X	X	A	A	A	A	A	A
Bill Reed	RWE Supply and Trading	Workgroup member	A	A	A	A	AD	A	A	A	A	A	A	A	A
Fruzina Kemenes	Innogy Renewables and npower	Workgroup member	X	AO	AO	X	AD	A	A	X	X	A/D	A	A	A
Herdial Dosanjh	Npower	Workgroup alternate	X	X	X	X	X	X	X	A	X	X	X	X	X

Name	Organisation	Role	13/06/16 CMP 265 14/06/16 CMP 264	21/06/16	04/07/16	11/07/16	28/07/16 (t-conf)	11/8/16	30/8/16	1/9/16	7/9/16	12/9/16	15/9/16	19/9/16	5/10/16
George Douthwaite	RWE Npower	Workgroup alternate	X	X	X	AO	AD	X	X	X	A/D	A	X	X	X
James Anderson	Scottish Power	Workgroup member	X	A	A	X	AD	A	A	A	A	A	A	A	A
Richard Sweet	Scottish Power	Workgroup alternate	A	X	X	X	X	X	X	X	X	A	A	X	X
Rupert Steele	Scottish Power	CMP264 Proposer	AO	X	X	AO	X	A	X	X	X	X	X	X	X
John Tindal	SSE	Workgroup member	A	A	A	X	AD	A	A	A	A	A	A	A	A
Gareth Graham	SSE	Workgroup alternate	X	X	X	AO	X	X	X	X	X	X	X	X	X
Kirsten Gardner	Stag Energy	Workgroup member	A	A	AD	A	AD	A	A/D	A/D	A	A/D	A/D	A	X
Adam Heffill	Stag Energy	Workgroup alternate	X	X	X	X	X	X	X	X	X	X	X	X	A
Jonathan Graham	The ADE	Workgroup member	A	X	A	A	AD	A	A	A	A	A	A	A	A
Tim Rotheray	The ADE	Workgroup alternate	X	AO	X	X	X	X	X	X	X	X	X	X	X
Sam Wither	UK Power Reserve	Workgroup member	A	X	X	A	AD	A	A/D	A	A	A	A	A	A

Name	Organisation	Role	13/06/16 CMP 265 14/06/16 CMP 264	21/06/16	04/07/16	11/07/16	28/07/16 (t-conf)	11/8/16	30/8/16	1/9/16	7/9/16	12/9/16	15/9/16	19/9/16	5/10/16
Ian Tanner	UK Power Reserve	Workgroup alternate	AO	A/D	A/D	AD	AD	X	X	X	X	X	X	X	X
Guy Phillips	Unipe r	Workgroup member	A	A	A	AD	X	A	X	X	X	A	X	X	X
Paul Jones	Unipe r	Workgroup alternate	X	X	X	X	AD	X	A	A	A	A	A/D	A	A
Lisa Waters	Waters Wye	Workgroup member	A	A	A	X	X	A	A	A	A	X	A/D	X	A
Matthew Tucker	Welsh Power	Workgroup member	A	A	A	A	X	A	A	A	A	A	A	A	A