



DCUSA Change Report

DCP 222 - Non billing of excess Reactive Power charges

Executive Summary

DCP 222 seeks to allow Distribution Network Operators (DNOs) to not charge excess reactive power charges to generators who operate, at the instruction of the DNO, with a power factor less than 0.95.

This document presents the Change Report for DCP 222 and invites respondents to vote on the following:

- whether to accept or reject DCP 222, noting whether or not DCP 222 better facilitates the DCUSA Objectives; and
- the implementation date for DCP 222.

The voting deadline for DCP 222 is **08 July 2016**.

1 PURPOSE

- 1.1 This document is issued in accordance with Clause 11.20 of the DCUSA and details DCP 222 'Non billing of excess Reactive Power charges'.
- 1.2 The voting process for the proposed variation and the timetable of the progression of the Change Proposal (CP) through the DCUSA Change Control Process is set out in this document.
- 1.3 Parties are invited to consider the proposed legal drafting amendments (Attachment 1) and submit their votes using the voting form (Attachment 2) to dcusa@electralink.co.uk no later than **08 July 2016**.

2 BACKGROUND

- 2.1 DCP 222 has been raised by Western Power Distribution to investigate options for Distribution Network Operators (DNOs) to not charge excess reactive power charges to generators who operate, at the request of the DNO, with a power factor less than 0.95.
- 2.2 This CP has been raised as a result of an issue flagged by National Grid in their paper on the System Operability Framework in September 2014. It suggests that currently there is a rapidly emerging issue around falling VAR¹ demand leading to high voltage levels on the National Electricity Transmission System operated by National Grid under low load conditions.
- 2.3 The proposer of this change has stated that following recent Statement of Works Applications to National Grid under the Connection and Use of System Code (CUSC) National Grid may add connection conditions to generation connection offers to help control reactive flows. These conditions may result in generators being requested to operate outside of the 0.95 power factor limit to assist with this system wide voltage control issue. This issue relates to EHV, 22kV or 11kV generators, although so far no DNO has currently required any HV or LV generator to operate outside the 0.95 power factor.

¹ Volt Ampere Reactive

- 2.4 There are currently two methodologies for charging Distribution Use of System (DUoS), the Extra-high-voltage Distribution Charging Methodology (EDCM) which applies to EHV designated properties and the Common Distribution Charging Methodology (CDCM) which applies to HV and LV connected Customers (including Generators). The EDCM does not have specific reactive power charges whereas the CDCM does. As a result, this CP is only looking to address issues with the CDCM.
- 2.5 Generators charged under the CDCM would currently be charged an excess reactive power charge if they were to operate outside 0.95 power factor limit. This would discourage generators carrying out this request given that those generators would be only generating outside 0.95 power factor for the wider system benefits of all customers and at the request of the DNO, if National Grid have included such a condition in the Statement of Works Application. The removal of the excess reactive power charge may therefore be appropriate where a DNO requests a generator to operate outside of the 0.95 power factor limit.
- 2.6 The proposed DCP 222 solution is to insert new tariffs, which mirror existing LV and HV tariffs, except they have no reactive power charges being applied to them in paragraph 146 table 7 and to add a new 'note 7' which states:
- 'Where a DNO Party has requested (and still requires) a generator to operate with a power factor of less than 0.95, excess reactive power charges will not apply (these instances are identified in the table as 'no RP charge').*
- 2.7 Additional information on the CP is contained within the CP form provided as Attachment 3.

3 DCP 222 WORKING GROUP ASSESSMENT

- 3.1 The DCUSA Panel established a Working Group to assess DCP 222. The group consists of Distributor, Supplier and Ofgem representatives. Meetings were held in open session and the minutes and papers of each meeting are available on the DCUSA website – www.dcusa.co.uk. The topics discussed by the Working Group are detailed below.

- 3.2 During the development of the Change Proposal the Working Group did not feel this change was required and requested the proposer consider withdrawing this change.
- 3.3 In their assessment of DCP 222, the Working Group agreed that it was important to understand the issue from the perspective of National Grid. As a result National Grid were requested to provide details, by each DNO area, where the requirement for Generators to operate outside a 0.95 Power Factor is likely to be an issue in the future and, if it is, what is the estimated year in which it could become a problem. The National Grid response is provided as Attachment 5.
- 3.4 In their response National Grid highlighted that high voltage on the network caused by falling MVar demand (there are a number of reasons for this including the changing generation portfolio, extent of cable networks, greater use of power electronics and inverter technology, reduced industrial demand and energy efficient light bulbs) is an acknowledged serious and widespread issue. The Working Group noted that the National Grid response did not include a view of all fourteen DNO regions, and did not reference DCP 222 only being able to revise the arrangements for LV and HV Generators under the CDCM. Due to the differing methodology in the EDCM for EHV Customers, it was agreed that this is out of scope of this change.

4 DCP 222 MODELLING DOCUMENTATION

- 4.1 The Working Group updated the CDCM model to reflect the proposed solution. The updated model is provided as Attachment 4 along with a description of the changes made.
- 4.2 The proposed change will mean that the CDCM model and the Annual Review Pack (ARP) will need additional half hourly generation tariffs. These new half hourly generation tariffs will be the same as the existing half hourly generation tariffs but with no charge for reactive power.

5 DCP 222 CONSULTATION ONE

- 5.1 Three consultations were issued in relation to DCP 222. The first consultation was issued to gather information and feedback from Distribution Network Operators (DNOs), Independent Distribution Network Operators (IDNOs), Suppliers, Citizens Advice, Elexon, National Grid, any other interested Parties and the Authority.

- 5.2 The Working Group agreed that the change should go to a consultation with two options (the original proposed in the CP form, Option 1 (Attachment 7), and an alternative approach, Option 2) to be considered. Option 2 would not seek to introduce new tariffs or require additional LLFC²s to be created as per Option 1.
- 5.3 The first DCP 222 consultation was issued on 30 March 2015 and there were eight responses received.
- 5.4 A summary of the responses received, and the Working Group's conclusions are set out below. The full set of responses and the Working Group's comments are provided in Attachment 6.

Question 1 - Are you supportive of the intent of DCP 222?

- 5.5 The Working Group noted that the majority of respondents were supportive of the intent of the CP.
- 5.6 One of the respondents stated that they were not supportive of the CP because more information is needed to assist Parties to assess if this is an issue which affects them or if this is going to affect only a small number of sites in certain locations.

Question 2 - Are you supportive of the principles of DCP 222?

- 5.7 The Working Group noted that six out of eight respondents were supportive of the principles of the CP.
- 5.8 One of the respondents was concerned that this change may be too restrictive. Where a special arrangement is being put in place for a particular customer if the DNO felt it was appropriate to not charge for reactive power would the DNO be precluded from doing so by this change.

Question 3 - Are there any unintended consequences of this proposal?

- 5.9 The Working Group noted that a majority of respondents felt that there may be some unintended consequences of the proposal.
- 5.10 One respondent suggested that the generator will benefit by being permitted to operate outside the 0.95 power factor for approximately 17,520 HH periods and all other customers would have to socialise the excess Reactive Power Charge that would

² LLFCs – Line Loss Factor Classes

normally be applied in this situation. The Working Group noted that this would be for a small number of customers and that the customer would only need to operate outside of 0.95 on a small number of designated HH periods. It was noted that although you could change a tariff for a specific customer for a particular day, you would not be able to do so for specific HH periods.

- 5.11 A respondent pointed out that the change is a step towards distributed generation being able to provide reactive services not only to the DNO but also to the Transmission System Operators (TSOs). The Working Group noted that it could be argued that Distribution Customers are paying to alleviate the system wide voltage control issue with no costs being borne by the TSO.
- 5.12 It was highlighted that although DNOs could request generators to operate in a certain way, the generator could choose to not provide the service of operating outside of the power factor 0.95 and instead pay for extra reinforcement of the network in order to be connected.
- 5.13 The Working Group expressed concerns that this arrangement may lead to a trilateral agreement between the Customer, Distributor and the National Grid and agreed to invite National Grid, the six DNOs and the Suppliers to share their views on the proposed change and how it might affect industry Parties.

Question 4: The Working Group considers that DCUSA General Objectives 1³ and the DCUSA charging objectives General Objective 3⁴ and Charging Objective 1⁵ are better facilitated by DCP 222, do you agree with this opinion? Please provide supporting comments on this and any other DCUSA Objective you feel may be impacted by DCP 222.

- 5.14 The Working Group noted that six of the eight consultation respondents agreed that the proposal better facilitates the DCUSA objectives.
- 5.15 The following table outlines which DCUSA Charging Objectives respondents stated as being better facilitated by the CP:

³ The development, maintenance and operation by the DNO Parties and IDNO Parties of efficient, co-ordinated, and economical Distribution Network

⁴ The efficient discharge by the DNO Parties and IDNO Parties of obligations imposed upon them in their Distribution Licences

⁵ That compliance by each DNO Party with the Charging Methodologies facilitates the discharge by the DNO Party of the obligations imposed on it under the Act and by its Distribution Licence

DCUSA General Objectives	No. Of Respondents that agree it is better facilitated	DCUSA Charging Objectives	No. Of Respondents that agree it is better facilitated
Objective 1	6	Objective 1	6
Objective 2	0	Objective 2	0
Objective 3	6	Objective 3	0
Objective 4	0	Objective 4	0
Objective 5	0	Objective 5	0

Question 5: Should a customer who has been asked during the charging year to move Line Loss Factor Class (LLFCs) and operate under these conditions, have their charge moved retrospectively?

5.16 The Working Group noted that six out of the eight respondents felt that a customer who has been requested during the charging year to operate outside the power factor of 0.95 should not have their charge moved retrospectively.

5.17 Those respondents that felt that the customer should not be charged provided the following comments in their responses:

- A customer should not be penalised for following the instructions of the Network Operator and operating outside of a 0.95 power factor – however, the tariff will have been published 15 months in advance so rather than moving a customer during the charging year, there will have to be a rigid process where customers who are expected to operate outside 0.95 power factor are notified of this 15 months in advance of that tariff being applied.
- The Customer should benefit from the date the request is effective. This is no different than the existing processes of tariff changes undertaken by suppliers.
- There is no valid reason we can see to justify retrospective application and this could be misinterpreted as a precedent for how other LLFC changes in other contexts are handled.
- It should be properly controlled by the DNOs when adding connection conditions to generation connection offers.

5.18 The Working Group agreed that they needed to consult on this issue further in order to get enough feedback from industry parties.

Question 6: Should a customer who has been asked to operate outside the 0.95 power factor for a short duration benefit from not being charged for the reactive element for the full year?

- 5.19 The Working Group noted that mixed responses were received to this question.
- 5.20 Some respondents felt that a customer who has been asked to operate outside the 0.95 power factor should be charged for the reactive element for the full year. It was noted that this may be a practical way of doing it and that customers should benefit from the start of the agreement.
- 5.21 One respondent pointed out, that customers should not benefit for the full year if it is not required by the network operator and that there should only benefit for the specific time period.

Question 7: The Change Proposal (CP) suggests that new LLFCs are needed to achieve its intent (Option 1); do you think there is a better way of achieving the intent of the CP? If so, please provide further details? Do you believe the alternative option, Option 2, a viable alternative?

- 5.22 The Working Group noted that the majority of respondents felt that Option 2 may not be a viable alternative as it is less transparent compared to Option 1.
- 5.23 It was noted that two respondents felt that a new LLFC would make the proposed change clear and transparent.

Question 8: Do you foresee any implementation issues with the two options proposed?

- 5.24 The Working Group noted that the majority of respondents felt that there could be issues with the two proposed solutions.
- 5.25 One respondent highlighted that Option 1 has issues with generators being moved between LLFCs year on year dependent on the specific need of the power system. If generators are on a “no RP charge” tariff but they are not explicitly required to operate outside of a 0.95 power factor but choose to do so, they will have been treated in a different manner than other generators; this is clearly unfair on those other generators.
- 5.26 The Working Group noted that some respondents felt that the Option 2 solution is not clear on how it would work with other DNO billing systems or if it would be compatible with Suppliers’ billing systems.

Question 9: Are there any alternative solutions or matters that should be considered?

- 5.27 The Working Group noted that three respondents provided comments on solutions that could be considered.

- 5.28 One respondent felt that the change should allow but not require generators to operate at less than 0.95 power factor without incurring reactive power charges.
- 5.29 Another respondent suggested that it may not be most cost effective to request generators to import significant quantities of reactive power causing losses in the distribution system.
- 5.30 The Working Group noted that the requirement would be captured in the connection agreement for new generators so long as both Parties agree to it.

Question 10: Are you supportive of the proposed implementation date?

- 5.31 The Working Group noted that six of the eight consultation respondents were supportive of the proposed implementation date of 1 April 2018.
- 5.32 One respondent felt that this change should not be implemented in the near future as no DNO has demonstrated the immediate need or given any indication of timescales where they feel this will be an issue. A Working Group member clarified that no evidence had been produced from a DNO where this is an issue or a timescale provided.

Question 11: Please state any other comments or views on the CP.

- 5.33 Two respondents provided further comments regarding the proposed change.
- 5.34 One respondent felt that this change introduces an additional level of complexity and uncertainty to the CDCM charging model which currently has average charges for most customers and introduces semi-site specific tariffs for this group of customers.
- 5.35 The Working Group noted that the Option 2 solution will have costs to the DNOs as their billing application will need to be amended.

Working Group discussions after Consultation One

- 5.36 The Working Group agreed that Option One was the preferred option of respondents, and as such would be the option which the Working Group would take forward.
- 5.37 Working Group members noted that if the (CDCM) generator was requested to operate outside the power factor of 0.95 then they would be able to do so for the whole charging year and not just the specific Half Hourly (HH) period(s) that the DNO requested. The CDCM is an average methodology and does not have tariffs that can be applied to HH specific time periods. This would result in the socialising of the under-recovered excess reactive power charges back into the CDCM revenue pot.

6 DCP 222 CONSULTATION TWO

- 6.1 The Working Group issued a second consultation to address concerns raised by respondents in the first consultation.
- 6.2 The second DCP 222 consultation was issued on 6 May 2015 and there were seven responses received. A summary of the responses received, and the Working Group's conclusions are set out below. The full set of responses and the Working Group's comments are provided in Attachment 7.

Question 1: National Grid has not explicitly requested that all DNOs provide this service, so do you believe that this service should be reflected by a change to the Common Distribution Charging Methodology (CDCM) for LV & HV connections?

- 6.3 The Working Group noted that the majority of respondents felt that this change should not be reflected by a change to the CDCM for LV and HV connections.
- 6.4 One respondent highlighted that if National Grid want to ask generators to operate outside of the 0.95 Power Factor this can be achieved through commercial agreements between National Grid and the Generator where National Grid can agree to pay charges for reactive power.

Question 2: The Working Group discussed whether it is correct that National Grid may benefit from this service without incurring any costs. Do you agree with this assumption?

- 6.5 The Working Group noted that all of the respondents agreed that National Grid should bear the costs of providing the service and not the DNOs.

Question 3: Has National Grid specifically requested that these connection conditions be added to new LV and / or HV generator connection offers and if so, on how many instances has this been included within new connection agreements?

- 6.6 A majority of respondents noted that National Grid had not specifically requested for the connection conditions to be added to new LV and / or HV generator connection offers.

Question 4: This change proposes an arrangement that could lead to a trilateral agreement between the Customer, DNO and National Grid. Do you believe this to be the case? Please provide comments?

- 6.7 The Working Group noted that a majority of respondents felt that the change could lead to an agreement between the National Grid and the DNOs.

- 6.8 The Working Group observed that if the change is made to the DCUSA there should be communication set up between DNOs and National Grid. It was noted that it is important for DNOs to understand the process and how charges will be applied to them.

Question 5: Should the non-billing of excess reactive power only apply to new customers?

- 6.9 The Working Group noted that all the respondents felt that the non-billing of excess reactive power should apply to all customer not just new customers.

Question 6: When is it envisaged (if at all) that this requirement to request that 11kV generators operate outside a 0.95 power factor will be needed in each DNO License area - and if appropriate, how many generators will this be expected to impact?

- 6.10 The Working Group noted that the majority of DNOs agree that there will not be an impact on generators in the future.

Question 7: If you are a DNO or IDNO and do not use the Durabill billing system, please advise how Option Two could be incorporated into your existing billing system – if at all?

- 6.11 The Working Group noted that two respondents provided further comments in their answers.

- 6.12 One of the respondents pointed out that their billing system does not have the ability to switch off an individual tariff component, rather tariffs are inserted and a tariff is linked to an individual customer. It would be possible for them to employ significant and costly changes to the system to work around this.

Question 8: If you are a Supplier do you envisage there being any billing or validation systems issues as result of Option Two being implemented?

- 6.13 The Working Group noted that one response was received stating that additional IT development may be needed to implement this change.

Working Group discussions after Consultation Two

- 6.14 The Working Group discussed the responses further and noted that most of the respondents did not believe that there is a need to make a change to the CDCM model as this would not affect most DNOs and does not affect DNOs at the current time.

- 6.15 It was highlighted that if National Grid is not changing the charging arrangements for DNOs then it would be unfair for DNOs to amend the methodology for their customers, as it is also less efficient for DNOs to operate outside 0.95 power factor limits. The Working Group requested National Grid to evaluate the cost/benefit for the customer. It was noted that this would identify the benefits for putting this change in place and

also indicate the costs of not making the change at this time. The Working Group never received a comprehensive cost benefit analysis from National Grid. The cost benefit analysis that was provided was based on another project.

- 6.16 The financial cost of making this change is seen by the Working Group as negligible. Whereas the National Grid REACT report claims that the cost of postponing this change for 5 years, as detailed in Attachment 9 (Deliverable 5, Second Year Final Report Stage 2 - REACT Project Page 22) could potentially have a minimum cost of £213 million across the 14 DNO areas. The £213 million is based on the REACT project document which came to a number of conclusions based upon only 7 GSPs and a number of assumptions have been made. It is worth noting here that this study did not examine any GSPs in Scotland.

Option 3: Removing the Charge for Reactive Power

- 6.17 During their discussions the Working Group considered a further option of removing the charge of excess reactive power for all generators in the CDCM and noted the following:

- By removing the charge of excess reactive power the intent of DCP 222 would still be met as DNOs will be removing the charge for excess reactive power for all generators, and if a generator was then instructed to operate outside the 0.95 power factor, that specific generator would not be charged for excess reactive power – thus meeting the original intent of the CP.
- The financial impact on the DNOs revenue of not charging for excess reactive power would be minimal.

- 6.18 In order to understand the financial impact of removing the charge for excess reactive power the Working Group collated information from all six DNOs detailing the interaction between 'Export Tariff Net Revenue' and 'Reactive Power Charge Revenue' for all fourteen DNO regions using the 2016/17 CDCM data.

- 6.19 The Working Group agreed to issue a third Consultation to seek industry views on Option 1 which had been previously consulted on and Option 3.

7 DCP 222 CONSULTATION THREE

- 7.1 The third DCP 222 consultation was issued on 21 March 2016 and there were eleven responses received. A summary of the responses received, and the Working Group's conclusions are set out below. The full set of responses and the Working Group's comments are provided in Attachment 8.

Question 1: Do you understand the intent of DCP 222

- 7.2 The Working Group noted that a majority of the respondents understood the intent of the CP.
- 7.3 One respondent argued that National Grid had not made it clear to the Working Group what the problem is that they are seeking to be resolved. The Working Group noted that the CP was raised as a result of an issue flagged by National Grid in regards to generators potentially being asked to operate outside of the 0.95 power factor limit to assist with this system wide voltage control issue. National Grid have been clear in their communication with the Working Group and have made clear the issue the CP is seeking to resolve.

Question 2: Do you agree with the principles of DCP 222?

- 7.4 The Working Group noted that most of the respondents agree with the principles of the CP.
- 7.5 A respondent not supportive of the CP highlighted that the scale of the issue this CP seeks to address has not been demonstrated effectively and they do not believe an adequate case has been made to justify any changes to the CDCM at this time. Alternative solutions to changing the CDCM should be considered i.e. contractual agreements between National Grid and the Distributed Generation customer.

Question 3: Are there any unintended consequences of this proposal?

- 7.6 The Working Group noted that some of the respondents felt that there may be some unintended consequences of the proposal.
- 7.7 One respondent pointed out that Option 1 could result in a trilateral agreement between the DNOs and National Grid and that from experience the industry may not be supportive of trilateral agreements. The Working Group noted that DCP 222 is seeking to address the issue on a potential agreement between the DNO and National Grid.

- 7.8 Another respondent felt that the report does not address what analysis has been done on generator behaviour if the excess reactive charges were to be removed as it references that failure to maintain the correct reactive level would be considered as a breach of the connection agreement. The group noted that the respondent is not supportive of Option 3 which would result in the removal of the charge for excess reactive power for all generators in the CDCM and would bring them more in line with generators connected at EHV, where there is no explicit charge for reactive power but it is taken account of within the methodology.
- 7.9 A respondent noted that with Option 1 it may be difficult to forecast the level of generators who are operating outside 0.95 power factor limit. The Working Group noted that operating outside 0.95 will impact a small number of customers with minimal value.
- 7.10 The Working Group noted that most of the respondents were not supportive of Option 3 which would result in the removal of the charge for excess reactive power for all generators in the CDCM and would bring them in line with generators connected at EHV.

Question 4: For each option (1 & 3) which DCUSA General Objectives does the CP better facilitate? Please provide supporting comments.

- 7.11 The Working Group noted that there were mixed responses as to whether the General Objectives are better facilitated by the CP.
- 7.12 The following table outlines which DCUSA General Objectives respondents stated as being better facilitated by the CP:

DCUSA General Objectives	No. Of Respondents that agree it is better facilitated
Objective 1	6
Objective 2	0
Objective 3	3
Objective 4	1
Objective 5	0
CP Not facilitated by Objectives	2

- 7.13 Respondents had mixed views on whether the DCUSA Objectives are better facilitated by the CP with one respondent highlighting that both options are contrary to efficient

charging arrangements and therefore do not believe the DCUSA General Objectives are better facilitated.

- 7.14 A number of respondents agreed that the DCUSA General Objective One is better facilitated by DCP 222:

DCUSA General Objective One: The development, maintenance and operation by each of the DNO Parties and IDNO Parties of an efficient, co-ordinated, and economical Distribution System.

- 7.15 DCUSA General Objective One better facilitates Option 1 as it helps with the control of reactive power. However, some of the Working Group members feel that the DCUSA General Objectives do not best facilitate the proposed change.

Question 5: For each option (1 & 3) which DCUSA Charging Objectives does the CP better facilitate? Please provide supporting comments.

- 7.16 The Working Group noted that there were mixed responses as to whether the Charging Objectives are better facilitated by the CP.

- 7.17 The following table outlines which DCUSA Charging Objectives respondents stated as being better facilitated by the CP:

DCUSA Charging Objectives	No. Of Respondents that agree it is better facilitated
Objective 1	5
Objective 2	0
Objective 3	3
Objective 4	0
Objective 5	0
CP Not facilitated by Objectives	3

- 7.18 The Working Group noted that there were diverse responses as to whether the Charging Objectives are better facilitated by the CP. It was also highlighted that there is a difference of opinion within the Working Group.

Question 6: Is your preference for Options 1 or 3? (The Working Group has at this time discounted Option 2). Please provide reasons.

- 7.19 The Working Group noted that responses to this question were mixed. The following table provides a summary of the responses received.

Is your preference for Options 1 or 3? (The Working Group has at this time discounted Option 2). Please provide reasons.	
Option 1	5
Option 3	3
No preference	3

7.20 Some respondents supported Option 1 while others did not support either Option 1 or Option 3. The respondents in support of Option 1 pointed out that this option allows for any generators that have been asked by the DNO to operate outside a 0.95 PF not to receive excess reactive charges and will continue to provide a signal to generators to operate at or near unity.

7.21 A few of the respondents preferred Option 3 and pointed out that this Option would be simpler to implement and bring CDCM generators more in line with EDCM generators.

Question 7: Do you believe there are any implementation issues with either option 1 or 3?

7.22 The Working Group noted that some respondents prefer Option 1 as this allows for any generators that have been asked by the DNO to operate outside a 0.95 power factor limit not to receive excess reactive charges.

7.23 A respondent highlighted that there could be issues with the implementation of Option 1 as it would require new LLFCs to be set-up requiring some advanced notice. It was also noted that Option 1 creates an additional level of complexity in the CDCM by creating new tariffs.

7.24 For Option 3 it was highlighted that this would be simpler to implement and bring CDCM generators more in line with EDCM generators.

Question 8: Which option do you believe is more reflective of the costs incurred by a DNO of allowing a generator to operate outside the 0.95 power factor?

7.25 Most of the respondents believe that Option 1 is more cost reflective as the principle of charging excess reactive power will remain for those generators not asked to operate outside the 0.95 power factor thereby the costs imposed on the DNO would continue to be reflected in the CDCM.

7.26 One respondent argued that It is difficult to say which option is more cost reflective as the values recovered could be classed as insignificant, therefore it may be more

appropriate to recover these costs through other elements of the charge.

Question 9: Does the excess reactive power charge for generators provide an incentive for generators to run more efficiently?

7.27 Most of the respondents felt that the excess reactive power charge provides an incentive for generators to run more efficiently. A respondent highlighted that reactive power charges were put in place for a reason and that they allow the distribution network to operate more efficiently.

7.28 Another respondent noted that the purpose of the excess reactive power charge is to encourage the generator to run more efficiently which would have a positive impact on the operation of the network.

Question 10: Are there any alternative solutions or matters that should be considered?

7.29 A few of the respondents suggested other options that could be considered in dealing with reactive power. One suggestion was that National Grid should incur the cost by compensating generators directly for any DNO reactive power charges incurred by the generator. It was noted that this would ensure all benefits and costs are sustained by National Grid, and so the costs of generators operating outside power factor limits could be properly evaluated against other alternative actions that National Grid may be able to undertake.

7.30 Another respondent suggested that it may be of benefit to consider a solution that takes into account the potential impacts on Capacity Charges.

7.31 The Working Group noted that CDCM generators do not pay capacity charges therefore excess reactive power charges do not impact the excess capacity charge calculation in the same way as demand customers.

Question 11: Are you supportive of the proposed implementation date of 1 April 2018?

7.32 It was noted that most of the respondents were supportive of the implementation date of 1 April 2018.

Question 12: Please state any other comments or views on the Change Proposal.

7.33 Some of the respondents felt that currently there is no requirement for this change to be made as there is no current request for CDCM generators to operate outside 0.95 power factor. It was highlighted that if Option 1 is to be implemented customers would

receive the benefit for the full year, whether or not it is required by the DNO.

- 7.34 The Working Group noted that the reactive power charges provide an economic incentive for generators to run in a way that enables the distribution network to which they are connected to operate more efficiently; this is the justification for having reactive power charges in the CDCM.
- 7.35 Another respondent queried that this CP may be addressing issues which are outside of the scope of the DCUSA and pointed out that the Standard Licence Condition (SLC) 12 is about the distributor meeting the needs of the customer and not about meeting their own needs. The Working Group noted that this issue as highlighted is not material to the change.

8 WORKING GROUP ASSESSMENT OF DCP 222 FOLLOWING INDUSTRY CONSULTATION

- 8.1 After reviewing the consultation responses, the Working Group discussed the CP.
- 8.2 The majority of the Working Group agreed with Option 1 as the proposed solution to DCP 222. It was noted that the Option will create new tariffs with no reactive power charges being applied to them in the CDCM but will otherwise mirror the existing LV and HV Generation charges.
- 8.3 The Working Group acknowledged that a few members of the Working Group were in support of Option 3 as this would be simpler to implement and bring CDCM generators more in line with EDCM generators.
- 8.4 The group considered whether a member of the Working Group preferred to raise an Alternative CP for Option 3. The member of the Working Group confirmed that they would not wish to raise an Alternative CP and agreed for the Working Group to progress with proposed solution, Option 1.
- 8.5 At the current time it is felt that this issue does not impact all DNOs; however, the evidence from National Grid suggested that all DNOs are likely to be impacted, even if it is not for a number of years.

9 PROPOSED LEGAL TEXT

- 9.1 The proposed legal drafting for DCP 222 has been considered by the Working Group,

and reviewed by the DCUSA legal advisor, and is provided as Attachment 1.

- 9.2 The Working Group noted that the legal text states that new tariffs will be needed and agreed that a change to the CDCM model will be required to reflect the additional tariffs in the legal text. The Working Group agreed to put together a model specification to reflect the changes as shown in the legal text.
- 9.3 This legal text amends paragraph 146 table 7, and inserts new tariffs with no reactive power charges being applied to them and also inserts a new note 7.

10 EVALUATION AGAINST THE DCUSA OBJECTIVES

- 10.1 For a DCUSA CP to be approved it must be demonstrated that it better meets the DCUSA Objectives. Since DCP 222 consultation one and three were issued, Ofgem has directed that DCUSA Working Groups on charging methodology CPs should only consider which DCUSA Charging Objectives are best facilitated by the change. There are five Charging Objectives, the full list of objectives is documented in the CP form provided as Attachment 3.
- 10.2 Both the views of Working Group and the responses to the consultation(s) were mixed on whether the CP better facilitates the Charging Objectives.

DCUSA Charging Objective One - That compliance by each DNO Party with the Charging Methodologies facilitates the discharge by the DNO Party of the obligations imposed on it under the Act and by its Distribution Licence

- 10.3 DCUSA Charging Objective One was felt to be better facilitated by some responses to the consultation(s) and some members of the Working Group. Although in both cases this was less than half the total of those who stated a view, however it was felt that the proposed change could help with the control of reactive power.

11 DCP 222 WORKING GROUP CONCLUSIONS

- 11.1 The DCP 222 Working Group has discussed the proposed amendment to DCUSA.
- 11.2 Based upon the feedback from the three consultations some members of the Working Group support Option 1 which is to insert new tariffs which mirror existing LV and HV tariffs except they have no reactive power charges being applied to them into Schedule

16 of the DCUSA. (Attachment 1).

11.3 The Working Group agrees that the CP should be issued for industry voting.

12 IMPLEMENTATION

12.1 The proposed implementation date of DCP 222 is 1 April 2018.

12.2 DCP 222 is classified as a Part 1 matter and therefore will go to the Authority for determination after the voting process has completed.

13 ENGAGEMENT WITH THE AUTHORITY

13.1 Ofgem has been fully engaged throughout the development of DCP 222 as a member of the Working Group.

14 ENVIRONMENTAL IMPACT

14.1 In accordance with DCUSA Clause 11.14.6, the Working Group assessed whether there would be a material impact on greenhouse gas emissions if DCP 222 were implemented. The Working Group did not identify any material impact on greenhouse gas emissions from the implementation of this CP.

15 PANEL RECOMMENDATION

15.1 The Panel approved this Change Report on **15 June 2016**. The Panel considered that the Working Group had carried out the level of analysis required to enable Parties to understand the impact of the proposed amendment and to vote on DCP 222.

15.2 The timetable for the progression of the Change Proposals is set out below:

Activity	Date
Change Report approved by DCUSA Panel	15 June 2016
Change Report Issued for Voting	17 June 2016
Party Voting Closes	08 July 2016
Change Declaration Issued	12 July 2016
Authority Decision	16 August 2016
Implementation	01 April 2018

16 NEXT STEPS

- 16.1 Parties are invited to consider the proposed amendment (Attachment 1) and submit their votes using the Voting form (Attachment 2) to DCUSA@electralink.co.uk by **08 July 2016**.
- 16.2 If you have any questions about this paper or the DCUSA Change Process please contact the DCUSA by email DCUSA@electralink.co.uk to or telephone 020 7432 3008.

ATTACHMENTS:

- Attachment 1 – DCP 222 Legal Text
- Attachment 2 – Voting Form
- Attachment 3 – Change Proposal Form
- Attachment 4 – Modelling Documentation
- Attachment 5 – National Grid Response
- Attachment 6 – DCP 222 Consultation One Document
- Attachment 7 – DCP 222 Consultation Two Document
- Attachment 8 – DCP 222 Consultation Three Document
- Attachment 9 – National Grid Report (Deliverable 5. Second Year Final Report Stage 2 - REACT Project)