



DCUSA Consultation

DCP 274 – The Application of Export Capacity Charges in the EDCM

DCP 274 is an electricity industry Change Proposal under the governance of the Distribution Connection and Use of System Agreement (DCUSA) that seeks to amend the Electricity Distribution Charging Methodologies (EDCM) so distributed generation and storage sites do not pay distribution Use of System (UoS) charges twice for the import and export from a site where the same assets are used.

This document presents a consultation for DCP 274 and invites all parties to respond on the proposed change by the **16 September 2016**.

1 PURPOSE

- 1.1 The Distribution Connection and Use of System Agreement (DCUSA) is a multi-party contract between electricity Distributors, electricity Suppliers and large Generators. Parties to the DCUSA can raise Change Proposals (CPs) to amend the Agreement with the consent of other Parties and (where applicable) the Authority. More information is available at www.dcusa.co.uk
- 1.2 The Electricity Distribution Charging Methodology (EDCM) sets out the methods, principles, and assumptions underpinning the EDCM for the calculation of Use of System Charges by DNO¹ Parties. The DCUSA contains the EDCM within it and so is the mechanism by which the EDCM may be varied. A full copy of the DCUSA is available at www.dcusa.co.uk.
- 1.3 DCP 274 *'The application of export capacity charges in the EDCM'* is a DCUSA Change Proposal that seeks to amend the EDCM. This document is a consultation issued to all DCUSA Parties, interested third parties, and the Authority in accordance with Clause 11.14 of the DCUSA seeking views on DCP 274.
- 1.4 Parties are invited to consider the points made in this consultation, together with the proposed legal drafting set out in Attachment 2 and submit comments using the response form provided as Attachment 1 to DCUSA@electralink.co.uk by **16 September 2016**.

2 CURRENT ARRANGEMENTS

- 2.1 The current EDCM methodology applies an import capacity charge and an export capacity charge to distributed generation sites which includes electricity storage. The export capacity charge consists primarily of an Operations & Maintenance (O&M) charge which is defined within the EDCM methodology as £0.2/kW. The import capacity also includes an element of O&M charges.
- 2.2 When importing and exporting, distributed generation sites generally use the same distribution assets subject to network conditions at times of import compared to times of export. Applying an export capacity charge to the Maximum Export Capacity (MEC) and an

¹ DNO – Distribution Network Operator

import capacity charge to the Maximum Import Capacity (MIC) effectively applies the same charge where the MIC and MEC overlaps, such as in the case of distributed generation sites.

- 2.3 This CP has been raised to amend the EDCM methodology to apply the export capacity charge to the difference between the MEC and the MIC. To implement this change, the legal text will require changes to Clause 12.6 in DCUSA Schedule 18, and these changes have been included in Attachment 2.

3 INTENT OF DCP 274 'THE APPLICATION OF EXPORT CAPACITY CHARGES IN THE EDCM'

- 3.1 DCP 274 has been raised by Neas Energy Ltd and seeks to amend the EDCM methodology to ensure that distributed generation and storage sites do not pay distribution use of system charges twice for the import and export from a site where the same assets are used.

4 WORKING GROUP

- 4.1 The DCUSA Panel established a DCP 274 Working Group which consists of Distributed Generation (DG), Supplier, DNO and Ofgem representatives. Under DCUSA there is a continuous open invitation to any experts in the relevant subject matter who wish to join this Working Group.

5 WORKING GROUP ANALYSIS

5.1 The current EDCM methodology calculates a charge for eligible generation which consists of a unit based credit, a fixed charge and an export capacity based charge. The export capacity charge consists of an O&M charge only following the approval of DCP 232 which sets the GL and GPa components to zero.

5.2 The O&M element of the export charges in the EDCM is set at £0.2/kW. This value was determined based on data submitted in DNOs Forward Business Plan Questionnaire submissions to Ofgem. The methodology used to determine the O&M value is replicated below for information:

"For the purpose of estimating O&M costs the DNOs have relied on information contained within each DNO's Forward Business Plan Questionnaire (FBPQ) submissions to Ofgem. The

most recent FBPQ submissions were prepared by the DNOs and sent to Ofgem as part of the fifth distribution price control review (DPCR5, April 2010 to March 2015) in a common format. Sheet LR2 of these submissions contains each DNO's forecasts of new generation capacity and the qualifying capital expenditure that would need to be incurred to connect these.

An analysis of these FBPQ submissions suggests that the average forecast capital expenditure (excluding sole use assets) per unit of new generation capacity (in £/kW) in each DNO area over the DPCR5 period ranges from 0 to £67/kW. The simple average of these numbers is £20.02/kW and a weighted average (weighted by new capacity) is £19.74/kW. The median is £15.66/kW.

DNOs believe that an O&M rate of 1 per cent of the forecast capital expenditure is reasonable, and when applied to these estimates would suggest an O&M contribution of approximately £0.20/kW. The O&M rate of 1 per cent is consistent with rates previously used for the DG incentive revenue calculations.”²

5.4.5.3 The Working Group considered previous discussions at the Distribution Charging Methodology Forum (DCMF) Methodology Issues Group (MIG) prior to the raising of this issue as a formal change under DCUSA. The question was raised as to whether the approach set out in the EDCM was fair if the customer was using ~~different~~ the same assets for the import and export of electricity on-site.

5.4 The Working Group noted that the customer tends to be using the same assets for importing and exporting electricity from the site but ~~conceded~~ that in some cases for technical reasons the customer may be using some different assets. Network conditions may be different at times when energy is flowing into the site compared to when it is flowing out of the site causing different assets to be used at times of import compared to times of export.

5.5 The EDCM only takes account of individual assets when looking at those which are sole use (SUA). T, the assessment of shared use assets used is taken account in the calculation of the

² Source: EDCM Consultation on the methodology for export charges (March 2012)

Network Use Factors (NUFs) which are grouped by voltage level. It should be noted that the import and export methodologies are very different and it may therefore not be appropriate to compare the two. The import methodology takes account of assets by voltage level and utilises the NUFs and, the Operational repair & Maintenance (O & M) is therefore recovered on the SUA and the shared assets. However, whereas the export methodology uses the £0.2/kW charging rate as a proxy for O & M but to recover income which is based on previous price control incentive mechanisms and on the additional shared use assets required to connect generation does not relate to specific assets. The resultant charging rates are therefore also very different.

5.6 The use of the NUFs is also different for mixed sites that have both import and export capability. Where a site is deemed to be generation dominated by reference to the large of the MIC and MEC then the NUFs are capped. The DNO determines whether the site is generation dominated based on the following criteria as set out in DCUSA:

"The choice of model is based on whether the Connectee's dominant operating mode is that of a demand Connectee or a generation Connectee (determined by examination of the Connectee's Maximum Import Capacity and Maximum Export Capacity or kWh consumptions as appropriate)."

5.7 The determination of whether a site is deemed to generation dominant is used by DNOs when modelling a site in their powerflow analysis to determine the locational element of the DUoS price that is applied to each site. In addition, the powerflow is also used to determine the NUFs that apply to each site. For an import site the NUFs are used to determine an allocation of:

- direct costs
- indirect costs
- network Rates; and
- demand scaling

5.8 The elements of the import tariff that relate to O&M are the allocation of direct, indirect and network rates. It is these elements that are also applied to the export tariff, albeit in a different format.

5.25.9 Members considered that if different the same assets were in use, iswas it still reasonable

to request a customer to pay for using the same part of the network twice. Other members queried whether the ~~proposed~~ double charge referred to in the change proposal was in fact the cost recovery mechanism for two different assets, or for two different costs on the same assets. The Working Group seeks your views on this discussion at question 3, 4 and 5 of this consultation.

5.5.10 This CP proposes to amend the EDCM methodology to ensure that distributed generation and storage sites do not pay ~~distribution Use of System~~ charges twice for the import and export from a site where the same assets are used. The solution put forward therefore proposes to levy charge the import charge up to the full level of the MIC and levy charge the export charge on up to the difference between the MEC and the MIC. For example, a site with a MIC of 4MW and a MEC of 1MW would be charged the import capacity charge for 4MW and no export capacity charge; whereas a site with a MIC of 4MW and a MEC of 7MW would be charged the import capacity charge for 4MW and the export capacity charge for 3MW.

5.4 ~~For instances where the fixed export capacity charge in p/kVA/day when applied to the Chargeable Export Capacity is less than the MIC of each EDCM Connectee, if the calculation results in a value less than zero then the Chargeable Export Capacity less the MIC is deemed to be zero.~~

5.5.11 The Working Group considered the Energy Network Association (ENA) 'EDCM Report on Condition 3' paper which contains a section on capped Network Use Factors (NUFs) for generation dominated sites (Attachment 4) and ask industry parties views on whether it is appropriate to cap the Network Use Factor (NUF) at question 6.

Alternative Solution

5.12 An alternative solution is to remove O&M charges and possibly the scaling element from the import charges of a generation dominant site. The allocation of an O&M charge and any other applicable charges across the import and export MPANs of a mixed use site needs to be cost reflective to ensure sites are charged fairly.

5.13 The principle used within the EDCM is to determine the allocation of costs within the powerflow model based on a notional use of assets when the system is under most stress

Commented [AP1]: JW comment - Possibly better replaced by "users with both MEC and MIC"?

Commented [EA2]: This isn't clear – are we saying:

- If a site has bigger MIC than MEC they will be charged only import capacity on the MIC;
- If a site has identical MIC and MEC they will be charged only import capacity on the MIC
- If a site has MEC bigger than MIC, they will be charged import capacity on the full MIC and export capacity on the difference between MEC and MIC

?

Commented [WP3]: I think the confusion here is resulting from a mixed use of Chargeable Capacity, when it should focus on only using the reference to MIC and MEC. AP to confirm this is the case?

Commented [AP4]: JW comment - Possible confusion by referring to both charges (£) and capacity (MW). Do we mean:

"Where the MIC is greater than the MEC, and so where the difference between the two is negative, then the export charge would be zero rather than negative.

If the text added to the paragraph above is accepted by the workgroup, is this paragraph 5.4 still needed, or is paragraph 5.4 making a different points?

Commented [AP5]: JW comment - Wasn't the alternative solution to look at removing the import charge element?

-Questioned whether it should include scaling

(ie at time of peak demand). To enable this, the predominance of mixed sites need to be determined as the powerflow model needs to be run with each mixed site operating as either import or export. Clearly, this assumption has a large impact as a mixed site that is importing at time of peak demand is driving costs for the DNO, whereas a mixed site that exports at time of peak can contribute to a reduction in DNO costs.

5.14 As a mixed site customer with a generation predominance is modelled as export at time of peak, the underlying assumption is that the site will import at a time when the system is not under stress and therefore will not drive a DNO's costs. The use of capped NUFs is meant to represent this low level of cost. However, under the principle established by the EDCM, NUFs represent the notional assets used by demand customers at time of peak and therefore a mixed site with a generation predominance does not import at time of peak and should have a zero NUF. This would remove the O&M element of the charge for generation dominated mixed site customers and also remove the scaling element of the charge. ~~export sites as O&M charges are larger per unit for the import side than the export and cap the NUFs on the import side of a mixed site.~~

~~5.65.15~~ The ~~Working -~~Group agreed that this approach could have ~~a more significant impact~~ as ~~on DNOs would still have to recover the same targeting revenues so other on~~ customers would have to pick up any shortfall in revenue. The working group ~~and~~ seek your views at question 7 and 8.

5.16 The Working Group questioned which Parties would be impacted by this DCP. ~~Some~~as members did not believe there to be a large number of Parties that would be susceptible to dual charging as described. It is thought that the impacted Parties would be ~~those who utilise energy storage facilities~~ distributed generation sites which also have significant import capacity (e.g. industrial sites with on-site intermittent generation).

5.17 Most embedded generators will have both a MIC and a MEC which may both be chargeable. It will have a greater impact on energy storage sites as they are likely to have MIC and MEC set at a similar level, whereas most generators would have a MIC which is much smaller than their MEC.

Commented [AP6]: JW comment - Presumably this will impact anyone with MIC and MEC, which isn't limited to storage sites?

6 LEGAL DRAFTING

- 6.1 The Working Group is interested in Parties views on the proposed legal drafting included as Attachment 2.

Commented [CH7]: Is there any legal text for the alternate solution?
-I think we gather views at this stage

7 ASSESSMENT AGAINST THE DCUSA OBJECTIVES

- 7.1 Changes to the DCUSA must better facilitate the DCUSA objectives³. The proposer reviewed the CP against the DCUSA Objectives and believes that DCP 274 better facilitates DCUSA Charging Objective 3⁴.

Commented [CH8]: Ofgem directed that changes to the charging methodology objectives should be considered against the charging objectives only.

DCUSA Charging Objective 3

“that compliance by each DNO Party with the Charging Methodologies results in charges which, so far as is reasonably practicable after taking account of implementation costs, reflect the costs incurred, or reasonably expected to be incurred, by the DNO Party in its Distribution Business”.

Commented [CH9]: Working Group: Do you agree that this change is better facilitated against Charging Objective 3? The wording set out in this section has been taken from the CP form.

Commented [AP10]: JW comment - Would the removal of any double charging also facilitate competition as a user's charges would better reflect their impact on the network (and possibly reduce discrimination between users if other users don't face double charging)?

³ DCUSA Charging Objectives

1. 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
2. that compliance by each DNO Party with the Charging Methodologies facilitates competition in the generation and supply of electricity and will not restrict, distort, or prevent competition in the transmission or distribution of electricity or in participation in the operation of an Interconnector (as defined in the Distribution Licences)
3. that compliance by each DNO Party with the Charging Methodologies results in charges which, so far as is reasonably practicable after taking account of implementation costs, reflect the costs incurred, or reasonably expected to be incurred, by the DNO Party in its Distribution Business
4. that, so far as is consistent with Clauses 3.2.1 to 3.2.3, the Charging Methodologies, so far as is reasonably practicable, properly take account of developments in each DNO Party's Distribution Business
5. that compliance by each DNO Party with the Charging Methodologies facilitates compliance with the Regulation on Cross-Border Exchange in Electricity and any relevant legally binding decisions of the European Commission and/or the Agency for the Co-operation of Energy Regulators.

7.2 The Working Group is interested in parties views on which of the following DCUSA Charging Objectives are better facilitated by this change and why.

- 1. 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
- 2. that compliance by each DNO Party with the Charging Methodologies facilitates competition in the generation and supply of electricity and will not restrict, distort, or prevent competition in the transmission or distribution of electricity or in participation in the operation of an Interconnector (as defined in the Distribution Licences)
- 3. that compliance by each DNO Party with the Charging Methodologies results in charges which, so far as is reasonably practicable after taking account of implementation costs, reflect the costs incurred, or reasonably expected to be incurred, by the DNO Party in its Distribution Business
- 4. that, so far as is consistent with Clauses 3.2.1 to 3.2.3, the Charging Methodologies, so far as is reasonably practicable, properly take account of developments in each DNO Party's Distribution Business
- 5. that compliance by each DNO Party with the Charging Methodologies facilitates compliance with the Regulation on Cross-Border Exchange in Electricity and any relevant legally binding decisions of the European Commission and/or the Agency for the Co-operation of Energy Regulators.

7.2 believes DCUSA Charging Objective 3 is better facilitated as it removes a potential area of double charging and results in more cost reflective charges for both distributed generation and storage.

8 IMPLEMENTATION

8.1 The proposed implementation date for DCP 274 is the 01 April 2019. DCP 178 introduced a 15 month notification period for changes to Use of System charges from 2016. As a

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result, for this change to be implemented on the 01 April 2019, it will need to be approved prior to tariff setting in December 2017 so that it may included in the relevant models.

9 CONSULTATION

9.1 The Working Group is seeking views on the below questions:

1. Do you understand the intent of DCP 274?
2. Are you supportive of the principles of DCP 274?
3. Do you consider that mixed sites use the same assets for import and export, and should the assets be charged for individually?
4. Do you think O&M should be recovered on the import or export?
5. How should the revenue shortfall be recovered?
6. Do you think capping the Network Use Factors (NUF) on the import side of a mixed site is appropriate?

7. If a site is generation dominated, if it is importing, is it driving any costs for the DNO's?

7-8. Where a site is generation dominated is it more appropriate to set the NUFs to zero rather than cap them. If you think this is a more cost reflective approach should it extend to the O&M element or include scaling?

8-9. Do you have any comments on the proposed legal text?

9-10. Which DCUSA Charging Objectives does the CP better facilitate? Please provide supporting comments.

1. 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
2. that compliance by each DNO Party with the Charging Methodologies facilitates competition in the generation and supply of electricity and will not restrict, distort, or prevent competition in the transmission or distribution of

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electricity or in participation in the operation of an Interconnector (as defined in the Distribution Licences)

3. that compliance by each DNO Party with the Charging Methodologies results in charges which, so far as is reasonably practicable after taking account of implementation costs, reflect the costs incurred, or reasonably expected to be incurred, by the DNO Party in its Distribution Business
4. that, so far as is consistent with Clauses 3.2.1 to 3.2.3, the Charging Methodologies, so far as is reasonably practicable, properly take account of developments in each DNO Party's Distribution Business
5. that compliance by each DNO Party with the Charging Methodologies facilitates compliance with the Regulation on Cross-Border Exchange in Electricity and any relevant legally binding decisions of the European Commission and/or the Agency for the Co-operation of Energy Regulators.

~~10.11.~~ Are you supportive of the proposed implementation date of DCP 274 of 01 April 2019?

~~11.12.~~ Are you aware of any wider industry developments that may impact upon or be impacted by this CP?

~~12.13.~~ Are there any alternative solutions or unintended consequences that should be considered by the Working Group?

9.2 Responses should be submitted using Attachment 1 to DCUSA@electralink.co.uk no later than **16 September 2016**.

9.3 Responses, or any part thereof, can be provided in confidence. Parties are asked to clearly indicate any parts of a response that are to be treated confidentially.

10 NEXT STEPS

10.1 Responses to the Consultation will be reviewed by the DCP 274 Working Group. The Working Group will then determine the progression route for the DCP.

10.2 If you have any questions about this paper or the DCUSA Change Process please contact the DCUSA Help Desk by email to DCUSA@electralink.co.uk or telephone 020 7432 3011.

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11 ATTACHMENTS

Attachment 1 - DCP 274 Consultation Response Form

Attachment 2 - DCP 274 Draft Legal Text

Attachment 3 - DCP 274 Change Proposal

Attachment 4 - Energy Network Association (ENA) *'EDCM Report on Condition 3'* Paper