









DCUSA Consultation		At what stage is this document in the process?
<h1>DCP 274</h1> <h2>The Application of Export Capacity Charges in the EDCM</h2> <p><i>Raised on the 10 June 2016 as a Standard Change</i></p>		01 – Change Proposal
		02 – Consultation
		03 – Change Report
		04 – Change Declaration
<p><b>Purpose of Change Proposal:</b></p> <p>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.</p> <p>This document is a Consultation issued to DCUSA Parties and any other interested Parties in accordance with Clause 11.14 of the DCUSA seeking industry views on DCP 274.</p>		
	<p>The Workgroup recommends that this Change Proposal should:</p> <ul style="list-style-type: none"> <li>• proceed to Consultation</li> </ul>	
	<p>Parties are invited to consider the questions set in section 10 and submit comments using the form attached as Attachment 1 to <a href="mailto:dcusa@electralink.co.uk">dcusa@electralink.co.uk</a> by <b>28 November 2016</b>.</p>	
	<p>DCP 274 has been designated as a Part 1 Matter.</p>	
	<p>The Working Group will consider the consultation responses and determine the appropriate next steps for the progression of the Change Proposal (CP).</p>	
	<p>Impacted Parties: Distributors and Distributed Generation</p>	
	<p>Impacted Clauses: Schedule 17 EHV Charging Methodology (FCP Model) and Schedule 18 EHV Charging Methodology (LRIC Model)</p>	

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Timetable		
The timetable for the progression of the CP is as follows:		
<b>Change Proposal timetable</b>		
<b>Change Proposal timetable:</b>		
Activity	Date	
Initial Assessment Report Approved by Panel	15 June 2016	
Consultation issued to Parties	07 November 2016	
Change Report issued to Panel	10 May 2017	
Change Report issued for Voting	19 May 2017	
Party Voting Ends	09 June 2017	
Change Declaration Issued to Parties	13 June 2017	
Change Declaration issued to Authority	18 July 2017	
Authority Decision	1 April 2019	

## 1. Summary

### What?

- 1.1 The Distribution Connection and Use of System Agreement (DCUSA) is a multi-party contract between electricity Distributors and 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.

### Why?

- 1.2 DCP 274 has been raised by Neas Energy Limited 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.

### How?

- 1.3 This change proposes that 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 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.
- 1.4 This consultation seeks Parties views on the principles of this change and two solutions. The originating solution seeks to apply the export capacity charge to the difference between the MEC and the MIC. The alternative solution is based on the principle that notional assets are 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 Network Use Factor (NUF). This solution will remove O&M<sup>1</sup> charges and possibly the scaling element from the import charges of a generation dominant site. Once a preferred solution has been identified as a result of this consultation, legal text changes to Schedule 17 and 18 will be developed.

## 2 Governance

### Justification for Part 1 Or Part 2 Matter

- 2.1 DCP 274 is classified as a Part 1 matter and therefore will go to the Authority for determination after the voting process has completed.

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<sup>1</sup> O&M – Operational repair & Maintenance

- 2.2 This issue is considered a part 1 matter as it affects the level of charges for embedded generation and therefore impacts on competition for embedded generation as specified under 9.4.2 (A).

### Requested Next Steps

Following a review of the Consultation responses, the Working Group will work to agree the detail of the solution for DCP 274.

## 3 Why Change?

### Background of DCP 274

- 3.1 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.
- 3.2 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 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.
- 3.3 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.

## 4 Code Specific Matters

### Reference Documents

n/a

## 5 Working Group Assessment

### DCP 274 Working Group Assessment

- 5.1 The DCUSA Panel established a DCP 274 Working Group which consists of Distributed Generation (DG), Supplier, DNO, National Grid 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.
- 5.2 The Working Group developed this consultation document to gather information and feedback from market participants.

5.3 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<sup>2</sup> and GPa components to zero.

5.4 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.”<sup>3</sup>*

5.5 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 the same assets for the import and export of electricity on-site.

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<sup>2</sup> The GP and GL terminology contribute to part of the EDCM generation revenue. The GP term relates to DPCR5 generation pass-through revenue, which is based on the amount of use of system capex for generation that was subject to the pass-through arrangement under the DPCR5 price control. The GL term relates to DPCR4 generation revenue, which represents revenue in respect of the generation that was connected to the distribution system prior to 31 March 2010, reflecting the generation incentive scheme that was in effect at that date.

<sup>3</sup> Source: EDCM Consultation on the methodology for export charges (March 2012)

- 5.6 The Working Group noted that the customer tends to be using the same assets for importing and exporting electricity from the site but 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.
- 5.7 The EDCM only takes account of individual assets when looking at those which are sole use assets (SUA). The assessment of shared use assets is taken account in the calculation of the 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, the export methodology uses the £0.2/kW charging rate as a proxy for O&M on the additional shared use assets required to connect generation. The resultant charging rates are therefore also very different.
- 5.8 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 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).”*
- 5.9 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
  - network Rates; and
  - Variable element of demand scaling (asset based scaling)
- 5.10 The elements of the import tariff that relate to O&M are the allocation of direct and network rates. It is these elements that are also applied to the export tariff, albeit in a different format.
- 5.11 Members considered that if the same assets were in use, is it reasonable to request a customer to pay for using the same part of the network twice. Other members queried whether the double charge referred to in the CP 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.
- 5.12 This CP proposes to amend the EDCM methodology to ensure that distributed generation and storage sites do not pay 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 the import charge up to the full level of the MIC and levy the export charge on 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.

- 5.13 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 3) and ask industry parties views on whether it is appropriate to cap the Network Use Factor (NUF) at question 6.

#### Alternative Solution

- 5.14 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.
- 5.15 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 (i.e. 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.
- 5.16 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.
- 5.17 The Working Group agreed that this approach could have a more significant impact as DNOs would still have to recover the same target revenue so other customers would have to pick up any shortfall in revenue. The Working Group seek your views at question 7 and 8.
- 5.18 The Working Group questioned which Parties would be impacted by this DCP. Some 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 distributed generation sites which also have significant import capacity (e.g. industrial sites with on-site intermittent generation).



- 5.19 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.

#### Working Group View on the Proposed Solutions

- 5.20 The Working Group members noted that they are putting forward two very distinct solutions, which reflects the fact that the O&M elements are calculated differently on import and export within the Charging Methodology. The group has not yet concluded which is its preferred solution. Consultation respondents are invited to put forward evidence to support why the proposed solution or its alternative improves cost reflectivity.

## 6 Impacts & Other Considerations

- 6.1 Distributors and Distributed Generators will be impacted by this change as this CP 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.
- 6.2 Depending on the preferred solution identified as a result of this consultation, Distributors will need to account for the agreed amendment through a change to the EDCM model or for the alternative solution by setting the NUF to zero.

#### Request for Information

- 6.3 The Working Group issued a Request for Information (RFI) to DNOs to determine how many accepted sites would be affected by this change in order to gain an understanding of the scale of this issue. Distributors were also asked what the timescales would be to complete an impact assessment for both solutions. A summary of the responses is set out below.
- 6.4 The table below acts as a summary to the question “*Please provide the count of customers and aggregate MIC and MEC split into the bands detailed in the table below, based on the 2017/18 charges (where the dominance is seen to be generation)*”. The Working Group have noted that a low number of customers will be impacted by this change.

Bands (MIC / MEC)	Aggregate MIC	Aggregate MEC	Number of customers
0-20%	533,670	22,955,865	1,421
21-40%	74,070	260,334	28
41-60%	109,420	105,759	17
61-80%	45,000	52,000	14
81-100%	17,500	22,800	12



- 6.5 A summary table setting out the timescales provided in DNOs responses to the question “*What are the timescales for completing the impact assessment for the identified sites for both solutions?*” is set out below:

Respondent	DCP 274 Solution	Alternate Solution
1	2 Weeks	4-6 Weeks
2	Circa 2 weeks	
3	5 Working Days	5 Working Days
4	2 Weeks	
5	2 Weeks	

- 6.6 For the originating proposal, it is noted that a revised EDCM model would be required to formally implement the change and that the majority of respondents could implement this change on a quicker timescale than the alternate solution.
- 6.7 For the alternate solution, one respondent advised that to carry out a full review of a group of customers’ connection assets (and the extent to which their use of them differs when importing rather than exporting) a longer timescale would be required of 4 - 6 weeks. Another respondent highlighted that the alternate solution could be completed within the current published EDCM model. The variances in individual tariffs could be analysed and an aggregate view of the variance in DUoS charges could be completed within a 5 Working Day timeframe.
- 6.8 The Working Group are seeking to determine the preferred solution before a full impact analysis will be undertaken.

## Consumer Impacts

- 6.9 The Working Group did not identify any consumer impacts introduced by this change.

## Environmental Impacts

- 6.10 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 274 were implemented. The Working Group did not identify any material impact on greenhouse gas emissions from the implementation of this CP.

## Engagement with the Authority

- 6.11 Ofgem has been fully engaged throughout the development of DCP 274 as a member of the Working Group.

# 7 Legal Text

- 7.1 The Working Group will develop the legal text for the proposed solution in due course, taking into account the consultation responses.

## 8 Relevant Objectives

### Assessment Against the DCUSA Objectives

- 8.1 Changes to the DCUSA charging methodologies must better facilitate the DCUSA Charging Objectives. The Working Group is interested in parties views on which of the following DCUSA Charging Objectives are better facilitated by this change and its alternate 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.

## 9 Implementation

- 9.1 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 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.

## 10 Consultation Questions

- 10.1 The Working Group is seeking industry views on the following consultation questions:

Number	Questions
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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	For the original solution, do you think O&M should be recovered on the import or export?
5	Can you put forward evidence to support why the proposed solution or its alternative improves cost reflectivity.
6	How should the revenue shortfall be recovered?
7	Do you think capping the Network Use Factors (NUF) on the import side of a mixed site is appropriate?
8	If a site is generation dominated, if it is importing, is it driving any costs for the DNO's?
9	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?
10	<p>Which DCUSA Charging Objectives does the CP better facilitate? Please provide supporting comments.</p> <ol style="list-style-type: none"> <li>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</li> <li>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)</li> <li>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</li> <li>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</li> <li>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-</li> </ol>

	operation of Energy Regulators.
11	Are you supportive of the proposed implementation date of DCP 274 of 01 April 2019?
12	Are you aware of any wider industry developments that may impact upon or be impacted by this CP?
13	Are there any alternative solutions or unintended consequences that should be considered by the Working Group?

10.2 Responses should be submitted using Attachment 1 to [dcusa@electralink.co.uk](mailto:dcusa@electralink.co.uk) no later than, **28 November 2016**.

10.3 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.

## Attachments

- Attachment 1 - DCP 274 Consultation Response Form
- Attachment 2 - DCP 274 Change Proposal
- Attachment 3 - Energy Network Association (ENA) '*EDCM Report on Condition 3*' Paper