DCUSA Change Proposal (DCP)	At what stage is this document in the process?

DCP 452:

Correct application of Forward Cost Pricing EDCM charges to users connected directly to a Grid Supply Point

Date Raised: 28 February 2025

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Company Name: Field Gaia Ltd

Party Category: CVA Registrant

01 – Change Proposal
02 – Consultation
03 – Change Report
04 – Change Declaration

Purpose of Change Proposal

To correct an oversight in DCUSA which results in customers connecting directly to Grid Supply Point incorrectly facing a locational FCP charge relating to assets downstream of their connection.

Governance:

The Proposer recommends that this Change Proposal should be:

- Treated as a Part 1 Matter
- Treated as a Standard Change
- Progressed to the Working Group phase

The Panel will consider the proposer's recommendation and determine the appropriate route.

Impacted Parties:

Suppliers, DNOs, CVA Registrants

Impacted Clauses:

Schedule 17, Section 6

Contents

Indicative Timeline

The Secretariat recommends the following timetable:	
Initial Assessment Report	19 March 2025
Consultation Issued to Industry Participants	April/May 2025
Change Report Approved by Panel	18 June 2025
Change Report issued for Voting	19 June 2025
Party Voting Closes	10 July 2025
Change Declaration Issued	14 July 2025

Any questions?

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1 Summary

What?

1.1 Under the Forward Cost Pricing (FCP) variant of the Extra High Voltage (EHV) Distribution Charging Methodology (EDCM), Connectees which connect direct to a Grid Supply Point (GSP) are deemed not to use any shared network assets, but are exposed to forward looking charges/credits for the downstream FCP network group in that location. This Change Proposal seeks to remove the non-cost-reflective application of FCP charges/credits to such Connectees.

1.2 There is no equivalent issue under the Long Run Incremental Cost (LRIC) variant of the EDCM. The LRIC approach derives a zero charge for all Connectees which are connected direct to a GSP.

Why?

1.3 Connectees at all voltages in the EDCM and CDCM face forward looking charges/credits in respect of assets upstream of their connection point, up to the GSP. Connectees directly connecting to a GSP under the FCP variant of the EDCM are the only users to be exposed to charges/credits in respect of a downstream voltage, resulting in differential treatment of similar network users, dependant on whether the DNO region uses the FCP variant of the EDCM or the LRIC variant.

1.4 For impacted Connectees, this can have a very material impact. For example, we are aware of a prospective battery storage site in one location which the DNO has indicated will face a non-cost-reflective charge of ~£18/kVA/year for network assets it does not use.

How?

1.5 The FCP-related element of the EDCM charge/credit should be set to zero for Connectees which connect direct to a GSP, enacted in Schedule 17, Section 6.

2 Governance

Justification for Part 1 and Part 2 Matter

2.1 This Change Proposal should be treated as a Part 1 Matter. It will remove charges faced by some users which connect directly to a GSP in DNO regions using the FCP variant of the EDCM, in turn impacting on competition in the generation and supply of electricity.

Requested Next Steps

2.2 This Change Proposal should:

- Be treated as a Part 1 Matter;
- Be treated as a Standard Change; and
- Proceed to the Working Group phase.

2.3 We consider this Change Proposal is likely to meet the definition of an urgent modification under DCUSA due to its significant commercial impact on directly impacted Connectees, but we have chosen to bring this forward as a standard change with the expectation that it will be given suitably high priority by the Panel and progressed at pace by a Working Group. This is in order to achieve an Authority decision by September 2025 to facilitate implementation in time for the publication of DUoS charges which will apply from April 2027, to avoid the issue at hand being replicated in a further year of DUoS charging.

3 Why Change?

Background

3.1 The EHV Distribution Charging Methodology (EDCM) is intended to give Connectees a locationally-varying forward-looking cost signal related to each user's impact on the network. This is achieved differently in the Long Run Incremental Cost (LRIC) and Forward Cost Pricing (FCP) variants of the EDCM.

3.2 The FCP method uses the concept of "network groups". All network assets at a given voltage level which are electrically connected under normal running conditions are assigned to the same network group. All Connectees connected to a given network group face the same FCP charge/credit.

3.3 The LRIC method does not use the concept of network groups. All network assets are treated individually, with each Connectee's impact on the network assessed based on the impact of incremental demand at their specific location. Connectees face an LRIC charge/credit only in respect of network assets which they directly influence.

3.4 Six DNO licensees use the FCP method (Scottish Hydro Electric Power Distribution plc; Southern Electric Power Distribution plc; SP Distribution Limited; SP Manweb plc; National Grid Electricity Distribution East Midlands plc; and National Grid Electricity Distribution West Midlands plc.). The remaining eight DNO licensees use the LRIC method.

3.5 Under both variants, Sole Use Assets (defined as "assets in which only the consumption or output associated with a single Connectee can directly alter the power flow in the asset") for each Connectee are separately identified.

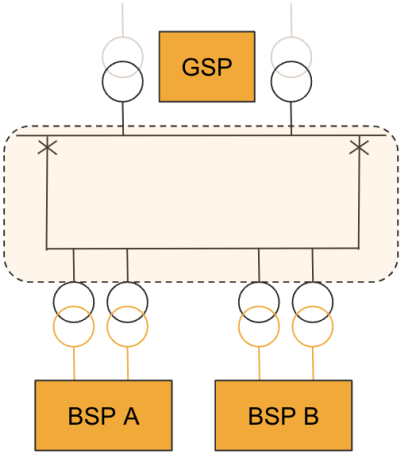
3.6 All Connectees charged under both variants of the EDCM are assigned a Point of Common Coupling (PoCC), identifying where their Sole Use Assets connect to the shared network. The PoCC is converted into a Customer Category, encoding the voltages at which a Connectee is deemed to use shared assets.

3.7 Separate charges are calculated in respect of Sole Use Assets, reflecting that those assets are funded by the Connectee in their connection charge. The charge under the EDCM for Sole Use Assets only reflects the costs associated with operation and maintenance. The LRIC and FCP charges/credits only relate to a Connectee's use of shared networks assets upstream of the PoCC.

Worked Example of FCP Grouping

3.8 Figure 1 shows a small section of network, with a Grid Supply Point (GSP) and two downstream Bulk Supply Points (BSPs). In England and Wales this would typically be a 132kV network; in Scotland this would typically be a 33kV network serving Primary substations in place of BSPs.

Figure 1: Example of FCP Grouping



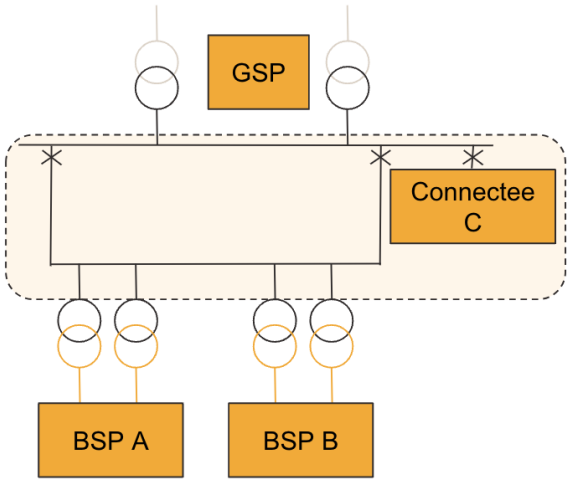
3.9 The FCP network group for the 132kV network at this GSP would include all assets within the dotted line. A Connectee connecting to any of the circuits within the dotted line would face the FCP charge/credit for the group.

3.10 Conversely under the LRIC approach, a Connectee connecting anywhere faces a charge/credit in respect of any assets on which incremental demand at their location causes change in powerflow. In Figure 1, a Connectee connecting to any of the circuits in the dotted line would impact all of those circuits, so both LRIC and FCP would give a similar, cost-reflective outcome.

Issues with of FCP Grouping for GSP-connected Users

3.11 Figure 2 shows the same small section of network, with the addition of Connectee C. Connectee C's PoCC is at the GSP, so this Connectee would be assigned Customer Category 0000.

Figure 2: FCP Grouping with a GSP-connected Connectee



3.12 Under the FCP approach, Connectee C is included within the 132kV network group. As a result, it is non-cost-reflectively exposed to the locational charge/credit for the whole network group. This is despite Schedule 17, Clause 15.10 stating that “Category 0000 Connectee are deemed not to use any network assets other than sole use assets”. **Connectee C is facing a locational charge/credit for assets which it is deemed not to use.**

3.13 Conversely under the LRIC approach, incremental demand at Connectee C’s location is assessed for its impact on network assets. It does not impact powerflow on any of the 132kV circuits, so it correctly sees no locational charge/credit.

The Defect this Change Proposal seeks to address

3.14 Under the FCP variant of the EDCM, Connectees connected directly to a GSP, identified by allocation of Customer Category 0000, are incorrectly and non-cost-reflectively exposed to the locational charge/credit for the shared network in the network group associated with the network voltage downstream of the relevant GSP, despite explicit statements in DCUSA that such Connectees are deemed not to use any network assets other than Sole Use Assets.

The Solution

3.15 Section 6 of Schedule 17 of DCUSA sets out how the FCP charge is applied. Our proposed solution is to amend formulae in that section such that the import charges and super-red generation rates calculated are zero for Connectees with Customer Category 0000.

3.16 Note – Section 6 only relates to a subset of the total tariffs calculated. For example, Connectees with Customer Category 0000 would continue to face an import capacity charge in respect of Transmission Connection Charges (so-called exit charges) calculated in accordance with Section 9.

The Impact

3.17 If not made, Connectees directly connected to GSPs in DNO areas using the FCP variant of the EDCM will continue to be charged and/or receive credits non-cost-reflectively for assets which they are deemed not to use.

3.18 We are unable to determine the number of Connectees impacted and the overall magnitude of that impact as only the DNOs have access to the Customer Category assigned to each Connectee, and the location at which each Connectee is connected. A Working Group should fully assess the impact.

3.19 However, we expect a relatively small number of Connectees are likely to be directly impacted – only those which have Customer Category 0000, are in a DNO area using the FCP variant of EDCM, and at a GSP with a non-zero FCP charge. Based on the 2026-27 Charging Statements of the six DNOs using FCP, approximately 15% of GSPs in DNO area using FCP have a non-zero FCP charge.

3.20 If there are directly impacted Connectees in a given DNO region, there will be a second-order impact on all other Connectees in that DNO region. Depending on whether the directly impacted Connectees are demand or generation, there will either be a decrease or increase in revenue derived from forward-looking charges, associated with the reduction in charges or credits respectively. That change in revenue will manifest as an offsetting change in revenue to be recovered from residual charges. For example, if a DNO region had a single demand Connectee impacted, the revenue derived from the FCP charge in respect of that demand user would instead be recovered in residual charges for that DNO region.

3.21 Despite the likely low overall impact, the impact on directly affected Connectees can be very marked. We are aware of a prospective battery storage site in one location which the DNO has indicated will face a non-cost-reflective charge of ~£18/kVA/year for network assets it does not use.

3.22 A Working Group should pay particularly close attention to any Connectees who may be benefiting from non-cost-reflective credits. It is relatively unlikely that there will be a large number of such Connectees, as only controllable generation connected directly at a GSP with a non-zero FCP charge would be receiving such a credit. But nonetheless, identification and engagement with Connectees which will see credits removed will be important.

4 Solution and Legal Text

4.1 Section 6 of Schedule 17 of DCUSA sets out how the FCP charge is applied. The proposed solution is to amend formulae in that section such that the import charges and super-red generation rates calculated are zero for Connectees with Customer Category 0000.

Legal Text

4.2 Proposed red-lined legal text is shown below, based on Schedule 17, Section 6 of DCUSA version 16.7. There are multiple ways in which this Change Proposal could be enacted. The Working Group may wish to refine or modify this proposed approach.

6.1 Each tariff in the model is linked to one FCP location or network group. Each FCP network group may be linked to a parent FCP network group and a grandparent FCP network group. Each FCP network group may have a charge 1 in £/kVA/year associated with it.

6.2 The import charges for the application of charge 1 is given by the formulas:

For Connectees with Customer Category 0000:

[p/kWh super-red rate] = 0

[p/kVA/day capacity charge] = 0

For other Connectees with zero average kW/kVA:

*[p/kWh super-red rate] = ([parent charge 1 £/kVA/yr] * (abs[A1] / (SQRT(A1^2 + R1^2)) / [Super-red hours] *100) + ([grandparent charge 1 £/kVA/yr] * (abs[A2] / (SQRT(A2^2 + R2^2)) / [Super-red hours] *100)*

*[p/kVA/day capacity charge] = ([network charge 1 £/kVA/year] /[days in Charging Year]*100) + ([parent charge 1 £/kVA/yr] * (–R1 * Average kVAr/kVA]) / (SQRT(A1^2 + R1^2)) / [days in Charging Year] *100) + ([grandparent charge 1 £/kVA/yr] * (–R2 * [Average kVAr/kVA]) / (SQRT(A2^2 + R2^2)) / [days in Charging Year] *100)*

For all other Connectees:

*[p/kWh super-red rate] = [parent charge 1 £/kVA/yr] * (abs[A1] – (R1 * ([Average kVAr/kVA] / [Average kW/kVA])) / (SQRT(A1^2 + R1^2)) / [Super-red hours] *100 + ([grandparent charge 1 £/kVA/yr] * (abs[A2] – (R2 * ([Average kVAr/kVA] / [Average kW/kVA])) / (SQRT(A2^2 + R2^2)) / [Super-red hours] *100)*

*[p/kVA/day capacity charge] = [network group charge 1 £/kVA/year] / [days in Charging Year]*100*

Where:

A1 and R1 are the values of the active power flow and reactive power flow modelled through the parent network group in the maximum demand scenario.

A2 and R2 are the values of the active power flow and reactive power flow modelled through the grandparent network group in the maximum demand scenario.

*If both A1 and R1 are equal to zero, in respect of that network level in the formulas above, the term (abs[A1] / (SQRT(A1^2 + R1^2)) is set equal to 1, (–R1 * Average kVAr/kVA]) / (SQRT(A1^2 + R1^2)) is set equal to zero, and ([Average kVAr/kVA] / [Average kW/kVA])) / (SQRT(A1^2 + R1^2)) is also set to zero.*

*If both A2 and R2 are equal to zero, in respect of that network level in the formulas above, the term (abs[A2] / (SQRT(A2^2 + R2^2)) is set equal to 1, (–R2 * Average kVAr/kVA]) / (SQRT(A2^2 + R2^2)) is set equal to zero, and ([Average kVAr/kVA] / [Average kW/kVA])) / (SQRT(A2^2 + R2^2)) is also set to zero.*

Any negative contributions to the [p/kVA/day capacity charge] or the [p/kWh super-red rate] from the parent or the grandparent network groups are set to zero.

Super red hours are the number of hours in the DNO Party's super-red time band.

The average kW/kVA and average kVAr/kVA figures are forecasts for the Charging Year, based on data from the most recent regulatory year for which data were available in time for setting charges for the Charging Year. Specifically, active and reactive power consumptions are averaged over a super-red time band, which is a seasonal time of day period determined by the DNO Party to reflect the time of peak, and then divided by the Maximum Import Capacity (averaged over the same financial year). If the DNO Party considers that the reactive consumption data relates to export rather than import (e.g. the average kVAr figure exceeds half of the Maximum Import Capacity) then the Maximum Import Capacity in the denominator should be replaced by the Maximum Export Capacity of the same Connectee. The average kVAr divided by kVA is restricted to be such that the combined active and reactive power flows cannot exceed the Maximum Import Capacity.

6.3 *Charge 1 is applied to export charges as a credit. The credit is expressed as a negative charge rate in p/kWh and is applied in respect of active power units exported during the DNO Party's super-red time band. The credit rate is set to zero for Connectees who are assigned an F Factor of zero. The credit rate is calculated as follows:*

For Connectees with Customer Category 0000:

[p/kWh super-red export rate] = 0

For all other Connectees:

[p/kWh super-red export rate] = -100[Proportion eligible for charge 1 credits] *([network charge 1 £/kVA/year] + [parent charge 1 £/kVA/year] + [grandparent charge 1 £/kVA/year]) * ([Chargeable export capacity]/[Maximum export capacity]) /[number of hours in the super-red time band]*

Where:

The proportion eligible for charge 1 credits is zero if the F factor that is assigned to the Connectee as described in the FCP methodology is equal to zero, and 1 otherwise.

The super-red generation rate is not applied to Connectees with zero Chargeable Export Capacity.

Text Commentary

4.3 The proposed legal text changes set the FCP-element of the import capacity charge, super-red import rate and super-red export rate to zero for Connectees with Customer Category 0000.

5 Code Specific Matters

Reference Documents

5.1 This issue was discussed at the Distribution Charging Methodologies Development Group (DCMDG), the presentation slides and discussion output of which can be found in the post meeting pack for meeting 84.

6 Relevant Objectives

	DCUSA Charging Objectives	Identified impact
☐	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	Neutral
☑	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)	Positive
☑	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	Positive
☐	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	Neutral

☐	5. That compliance by each DNO Party with the Charging Methodologies facilitates compliance with the EU Internal Market Regulation and any relevant legally binding decisions of the European Commission and/or the Agency for the Co-operation of Energy Regulators; and	Neutral
☑	6. That compliance with the Charging Methodologies promotes efficiency in its own implementation and administration.	Positive

6.1 Charging Objective 2: this Change Proposal will ensure that customers directly connected to GSPs only face DUoS charges in respect of upstream network assets, aligned with all other users of the distribution network. As a result, it will better facilitate competition in the generation of electricity between users connected at different voltage levels. It will also resolve a contradiction in DCUSA, enabling suppliers and end customers to better predict the DUoS charges they will face in a given location, better facilitating competition in supply.

6.2 Charging Objective 3: this Change Proposal will remove the application of charges to customers directly connected to GSPs in respect of network assets they are deemed not to use. The charges those users face will be more cost-reflective as a result. It will also ensure one of the underlying principles of both the CDCM and EDCM – that customers are only charged in respect of network assets at or upstream of their voltage of connection – is applied consistently across all voltage levels.

6.3 Charging Objective 6: this Change Proposal will remove a contradiction in DCUSA, promoting efficiency in its implementation.

7 Impacts & Other Considerations

7.1 This Change Proposal has minor interactions with other ongoing workstreams:

Surplus residuals

7.2 Surplus residuals have required derogations from publishing charges in line with the DCUSA. Some DNOs using FCP have held FCP charges at the level of previous years to avoid excessive volatility driven by surplus residuals. This Change Proposal would not directly interact with ongoing work on surplus residual issues, but may slightly reduce FCP-related revenues, so slightly reduce surplus residuals.

REMA

7.3 REMA may fundamentally change the context of locational signals. Connectees may face locational operational signals under a zonal wholesale market, or face sharper locational signals through network charges (primarily TNUoS) under a reformed national market. It is very unclear how REMA will impact DUoS. Hence corrections such as this Change Proposal should continue to be made in the meantime.

Clean Power 2030

7.4 The Clean Power 2030 Action Plan[1] sets out the mix of technologies needed to achieve a decarbonised power system by 2030. Incorrectly applied locational signals could be a barrier to developing projects which are Clean Power 2030 aligned, so should be corrected.

Does this Change Proposal impact a Significant Code Review (SCR) or other significant industry change projects, if so, how?

7.5 The DUoS SCR may at some point make broader changes to the EDCM, but there appears to be no prospect of change in the medium term. A small correction which can be made quickly should not be delayed by the prospect of broader reform in the future.

Does this Change Proposal Impact Other Codes?

7.6 No

Consideration of Wider Industry Impacts

7.7 This Change Proposal was presented at meeting 84 of the Distribution Charging Methodologies Development Group, and feedback sought. Some DCMDG members queried how long this issue has been in place, and why it has only come to light now. The Proposer understands that the issue has been present since the inception of the EDCM, and may only have come to light now due to the very material impact on a prospective Connectee.

Confidentiality

7.8 This Change Proposal is non-confidential.

8 Implementation

Proposed Implementation Date

8.1 The proposed implementation date is 1 April 2027, in line with the next publication of DUoS charges by DNOs. This would require an Authority decision by September 2025 to enable DNOs to incorporate the change in charge setting in late 2025. We consider there is a strong case for derogations to apply this Change Proposal sooner in respect of heavily impacted new Connectees, which will be pursued outside of the DCUSA Change process.

9 Recommendations

The Code Administrator will provide a summary of any recommendations/determinations provided by the Panel in considering the initial Change Proposal. This will form part of a Final Change Report.

[1] https://www.gov.uk/government/publications/clean-power-2030-action-plan