




DCUSA Consultation		At what stage is this document in the process?
<h2>DCP 425:</h2> <h3>Cost Apportionment Factor “cap” methodology</h3> <p>Date raised: 13 July 2022</p> <p>Proposer Name: Lee Wells</p> <p>Company Name: Northern Powergrid</p> <p>Company Category: DNO</p>		01 – Change Proposal
		02 – Consultation
		03 – Change Report
		04 – Change Declaration
Purpose of Change Proposal (CP): <p>The intent of this Change Proposal (“CP”) is to provide further clarification as to how costs of Reinforcement are apportioned between the Company and the Customer (a Generation Connection) when the High-Cost Project Threshold is triggered.</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 425.</p> <p>Parties are invited to consider the questions set in section 10 and submit comments using the form attached as Attachment 1 to dcusa@electralink.co.uk by 01 December 2023.</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:</p> <p>DNOs, IDNOs, Customers (Generation Connection)</p>	
	 <p>Impacted Clauses:</p> <p>Schedule 22</p>	

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Timetable

The timetable for the progression of the CP is as follows:

Change Proposal timetable

Activity	Date
Initial Assessment Report	16 August 2023
Consultation Issued to Industry Participants	10 November 2023
Change Report Approved by Panel	20 December 2023
Change Report issued for Voting	21 December 2023
Party Voting Closes	16 January 2024
Change Declaration Issued to the Authority	18 January 2024
Authority Decision	TBC
Implementation	10 working after Authority Decision



Any questions?

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1 Summary

What?

- 1.1 Prior to the implementation of the Authority's Access SCR final decision (the "Access SCR Decision"),¹ and for (i) an application received prior to 1 April 2023 and (ii) a Customer that was a Generation Connection, both the:
- costs of Reinforcement subject to the Cost Apportionment Factors ("CAFs"); and
 - calculation of the High-Cost Project Threshold,
- were assessed based on costs of Reinforcement at the Voltage Level of the Point of Connection and one Voltage Level above.
- 1.2 The Access SCR Decision changed apportioned costs of Reinforcement such that, for a Generation Connection, the CAFs apply at the Voltage Level of the Point of Connection only.
- 1.3 [DCP 422 "Access SCR Clarifications and Corrections"](#) amended Paragraph 1.16 of Schedule 22 ("Common Connection Charging Methodology") to clarify that, if (for a Generation Connection only) the costs of Reinforcement at the same Voltage Level as the Point of Connection exceed the High-Cost Project Threshold, the costs of Reinforcement subject to the CAFs shall be applied up to and including the High-Cost Project Threshold only.
- 1.4 For example, if the High-Cost Project Threshold was £200k and the costs of Reinforcement at the Voltage Level of the Point of Connection were £300k, the Customer would be required to pay £100k (the amount in excess of the High-Cost Project Threshold) plus a contribution to the £200k per the CAFs.² If the Reinforcement related to a single asset and CAF only (e.g. replacement of an overhead line for thermal constraints only), the cost of Reinforcement to be used in the CAF shall simply be £200k rather than £300k. This clarity provided by DCP 422 mitigates the risk of double-charging costs of Reinforcement.
- 1.5 However, if the Reinforcement related to multiple assets and/or CAFs – say separate costs of £250k and £50k respectively – it is unclear how the Company should CAF the "capped" value of £200k per the example in paragraph 1.4.

Why?

- 1.6 Example 13 of Schedule 22 demonstrates Reinforcement charging principles for a Generation Connection where both the Security CAF and Fault Level CAF are applicable. In the example,

¹ https://www.ofgem.gov.uk/sites/default/files/2022-05/Access_SCR_Final_Decision.pdf

² Examples given for the purpose of this document intentionally exclude other costs such as Extension Assets.

the High-Cost Project Threshold is £1.2m (6,000kW x £200) and the costs of Reinforcement total £820k; therefore the High-Cost Project Threshold is not exceeded.

- 1.7 However, assuming the Required Capacity in example 13 was (e.g.) 3,000kW and all other assumptions (including costs) remained unchanged, the High-Cost Project Threshold would be £600k (3,000kW x £200) and therefore the costs of Reinforcement of £820k would be £220k higher than the HCPT Schedule 22 does not clarify how the CAF should apply in this instance.
- 1.8 Further, example 30 of Schedule 22 demonstrates Reinforcement charging principles for a Generation Connection where the High-Cost Project Threshold is exceeded and costs of Reinforcement at the Voltage Level of the Point of Connection need to be apportioned. However, in this example the High-Cost Project Threshold is only exceeded due to costs of Reinforcement at the Voltage Level above the Point of Connection i.e. the full costs of Reinforcement at the Voltage Level of the Point of Connection need to be apportioned. In addition, there is only one cost of Reinforcement at the Voltage Level of the Point of Connection to be apportioned.
- 1.9 Whilst the scenario set out in paragraph 1.7 could have applied prior to the implementation of the Access SCR Decision, as the CAF methodology and High-Cost Project Threshold both treated costs of Reinforcement consistently (i.e. at both the Voltage Level of the Point of Connection and the Voltage Level above), it is understood to have never manifested. Whilst it is unclear how the Company must CAF capped costs of Reinforcement, it is also expected that the need to do so will be a relatively rare occurrence going forward too.

How?

- 1.10 There are several options to apply a CAF to capped costs of Reinforcement to ensure no double-charging by amending the CAF methodology. Some of these options have been considered in the development of this CP. Options considered (which are not mutually exclusive) to apply adjustments to the CAFs include capping costs of Reinforcement:
- only where that cost exceeds the High-Cost Project Threshold;
 - on a proportionate basis to the aggregated costs of Reinforcement to be apportioned;
 - on a proportionate basis to the unadjusted cost apportioned amounts to the Customer;
 - and
 - only to the maximum costs of Reinforcement to be apportioned.
- 1.11 Attachment 2 to this Consultation sets out several modelled approaches considered by the Working Group, based on several examples.³

³ Costs used are illustrative and used to demonstrate nuances only.

- 1.12 The proposed approach set out in the CP was to amend the CAF methodology to cap costs of Reinforcement proportional to the unadjusted CAF contribution from the Customer. In the CP, the Proposer's view was that this approach retains the proportionality of the Customer's contribution to the costs of Reinforcement, and based on the modelled illustrative scenarios, generally results in the cheapest post-adjustment cost to the Customer.
- 1.13 Further, and to prevent a situation where the Customer contribution may be a negative value (i.e. a payment to the Customer)⁴ a hierarchal approach was included where the methodology defaults to capping costs of Reinforcement on a simple proportionate basis.
- 1.14 However, the Proposer informed the Working Group that, since submission of the CP, their preferred solution had changed; preferring instead to adjust the costs of Reinforcement on a proportionate basis to the aggregated costs of Reinforcement to be apportioned. The Proposer explained that a "live" situation had occurred where Schedule 22 was clear on the policy position to not apportion costs of Reinforcement at the Voltage Level of the Point of Connection for a Generation Connection, but not how to satisfy this obligation. To satisfy the policy requirement, and to both improve understanding of the need, and embed an intermediate workaround solution, cost proportionality was the favoured approach.
- 1.15 The Proposer's view is that a simple approach is, in hindsight, a more appropriate solution to ensure consistent application, and that is easily understood by the DNO/IDNO Party and Customer. Further, whilst it may only be theoretically possible, the Proposer considered that the potential need to default to this approach as part of a hierarchical methodology, supported the benefits of a simple pro rata solution by default without a need for a tiered approach.

2 Governance

Justification for Part 1 Matter

- 2.1 This CP will impact the Connection Charge and subject to a policy decision that was not set out in the Access SCR Decision, and therefore should be a Part 1 Matter.

Next Steps

- 2.2 Following a review of the Consultation responses, the Working Group will work to agree the final detail of the solution for this CP and if appropriate progress to the Change Report phase.

⁴ The illustrative modelling scenarios identified this as being a possibility.

3 Why Change?

Background of DCP 425

- 3.1 As set out in paragraphs 1.6 to 1.9, unless the relevant legal text is changed, there risks a situation arising that Schedule 22 does not address.

Question 1: Do you understand the intent of DCP 425?

Question 2: Are you supportive of the principles of DCP 425? Please provide your rationale.

4 DCP 425 Working Group Assessment

- 4.1 The DCUSA Panel established a Working Group to assess this CP. This Working Group consists of Supplier, DNO and Generator representatives. Meetings were held in open session and the minutes and papers of each meeting are available on the DCUSA website at www.dcusa.co.uk.

Consideration of options

- 4.2 The Working Group considered the options set out by the Proposer in the CP. The Working Group identified no additional options to be considered as part of this Consultation.
- 4.3 The options represent varying approaches to reduce the costs of Reinforcement to be apportioned by a portion the “excess”, to ensure that an aggregate amount no greater than the High-Cost Project Threshold is subject to the CAFs.
- 4.4 For the avoidance of doubt, the “excess” represents the amount that the aggregate costs of Reinforcement at the Voltage Level of the Point of Connection exceed the High-Cost Project Threshold. For example, as set out in paragraph 1.4, cost of Reinforcement of £300k compared to a High-Cost Project Threshold of £200k includes an “excess” of £100k; and where only £200k should be cost apportioned.
- 4.5 The options and examples below are all based around a scenario where (i) the High-Cost Project Threshold is £600k; (ii) it is a Generation Connection; and (iii) all costs of Reinforcement are at the Voltage Level of the Point of Connection.

Option 1: Cap Reinforcement where HCPT exceeded only (subject to zero floor)

- 4.6 This option uses a linear four-tiered approach.
- 4.7 If a single CAF applies, the cost of Reinforcement to be apportioned shall equal the High-Cost Project Threshold. For example, if the only cost of Reinforcement was £700k, £600k (equivalent to the High-Cost Project Threshold) would be subject to the relevant CAF instead (see also scenarios 5-6 of option 1 in Attachment 2).

- 4.8 If multiple CAFs apply *but* there is only one cost of Reinforcement that exceeds the High-Cost Project Threshold in isolation, that cost of Reinforcement is reduced by the “excess”. For example (see also Table 1 below), if there were costs of Reinforcement of £20k and £800k (so £820k in total), the £220k “excess” should be subtracted from the £800k; meaning £580k would be subject to the relevant CAF (see also scenarios 1-2 of option 1 in Attachment 2).

Reinforcement asset (POC Voltage Level)	Cost of Reinforcement	Exceed HCPT?	"Excess" apportionment basis		"Excess" reduction	Adjusted cost of Reinforcement
Security CAF_1	£20k	FALSE	-	-	-	£20k
Fault Level CAF_1	£800k	TRUE	£800k	100.0%	(£220k)	£580k
Security CAF_2	-	FALSE	-	-	-	-
Fault Level CAF_2	-	FALSE	-	-	-	-
Total	£820k		£800k	100.0%	(£220k)	£600k

Table 1: Option 1, example 2

- 4.9 If multiple CAFs apply *and* both (i) there are multiple costs of Reinforcement that exceed the High-Cost Project Threshold in isolation, and (ii) the aggregate value of those costs is greater than or equal to the “excess”, the “excess” is subtracted proportionally from those costs. For example (see also Table 2 below), if there were costs of Reinforcement of £20k, £800k and £700k (so £1,520k in total), and as the total of the costs that exceed the High-Cost Project Threshold (£1,500k) is greater than or equal to the £920k “excess”, the “excess” should be subtracted from the £800k and £700k only. The cost of Reinforcement of £800k and £700k are around 53% and 47% of the £1,500k respectively. Therefore the “excess” should be subtracted from those costs of Reinforcement based on those percentages (see also scenarios 4, 7-8 and 10-12 of option 1 in Attachment 2).

Reinforcement asset (POC Voltage Level)	Cost of Reinforcement	Exceed HCPT?	"Excess" apportionment basis		"Excess" reduction	Adjusted cost of Reinforcement
Security CAF_1	£20k	FALSE	-	-	-	£20k
Fault Level CAF_1	£800k	TRUE	£800k	53.3%	(£491k)	£309k
Security CAF_2	-	FALSE	-	-	-	-
Fault Level CAF_2	£700k	TRUE	£700k	46.7%	(£429k)	£271k
Total	£1,520k		£1,500k	100.0%	(£920k)	£600k

Table 2: Option 1, example 3

- 4.10 Finally, there are two circumstances that may require that the “excess” be subtracted from each cost of Reinforcement proportional to the total cost of Reinforcement. Firstly, if no costs of Reinforcement exceed the High-Cost Project Threshold in isolation but do in aggregate. Secondly, if multiple CAFs apply *and* both (i) there are multiple costs of Reinforcement that exceed the High-Cost Project Threshold in isolation, and (ii) the aggregate value of those costs is less than the “excess”.
- 4.11 In relation to the first circumstance identified in paragraph 4.10: for example (see also Table 3 below) if there were costs of Reinforcement of £100k and £550k (so £650k in total), and as neither

exceed the High-Cost Project Threshold but do in total, the “excess” (£50k) should be subtracted from the all costs of Reinforcement. The “excess” is subtracted proportionate to the cost of Reinforcement to the total cost of Reinforcement i.e. 15% and 85% for the respective costs (see also scenarios 3 and 9 of option 1 in Attachment 2).

Reinforcement asset (POC Voltage Level)	Cost of Reinforcement	Exceed HCPT?	"Excess" apportionment basis		"Excess" reduction	Adjusted cost of Reinforcement
Security CAF_1	£100k	FALSE	£100k	15.4%	(£8k)	£92k
Fault Level CAF_1	£550k	FALSE	£550k	84.6%	(£42k)	£508k
Security CAF_2	-	FALSE	-	-	-	-
Fault Level CAF_2	-	FALSE	-	-	-	-
Total	£650k		£650k	100.0%	(£50k)	£600k

Table 3: Option 1, example 4

4.12 In relation to the second circumstance identified in paragraph 4.10: for example if there were costs of Reinforcement of £20k, £800k, £600k, and £800k (so £2,220k in total), and as the total of the costs that exceed the High-Cost Project Threshold (£1,600k) is less than the £1,620k “excess”, the “excess” should be subtracted from all costs of Reinforcement – otherwise the two £800k costs of Reinforcement would be a negative value after being reduced by the “excess” (see Table 4 below).

Reinforcement asset (POC Voltage Level)	Cost of Reinforcement	Exceed HCPT?	"Excess" apportionment basis		"Excess" reduction	Adjusted cost of Reinforcement
Security CAF_1	£20k	FALSE	-	-	-	£20k
Fault Level CAF_1	£800k	TRUE	£800k	50.0%	(£810k)	(£10k)
Security CAF_2	£600k	FALSE	-	-	-	£600k
Fault Level CAF_2	£800k	TRUE	£800k	50.0%	(£810k)	(£10k)
Total	£2,220k		£1,600k	100.0%	(£1,620k)	£600k

Table 4: Option 1, example 5 (negative cost)

4.13 The “excess” is therefore subtracted proportionate to the cost of Reinforcement to the total cost of Reinforcement at the Voltage Level of the Point of Connection (see Table 5 below) i.e. 1%, 36%, 27%, and 36% for the respective costs (see also scenario 13 of option 1 in Attachment 2).

Reinforcement asset (POC Voltage Level)	Cost of Reinforcement	Exceed HCPT?	"Excess" apportionment basis		"Excess" reduction	Adjusted cost of Reinforcement
Security CAF_1	£20k	FALSE	£20k	0.9%	(£15k)	£5k
Fault Level CAF_1	£800k	TRUE	£800k	36.0%	(£584k)	£216k
Security CAF_2	£600k	FALSE	£600k	27.0%	(£438k)	£162k
Fault Level CAF_2	£800k	TRUE	£800k	36.0%	(£584k)	£216k
Total	£2,220k		£2,220k	100.0%	(£1,620k)	£600k

Table 5: Option 1, example 5 (zero floor)

Option 2: Cap Reinforcement for a single HCPT exceedance otherwise cap all proportionally

- 4.14 This option uses a linear three-tiered approach and is similar to option 1; however, unlike option 1, where there are multiple costs of Reinforcement there are no costs that are not adjusted.
- 4.15 If a single CAF applies, the cost of Reinforcement to be apportioned shall equal the High-Cost Project Threshold. For example, if the only cost of Reinforcement was £700k, £600k (equivalent High-Cost Project Threshold) would be subject to the relevant CAF (see also scenarios 5-6 of option 2 in Attachment 2).
- 4.16 If multiple CAFs apply *but* there is only one cost of Reinforcement that exceeds the High-Cost Project Threshold in isolation, that cost of Reinforcement is reduced by the “excess”. For example (see also Table 6 below), if there were costs of Reinforcement of £20k and £800k (so £820k in total), the £220k “excess” should be subtracted from the £800k; meaning £580k would be subject to the relevant CAF (see also scenarios 1-2 of option 2 in Attachment 2).

Reinforcement asset (POC Voltage Level)	Cost of Reinforcement	Exceed HCPT?	"Excess" apportionment basis		"Excess" reduction	Adjusted cost of Reinforcement
Security CAF_1	£20k	FALSE	-	-	-	£20k
Fault Level CAF_1	£800k	TRUE	£800k	100.0%	(£220k)	£580k
Security CAF_2	-	FALSE	-	-	-	-
Fault Level CAF_2	-	FALSE	-	-	-	-
Total	£820k		£800k	100.0%	(£220k)	£600k

Table 6: Option 2, example 2

- 4.17 Otherwise, the “excess” should be subtracted from each cost of Reinforcement proportional to the total cost of Reinforcement. For example (see also Table 7 below) if there were costs of Reinforcement of £20k, £800k, £600k, and £800k (so £2,220k in total), and as more than one exceeds the High-Cost Project Threshold, the “excess” should be subtracted from all costs of Reinforcement. The “excess” is subtracted proportionate to the cost of Reinforcement to the total cost of Reinforcement i.e. 1%, 36%, 27%, and 36% for the respective costs (see also scenarios 3-4 and 7-13 of option 2 in Attachment 2).

Reinforcement asset (POC Voltage Level)	Cost of Reinforcement	Exceed HCPT?	"Excess" apportionment basis		"Excess" reduction	Adjusted cost of Reinforcement
Security CAF_1	£20k	FALSE	£20k	0.9%	(£15k)	£5k
Fault Level CAF_1	£800k	TRUE	£800k	36.0%	(£584k)	£216k
Security CAF_2	£600k	FALSE	£600k	27.0%	(£438k)	£162k
Fault Level CAF_2	£800k	TRUE	£800k	36.0%	(£584k)	£216k
Total	£2,220k		£2,220k	100.0%	(£1,620k)	£600k

Table 7: Option 2, example 3

Option 3: Cap all Reinforcement proportionally (the Proposer’s preferred option)

- 4.18 The “excess” should always be subtracted from each cost of Reinforcement proportional to the total cost of Reinforcement (see all scenarios of option 3 in Attachment 2).

Option 4: Cap maximum Reinforcement (subject to zero floor)

- 4.19 This option uses a non-linear multi-tiered approach regardless of the number of CAFs to be applied and introduces a concept of a “residual excess”.
- 4.20 The “residual excess” represents the difference between the “excess” and the aggregate value of maximum costs of Reinforcement, and only where the “excess” is greater. For example, if there are costs of Reinforcement of £700k and £800k (so £1,500k in total) the “excess” would be £900k. As the “excess” is greater than the maximum cost of Reinforcement (£800k), there is a “residual excess” of £100k.
- 4.21 If there is a single occurrence of the maximum cost of Reinforcement, providing that cost of Reinforcement is greater than or equal to the “excess”, the “excess is subtracted from that maximum cost of Reinforcement. For example (see also Table 8 below), if there were costs of Reinforcement of £20k and £800k (so £820k in total), and as the maximum cost of Reinforcement (i.e. £800k) is greater than or equal to the “excess” (£220k), the “excess” should be subtracted from the £800k only.

Reinforcement asset (POC Voltage Level)	Cost of Reinforcement	Max cost?	"Excess" apportionment basis		"Excess" reduction	Adjusted cost of Reinforcement
Security CAF_1	£20k	FALSE	-	-	-	£20k
Fault Level CAF_1	£800k	TRUE	£800k	100.0%	(£220k)	£580k
Security CAF_2	-	FALSE	-	-	-	-
Fault Level CAF_2	-	FALSE	-	-	-	-
Total	£820k		£800k	100.0%	(£220k)	£600k

Table 8: Option 4, example 1

- 4.22 Further, whilst in the example above there is an instance of a cost of Reinforcement exceeding the High-Cost Project Threshold, the principle applies if the High-Cost Project Threshold is only exceeded in aggregate (and not therefore for any cost of Reinforcement in isolation). For example see also Table 9 below), if there were costs of Reinforcement of £100k, £400k, £50k, and £300k (so £850k in total), and as the maximum cost of Reinforcement (i.e. £400k) is greater than or equal to the “excess” (£250k), the “excess” should be subtracted from the £400k only (see also scenarios 1-3, 5-6 and 9 of option 4 in Attachment 2).

Reinforcement asset (POC Voltage Level)	Cost of Reinforcement	Max cost?	"Excess" apportionment basis		"Excess" reduction	Adjusted cost of Reinforcement
Security CAF_1	£100k	FALSE	-	-	-	£100k
Fault Level CAF_1	£400k	TRUE	£400k	100.0%	(£250k)	£150k
Security CAF_2	£50k	FALSE	-	-	-	£50k
Fault Level CAF_2	£300k	FALSE	-	-	-	£300k
Total	£850k		£400k	100.0%	(£250k)	£600k

Table 9: Option 4, example 2

- 4.23 If there are multiple instances of the maximum cost of Reinforcement, providing the aggregate cost of that Reinforcement is greater than or equal to the “excess”, the “excess is subtracted evenly from those maximum cost of Reinforcement. For example (see also Table 10 below), if

there were costs of Reinforcement of £700k, £300k, and £700k (so £1,700k in total), and as the aggregate value of the maximum costs of Reinforcement (i.e. two instances of £700k so £1,400k) is greater than or equal to the “excess” (£1,100k), the “excess” should be subtracted from the two instances of £700k only i.e. reduced by £550k each, being 50% of the “excess” (see also scenarios 8 and 11-12 of option 4 in Attachment 2).

Reinforcement asset (POC Voltage Level)	Cost of Reinforcement	Max cost?	"Excess" apportionment basis		"Excess" reduction	Adjusted cost of Reinforcement
Security CAF_1	£700k	TRUE	£700k	50.0%	(£550k)	£150k
Fault Level CAF_1	£300k	FALSE	-	-	-	£300k
Security CAF_2	£700k	TRUE	£700k	50.0%	(£550k)	£150k
Fault Level CAF_2	-	FALSE	-	-	-	-
Total	£1,700k		£1,400k	100.0%	(£1,100k)	£600k

Table 10: Option 4, example 3

4.24 If a “residual excess” occurs: (i) the adjusted costs of Reinforcement (for single or multiple instances of maximum costs of Reinforcement) are floored at zero (otherwise the costs of Reinforcement would be a negative value after being reduced by the “excess”), and (ii) the “residual excess” is separately subtracted from other costs of Reinforcement based on one of two approaches.

4.25 In relation to the “residual excess”: firstly, it is subtracted proportionally from costs of Reinforcement that are (i) less than the maximum and (ii) greater than the High-Cost Project Threshold; secondly, if no other costs of Reinforcement exceed the High-Cost Project Threshold, it is subtracted proportionally from all other costs of Reinforcement.

4.26 In relation to the first approach to deal with a “residual excess” (as identified in paragraph 4.25): for example if there were costs of Reinforcement of £20k, £800k, and £700k (so £1,520k in total), and as the “excess” (£920k) is greater than the aggregate value of the maximum cost of Reinforcement (£800k), the maximum cost of Reinforcement is reduced by the “excess” but floored at zero, leaving a £120k “residual excess”. Otherwise, the maximum cost of Reinforcement to be apportioned would be a negative value after being reduced by the “excess” (see Table 11 below).

Reinforcement asset (POC Voltage Level)	Cost of Reinforcement	Max cost?	"Excess" apportionment basis		"Excess" reduction	Adjusted cost of Reinforcement
Security CAF_1	£20k	FALSE	-	-	-	£20k
Fault Level CAF_1	£800k	TRUE	£800k	100.0%	(£920k)	(£120k)
Security CAF_2	-	FALSE	-	-	-	-
Fault Level CAF_2	£700k	FALSE	-	-	-	£700k
Total	£1,520k		£800k	100.0%	(£920k)	£600k

Table 11: Option 4, example 4 (negative cost)

4.27 As the £700k cost of Reinforcement exceeds the High-Cost Project Threshold, the “residual excess” of £120k is subtracted from that cost of Reinforcement i.e. £580k is subject to the

relevant CAF. When expressed as a percentage reduction of the “excess” (see Table 12 below), the £800k cost of Reinforcement is therefore reduced by around 87% of the £920k (taking the cost of Reinforcement to zero) and the £700k cost of Reinforcement is reduced by around 13% of the £920k (see also scenarios 4, 7 and 10 of option 4 in Attachment 2).

Reinforcement asset (POC Voltage Level)	Cost of Reinforcement	Exceed HCPT?	"Excess" apportionment basis		"Excess" reduction	Adjusted cost of Reinforcement
Security CAF_1	£20k	FALSE	n/a	-	-	£20k
Fault Level CAF_1	£800k	TRUE	n/a	87.0%	(£800k)	-
Security CAF_2	-	FALSE	n/a	-	-	-
Fault Level CAF_2	£700k	TRUE	n/a	13.0%	(£120k)	£580k
Total	£1,520k		-	100.0%	(£920k)	£600k

Table 12: Option 4, example 4 (zero floor)

4.28 In relation to the second approach to deal with a “residual excess” (as identified in paragraph 4.24): for example if there were costs of Reinforcement of £20k, £800k, £600k, and £800k (so £2,220k in total), and as the “excess” (£1,620k) is greater than the aggregate value of the maximum cost of Reinforcement (i.e. two instances of £800k so £1,600k), the maximum cost of Reinforcement is reduced by the “excess” but floored at zero, leaving a £20k “residual excess”. Otherwise, the maximum costs of Reinforcement to be apportioned would be a negative value after being reduced by the “excess” (see Table 13 below).

Reinforcement asset (POC Voltage Level)	Cost of Reinforcement	Max cost?	"Excess" apportionment basis		"Excess" reduction	Adjusted cost of Reinforcement
Security CAF_1	£20k	FALSE	-	-	-	£20k
Fault Level CAF_1	£800k	TRUE	£800k	50.0%	(£810k)	(£10k)
Security CAF_2	£600k	FALSE	-	-	-	£600k
Fault Level CAF_2	£800k	TRUE	£800k	50.0%	(£810k)	(£10k)
Total	£2,220k		£1,600k	100.0%	(£1,620k)	£600k

Table 13: Option 4, example 5 (negative cost)

4.29 As the £20k and £600k costs of Reinforcement do not exceed the High-Cost Project Threshold, the “residual excess” is subtracted from both of those costs of Reinforcement in proportion to the aggregate value of those costs of Reinforcement (i.e. £20k and £600k relative to £620k, so around 3% and 97% respectively). When expressed as a percentage reduction of the “excess” (see Table 14 below), the £20k cost of Reinforcement is therefore reduced by less than 0% (0.04%) of the £1,620k, the £800k costs of Reinforcement are both reduced by around 49% of the £1,620k (taking the costs of Reinforcement to zero), and the £600k cost of Reinforcement is reduced by around 1% of the £1,620k (see also scenario 13 of option 4 in Attachment 2).

Reinforcement asset (POC Voltage Level)	Cost of Reinforcement	Exceed HCPT?	"Excess" apportionment basis		"Excess" reduction	Adjusted cost of Reinforcement
Security CAF_1	£20k	FALSE	n/a	0.0%	(£1k)	£19k
Fault Level CAF_1	£800k	TRUE	n/a	49.4%	(£800k)	-
Security CAF_2	£600k	FALSE	n/a	1.2%	(£19k)	£581k
Fault Level CAF_2	£800k	TRUE	n/a	49.4%	(£800k)	-
Total	£2,220k		-	100.0%	(£1,620k)	£600k

Table 14: Option 4, example 5 (zero floor)

Option 5: Cap Reinforcement proportional to unadjusted Customer CAF contribution (subject to zero floor)

4.30 This option reduces the cost of Reinforcement to be apportioned proportional to the Customer's unadjusted contribution to the cost of Reinforcement, providing the adjusted cost of Reinforcement is greater than or equal to zero.

4.31 The unadjusted cost of Reinforcement is multiplied by the relevant CAF, and the relative proportion of Customer contributions to those unadjusted costs of Reinforcement is then used to determine the proportion of the "excess" to subtract from that cost of Reinforcement. For example (see also Table 15 below), if there were costs of Reinforcement of £100k, £400k, £50k, and £300k (so £850k in total), to determine the proportionate reduction of the "excess" (£250k), the respective CAFs (39.5%, 12.0%, 39.5%, and 12.0%) are applied to each cost of Reinforcement resulting in a total Customer contribution of £143k. For each of the £100k, £400k, £50k, and £300k costs of Reinforcement, the proportion of that £143k would be around 28%, 34%, 14%, and 25% respectively, equating to reductions of the "excess" of around £69k, £84k, £34k, and £63k respectively. The cost of Reinforcement to be apportioned is the unadjusted cost of Reinforcement plus the proportionate "excess" reduction, unless this value is less than zero: which is not the case in this example (see also scenarios 1-6, 8-9, and 11-12 of option 5 in Attachment 2).

Reinforcement asset	Cost of Reinforcement	CAF %	Customer contribution		"Excess" reduction	Adjusted cost of Reinforcement
Security CAF_1	£100k	39.5%	£39k	27.6%	(£69k)	£31k
Fault Level CAF_1	£400k	12.0%	£48k	33.5%	(£84k)	£316k
Security CAF_2	£50k	39.5%	£20k	13.8%	(£34k)	£16k
Fault Level CAF_2	£300k	12.0%	£36k	25.1%	(£63k)	£237k
Total	£850k		£143k	32.8%	(£250k)	£600k

Table 15: Option 5, example 1

4.32 As a further example, if there were costs of Reinforcement of £20k, £800k, £600k, and £800k (so £2,220k in total), to determine the proportionate reduction of the "excess" (£1,620k), the respective CAFs (39.5%, 12.0%, 39.5%, and 12.0%) are applied to each cost of Reinforcement resulting in a total Customer contribution of £437k. For each of the £20k, £800k, £600k, and £800k costs of Reinforcement, the proportion of that £437k would be around 2%, 22%, 54%, and

22% respectively, equating to reductions of the “excess” of around £29k, £356k, £879k, and £356k respectively. The cost of Reinforcement to be apportioned is the unadjusted cost of Reinforcement plus the proportionate “excess” reduction, unless this value is less than zero: which is the case in this example (see also scenarios 7, 10, and 13 of option 5 in Attachment 2).

Reinforcement asset	Cost of Reinforcement	CAF %	Customer contribution		"Excess" reduction	Adjusted cost of Reinforcement
Security CAF_1	£20k	39.5%	£8k	1.8%	(£29k)	(£9k)
Fault Level CAF_1	£800k	12.0%	£96k	22.0%	(£356k)	£444k
Security CAF_2	£600k	39.5%	£237k	54.2%	(£879k)	(£279k)
Fault Level CAF_2	£800k	12.0%	£96k	22.0%	(£356k)	£444k
Total	£2,220k		£437k	100.0%	(£1,620k)	£600k

Table 16: Option 5, example 2 (negative cost)

- 4.33 In the above example, two costs of Reinforcement to be apportioned would be less than zero e.g. the £600k cost of Reinforcement would (unadjusted) represent around 54% of the Customer contribution, and as 54% of the “excess” (around £879k) is greater than the cost of Reinforcement, the outcome is a negative value. As a result, this option defaults to apportioning the “excess” reduction from each cost of Reinforcement proportional to the total cost of Reinforcement i.e. around 1%, 36%, 27%, and 36% for the respective costs (see Table 17 below).

Reinforcement asset (POC Voltage Level)	Cost of Reinforcement	CAF %	"Excess" apportionment basis		"Excess" reduction	Adjusted cost of Reinforcement
Security CAF_1	£20k	39.5%	£20k	0.9%	(£15k)	£5k
Fault Level CAF_1	£800k	12.0%	£800k	36.0%	(£584k)	£216k
Security CAF_2	£600k	39.5%	£600k	27.0%	(£438k)	£162k
Fault Level CAF_2	£800k	12.0%	£800k	36.0%	(£584k)	£216k
Total	£2,220k		£2,220k	100.0%	(£1,620k)	£600k

Table 17: Option 5, example 2 (zero floor)

Option 6: Cheapest for the Customer

- 4.34 This option is potentially open-ended in that it could require assessment of an exhaustive set of options to determine that which results in the lowest cost to the Customer, and which may vary subject to the scenario (i.e. one option may not always be the cheapest).
- 4.35 As such, it is questionable as to how practicable this option is given it could require calculating apportioned costs of Reinforcement under each of the five options presented in this consultation – and any others – before being able to determine the outcome.

Preferred option

- 4.36 The majority of the Working Group agree with the Proposer that option 3 is the preferred option due to the relative simplicity, repeatability, and transparency. Other options, primarily option 6, may have significant impacts on systems and processes, for potentially little/no benefit (to the DNO/IDNO Party and/or Customer).

- 4.37 The Working Group considered an alternative approach whilst achieving the same outcome as the preferred option, by amending the CAF applied to a cost of Reinforcement rather than adjusting to cost to which the CAF is applied.
- 4.38 The Working Group agreed that such alternative approach is potentially less transparent and more complicated and would require wider changes to Schedule 22 given the existing requirement to apply the CAF methodology to “Reinforcement costs up to and including the High-Cost Project Threshold only”. Therefore, the Working Group agreed that it is more in line with policy intent to adjust the costs of Reinforcement and not the methodology applied to those costs.

Question 3: Do you agree with the Working Group’s preferred option, and why?

Question 4: Do you believe that the Working Group has sufficiently considered options, and are there any that you believe have not been considered?

5 Assessment Against the DCUSA Objectives

- 5.1 For a DCUSA CP to be approved it must be demonstrated that it better facilitates the DCUSA Objectives. There are five General Objectives and six Charging Objectives. DCP 425 will be measured against the DCUSA Charging Objectives, which are set out in the table below:

	DCUSA Charging Objectives	Identified impact
<input checked="" type="checkbox"/>	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	Positive
<input checked="" type="checkbox"/>	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
<input checked="" type="checkbox"/>	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
<input type="checkbox"/>	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	None

<input type="checkbox"/>	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	None
<input checked="" type="checkbox"/>	6. That compliance with the Charging Methodologies promotes efficiency in its own implementation and administration.	Positive

5.2 It is the view of the Working Group that this CP will better facilitate Charging Objectives 1, 2, 3 and 6, with no impact to the others.

5.3 Charging Objective 1 will be better facilitated by ensuring that a DNO/IDNO Party can demonstrate via its charging statement the basis on which Connection Charges will be recovered – and be applied consistently – where a Generation Connection (i) triggers Reinforcement at the Voltage Level of the Point of Connection, (ii) the costs of Reinforcement at that Voltage Level exceed the High-Cost Project Threshold, and (iii) multiple CAFs are required.

5.4 Charging Objective 2 will be better facilitated by ensuring that each DNO Party applies a consistent approach.

5.5 Charging Objective 3 will be better facilitated by ensuring that the Connection Charge applicable in a situation described in paragraph 5.3 is reasonable and calculated based on an appropriate CAF methodology in such circumstances (e.g. to avoid double-recovery of costs).

5.6 Charging Objective 6 will be better facilitated by ensuring that Schedule 22 provides clarity in how to consistently calculate the Connection Charge in a situation described in paragraph 5.3.

Question 5: Do you consider that the CP better facilitates the DCUSA Charging Objectives? If so, please detail which of the Charging Objectives you believe are better facilitated and provide supporting reasons. If not, please provide supporting reasons.

6 Impacts & Other Considerations

Significant Code Review (SCR) or other significant industry change projects

6.1 No – this policy area was not covered in the Access SCR Decision.

Cross Code Impacts

BSC..... ☐ REC..... ☐ Distribution Code.. ☐

CUSC..... ☐ SEC..... ☐ Grid Code..... ☐

None..... ☒

Consideration of Wider Industry Impacts

- 6.2 The issue which this CP seeks to remedy has been discussed in the DCP 422 Working Group and at the ENA Connections Commercial Operations Group (“Connections COG”).

Question 6: Are you aware of any wider industry developments that may impact upon or be impacted by this CP?

7 Implementation

- 7.1 As this CP is to remedy a known gap in Schedule 22, the Working Group believe that it should be implemented at the earliest opportunity once approved by the Authority.

8 Legal Text

Legal Text

- 8.1 The legal text to achieve the Working Group’s preferred option can be found in Attachment 3 to this CP and relates to Schedule 22 only. The Working Group propose to include two new examples to Schedule 22, being examples 32 and 33.
- 8.2 Legal text for other options considered in the development of this CP are also included in Attachment 3 (without illustrative examples).

Text Commentary

- 8.3 It is proposed that Paragraph 1.16 is amended to address a conflict within that paragraph to clarify that costs of Reinforcement should be apportioned “up to and including” rather than “below” the High-Cost Project Threshold.
- 8.4 It is proposed that Paragraph 1.18 is amended to further add to the clarity provided by DCP 422 in Paragraph 1.16.
- 8.5 For the Working Group’s preferred option, Paragraph 1.28A sets out that the CAF methodology shall be applied to capped costs of Reinforcement by subtracting the “excess” from the relevant costs of Reinforcement proportional to the total costs of Reinforcement at the Voltage Level of the Point of Connection.
- 8.6 In relation to the two additional examples:
- Example 32 demonstrates how costs of Reinforcement should be apportioned when the High-Cost Project Threshold is exceeded at the Voltage Level of the Point of Connection and where a single asset is subject to a CAF. This is based on the existing Example 30.
 - Example 33 demonstrates how costs of Reinforcement should be apportioned when the High-Cost Project Threshold is exceeded at the Voltage Level of the Point of Connection and where multiple assets are subject to a CAF. This is based on the existing Example 13.

Question 7: Do you have any comments on the proposed legal text?

Question 8: Do you have any other comments on DCP 425?

9 Code Specific Matters

Reference Documents

9.1 Links to reference documents are included in footnotes throughout.

10 Consultation Questions

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

No.	Questions
1	Do you understand the intent of DCP 425?
2	Are you supportive of the principles of DCP 425? Please provide your rationale?
3	Do you agree with the Working Group's preferred option, and why?
4	Do you believe that the Working Group has sufficiently considered options, and are there any that you believe have not been considered?
5	Do you consider that the CP better facilitates the DCUSA Charging Objectives? If so, please detail which of the Charging Objectives you believe are better facilitated and provide supporting reasons. If not, please provide supporting reasons.
6	Are you aware of any wider industry developments that may impact upon or be impacted by this CP?
7	Do you have any comments on the proposed legal text?
8	Do you have any other comments on DCP 425?

10.2 Responses should be submitted using Attachment 1 to dcusa@electralink.co.uk no later than, **01 December 2023**.

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.

11 Attachments

- Attachment 1: DCP 425 Consultation Response Form
- Attachment 2: DCP 425 Examples

- Attachment 3: DCP 425 Draft Legal Text
- Attachment 4: DCP 425 Change Proposal Form