The Voice of the Networks

Energy Networks Association

Electricity (Connection Charges) Regulations 2022

Guidance Document

December 2024

Overview:

The Electricity (Connection Charges) Regulations 2017 (ECCR 2017) provide that where a person connects to, and benefits from, electricity infrastructure that was paid for by an earlier party, the earlier party can be reimbursed for a share of the costs by the subsequent connecting customer.

The Electricity (Connection Charges) (Amendment) Regulations 2022 make changes to ECCR 2017 to allow Ofgem's decision to reform the distribution network connection charging boundary to be implemented from 1 April 2023.

This document provides guidance on the interpretation of the ECCR 2017 and the amending Regulations and will refer to the combined effect as ECCR 2022.

This document has been produced to assist stakeholders and is not legally binding.

Context

Getting connected to the local electricity distribution networks is important. It allows businesses to begin trading, new homes to be lived in, and renewable energy to be generated.

Under the Electricity Act 1989, the person who requests a connection is required to pay a proportion of the cost of getting connected to the network. There are a number of rules in place to ensure that connection customers pay a fair price. For example, connection charges should be calculated in accordance with the Electricity Distributors' obligations under legislation and the electricity distribution licence.

The first regulations on connection charging - Electricity (Connection Charges) Regulations 2002 - were made in 2002. In 2017, the then Department for Business, Energy and Industrial Strategy (BEIS) made a new version of regulations.

The Electricity (Connection Charges) Regulations 2017 (ECCR 2017) is one of the relevant pieces of legislation that ensures customers pay a fair price to get connected. The ECCR 2017 state that if a Second Connection customer benefits from infrastructure that was paid for by an earlier party, the Second Connection customer should reimburse the earlier party to account for their proportion of the new infrastructure.

The Electricity (Connection Charges) (Amendment) Regulations 2022 make changes to when Second Connection customers must pay for reinforcement that was provided for an earlier party. This was to align the treatment to the changes to what customers pay for reinforcement arising from Ofgem's reforms of the connections charging boundary.

This document has been developed by the Distribution Network Operators to provide guidance on the interpretation of the ECCR 2022.

Document Control

Authorities

Version	Issue Date	Authorisation	Comments
1.0	1 Sept 2020	COG Connections	
2.0	13 May 2024	COG Connections	
3.0	19 Dec 2024	COG Connections	

Related Documents

Reference 1	The Electricity (Connection Charges) Regulations 2017; http://www.legislation.gov.uk/uksi/2017/106/made
Reference 2	The Electricity (Connection Charges) Regulations 2002; http://www.legislation.gov.uk/uksi/2002/93/pdfs/uksi_20020093_en.pdf
Reference 3	Section 52 of the Infrastructure Act 2015 which amends the Electricity Act 1989 to add Schedule 5B http://www.legislation.gov.uk/ukpga/2015/7/section/52/enacted
Reference 4	The Electricity (Connection Charges) (Amendment) Regulations 2022 https://www.legislation.gov.uk/uksi/2022/1265/made

Change History

Version	Issue Date	Description
1.0	1 Sept 2020	Initial issue
2.0	13 May 2024	Updated to incorporate changes arising from the Electricity (Connection Charges) (Amendment) Regulations 2022
3.0	19 Dec 2024	Inclusion of Example 3, table of figures, updated cross references and some minor text changes

Distribution

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Executive Summary

Under the Electricity Act 1989 (EA 89), a person who requests a connection to the GB electricity distribution network is required to pay a proportion of the cost of getting connected to the network. There are rules in place to ensure that connection customers pay a fair price to get connected.

The Electricity (Connection Charges) Regulations (ECCR) 2017 (the ECCR 2017) deal with connection charging. Under the ECCR 2017, where a person connects to and benefits from electricity infrastructure that was paid for by an earlier party, this earlier party can be reimbursed for a share of these costs by the subsequent connecting customer. The Electricity (Connection Charges) (Amendment) Regulations 2022 makes changes to the treatment of reinforcement but does not affect extension assets paid for by an earlier party.

We are not required to produce this guidance but have chosen to do so to assist stakeholders in interpreting the ECCR 2022. In the event of any inconsistency between the ECCR 2022 and this guidance document, the ECCR 2017 and the amending Regulations should prevail. This document is not a substitute for specific legal advice.

Specifically, this document provides guidance to stakeholders on:

a) the relevant requirements that need to be met for a party to be eligible to receive a Reimbursement Payment under the ECCR 2022,
b) the steps that Electricity Distributors should take to identify Eligible Persons,
c) how Electricity Distributors should calculate the value of any Reimbursement Payment under the ECCR 2022,
d) the timescales for requiring Reimbursement Payments from Subsequent Contributors and making Reimbursement Payments to Eligible Persons,
e) the information that Electricity Distributors should make available to Subsequent Contributors when requested, and
f) the information that Electricity Distributors should hold to comply with the ECCR 2022.

The appendix to this document also contains examples to illustrate the guidance on eligibility for, and calculation of, a Reimbursement Payment.

1 Introduction

Chapter Summary

This chapter provides an overview of the ECCR 2022 and clarifies the purpose of this document.

Purpose of this document

1.1 The objective of this document is to assist stakeholders on our interpretation of the ECCR 2022.

1.2 This document also has the benefit of ensuring that Electricity Distributors apply the ECCR 2022 on a consistent basis and providing guidance to customers on how the ECCR 2022 should be applied.

Legal framework for the Electricity (Connection Charges) Regulations

1.3 Section 19 Electricity Act 1989 allows the Secretary of State to make regulations which allow for the sharing of costs among persons requiring electricity connections to a distribution network.

1.4 The Secretary of State exercised these powers to make the ECCR 2002. On the 6 April 2017, the ECCR 2017 came into force.

1.5 On 1 April 2023 the Secretary of State made amendments to ECCR 2017 through the Electricity (Connection Charges) (Amendment) Regulations 2022.

1.6 The key changes introduced by the amendments were:

a) To reflect changes to the circumstances in which second comers are required to make reimbursement payments, in particular to limit the circumstances where a second comer must make a reimbursement payment in respect of expenses relating to network reinforcement.
b) so that distributors are not required to demand a reimbursement payment, or the appropriate part of any such payment, which the distributor is not required and does not intend to pay to an initial contributor.

Purpose of the ECCR

1.7 Under the Electricity Act 1989, any person that requests a connection is required to pay a proportion of the costs associated with getting connected to the network. There are a number of rules in place to ensure that connection customers pay a fair proportion of the costs.

1.8 Under the ECCR 2022, if an Electricity Distributor notes that a Second Connection uses assets that were paid for by an earlier party, the Electricity Distributor is required where the criteria are met, to:

a) charge the Second Connection customer for using these assets; and
b) use this money to reimburse the party that paid for the asset.

Compliance

1.9 This document is intended to assist stakeholders to understand the general framework of the regulations. It is not a substitute for specific legal advice.

1.10 In the event of any inconsistency between the ECCR 2017 and the amending Regulations and this document, the ECCR 2017 and amending Regulations take precedence.

1.11 In this guidance document, unless the context otherwise requires, any reference to the singular includes the plural, and vice versa.

Disputes

1.12 If a connection customer is concerned that an Electricity Distributor has not complied with the ECCR 2022, we would encourage the customer to resolve their dispute with the company concerned.[1] A copy of the company's complaints handling procedure can be requested from the company by telephone, email or their website.

1.13 If the matter remains unresolved for more than eight weeks or reaches a point of deadlock (where the network company cannot do anything more to resolve the complaint), domestic and small (micro) business customers can take their complaint to the Energy Ombudsman.[2]

1.14 The Energy Ombudsman investigates complaints from domestic and small (micro) business consumers that the network company cannot resolve to the customer's satisfaction. If the Ombudsman finds in favour of the customer, the Ombudsman can direct a company to take practical action to resolve a complaint and, in some cases, make a financial award.

1.15 Ofgem has the power to determine disputes between Electricity Distributors and customers (both commercial and domestic) in certain circumstances. More information on Ofgem's determination powers, and how to refer a determination to Ofgem, can be found in its guidance[3].

Implementation of ECCR 2022

1.16 The ECCR 2017 apply in cases where a First Connection is made on or after 6 April 2017.

1.17 The ECCR 2022 amendments only apply in cases where applications for a Second Connection is made on or after 1 April 2023.

[1] Since the introduction of the Consumers, Estate Agents and Redress (CEAR) Act 2007 and the Gas and Electricity (Consumer Complaints Handling Standards) Regulations 2008, Electricity Distributors are required to establish arrangements to handle complaints and disputes involving domestic and micro business customers.
[2] https://www.energyombudsman.org/?utm_source=http://ombudsman-services.org&utm_medium=landing-page&utm_campaign=button
[3] https://www.ofgem.gov.uk/publications/ofgem-guidance-determination-disputes-use-system-or-connection-energy-networks

2 Scope of the ECCR 2022

Chapter Summary

This chapter provides guidance on the scope of the ECCR 2022

The applicability of the ECCR 2022

2.1 The ECCR 2022 specify how Electricity Distributors should recover from Subsequent Contributors an appropriate amount in order to reimburse the First Connection customer with a proportion of the expenses incurred by it in first providing the electric line or electrical plant for the purposes of making a First Connection.

2.2 The ECCR 2022 only apply when a Second Connection is made (i) between a premise and the distribution system or (ii) between distribution systems, making use of electric line or electrical plant provided for the purposes of making a First Connection. Moreover, the Second Connection must be made within the prescribed period of 10 years from the date on which the First Connection was made.

The First Connection

2.3 The ECCR 2022 only apply where there has been a First Connection[4] between a premise and a distribution system or between two distribution systems. The ECCR 2022 only apply to connections that have installed Extension Assets and/or required Reinforcement to be undertaken. The person requiring the First Connection should have made a payment in respect of Net First Connection Expenses.

2.4 The ECCR 2022 apply regardless of whether an ICP or Electricity Distributor made the First Connection[5].

2.5 It is not possible for an Electricity Distributor to recover costs under the ECCR 2022 for Reinforcement work costs that have not been triggered by a First Connection.

2.6 For the sake of clarity, where two connections have been requested, the First Connection will be the earliest connection made between premises and a distribution system, or between two distribution systems, regardless of which connection the Electricity Distributor initially considered would be made first.

[4] This includes any connection made under section 16 of the Electricity Act 1989 and any other arrangement that a person enters into an arrangement with an Electricity Distributor to provide a connection (eg under section 22 of the Electricity Act).

[5] If an ICP made the First Connection, the new electric line and electrical plant installed would have been adopted by an Electricity Distributor.

The Second Connection

2.7 The ECCR 2022 apply to any Second Connection[6] made between a premise and a distribution system or between two distribution systems that uses electric line or electrical plant that was provided for the purposes of making a First Connection.

2.8 The person who has obtained the Second Connection is also known as the "second comer".

2.9 The definition of Second Connection includes all subsequent connection customers that use electric line or electrical plant that was provided for the purpose of making a First Connection.

The Prescribed Period

2.10 The ECCR 2022 only apply when the Second Connection is made within the prescribed period.

2.11 The prescribed period for the ECCR 2022 begins on the date that the First Connection is made and ends ten years after that date.

[6] This includes any connection made under section 16 of the Electricity Act 1989 and any other arrangement that a person enters into an arrangement with an Electricity Distributor to provide a connection (eg under section 22 of the Electricity Act).

3 Eligible Persons

Chapter Summary

This chapter provide guidance on the requirements for parties to be eligible to receive a Reimbursement Payment under the ECCR 2022.

3.1 Under the ECCR 2022, if a Second Connection is made between a premises and the distribution system or between distribution systems that makes use of electric line or electrical plant provided for the purposes of making a First Connection, the Second Connection customer should, unless exceptions apply, reimburse the party (or parties) that paid for them.

3.2 There are five types of person that may be eligible for a Reimbursement Payment (hereafter the "Eligible Persons"):

a) the Initial Contributor, who at the Relevant Time owns or occupies the premises or distribution system to which the First Connection was made;
b) a person who on a previous occasion e.g. when a Second Connection was made, has made a Reimbursement Payment under the ECCR 2022, in respect of Net First Connection Expenses and at the Relevant Time owns or occupies the premises or distribution system to which the Second Connection was made;
c) a person to whom the right to receive the Reimbursement Payment has been assigned and who at the Relevant Time owns or occupies the premises or distribution system to which the First Connection was made;
d) an Electricity Distributor that has previously incurred First Connection Expenses and has not fully recovered these expenses from any other person; and
e) a person other than an Initial Contributor, who has made a Reimbursement Payment under the ECCR 2022 or an Electricity Distributor, who has made a payment to an Electricity Distributor or an ICP in respect of Net First Connection Expenses.

3.3 The five types of Eligible Persons identified in the paragraph 3.2 are further clarified below.

A. The Initial Contributor

3.4 The Initial Contributor means the person who has obtained the First Connection and made a payment to either an Electricity Distributor or an ICP in respect of Net First Connection Expenses. The Initial Contributor is sometimes known colloquially as the "first comer".

3.5 Where an ICP installs the electric line or electrical plant for the purpose of making the First Connection, if the owner or occupier of the relevant premises or the distribution system that contracted with the ICP pays for those assets then they are the Initial Contributor (not the ICP).

3.6 If the Initial Contributor ceases to own or occupy the relevant premises or to own the distribution system, it ceases to be an Eligible Person. The Initial Contributor may assign the right to a Reimbursement Payment to the new owner or occupier of the relevant premises or to the owner of the distribution system.

B. A person who has made a Reimbursement Payment under the ECCR 2022

3.7 Any person that has previously made a Reimbursement Payment under these regulations in respect of Net First Connection Expenses and who at the Relevant Time owns or occupies the premises or distribution system, is also an Eligible Person.

3.8 For example, if a Subsequent Contributor makes a Reimbursement Payment in relation to Net First Connection Expenses, the Subsequent Contributor could become an Eligible Person if

further subsequent customers use any of the assets that it has now paid towards. If, over time, multiple customers connect to an electric line that was installed for the purpose of making a First Connection, this could create multiple Eligible Persons and multiple Reimbursement Payments, as outlined in the example below. The effect would be:

a) the second connectee would only reimburse the Initial Contributor;
b) the third connectee would reimburse the second connectee and the Initial Contributor;
c) the fourth connectee would reimburse the third connectee, the second connectee and the Initial Contributor; and so on.

3.9 If a person that made a Reimbursement Payment under these regulations ceases to own or occupy the relevant premises or to own the distribution system, this person ceases to be an Eligible Person. The person that made the payment under these Regulations may assign the right to a Reimbursement Payment to the new owner or occupier of the relevant premises or distribution system.

C. A person to whom the right to receive the Reimbursement Payment has been assigned

3.10 The holder of a right to receive a Reimbursement Payment may assign the right to receive the Reimbursement Payment to a third party. The party to whom the rights are assigned then becomes the Eligible Person, for as long as this person owns or occupies the premises or owns the distribution system to which the previous connection was made.

3.11 If the person to whom the right has been assigned ceases to own or occupy the relevant premises or to own the distribution system when the Second Connection is made, then that person ceases to be an Eligible Person.

3.12 If the holder of a right to receive a Reimbursement Payment does not assign the right to receive a Reimbursement Payment onto a third party, the right to a Reimbursement Payment is not transferred. For example, if the owner of a premises is an Eligible Person and decides to sell the premises, the new owner is not automatically entitled to receive a Reimbursement Payment under the ECCR 2022. For the new owner of the premises to become an Eligible Person, the right to receive a Reimbursement Payment should have been assigned to them by the previous owner or occupier, of the premises.

D. An Electricity Distributor

3.13 An Electricity Distributor may also be an Eligible Person if it incurs First Connection Expenses as a result of undertaking Reinforcement Work or Enhanced Scheme work for which it does not fully recover the costs from any other Person(s). The appendix contains examples (6, 7, 8 and 12) of when an Electricity Distributor may have incurred Net First Connection Expenses.

E. Another person that has made a payment in respect of Net First Connection Expenses

3.14 This category captures any person other than:

a) an Initial Contributor,
b) a person who has made a Reimbursement Payment under these Regulations or
c) an Electricity Distributor,

who has made a payment to an Electricity Distributor or an ICP in respect of Net First Connection Expenses.

3.15 For example, a third party acting independently of a person that obtains the connection may decide to make a payment in respect of the Net First Connection Expenses. Since this third

party has not obtained the first connection, it is not captured by the definition of "Initial Contributor". They would however be an Eligible Person for a Reimbursement Payment because they made a payment to the Electricity Distributor in respect of Net First Connection Expenses.

3.16 Alternatively, a third party who has made a payment to an ICP in respect of Net First Connection Expenses for the installation of new DNO electricity network to connect a new IDNO owned network, to which the third party is connected. Since this person has not obtained the first connection, the connection is to the IDNO, they are not captured by the definition of "Initial Contributor". They would however be an Eligible Person for a Reimbursement Payment because they made a payment to the ICP in respect of Net First Connection Expenses.

3.17 The appendix contains examples (10 and 11) of when a third party may be an Eligible Person where they are not an "Initial Contributor" but they have incurred Net First Connection Expenses, e.g. a Development Corporation or a customer connected to an IDNO Network.

3.18 A person who is acting for, or who is an agent of the person obtaining the connection would not be eligible under this category of Eligible Person.

4 Steps to be taken to identify Eligible Persons

Chapter Summary

This chapter summarises the steps that we expect Electricity Distributors to take to identify the Eligible Persons and their contact details.

4.1 The ECCR 2022 places an obligation on the Electricity Distributor to take reasonable steps to ascertain if there are any Eligible Persons and if so, to record their name and address.

4.2 For each category of Eligible Person, the reasonable steps could include, without being limited to, the following actions.

A. When the Eligible Person is the Initial Contributor

Where an Electricity Distributor completes the First Connection

4.3 Where the Eligible Person is the Initial Contributor and the Electricity Distributor completed the First Connection, the Electricity Distributor should already hold the name and the address of the Initial Contributor as a result of the connection application process. The Electricity Distributor should use this information to contact the relevant person.

4.4 The Electricity Distributor should also hold information on the Net First Connection Expenses, which it can use to help calculate the value of any Reimbursement Payment. Guidance on how Electricity Distributors should calculate the value of any Reimbursement Payments due under the ECCR 2022 can be found in chapter 5. If, having taken reasonable steps to do so, the Electricity Distributor is unable to ascertain the name and address of the Initial Contributor, the relevant Electricity Distributor should not be required to make a Reimbursement Payment to the Eligible Person.

Where an ICP completes the First Connection

4.5 In cases where an ICP completed the First Connection, the ICP should provide to the Electricity Distributor the relevant contact details for the Initial Contributor that paid for the connection. Electricity Distributors should ensure that the process of transferring assets from ICPs to Electricity Distributors includes provisions that allow this information to be supplied. If the Electricity Distributor does not have contact details for the Initial Contributor, the Electricity Distributor should request them from the ICP.

4.6 If no contact details are provided by the ICP regarding the Initial Contributor, the Electricity Distributor should take reasonable steps to find contact details for the Initial Contributor. If, having taken reasonable steps to do so, the Electricity Distributor is unable to ascertain the name and address of the Initial Contributor, the relevant Electricity Distributor is not required to make a Reimbursement Payment to the Eligible Person.

B. When the Eligible Person is a Subsequent Contributor who has made a payment under these Regulations

4.7 If the Eligible Person is another person that has made a payment in relation to Net First Connection Expenses, the Electricity Distributor should consult their own records to identify the relevant contact details.

4.8 If no contact details are available for the person that made a payment under these Regulations, then the Electricity Distributor should take reasonable steps to the locate the relevant contact details. If, having taken reasonable steps to do so, the Electricity Distributor

is unable to ascertain the name and address of the Eligible Person, the relevant Electricity Distributor should not be required to make a Reimbursement Payment to the Eligible Person.

C. When the Eligible Person has been assigned the right to receive a Reimbursement Payment

4.9 We recommend that the holder of the right to a Reimbursement Payment notify the Electricity Distributor if it assigns the right to receive a Reimbursement Payment to another person. Chapter 3 of this document outlines information on how the process of assignment should work.

4.10 If the holder of the right to a Reimbursement Payment does not notify the Electricity Distributor that it has assigned the rights to a Reimbursement Payment to a third party, it should do so and provide the contact details of the third party when the Electricity Distributor contacts it to notify it that it is eligible for a Reimbursement Payment.

4.11 If the original holder of the right to a Reimbursement Payment confirms that it has assigned the rights for a Reimbursement Payment to a third party, but does not provide any contact details, then the Electricity Distributor should take reasonable steps to locate the relevant contact details. If, having taken reasonable steps to do so, the Electricity Distributor is unable to ascertain the name and address of the person to whom the rights were assigned to, the relevant Electricity Distributor should not be required to make a Reimbursement Payment to the Eligible Person.

D. When the Eligible Person is an Electricity Distributor

4.12 If the Eligible Person is an Electricity Distributor, no further information is required.

E. When the Eligible Person is another person that has made a payment in respect of Net First Connection Expenses

4.13 If a third party pays Net First Connection Expenses at the time of the First Connection, the Electricity Distributor should normally have the contact details for this party. If the Electricity Distributor does not however have the contact details for this party, it should contact the customer that requested the First Connection to ask to provide contact details for the party that paid Net First Connection Expenses.

4.14 If the third party had paid an ICP for Net First Connection Expenses at the time of the First Connection, then the Electricity Distributor should contact the ICP and request the contact details.

4.15 If no contact details are provided by the customer that requested the First Connection or the ICP, the Electricity Distributor should take reasonable steps to locate the relevant contact details. If, having taken reasonable steps to do so, the Electricity Distributor is unable to ascertain the name and address of the other person that made a payment in respect of Net First Connection Expenses, the relevant Electricity Distributor should not be required to make a Reimbursement Payment to the Eligible Person.

5 Demanding a Reimbursement Payment

Chapter Summary

This chapter states how Electricity Distributors should calculate the value of any Reimbursement Payments under the ECCR 2022. This chapter also states how the Electricity Distributor should treat any scenarios where the Reimbursement Payment is below £300 (following the deduction of Administrative Expenses) or the Eligible Person waives the right to a Reimbursement Payment.

A. Calculating the value of Reimbursement Payments when the Electricity Distributor completes the work

5.1 Regulation 7(4) of the ECCR 2022 requires the Electricity Distributor to calculate an appropriate proportion of the Net First Connection Expenses "which appears to the relevant Electricity Distributor to be reasonable having regard to all the circumstances, including in particular the maximum capacity required by the person obtaining the Second Connection".

5.2 When calculating the value of any Reimbursement Payment, the amount demanded by the Electricity Distributor should be equal to the appropriate proportion of the Net First Connection Expenses.

5.3 The key circumstances to be taken into account are normally:

a) the extent to which electric line and electrical plant provided for the purpose of providing the Net First Connection, are to be used for the purpose of providing the Second Connection, and
b) the maximum capacity required by the person obtaining the Second Connection.

5.4 This chapter provides clarifications of our understanding of how Electricity Distributors should treat different costs when determining the value of any Reimbursement Payment under the ECCR 2022. This takes into account the provisions and terminology established in the Common Connection Charging Methodology (CCCM), set out in Schedule 22 of the Distribution Connection and Use of System Agreement, as available at the time of publication of this guidance.

Treatment of Extension Asset Costs

5.5 Charges for network Extension Assets are based on the full expenses incurred to provide the shared assets used for both the First Connection and Second Connection. For Extension Assets, the Reimbursement Payment should be calculated taking account of the relative capacity requirements of the parties.

Guiding Principles for the Treatment of Reinforcement Work Costs

5.6 Where the first connection customer has contributed in full towards reinforcement the second comer will not be required to reimburse the first comer.

5.7 If the first connection has contributed in part towards reinforcement, irrespective of whether it is generation or demand, reimbursement from second comers will be required provided the second comer would also be liable for reinforcement costs had they been the first comer under the prevailing connection charging arrangements, i.e. the second comer is a generation customer requiring reinforcement at the same voltage level.

5.8 Where the High-Cost Project Threshold applies then the costs above the threshold are paid in full by the First Connection and the Second Connection will not be required to reimburse the First Connection. The costs below the threshold are paid in part by the First Connections and

therefore a Second Connection may be liable for reinforcement costs if they would have been liable had they been the first comer under the prevailing charging arrangements.

5.9 These principles are illustrated in the matrix below.

		Would the second comer be liable for reinforcement costs had they been the first connection under Ofgem's new connection charging arrangements?	
		Yes[2]	No
Has the first connection customer contributed in part to connection costs?	Yes[1,1+]	Second comer would be required to reimburse first comer on a proportionate basis.	no reimbursement
	No	no reimbursement	no reimbursement

Clarifications

[1] **First connection applied pre-1 April 2023**: When a connection customer has contributed to reinforcement at same voltage level as connection or one above

[1+] **First connection applied from 1 April 2023**: When a generation customer contributes to reinforcement at same voltage level as connection,

[2] When a second comer generation customer contributes to reinforcement at same voltage level as the connection.

Figure 1: Reimbursement Matrix

The treatment of costs associated with transmission network works

5.10 Charges for transmission network works are based on the charges levied by National Grid Electricity Transmission plc (NGET) on the Electricity Distributor, which are necessary to facilitate the provision of the First Connection. For transmission network works, the Reimbursement Payment should be calculated taking account of the relative capacity requirements of the parties.

5.11 Where NGET places a requirement to provide security (and associated liability) in respect of transmission network works this should be explicitly excluded from the ECCR.

The treatment of costs associated with Enhanced Schemes

5.12 If a Second Connection customer uses electric line or electrical plant that was provided for the purposes of connecting the First Connection as part of an Enhanced Scheme, then any Eligible Persons that paid Net First Connection Expenses may be entitled to a Reimbursement Payment under the ECCR 2022.

5.13 Some of the electric line or electrical plant installed as part of an Enhanced Scheme may not be provided for the purpose of making a connection between premises and a distribution system (e.g. additional assets not provided for the purpose of making a connection). The

value of any Reimbursement Payment is therefore dependent on the extent to which the Eligible Person has incurred First Connection Expenses and the extent to which the Second Connection uses electric line and electrical plant that was provided for the purpose of making the First Connection.

Interaction with the High-Cost Project Threshold[7]

5.14 The High-Cost Project Threshold (HCPT) applies to Generation Connections and Demand Connections with particularly high costs or which have requirements significantly in excess of the Electricity Distributors' design standards. In these circumstances, the customer is expected to fund the required additional investment through connection charges. This includes any Generation Connections with Reinforcement costs in excess of £200/kW and Demand Connections with Reinforcement costs in excess of £1,720/kVA. This requirement is included in the CCCM.

5.15 With respect to the 2022 Regulations, the HCPT should only be applied to the First Connection customer that triggers any Reinforcement. If a Second Connection uses electric line or electrical plant that was previously reinforced for the purposes of making a First Connection that triggered the HCPT, then those costs above the HCPT are excluded from the Second Connection customer's Net First Connection Expenses.

The treatment of costs associated with "investment ahead of need"

5.16 The ECCR 2022 only apply to scenarios where there has been a First Connection. This means that it is not possible for an Electricity Distributor (or any other party) to recover costs for Reinforcement Work that have not been triggered by an initial connection request. (e.g. any work that cannot be defined as an Enhanced Scheme under the CCCM).

Administrative Expenses

5.17 When an Electricity Distributor receives a Reimbursement Payment from a Subsequent Contributor, the Electricity Distributor may deduct its Administrative Expenses from the amount received (e.g., the costs associated with identifying Eligible Persons, calculating the value of any Reimbursement Payments, legal costs to pursue non-payment etc).

Identifying First Connection Expenses when an ICP completes the work

5.18 If the First Connection was made by an ICP, the Electricity Distributor will not hold information on the costs of the works carried out by the ICP. The Electricity Distributor should take steps to estimate the value of the Net First Connection Expenses taking into account information obtained from the ICP and the elements of work that were carried out by the Electricity Distributor at the request of the ICP.

Steps to obtain information from ICPs

5.19 To allow the Electricity Distributor to estimate the value of Net First Connection Expenses on shared assets used for both the First Connection and Second Connection, the Electricity Distributors should take such steps as are reasonably practicable to obtain a description of the works carried out for the First Connection, including contacting the ICP.

5.20 To enable an Electricity Distributor to make a reasonable estimate of Net First Connection Expenses on shared assets used for both the First Connection and Second Connection, the

[7] The "High-Cost Project Threshold" used in the CCCM refers to the "high expenses threshold", as defined within the ECCR 2022.

ICP should provide a detailed description of the works carried out, including:

a) the size and type of assets installed;
b) cable lengths;
c) excavation works carried out by the ICP, including surface types;
d) excavation works carried out by the customer[8];
e) substation civil works;
f) traffic management arrangements; and
g) legal/wayleave consents obtained

The principles used to estimate Net First Connection Expenses

5.21 Where detailed information has not been provided, assumptions may need to be made regarding the level of works required, which could include, but are not limited to:

a) onsite excavation & reinstatement was completed by the customer[9];
b) offsite excavation & reinstatement was completed by the ICP;
c) surface types for excavation to be the lowest cost option; and
d) substation civil works.

5.22 The estimate is to be made using the Electricity Distributor's own Connection Charging Methodology (CCM) that is published and in effect at the time of making the estimate.

5.23 The estimate should be made at the time a Second Connection is requested, to enable the value of the potential Reimbursement Payment to be reflected alongside the connection charge.

5.24 If further applications are subsequently received to utilise the same shared assets, the Electricity Distributor should re-calculate the cost apportionment.

5.25 To reflect time elapsed since the First Connection was made, the following formula is to be applied to the estimated value:

$$E \; x \; \frac{A}{B}$$

Where:
E is the estimated value of the First Connection
A is the retail prices index[10] at the time the connection was actually made
B is the retail prices index at the time the estimate was completed

Unable to identify the value of Net First Connection Expenses

5.26 An Electricity Distributor is not required to make a reimbursement payment to an Eligible Person if it takes all reasonable steps to do so and is still unable to:

a) estimate the amount of the Net First Connection Expenses borne by the Eligible Person; or
b) make a reasonable estimate of the Net First Connection Expenses borne by the Eligible Person.

[8] The costs of excavation work carried out by the customers is not included in the calculation of the Reimbursement Payment but is needed to calculate the costs of installing any cable in those excavations.
[9] As per footnote 10.
[10] The retail price index can be found using the link below. Change the view from Chart to Table to view a list form of the RPI for any given month and year
https://www.ons.gov.uk/economy/inflationandpriceindices/timeseries/chaw

B. Waiving the rights to a Reimbursement Payment

5.27 When considering how to calculate the value of any Reimbursement Payment, it is important to note that the ECCR 2022 recognise that in some cases an Eligible Person may wish to waive its rights to a Reimbursement Payment. If an Eligible Person wants to waive its rights to a Reimbursement Payment for a particular project, it should notify the Electricity Distributor of this in writing.

C. If the value of any Reimbursement Payment is below £300

5.28 The Electricity Distributor is not required to demand a Reimbursement Payment if, once the Electricity Distributor has calculated the Reimbursement Payment in accordance with the requirements of the ECCR 2022, the value of the Reimbursement Payment (or proportion of) is less than £300 to any individual initial contributor after deducting any Electricity Distributor Administrative Expenses. Example 5 illustrates how this is intended to work.

6 The timescales for requiring Reimbursement Payments to be made

Chapter Summary

This chapter identifies the timescales for requiring reimbursements from Subsequent Contributors and making Reimbursement Payments to Eligible Persons.

Timescales for requiring Reimbursement Payments to be made from Subsequent Contributor

6.1 The relevant Electricity Distributors must take reasonable steps to ascertain whether there are any persons who will be Eligible Persons, and if so, the name and address of each of those persons. If it appears to the relevant Electricity Distributor that there are such persons, the Electricity Distributor should give to the customer a written demand (e.g. in the connection offer or issuing an invoice) for a Reimbursement Payment that the customer may be liable for. Any demand for a Reimbursement Payment should stipulate when the Reimbursement Payment is due. A customer is only due to make a Reimbursement Payment once the Second Connection has been made. The Electricity Distributor may ask for security for the payment.

6.2 The customer receiving a demand for a Reimbursement Payment is entitled to make a request for specific information to the Electricity Distributor. The relevant information is described further in Chapter 7. The customer is not required to pay the Reimbursement Payment until the Electricity Distributor has provided the information or confirmed that it does not hold the information.

Timescales for making Reimbursement Payments to Eligible Persons

6.3 Once an Electricity Distributor has received a Reimbursement Payment, it should pay the Reimbursement Payment, minus the Electricity Distributor's Administrative Expenses, to the Eligible Persons as soon as reasonably practicable.

6.4 If the Reimbursement Payment is not received by the Electricity Distributor, the Electricity Distributor does not make a Reimbursement Payment to the Eligible Person.

6.5 In situations where the Eligible Person has informed the Electricity Distributor that it does not wish to receive a Reimbursement Payment, no payment should be made.

7 The provision of information to the Subsequent Contributor

Chapter Summary

This chapter identifies the information that Electricity Distributors should make available to Subsequent Contributors when requested.

The provision of information to Subsequent Contributors

7.1 Subsequent Contributors may request information from the Electricity Distributor regarding the First Connection.

7.2 The Electricity Distributor should provide information to the Subsequent Contributors about:

a) the amount of the Net First Connection Expenses, or if an ICP completed the works, the Electricity's Distributor's estimate of the Net First Connection Expenses;
b) the date when the First Connection was made; and
c) the total amount actually paid in respect of the First Connection by the Initial Contributor or other persons (i.e. Subsequent Contributors).

7.3 The Electricity Distributor should, in so far as it holds the information requested by the Subsequent Contributor, provide this information as soon as reasonably practicable after receipt of the request.

8 Maintenance of records

Chapter Summary

This chapter states the information that Electricity Distributors should hold to comply with the ECCR 2022.

8.1 The Electricity Distributor should maintain the records necessary for complying with its obligations under the ECCR 2022 with regard to Reimbursement Payments.

8.2 We consider that the Electricity Distributor should hold the relevant information for at least ten years from the date of a First Connection being made. Specifically, we consider that the Electricity Distributor should maintain the following records:

a) capacity of assets;
b) capacity requested;
c) total cost of assets installed;
d) the date that the First Connection was made;
e) information on ICP assets installed;
f) funding of assets installed by the Initial Contributor or Subsequent Contributors; and
g) contact details for all Eligible Persons.

8.3 When maintaining the records, the Electricity Distributor should ensure that it complies with its obligations in terms of data confidentiality as stemming out among others from its licence and from the Data Protection Act 2018.

Appendix 1: Definitions

The definitions provided below are extracted from the relevant legal acts applicable at the time of publication of this guidance and are inserted here only for the convenience of the reader. For your convenience, the reference of the definition is also provided. Should the relevant legal acts be amended, their definitions should prevail.

Administrative Expenses (ECCR 2017, Regulation 2)

Administrative Expenses means the expenses reasonably incurred by a relevant Electricity Distributor discharging its obligations under the ECCR 2017.

Connection Charging Methodology (Electricity Distribution Standard Licence Condition 13)

The Connection Charging Methodology means the charging methodology used for the purpose of determining the licensee's connection charges.

Common Connection Charging Methodology (CCCM) (DCUSA, Section 1A, point 1.1)

The Common Connection Charging Methodology means the common connection charging methodology set out in Schedule 22 (Common Connection Charging Methodology) of the Distribution Connection and Use of System Agreement (DCUSA). As described in that Schedule, the CCCM only comprises part of the connection charging methodology that each DNO Party is obliged to have in force under its Distribution Licence.

Cost Apportionment Factor (CAF) (DCUSA, Schedule 22, point 1.28)

The Cost Apportionment Factor is the approach that we will use to apportion the costs of Reinforcement Work. There are two Cost Apportionment Factors (CAFs). The CAF that is used is dependent upon which factor is driving the requirement for Reinforcement Work:

- The 'Security CAF'; and
- The 'Fault Level CAF'.

Electricity Distributor (EA 89, section 6, para 9)

An Electricity Distributor means any person who is authorised by a distribution licence to distribute electricity except where he is acting otherwise than for purposes connected with the carrying on of activities authorised by the licence.

Eligible Person (ECCR 2017, Regulation 2 and 5)

An Eligible Person is:

a) "a person who—
   i. is an Initial Contributor; and
   ii. at the Relevant Time owns or occupies the premises, or owns the distribution system (as the case may be), to which the First Connection was made;

b) a person who—
   i. has, on a previous occasion when a Second Connection was made, made a payment under the ECCRs in respect of the Net First Connection Expenses; and
   ii. at the Relevant Time owns or occupies the premises, or owns the distribution system (as the case may be), to which the First Connection was made;

c) a person who—
   i. has been assigned a right to receive a Reimbursement Payment; and

ii. at the Relevant Time owns or occupies the premises, or owns the distribution system (as the case may be), to which the First Connection was made;

d) an Electricity Distributor which has incurred Net First Connection Expenses which it has not previously fully recovered from any other person; or

e) a person other than—
   i. an Initial Contributor;
   ii. a person who has made a payment under the ECCRs; or
   iii. an Electricity Distributor,

that has made a payment to an Electricity Distributor or to an Independent Connection Provider in respect of the First Connection Expenses."

Enhanced Scheme (DCUSA, CCCM, para 1.4)

An Enhanced Scheme is a connection that includes one or more of the following:
- additional assets not required as part of the Minimum Scheme;
- assets of a larger capacity than required by the Minimum Scheme;
- assets of a different specification than required by the Minimum Scheme.

Extension Assets (DCUSA, CCCM, section 2 – Glossary of Terms)

Extension Assets are assets installed to connect a party or parties to the existing distribution network but which exclude Reinforcement assets.

Fault Level (DCUSA, CCCM, section 2 – Glossary of Terms)

Fault Level means the maximum prospective current or power that will flow into a short circuit at a point on the network, usually expressed in MVA or kA.

Fault Level Cost Apportionment Factor (CAF) (DCUSA, CCCM, point 1.31)

The Fault Level CAF is the Cost Apportionment Factor that is applied, where the costs are driven by Fault Level restrictions. This rule determines the proportion of the Reinforcement costs that should be paid by you as detailed below:

$$\text{Fault Level CAF} = 3 \times \frac{\text{Fault Level Contribution from Connection}}{\text{New Fault Level Capacity}} \times 100\% \quad \text{(max 100\%)}$$

First Connection (EA 89, Schedule 5B, para 1(2))

A First Connection is any electric line or electrical plant that is provided for the purpose of making a connection between premises and a distribution system, or between two distribution systems.

First Connection Expenses (EA 89, Schedule 5B, para 1(6))

First Connection Expenses are any expenses reasonably incurred by a person in providing any electric line or electrical plant for the purpose of making the First Connection.

High-Cost Project Threshold (DCUSA, Schedule 22, point 1.16)

A High-Cost project Threshold sets a level above which customers are charged in full for the Reinforcement and is the mechanism referred to as a "high expenses threshold" in ECCR 2022. The values differ between demand and generation connections.

Independent Connection Provider (ICP) (ECCR 2017, Regulation 2)

An independent connection provider means a person, other than an Electricity Distributor, who provides electric line or electrical plant for the purpose of making a First Connection or a Second Connection.

Initial Contributor (ECCR 2017, Regulation 2)

An Initial Contributor, in relation to a First Connection, means a person who has (a) obtained the First Connection and (b) made a payment to an Electricity Distributor or to an ICP in respect of First Connection Expenses.

Minimum Scheme (DCUSA, CCCM, point 1.1 to 1.7)

The Minimum Scheme is the scheme with the lowest overall capital costs (as estimated by the Electricity Distributor), solely to provide the required capacity.

Net First Connection Expenses (ECCR 2022, Regulation 2)

"Net First Connection Expenses", in relation to a second connection, means the first connection expenses excluding such of those expenses relating to reinforcement works —

(a) which were met in full by the relevant electricity distributor or the initial contributor;

(b) which fell above the high expenses threshold and were met by the initial contributor;

(c) which the relevant electricity distributor would not require the person obtaining the second connection to defray under section 19(1) of the Act(6) if the electric line or electrical plant used for the purpose of the second connection were treated as provided for the purpose of making a new first connection.

Reinforcement Works (ECCR 2017, Regulation 2)

Reinforcement Works means works that adds capacity to an existing distribution system.

Reimbursement Payment (EA 89, Schedule 5B, para 2(2))

Reimbursement Payment is a payment, of such amount as may be reasonable in all the circumstances, in respect of First Connection expenses.

Relevant Time (ECCR 2017, Regulation 5)

The Relevant Time means "the time at which the Second Connection is made."

Required Capacity (DCUSA, CCCM, para 1.29)

Required Capacity is the Maximum Capacity agreed with the Customer. Where an existing Customer requests an increase in capacity then it is the increase above their Existing Capacity.

Second Connection (EA 89, Schedule 5B, para 1.4)

A Second Connection is any electric line or electrical plant provided for the purpose of making the First Connection and used for the purpose of making another connection, between premises and a distribution system, or between two distribution systems.

Security Cost Apportionment Factor (CAF) (DCUSA, CCCM, point 1.30)

The Security CAF is the Cost Apportionment Factor (CAF) that is applied, where the costs are driven by either thermal capacity or voltage (or both) as assessed against the relevant standard. This rule determines the proportion of the Reinforcement costs that should be paid by the Customer, as detailed below.

$$\text{Security CAF} = \frac{\text{Required Capacity}}{\text{New Network Capacity}} \times 100\%$$

Subsequent Contributor (ECCR 2017, Regulation 2)

A Subsequent Contributor, "in relation to a Second Connection means a person who has (a) obtained a Second Connection and (b) received a demand for a Reimbursement Payment under Regulation 7" of the ECCR 2017.

Appendix 2: Case Studies

1.1. The following case studies are not an exhaustive list of scenarios in which a customer may be required to make a Reimbursement Payment under the ECCR 2022 but aim to explain through a limited set of case studies how the calculations work.

1.2. The following case studies identify Eligible Persons and calculate the value of Reimbursement Payments based on our current understanding of how the ECCR 2022 should be applied. In the event of any inconsistency between the ECCR 2017 and the amending regulations and this document, the ECCR 2017 and the amending Regulations will take precedence. In the event of any dispute, the ECCR 2017 and the amending Regulations are the definitive point of reference.

1.3. The following network designs are shown for illustrative principles only and do not reflect actual network designs.

1.4. The calculations shown are illustrative and values shown may have been rounded to nearest £ or one decimal place. The Electricity Distributor should take into account all the relevant circumstances and case specific calculations may therefore differ. For the avoidance of doubt, VAT has not been shown in these examples but would apply at the appropriate rate.

1.5. In all the following scenarios, where a person is described as an Eligible Person, it is assumed that it meets the requirements of being an owner or occupier at the Relevant Time as described in Chapter 3.

1.6. Electricity Distributors are allowed to recover Administrative Expenses reasonably incurred discharging its obligations under the ECCR 2022. The values identified for Administrative Expenses in these examples are assumed for the purposes of illustration.

Example	Description	Purpose
1	Connection to Extension Assets paid for by a First Connection	Shows that if a Second Connection is made to Extension Assets that were paid for by an Initial Contributor, then the Second Connection is charged and the first customer is reimbursed.
2	Connection to Extension Assets where first connection was demand and the second was generation	Shows how the charges would be calculated if the first connection was demand and the second was generation.
3	Subsequent connections to Extension Assets paid for by others	Shows how reimbursements are made when multiple parties connect to the same Extension Assets.
4	Application of the £300 threshold	Shows that if the value of the reimbursement payment would be less than £300, no charge is made to the Second Connection.
5	Application of the £300 threshold with multiple parties	Shows that if the total value of the reimbursement payment would be less than £300, no charge is made to the Second Connection for that element, but other charges could still apply.
6	Connection where there are charges for Security Reinforcement for the second connection.	Shows that if a second connection is made by a Generation Connection where a previous connection had paid in part for the reinforcement due to Security then it is charged.
7	Connection where there are charges for Fault Level Reinforcement for the second connection	Shows where a second connection is made by a Generation Connection where a previous connection had paid in part for the reinforcement due to Fault Level.
8	Connection where there are no charges for Reinforcement for the second connection	Shows where a second connection is made where a previous connection had paid in part for the reinforcement but there are no charges to the second connection.
9	Connection where there are no charges for Reinforcement for the second connection	Shows where a second connection is made where a previous connection had not paid for the reinforcement and there are no charges to the second connection.
10	Another person has paid for the first connection	Shows where the Eligible Person is not an Initial Contributor such as a Development Corporation.
11	Another person has paid for the first connection	Shows where the Eligible Person is not an Initial Contributor such as a connection to an IDNO network.
12	Payment for Reinforcement when High-Cost Project Threshold applies	Shows that where a first connection has paid for Reinforcement above the High-Cost Project Threshold they do not receive any reimbursement if a second connection is made but the second connection may need to pay for the reinforcement under the Threshold.

Example	Description	Purpose
13	Payment for Reinforcement when High-Cost Project Threshold applies	Shows that where a first connection has paid for Reinforcement above the High-Cost Project Threshold they do not receive any reimbursement if a second connection is made and the second connection does not pay for any of the reinforcement.
14	Recovery of transmission work	Shows that a Second Connection is charged for transmission work if it is made to assets that were paid for by an Initial Contributor and the first customer is reimbursed.
15	First connection pays in full for Reinforcement as a Speculative Connection	Shows that a Second Connection is not charged if it is made to assets that were paid for by First Connection that paid in full for Reinforcement as it was a Speculative Connection.
16	First connection pays in full for Reinforcement as it requests a three-phase service	Shows that a Second Connection is not charged if it is made to assets that were paid for by First Connection that paid in full for Reinforcement as it requested a three-phase service not necessary for the load requested.

Example 1: An Initial Contributor with a subsequent contributor

Description	Purpose
Connection to Extension Assets paid for by a First Connection	Shows that if a Second Connection is made to Extension Assets that were paid for by an Initial Contributor, then the Second Connection is charged, and the first customer is reimbursed.

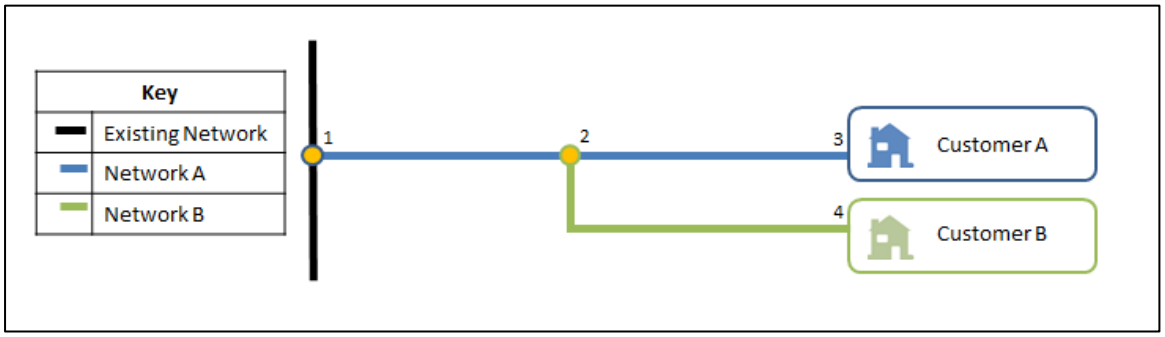
Scenario

1.7. In this example, Customer A (a domestic house with a load of 20kVA) connects to the network using the existing network. Customer A also wholly funds a new section of network (Network A) that is 20m long. The cost of installing Network A is £5,000.

Figure 2: A First Connection customer connects to the network

1.8. Customer B (a domestic house with a load of 20kVA) subsequently connects to the network using the existing network and 10m of Network A. In addition, Customer B wholly funds a new section of network (Network B) that is 12m long. The cost of installing Network B is £2,500.

Figure 3: A Second Connection customer connects to the network



Identification of Eligible Persons

1.9. In this scenario, there is one Eligible Person, the Initial Contributor (Customer A), because Customer B uses Network A, that was provided for and paid for by Customer A.

Calculate Reimbursement Payment value and connection costs

1.10. The Reimbursement Payment would be calculated by considering both the capacity requirements of the two customers and the amount of network used to connect Customer B.

a) For the amount of network, only 10m of the 20m of Network A is used to provide the connection to Customer B. The assumed cost of Network A between points 1 and 2 is therefore 10m/20m x £5,000 = £2,500.

b) For the capacity requirements, the capacity would be shared in proportion. The capacity of Customer B would be divided by the combined capacity of the two customers and then multiplied by the cost of Network A between points 1 and 2. In this case the capacity calculation would be 20kVA/40kVA x £2,500 = £1250.

1.11. Customer B should therefore be required to make a Reimbursement Payment of £1,250.

Connection costs

1.12. A detailed explanation of the costs incurred by Customer B is outlined below.

Description of cost item	**Section of network**	**Cost**	**Explanation**
Reimbursement Payment.	Network A (point 1-2)	£1,250	See calculation identified in paragraph 1.10.
Wholly funded works	Network B (point 2-4) Extension Assets	£2,500	Network B is solely used by Customer B. The costs incurred are therefore funded in full by Customer B.
Total		£3,750	

Reimbursement Payment value

1.13. An explanation of the Reimbursement Payment received by Customer A is outlined below:

Description of cost item	**Value**	**Explanation**
Reimbursement Payment	£1,250	See calculation identified in paragraph 1.10.
Electricity Distributor Administrative Expenses	-£100	£100 assumed for the illustration.
Total	£1,150	

1.14. In summary, in this scenario Customer B's connection charge would be £3,750. Of the £3,750, Customer A would receive a Reimbursement Payment of £1,150.

Example 2: Subsequent Contributor is a Generator

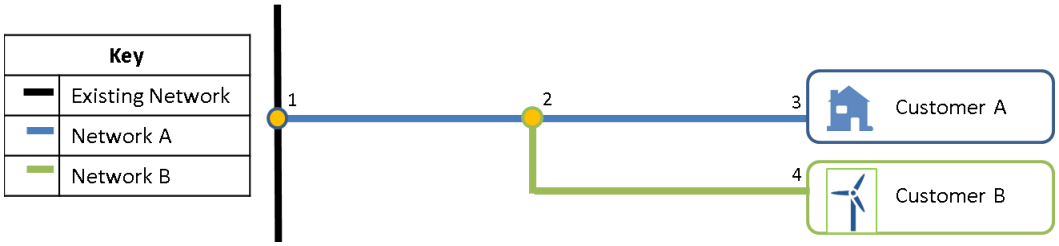
Description	Purpose
Connection to Extension Assets where the first connection was demand and the second was generation.	Shows how the charges would be calculated if the first connection was demand and the second was generation.

Scenario

1.15. In this example, Customer A (a domestic house with a load of 20kVA) connects to the network using the existing network. Customer A also wholly funds a new section of network (Network A) that is 20m long. The cost of installing Network A is £5,000.

1.16. Customer B (a generator with an export capacity of 50kVA, import capacity of 5kVA) subsequently connects to the network using the existing network and 10m of Network A. In addition, Customer B wholly funds a new section of network (Network B) that is 12m long. The cost of installing Network B is £2,500.

Figure 4: A Second Connection customer (a generator) connects to the network



Identification of Eligible Persons

1.17. In this scenario, there is one Eligible Person, the Initial Contributor (Customer A) because Customer B uses Network A, that was provided for and paid for by Customer A.

Calculate Reimbursement Payment value and connection costs

1.18. The Reimbursement Payment would be calculated by considering both the capacity requirements of the two customers and the amount of network used to connect Customer B.

a) For the amount of network, only 10m of the 20m of Network A is used to provide the connection to Customer B. The assumed cost of Network A between points 1 and 2 is therefore 10m/20m x £5,000 =£2,500.

b) For the capacity requirements, the capacity would be shared in proportion. Since Customer B's export capacity requirement is larger than its import capacity requirement, its export capacity is used to calculate the value of the Reimbursement Payment. The generation capacity of Customer B would be divided by the combined capacity of the two customers, and then multiplied by the cost of Network A between points 1 and 2. In this case the capacity calculation would be 50kVA/70kVA x £2,500 = £1,786.

1.19. Customer B should therefore be required to make a Reimbursement Payment of £1,786.

Connection costs

1.20. A detailed explanation of the costs incurred by Customer B is outlined below.

Description of cost item	Section of network	Cost	Explanation
Reimbursement Payment.	Network A (point 1-2)	£1,786	See calculation identified in paragraph 1.18.
Wholly funded works	Network B (point 2-4) Extension Assets	£2,500	Network B is solely used by Customer B. The costs incurred are therefore funded in full by Customer B.
Total		£4,286	

Reimbursement Payment value

1.21. An explanation of the Reimbursement Payment received by Customer A is outlined below:

Description of cost item	Value	Explanation
Reimbursement Payment	£1,786	See calculation identified in paragraph 1.18.
Electricity Distributor Administrative Expenses	-£100	£100 assumed for the illustration.
Total	£1,686	

1.22. In summary, in this scenario Customer B's connection charge would be £4,286. Of the £4,286, Customer A would receive a Reimbursement Payment of £1,686.

Example 3: A person who has made a Reimbursement Payment under these Regulations

Description	Purpose
Subsequent connections to Extension Assets paid for by others	Shows how reimbursements are made when multiple parties connect to the same Extension Assets.

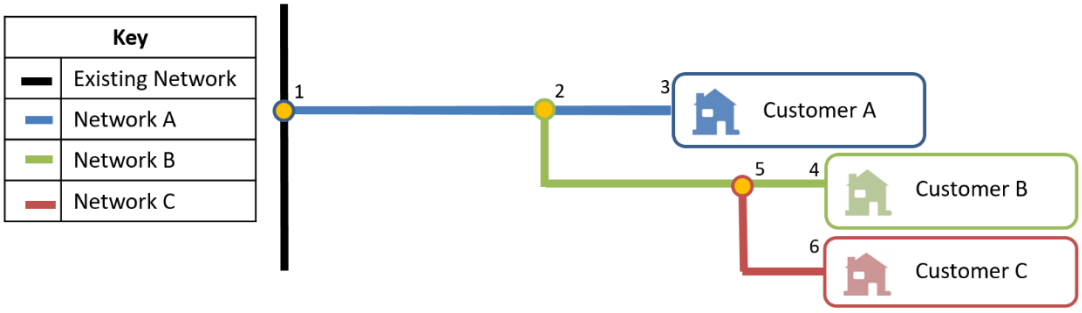
Scenario

1.23. In this example, Customer A (a domestic house with a load of 20kVA) connects to the network using the existing network. Customer A also wholly funds a new section of network (Network A) that is 20m long. The cost of installing Network A is £5,000.

1.24. Customer B (a domestic house with a load of 20kVA) has also connected to the network, using the existing network and 10m of Network A. Customer A and Customer B have each paid £1,250 towards the cost of installing Network A from Point 1 to 2. In addition, Customer B has wholly funded a new section of network (Network B) that is 12m long at a cost of £2,500.

1.25. Customer C (a domestic house with a load of 20kVA) subsequently connects to the network using the existing network, 10m of Network A and 8m of Network B. In addition, Customer C wholly funds a new section of Network that is 8m long (Network C). The cost of installing Network C is £400.

Figure 5: A third customer connects to the network



Identification of Eligible Persons

1.26. In this scenario there are two Eligible Persons in relation to Network A:

a) the Initial Contributors:

i. Customer A - because Customer C uses part of Network A that was provided for and paid by Customer A.

ii. Customer B – because Customer C uses part of Network B that was provided and paid for by Customer B.

b) the person that has made a Reimbursement Payment under these Regulations (Customer B) because Customer C uses part of Network A for which Customer B previously made a contribution.

Calculate Reimbursement Payment value and connection costs

1.27. The Reimbursement Payment for Network A is calculated by considering the capacity requirements of the three customers and the amount of network used to connect Customer C.

a) For the amount of network, only 10m of the 20m of Network A is used to provide the connection to Customer C. The assumed cost of Network A between points 1 and 2 is therefore 10m/20m x £5,000 =£2,500.

b) For the capacity requirements, the capacity would be shared in proportion. The capacity of Customer C would be divided by the combined capacity of the three customers and then multiplied by the cost of Network A between points 1 and 2. In this case the capacity calculation would be 20kVA/60kVA x £2,500 = £833.

1.28. Customer C should therefore be required to make a Reimbursement Payment of £833 towards the cost of installing Network A. As there are two eligible persons, Customer A and Customer B, who each paid £1,250 towards Network A, they would each receive a proportion of the Reimbursement Payment, relative to the amount paid. The amount is calculated using the capacity calculation in paragraph 1.27(b), which is then deducted from the amount paid by each customer i.e. £1,250 - £833 = £417.

1.29. The Reimbursement Payment for Network B would be calculated by considering the capacity requirements of the two customers and the amount of network used to connect Customer C.

a) For the amount of network, only 8m of the 12m of Network B is used to provide the connection to Customer C. The assumed cost of Network B between points 2 and 5 is therefore 8m/12m x £2,500 = £1,667.

b) For the capacity requirements, the capacity would be shared in proportion to the customer's load. The capacity of Customer C would be divided by the combined capacity of Customer A and Customer B and then multiplied by the cost of Network B from Point 2 to 5. In this case the capacity calculation would be 20kVA/40kVA x £1,667 = £834.

1.30. Customer C should therefore be required to make a Reimbursement Payment of £834, towards the costs of installing Network B.

Connection Costs

1.31. A detailed explanation of the costs incurred by Customer C is outlined below.

Description of cost item	**Section of network**	**Cost**	**Explanation**
Reimbursement Payment for Network A.	Network A (point 1-2)	£833	See calculation identified in paragraph 1.27 and 1.28.
Reimbursement Payment for Network B	Network B (Point 2-5)	£834	See calculation identified in paragraph 1.29.
Wholly funded works	Network C (Point 5-6) Extension Assets	£400	Network C is solely used by Customer C. The costs incurred are therefore funded in full by Customer C.
Total		£2,067	

Reimbursement Payment value

1.32. An explanation of the Reimbursement Payment received by Customer A is outlined below:

Description of cost item	Cost	Explanation
Reimbursement Payment to Customer A for Network A (point 1-2)	£417	See calculation identified in paragraph 1.27 and 1.28.
Electricity Distributor Administrative Expenses	-£100	£100 assumed for the illustration.
Total	£317	

1.33. An explanation of the Reimbursement Payment received by Customer B is outlined below:

Description of cost item	Cost	Explanation
Reimbursement Payment to Customer B for Network A (point 1-2)	£417	See calculation identified in paragraph 1.27 and 1.28.
Reimbursement Payment to Customer B for Network B (point 2-5)	£834	See calculation identified in paragraph 1.29 and 1.30.
Electricity Distributor Administrative Expenses	-£100	£100 assumed for the illustration.
Total	£1,151	

1.34. In this scenario, Customer C would pay a connection charge of £2,067. Of the £2,067, Customer A would receive a Reimbursement Payment of £317 and Customer B would receive a Reimbursement Payment of £1,151.

Example 4: An Initial Contributor but no Reimbursement Payment made

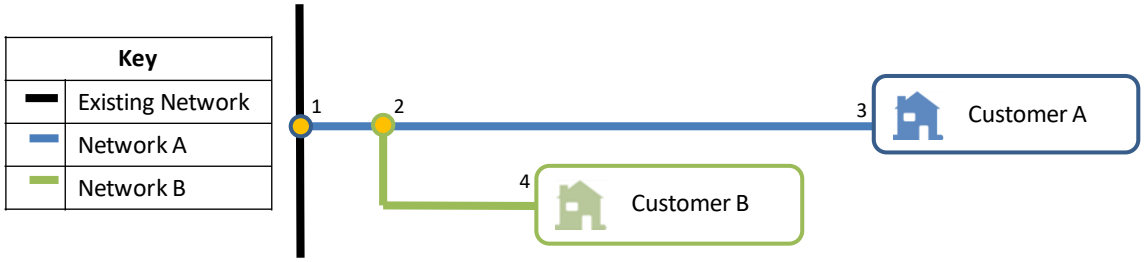
Description	Purpose
Application of the £300 threshold	Shows that if the value of the reimbursement payment would be less than £300, no charge is made to the Second Connection

Scenario

1.35. In this example, Customer A (a domestic house with a load of 20kVA) connects to the network using the existing network. Customer A also wholly funds a new section of network (Network A) that is 20m long. The cost of installing Network A is £5,000.

1.36. Customer B (a domestic house with a load of 20kVA) subsequently connects to the network using the existing network and 2m of Network A. In addition, Customer B wholly funds a new section of network (Network B) that is 12m long. The cost of installing Network B is £2,500.

Figure 6: A Second Connection customer connects to the network, but only uses a small proportion Network A



Identification of Eligible Persons

1.37. In this scenario there is one Eligible Person, the Initial Contributor (Customer A), because Customer B uses Network A, that was provided for and paid for by Customer A.

Calculate Reimbursement Payment value and connection costs

1.38. The Reimbursement Payment would be calculated by considering both the capacity requirements of the two customers and the amount of network used to connect Customer B.

a) For the amount of network, only 2m of the 20m of Network A is used to provide the connection to Customer B. The assumed cost of Network A between points 1 and 2 is therefore 2m/20m x £5,000 = £500.

b) For the capacity requirements, the capacity would be shared in proportion. The capacity of Customer B would be divided by the combined capacity of the two customers and then multiplied by the cost of Network A between points 1 and 2. In this case, the capacity calculation would be 20kVA/40kVA x £500 = £250.

1.39. Since the Reimbursement Payment to Customer A, after deducting any Electricity Distributor Administrative Expenses, is less than the £300 threshold (£250), no charge would be made to Customer B and no Reimbursement Payment would be made to Customer A.

Connection Costs

1.40. A detailed explanation of the costs incurred by Customer B is outlined below.

Description of cost item	Section of network	Cost	Explanation
Reimbursement Payment to Customer A.	Network A (point 1-2)	£0	See calculation identified in paragraphs 1.38 and 1.39.
Wholly funded works	Network B (point 2-4) Extension Assets	£2,500	Network B is solely used by Customer B. The costs incurred are therefore funded in full by Customer B.
Total		£2,500	

1.41. In summary, in this scenario Customer B's connection charge would be £2,500. Whilst Customer A is an Eligible Person, in this scenario Customer B should not be required to make a Reimbursement Payment to Customer A because the value of the Reimbursement Payment is less than £300.

Example 5: An Initial Contributor but no Reimbursement Payment charged

Description	Purpose
Application of the £300 threshold with multiple parties	Shows that if the total value of the reimbursement payment would be less than £300, no charge is made to the Second Connection for that element, but other charges could still apply.

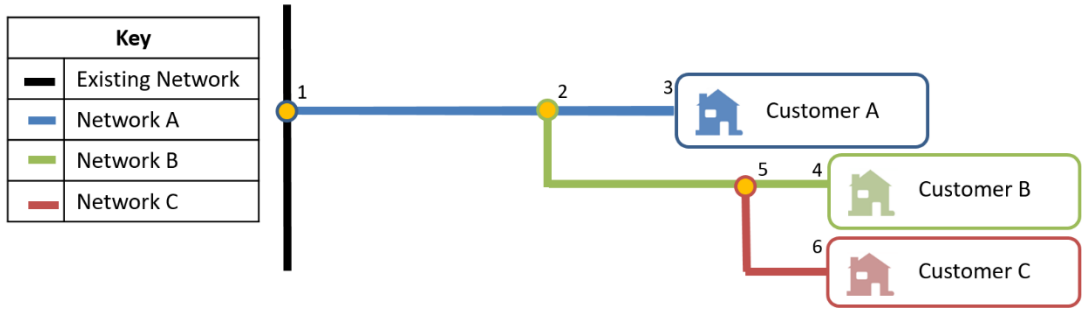
Scenario

1.42. In this example, Customer A (a domestic house with a load of 20kVA) connects to the network using the existing network. Customer A also wholly funds a new section of network (Network A) that is 20m long. The cost of installing Network A is £5,000.

1.43. Customer B (a domestic house with a load of 20kVA) has also connected to the network, using the existing network and 5m of Network A. Customer A and Customer B have each paid £625 towards the cost of installing Network A from Point 1 to 2 (calculation follows principles in Example 1 i.e. 5m/20m x £5,000 = £1,250, then 20kVA/40kVA x £1,250 =£625). In addition, Customer B has wholly funded a new section of network (Network B) that is 20m long at a cost of £2,500.

1.44. Customer C (a domestic house with a load of 20kVA) subsequently connects to the network using the existing network, 5m of Network A and 5m of Network B. In addition, Customer C wholly funds a new section of Network that is 8m long (Network C). The cost of installing Network C is £400.

Figure 7: A third customer connects to the network



Identification of Eligible Persons

1.45. In this scenario there are two Eligible Persons in relation to Network A:

a) the Initial Contributors:

i. Customer A - because Customer C uses Network A that was provided for and paid by Customer A.

ii. Customer B – because Customer C uses Network B that was provided and paid for by Customer B.

b) Customer B is also eligible because Customer C uses Network A for which Customer B previously made a Reimbursement Payment under these Regulations (to Customer A).

Calculate Reimbursement Payment value and connection costs

1.46. The Reimbursement Payments from Customer C to Customer A would be calculated by considering both the capacity requirements of the three customers and the amount of Network A used to connect Customer C.

a) For the amount of network, only 5m of the 20m of Network A is used to provide the connection to Customer C. The assumed cost of Network A between points 1 and 2 is therefore 5m/20m x £5,000 =£1,250.

b) For the capacity requirements, the capacity would be shared in proportion. The capacity of Customer C would be divided by the combined capacity of the three customers and then multiplied by the cost of Network A between points 1 and 2. In this case the capacity calculation would be 20kVA/60kVA x £1,250 = £417.

1.47. As Customer A and Customer B have each paid £625 towards the cost of installing Network A from Point 1 to 2, Customer C should be required to make a Reimbursement Payment of £208 (£625 - £417), less Administrative Expenses, to Customer A and Customer B.

1.48. The Reimbursement Payment from Customer C to Customer B would be calculated by considering both the capacity requirements of the two customers and the amount of Network B used to connect Customer C.

a) For the amount of network, only 5m of the 20m of Network B is used to provide the connection to Customer C. The assumed cost of Network A between points 2 and 5 is therefore 5m/20m x £2,500 = £625.

b) For the capacity requirements, the capacity would be shared in proportion. The capacity of Customer C would be divided by the combined capacity of the two customers and then multiplied by the cost of cost of Network B from Point 2 to 5. In this case the capacity calculation would be 20kVA/40kVA x £625 = £313.

1.49. Customer C should therefore be required to make a Reimbursement Payment of £208 to Customer A towards the costs of installing Network A and £521 (£208 + £313) to Customer B towards the costs of installing Network B and its contribution to Network A. However, assuming Administrative Expenses of £100, the Reimbursement Payment to Customer A would be less than £300, therefore Customer C would not be charged this element.

Connection Costs

1.50. A detailed explanation of the costs incurred by Customer C is outlined below.

Description of cost item	Section of network	Cost	Explanation
Reimbursement Payment to Customer A.	Network A (point 1-2)	£0	No charge would be made as the Reimbursement Payment would be less than £300 after Administrative Expenses. See calculation identified in paragraph 1.49
Reimbursement Payment to Customer B	Network A (Point 1-2)	£208	See calculation identified in paragraph 1.47
Reimbursement Payment to Customer B	Network B (Point 2-5)	£313	See calculation identified in paragraph 1.48

Wholly funded works	Network C (Point 5-6) Extension Assets	£400	Network C is solely used by Customer C. The costs incurred are therefore funded in full by Customer C.
Total		£921	

Reimbursement Payment value

1.51. An explanation of the Reimbursement Payment received by Customer A is outlined below:

Description of cost item	Cost	Explanation
Reimbursement Payment to Customer A for Network A (point 1-2)	£0	No charge would be made as the Reimbursement Payment would be less than £300 after Administrative Expenses. See calculation identified in paragraph 1.49
Total	£0	

1.52. An explanation of the Reimbursement Payment received by Customer B is outlined below:

Description of cost item	Cost	Explanation
Reimbursement Payment to Customer B for Network A (point 1-2)	£208	See calculation identified in paragraph 1.47
Reimbursement Payment to Customer B for Network B (point 2-5)	£313	See calculation identified in paragraph 1.48
Electricity Distributor Administrative Expenses	-£100	£100 assumed for the illustration.
Total	£421	

In this scenario, Customer C would pay a connection charge of £921. Of the £921 Customer B would receive a Reimbursement Payment of £421.

Example 6: Reimbursement Payment to the Electricity Distributor - Security Cost Apportionment Factor (CAF) – second customer is a generator

Description	Purpose
Connection where there are charges for Security Reinforcement for the second connection.	Shows that if a second connection is made by a Generation Connection where a previous connection had paid in part for the reinforcement due to Security then it is charged.

Scenario

1.53. In this example, Customer A (a generator with an export capacity of 650kW) connects to the network using the existing HV network.

1.54. The existing network was unable to deliver the Required Capacity, so HV Reinforcement Works were required. The total cost of the HV Reinforcement Work was £124,800. Following the Reinforcement Work, the new network capacity was 8,000kW.

1.55. The Reinforcement Work was cost apportioned between Customer A and the Electricity Distributor using the Security CAF. Customer A therefore paid £10,140 towards the cost of the Reinforcement Work (650kW/8,000kW x £124,800). The Electricity Distributor paid the remaining £114,660.

$$\text{Security CAF} = \frac{\text{Required Capacity}}{\text{New Network Capacity}} \times 100\%$$

$$= 650/8{,}000 \times 100\% = 8.1\%$$

$$\text{Reapportionment charge} = \text{Security CAF} \times \text{Reinforcement Work cost}$$

$$= 8.125\% \text{ of } £124{,}800$$

$$= £10{,}140$$

1.56. Customer B (a generator with an export capacity of 1000kW) subsequently connects to the HV network. In addition, Customer B wholly funds a new section of network (Network B). The cost of installing Network B is £25,000.

Figure 8: A Second 'Generator' connects to network that was paid to be reinforced under the Security CAF rules - Reimbursement Payment to the Electricity Distributor

Identification of Eligible Persons

1.57. In this scenario, there is one Eligible Person – the Electricity Distributor because Customer B connects using electric line and plant that was reinforced for the purpose of connecting the First Connection customer. In this scenario, the Electricity Distributor incurred First Connection Expenses reinforcing the HV network that it did not fully recover from the First Connection customer.

Calculate Reimbursement Payment value and connection costs

1.58. In this scenario, the HV Reinforcement Work costs were £124,800 for a capacity of 8000kW. In this scenario, Customer B requested 1000kW for the connection of the generator which is connecting at the same voltage level as the Reinforcement Works previously paid for by the Electricity Distributer and Customer A. Customer B would be required to pay for the proportion of the capacity that it uses, the calculation should therefore be 1000/8000kW x £124,800 = £15,600.

1.59. Customer B should therefore be required to make a Reimbursement Payment of £15,600 towards the costs of the Reinforcement Works.

Connection costs

1.60. A detailed explanation of the costs incurred by Customer B is outlined below.

Description of cost item	Section of network	Cost	Explanation
Reimbursement Payment to the Electricity Distributor	Reinforcement Work	£15,600	See calculation identified in paragraphs 1.58
Wholly funded works	Network B Extension Assets	£25,000	The new Network is solely used by Customer B. The costs incurred are therefore funded in full by Customer B as per paragraph 1.56
Total		£40,600	

Reimbursement Payment value

1.61. An explanation of the Reimbursement Payment received by the Electricity Distributor is outlined below:

Description of cost item	Value	Explanation
Reimbursement Payment to the Electricity Distributor	£15,600	See calculation identified in paragraphs 1.58
Total	£15,600	

1.62. In summary, in this scenario, Customer B's connection charges would be £40,600. Of which £15,600 would be reimbursed to the Electricity Distributor for the previous Reinforcement Work.

Example 7: Reimbursement Payment to the Electricity Distributor – Fault Level Cost Apportionment Factor (CAF)

Description	Purpose
Connection where there are charges for Fault Level Reinforcement for the second connection	Shows where a second connection is made by a Generation Connection where a previous connection had paid in part for the reinforcement due to Fault Level.

Scenario

1.63. In this example, Customer A (a generator with an export capacity of 3MVA) connects to the existing network. For the purposes of this example, the Fault Level contribution from Customer A is assumed to be 24MVA.

1.64. The existing network was unable to deliver the Required Capacity and Fault Level Contribution, so Reinforcement Work was required. The total cost of the Reinforcement Work was £450,000. Following the Reinforcement Work, the new Fault Level capacity was 315MVA.

1.65. The Reinforcement Work was cost apportioned between the Customer A and the Electricity Distributor using the Fault Level Cost Apportionment factor (CAF) from the CCCM. Customer A therefore paid £102,857 towards the cost of the Reinforcement Work. The Electricity Distributor paid the remaining £347,143. The calculation is identified below:

$$\text{Fault Level CAF} = 3 \times \frac{\text{Fault Level Contribution from Connection}}{\text{New Fault Level Capacity}} \times 100\%$$

$$= 3 \times (24\text{MVA}/315\text{MVA}) \times 100\% = 22.9\%$$

Reapportionment charge= Fault CAF x Reinforcement Work cost

= 22.857% of £450,000

= £102,857

1.66. Customer B (a generator with a Fault Level contribution of 12MVA) subsequently connects to the network, using the network that was reinforced. In addition, Customer B wholly funds a new section of network (Network B). The cost of installing Network B is £250,000.

Figure 9: Reimbursement Payment to the Electricity Distributor – Fault Level CAF

Identification of Eligible Persons

1.67. In this scenario, there is one Eligible Person – the Electricity Distributor because Customer B connects using electric line and plant that was reinforced for the purpose of connecting the First Connection customer. In this scenario, the Electricity Distributor incurred First Connection Expenses reinforcing the network that it did not recover from the First Connection customer.

Calculate Reimbursement Payment value and connection costs

1.68. In this scenario, the Reinforcement Work costs were £450,000 for a new Fault Level capacity of 315MVA. In this example the Fault Level contribution from, Customer B is assumed to be 12MVA.

1.69. Customer B would be required to pay for the proportion of the new Fault Level capacity that it uses, the Reimbursement Payment will be £51,300. The calculation is identified below:

$$\text{Fault Level CAF} = 3 \times \frac{\text{Fault Level Contribution from Connection}}{\text{New Fault Level Capacity}} \times 100\%$$

$$= 3 \times (12\text{MVA}/315\text{MVA}) \times 100\% = 11.4\%$$

Reapportionment charge= Fault CAF x Reinforcement Work cost

= 11.4% of £450,000

= £51,429

1.70. Customer B should therefore make a Reimbursement Payment of £51,429 towards the costs of the Reinforcement Works.

Connection costs

1.71. A detailed explanation of the costs incurred by Customer E is outlined below.

Description of cost item	Section of network	Cost	Explanation
Reimbursement Payment to the Electricity Distributor	Reinforcement Work	£51,429	See calculation identified in paragraph 1.69.
Wholly funded works	Network B Extension Assets	£250,000	The Network is solely used by Customer B. The costs incurred are therefore funded in full by Customer B.
Total		£301,429	

Reimbursement Payment value

1.72. An explanation of the Reimbursement Payment received by the Electricity Distributor is outlined below:

Description of cost item	Value	Explanation
Reimbursement Payment to the Electricity Distributor	£51,429	See calculation identified in paragraphs 1.69.
Total	£51,429	

1.73. In summary, in this scenario Customer B would pay a connection charge of £301,429 of which £51,429 would be retained by the Electricity Distributor for the previous Reinforcement Work.

Example 8 : Reimbursement Payment to the Electricity Distributor - Security Cost Apportionment Factor (CAF)– second customer is a demand customer

Description	Purpose
Connection where there are no charges for Reinforcement for the second connection	Shows where a second connection is made where a previous connection had paid in part for the reinforcement but there are no charges to the second connection.

Scenario

1.74. In this example, Customer A (a generator with an export capacity of 650kW) connects to the network using the existing HV network.

1.75. The existing network was unable to deliver the Required Capacity, so HV Reinforcement Works were required. The total cost of the HV Reinforcement Work was £124,800. Following the Reinforcement Work, the new network capacity was 8000kW.

1.76. The Reinforcement Work was cost apportioned between Customer A and the Electricity Distributor using the Security CAF. Customer A therefore paid £10,140 towards the cost of the Reinforcement Work (650kW/8000kW x £124,800). The Electricity Distributor paid the remaining £114,660.

$$\text{Security CAF} = \frac{\text{Required Capacity}}{\text{New Network Capacity}} \times 100\%$$

$$= 650/8{,}000 \times 100\% = 8.1\%$$

Reapportionment charge = Security CAF x Reinforcement Work cost

= 8.1% of £124,800

= £10,140

1.77. Customer B (a demand customer with a load of 1000kVA) subsequently connects to the HV network. In addition, Customer B wholly funds a new section of network (Network B). The cost of installing Network B is £25,000.

Figure 10: A Second 'Demand customer' connects to network that was paid to be reinforced under the Security CAF rules – NO Reimbursement Payment to the Electricity Distributor

Identification of Eligible Persons

1.78. In this scenario, there is one Eligible Person – the Electricity Distributor because Customer B connects using electric line and plant that was reinforced for the purpose of connecting the First Connection customer.

Calculate Reimbursement Payment value and connection costs

1.79. Whilst the Electricity Distributor incurred First Connection Expenses reinforcing the HV network that it did not recover from the First Connection customer, Customer B would NOT be required to pay a contribution towards the reinforcement work. As the Second Connection is a Demand Connection, they would not have had to pay for the Reinforcement if they had been the First Connection. The costs of the reinforcement are therefore removed from the Net First Connection Expenses and there would be no charge to the Second Customer (Paragraphs 5.6 and 5.7).

1.80. Customer B would NOT be required to make a Reimbursement Payment towards the costs of the Reinforcement Works as the value of the Net First Connection Expenses would be zero.

Connection costs

1.81. A detailed explanation of the costs incurred by Customer B is outlined below.

Description of cost item	Section of network	Cost	Explanation
Reimbursement Payment to the Electricity Distributor	Reinforcement Work	£0	Customer B is NOT required to make a reimbursement to the Electricity Distributor as defined in paragraph 5.6 and 5.7.
Wholly funded works	Network B Extension Assets	£25,000	The new Network is solely used by Customer B. The costs incurred are therefore funded in full by Customer B as per paragraph 1.77
Total		£25,000	

1.82. In summary, in this scenario, Customer B's connection charges would be £25,000

Example 9: A generation connection requires network reinforcement at the voltage level above the point of connection. The second comer is also a generation connection that connects to the reinforced network one voltage level above the first connection.

Description	Purpose
Connection where there are no charges for Reinforcement for the second connection	Shows where a second connection is made where a previous connection had not paid for the reinforcement and there are no charges to the second connection.

Scenario

1.83. The Customers in this example are both generation customers who have applied after 1st April 2023.

1.84. In this example, Customer A (a generator with an export capacity of 1MW) connected to the existing 11kV network.

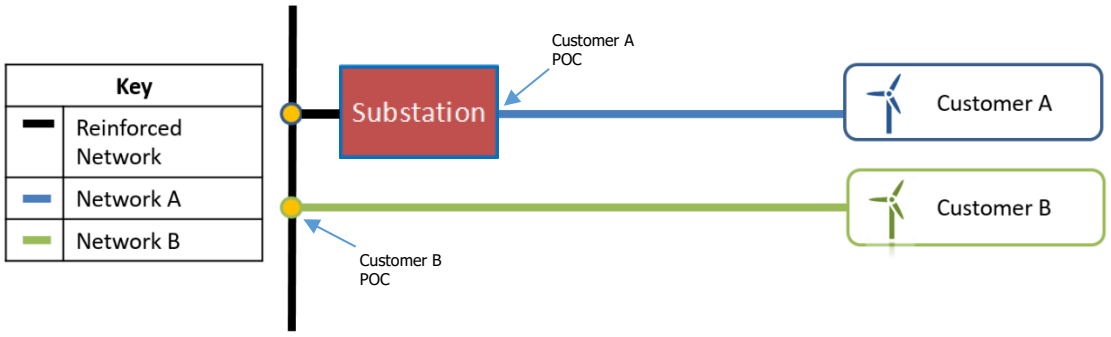
1.85. The Fault Level contribution from Customer A's equipment necessitated HV Reinforcement.

1.86. The cost of the HV Reinforcement was £50,000.

1.87. As this Reinforcement was at a voltage level above the voltage level of the POC, and the HCPT was not breached, this was fully funded by the Electricity Distributor.

1.88. A subsequent connectee, Customer B, requires a generation connection. The POC is to the existing, Reinforced HV network. In addition, Customer B fully funds a new section of network (Network B) at £20,000.

Figure 11: A Second Connection customer connects to a network one voltage higher than the connection voltage



Identification of Eligible Persons

1.89. In this scenario, there is only one Eligible Person – the Electricity Distributor.

1.90. Since Customer B only uses the Reinforced HV Network, which was fully funded by the Electricity Distributor, Customer B is not required to make a Reimbursement payment to the Electricity Distributor as these are regarded as 'sunk costs' under the new ECCR regulations. The

requirement for HV Reinforcement for Customer A was driven by the Fault Level Contribution from the generator.

Connection Costs

1.91. A detailed explanation of the costs incurred by Customer B is outlined below

Description of cost item	Section of network	Cost	Explanation
Reinforcement Work Reimbursement Payment	Reinforced HV Network	£0	As these works were wholly funded by the Electricity Distributor, no contribution is required.
Wholly funded works	Network B Extension Assets	£20,000	Network B is solely used by Customer B. The costs incurred are therefore funded in full by Customer B as per paragraph 1.88.
Total		**£20,000**	

Reimbursement Payment value

1.92. An explanation of the Reimbursement Payment received by the Electricity Distributor is outlined below:

Description of cost item	Value	Explanation
Reimbursement Payment to the Electricity Distributor	£0	As there was no contribution made by Customer A for the HV works and they were wholly funded by the Electricity Distributor, these are regarded as 'Sunk Cost' under the ECCR regulations applicable from 1st April.
Total	**£0**	

1.93. In summary, in this scenario Customer B would only pay a connection charge of £20,000, for the new Extension Assets but no reimbursement to the Electricity Distributor for the previous HV Reinforcement Work.

Example 10: A Development Corporation that has made a payment in respect of First Connection Expenses

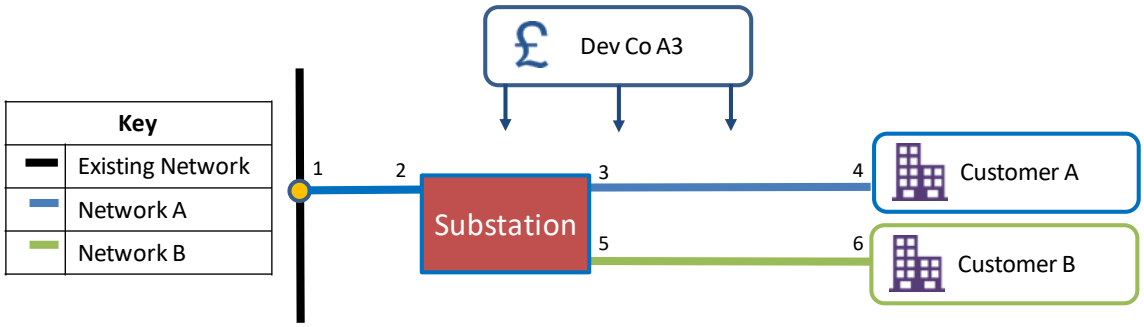
Description	Purpose
Another person has paid for the first connection	Shows where the Eligible Person is not an Initial Contributor such as a Development Corporation.

Scenario

1.94. In this example, Customer A (an office block with a load of 4000kVA) connects to the network using the existing network. In anticipation of further development within the area, a third party investment company (Development Corporation A3) is fully funding a new section of network (Network A) and a new 10,000kVA substation, built for the purpose of connecting Customer A and providing for future connection requirements. The cost of installing Network A and the new substation is £1,000,000.

1.95. Customer B (an office block with a load of 2500kVA) subsequently connects to the network using the existing network and part of Network A. In addition, Customer B wholly funds a new section of network (Network B) that is 650m long between points 5 and 6, assumed to be £5,000.

Figure 12: A Second Connection customer connects to a network that was paid for by a Development Corporation A3 (Network A).



Identification of Eligible Persons

1.96. In this scenario, although Development Corporation A3 has not obtained the connection it is considered as an Eligible Person, as it has made a payment in respect of Net First Connection Expenses and the connection for Customer B uses part of Network A that was paid for by Development Corporation A3 (see paragraph 3.15).

Calculate Reimbursement Payment value and connection costs

1.97. The Reimbursement Payment would be calculated by considering the capacity requirement of Customer B and the amount of network used to connect Customer B.

a) For the amount of network, only Network A between points 1 and 2, and the substation, is used to provide the connection to Customer B. The assumed cost of Network A between points 1 and 2, and the substation, is £800,000.

b) For the capacity requirements, the capacity would be shared in proportion. As there are likely to be further connections, each subsequent Customer should pay by proportion of capacity used. Customer B should therefore pay by proportion 2,500kVA/10,000kVA (i.e. 25 per cent of the £800,000 cost = £200,000).

1.98. Customer B is required to make a Reimbursement Payment of £200,000.

Connection costs

1.99. A detailed explanation of the costs incurred by Customer B are outlined below.

Description of cost item	Section of network	Cost	Explanation
Reimbursement Payment from Customer B	Network A (Point 1-2 + substation)	£200,000	See paragraph 1.97 & 1.98
Wholly funded works	Network B (Point 5-6) Extension Assets	£50,000	Network B is solely used by Customer B. The costs incurred are therefore funded in full by Customer B.
Total		£250,000	

Reimbursement Payment value

1.100. An explanation of the Reimbursement Payment received by Person A3 is outlined below:

Description of cost item	Cost	Explanation
Reimbursement Payment from Customer B to Dev Co A3 for Network A (point 1-2, and substation)	£200,000	The cost of installing Network from Point 1 to 2, and the substation, was £800,000 that was paid for by Dev Co A3. As there will be further connections, each subsequent Customer should pay by proportion of capacity used. Customer B should therefore pay by proportion 2,500kVA/10,000kVA i.e. 25 per cent of the £800,000 cost = £200,000 for the use of Network A.
Electricity Distributor Administrative Expenses	-£100	Electricity Distributors are allowed to recover expenses reasonably incurred discharging its obligations under the ECCRs.
Total	£199,900	

Example 11: Another person that has made a payment in respect of Net First Connection Expenses

Description	Purpose
Another person has paid for the first connection	Shows where the Eligible Person is not an Initial Contributor such as a connection to an IDNO network.

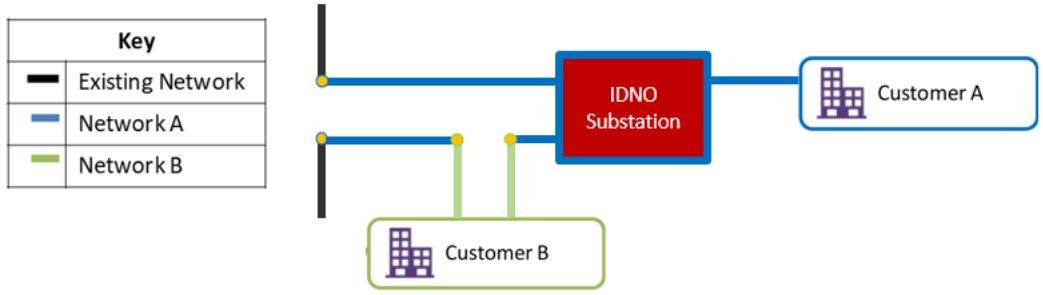
Scenario

1.101. In this example, an Independent Connection Provider (ICP) was appointed by their client, Customer A, to provide a connection to a new substation to be adopted by an IDNO with a load of 1,000kVA. The ICP installed 3km of HV cable (adopted by the DNO) connecting into the existing HV network and established the new 1,000kVA substation (adopted by an IDNO). Customer A is connected to the IDNO substation.

1.102. The cost of installing the new HV Network is £345,000.

1.103. Customer B, a mixed commercial / housing development with a load of 1,000kVA subsequently connects to the new DNO adopted HV network installed for Customer A. The new Point of Connection is just outside the IDNO substation.

Figure 13: A Second Connection customer connects to a network that was paid for by Customer A to an ICP.



Identification of Eligible Persons

1.104. In this scenario, the first connection is to the IDNO network but as the IDNO did not pay for the new HV network installed by the ICP and adopted by the DNO, then the IDNO does not meet the criteria of an 'Initial Contributor'.

1.105. The client (Customer A) has made a payment to the ICP for the new HV network and is not any of the excluded types and therefore meets the criteria of an 'Eligible Person'.

Calculate Reimbursement Payment value and connection costs

1.106. The Reimbursement Payment would be calculated by considering the capacity requirement of Customer B and the amount of network used to connect Customer B.

a) For the amount of network, all of the new HV cable is used to provide the connection to Customer B. The assumed cost of the new HV network, is £345,000.

b) For the capacity requirements, the capacity would be shared in proportion, the first customer requested 1,000kVA and the second customer requested 1,000kVA. Customer B should therefore pay by proportion 1,000kVA/2,000kVA (1,000kVA + 1,000kVA). This equates to 50 per cent of the £345,000 cost = £172,500.

1.107. Customer B is required to make a Reimbursement Payment of £172,500.

Connection costs

1.108. A detailed explanation of the costs incurred by Customer B are outlined below.

Description of cost item	Section of network	Cost	Explanation
Reimbursement Payment from Customer B	Network A-B & B-C	£172,500	See paragraphs 1.106 & 1.107
Wholly funded works	New network B-D Extension Assets	£175,000	New network is solely used by Customer B. The costs incurred are therefore funded in full by Customer B.
Total		£347,500	

Reimbursement Payment value

1.109. An explanation of the Reimbursement Payment received by the Customer A is outlined below:

Description of cost item	Cost	Explanation
Reimbursement Payment from Customer B to Customer A for Network A-B & B-C	£172,500	The cost of installing network A-B & B-C was £345,000, this network was adopted by the DNO and provided connection to an IDNO substation. As the subsequent (second) customer has made use of this network they should pay by proportion of capacity used. Customer B should therefore pay by proportion 1,000kVA/2,000kVA i.e. 50 per cent of the £345,000 cost = £172,500 for the use of network A-C & B-C.
Electricity Distributor Administrative Expenses	-£100	Electricity Distributors are allowed to recover expenses reasonably incurred discharging its obligations under the ECCRs.
Total	£172,400	

Example 12: A generator connects to previously reinforced assets where HCPT applied

Description	Purpose
Payment for Reinforcement when High-Cost Project Threshold applies	Shows that where a first connection has paid for Reinforcement above the High-Cost Project Threshold they do not receive any reimbursement if a second connection is made but the second connection may need to pay for the reinforcement under the Threshold.

Scenario

1.110. In this example, Customer A (a wind farm of 1000kW capacity) connects to the network.

1.111. The existing network was unable to deliver the Required Capacity, so Reinforcement Work was required. The total cost of the Reinforcement Work was £250,000. These reinforcements were required at the same voltage to the connection of Customer A and so Customer A is required to contribute to the work.

1.112. Following the Reinforcement Work, the new network capacity is 8000kVA.

1.113. The High-Cost Project Threshold (HCPT) for a Generation Connection is £200 x Required Capacity. The calculation is therefore £200 x 1000KW =£200,000.

1.114. Customer A, as a Generation Connection therefore pays an apportioned charge of reinforcements up to the High-Cost Project Threshold and fully funds the reinforcements above the threshold.

1.115. For the Reinforcement Work costs under the HCPT, Customer A would pay a proportion based on the CAF, the calculation is therefore

$$\text{Security CAF} = \frac{\text{Required Capacity}}{\text{New Network Capacity}} \times 100\%$$

$$= 1{,}000/8{,}000 \times 100\% = 12.5\%$$

1.116. The appointed charge under the HCPT would be 12.5% of £200,000 = £25,000. The Electricity Distributor would fund the remaining £175,000 under the HCPT.

1.117. For the Reinforcement Work costs over the HCPT, Customer A would pay in full the remaining Reinforcement Work costs, (i.e. £250,000 - £200,000 = £50,000).

1.118. Customer B (a generator with a maximum export capacity of 500kW) subsequently connects using the existing network that was reinforced as a result of Customer A. In addition, Customer B wholly funds a new section of network (Network B). The cost of installing Network B is £5,000.

Figure 14: A Second Connection customer connects to a network that was paid to be reinforced under the HCPT arrangements

Identification of Eligible Persons

1.119. In this scenario, there are two Eligible Persons – the Initial Contributor (Customer A) and the Electricity Distributor.

1.120. Since Customer B uses the Reinforced Network that the Eligible Persons have contributed and would have contributed to the Reinforcement if they had been the first customer, then Customer B is required to make a Reimbursement payment to the Eligible Persons.

1.121. However, Customer A's contribution below the HCPT was apportioned and their contribution above the HCPT is not considered a Net First Connection Expense, therefore Customer A is not due a Reimbursement payment.

1.122. Customer B is therefore only required to make a Reimbursement payment to the Electricity Distributor for works up to the HCPT.

Calculate Reimbursement Payment value and connection costs

1.123. The charge for the Reinforced Network would be based on applying the Cost Apportionment Factor to the lower of the reinforcement costs or the HCPT:

$$\text{Security CAF} = \frac{\text{Required Capacity}}{\text{New Network Capacity}} \times 100\%$$

$$= 500/8{,}000 \times 100\% = 6.3\%$$

Reapportionment charge = Security CAF x Reinforcement cost

In this case the reinforcement cost is the reinforcement cost up to the HCPT ie £200,000.

= 6.3% of £200,000

= £12,500.

1.124. In this scenario Customer B would be required to make a Reimbursement Payment of £12,500.

Connection costs

1.125. A detailed explanation of the costs incurred by Customer B is outlined below.

Description of cost item	Section of network	Cost	Explanation
Reinforcement Work Reimbursement Payment	Reinforced Network	£12,500	CAF = 500/8,000 = 0.063 Reinforcement Work Reimbursement Payment = 0.063 x £200,000 = £12,500
Wholly funded works	Network B Extension Assets	£5,000	Network B is solely used by Customer B. The costs incurred are therefore funded in full by Customer B.
Total		£17,500	

1.126. Customer A does not receive Reimbursement Payments even though they had contributed in full above the High-Cost Project Threshold. The Electricity Distributor would continue to receive any Reimbursement Payments from subsequent connecting customers for the Reinforcement it has contributed towards.

Example 13: A demand connection connects to previously reinforced assets where HCPT applied

Description	Purpose
Payment for Reinforcement when High-Cost Project Threshold applies	Shows that where a first connection has paid for Reinforcement above the High-Cost Project Threshold they do not receive any reimbursement if a second connection is made and the second connection does not pay for any of the reinforcement

Scenario

1.127. Customer A (a wind farm of 100kW capacity) connects to the network using the existing HV network. Customer A also fully funds a new section of network (Network A) that costs £10,000.

1.128. The existing network was unable to deliver the Required Capacity, so HV Reinforcement Work was required. The total cost of the Reinforcement Work was £150,000. Following the Reinforcement Work, the new capacity was 2000kVA.

1.129. The High Cost Project Threshold (HCPT) for a Generation Connection is set at £200 per kW. For Customer A requiring 100kW capacity connection, the HCPT would thus be set at £20,000, (£200 x 100kW).

1.130. The Reinforcement Work was cost apportioned between the Customer A and the Electricity Distributor. The Cost Apportionment Factor for Customer A would be calculated as:

$$\text{Security CAF} = \frac{\text{Required Capacity}}{\text{New Network Capacity}} \times 100\%$$

$$= 100/2{,}000 \times 100\% = 5\%$$

1.131. For the Reinforcement Work costs under the HCPT at the same Voltage Level as the Point of Connection, Customer A would pay a proportion based on the CAF, i.e. 5% of £20,000 = £1,000. The Electricity Distributor would fund the remaining £19,000 under the HCPT threshold.

1.132. For the Reinforcement Work costs over the HCPT, Customer A would pay in full the remaining Reinforcement Work costs, (i.e. £150,000 - £20,000 = £130,000).

1.133. Customer B (a demand site with a maximum import capacity of 500kW) subsequently connects using the existing network that was reinforced as a result of Customer A. In addition, Customer B wholly funds a new section of network (Network B). The cost of installing Network B is £5,000.

Figure 15: A Second Connection customer connects to a network that was paid to be reinforced under the HCPT arrangements

Identification of Eligible Persons

1.134. In this scenario, there are two Eligible Persons – the Initial Contributor (Customer A) and the Electricity Distributor.

1.135. Since Customer B uses the Reinforced Network that the Eligible Persons have contributed but would not have contributed to the Reinforcement if they had been the first customer, then Customer B is not required to make a Reimbursement payment to the Eligible Persons.

Calculate Connection Costs

1.136. In this scenario Customer B would not be required to make a Reimbursement Payment.

Connection costs

1.137. A detailed explanation of the costs incurred by Customer B is outlined below.

Description of cost item	Section of network	Cost	Explanation
Reinforcement Work Reimbursement Payment	Reinforced Network	£0.00	Customer B is classified as a Demand site and would not be liable for reinforcement costs had they been the first connection.
Wholly funded works	Network B Extension Assets	£5,000	Network B is solely used by Customer B. The costs incurred are therefore funded in full by Customer B.
Total		£5,000	

Reimbursement Payment value

1.138. The Electricity Distributor would not receive a Reimbursement Payment, as Customer B is a Demand Connection and would not be liable for reinforcement costs had they been the first connection.

Example 14: Recovery of costs associated with transmission works

Description	Purpose
Recovery of transmission work	Shows that a Second Connection is charged for transmission work if it is made to assets that were paid for by an Initial Contributor and the first customer is reimbursed.

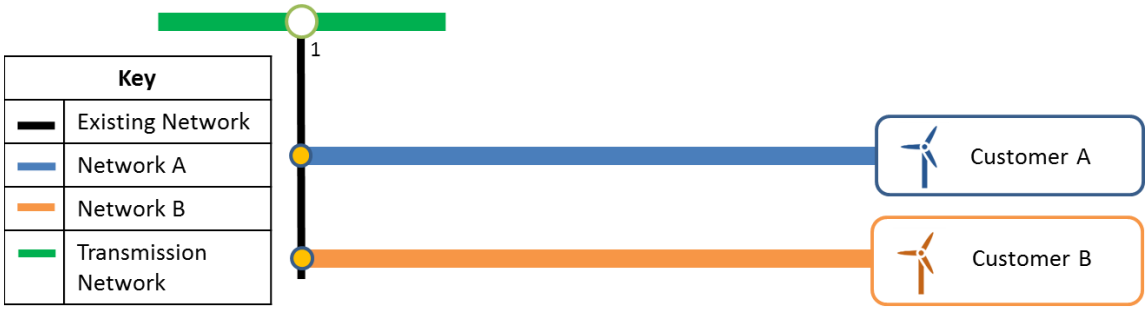
Scenario

1.139. In this example, Customer A (a generator with a maximum export capacity of 20MW) connects to the network using the existing network and the transmission network. Customer A also fully funds a new section of network (Network A) that costs £10,000.

1.140. The existing transmission network was unable to deliver the Required Capacity, so transmission reinforcement work was required. The total cost of the transmission reinforcement work was £2,100,000. For the purpose of this example only, we assume that this was wholly funded by Customer A.

1.141. Customer B (a generator with a maximum export capacity of 40MW) subsequently connects to the network, using capacity to the existing distribution network and the reinforced transmission network, as a result of Customer A. In addition, Customer B wholly funds a new section of network (Network B). The cost of installing Network B is £200,000.

Figure 16: Reimbursement to Initial Contributor - transmission network reinforcement work



Identification of Eligible Persons

1.142. In this scenario there is one Eligible Person, the Initial Contributor (Customer A), because Customer B uses the reinforced Transmission work, that was provided for and paid for by Customer A.

Calculate Reimbursement Payment value and connection costs

1.143. The charge for the Transmission Network reinforcement work would be calculated on an apportionment of costs based on the respective capacity requirements of Customers A and B.

$$\text{Cost Apportionment} = \frac{\text{Capacity of Customer B}}{\text{Capacity of Customer A + Capacity of Customer B}} \times 100\%$$

$$= 40/60 \times 100\% = 66.7\%$$

Reapportionment charge = Cost Apportionment x Reinforcement Work cost

= 66.7% of £2,100,000

= £1,400,000

1.144. In this scenario, Customer B's connection charge would be £1,600,000 (£1,400,000 for the Transmission Network reinforcement and £200,000 for the network Extension Assets).

Connection costs

1.145. A detailed explanation of the costs incurred by Customer B is outlined below.

Description of cost item	Section of network	Cost	Explanation
Reinforcement Work Reimbursement Payment	Transmission Network (point 1)	£1,400,000	Cost Apportionment = 40/60 = 0.667 Reinforcement Work Reimbursement Payment = 0.667 X £2,100,000 = £1,400,000
Wholly funded works	Network B Extension Assets	£200,000	Network B is solely used by Customer B. The costs incurred are therefore funded in full by Customer B.
Total		£1,600,000	

Reimbursement Payment value

1.146. An explanation of the Reimbursement Payment received by Customer A is outlined below:

Description of cost item	Value	Explanation
Reimbursement Payment	£1,400,000	The charge for the use of the Transmission Network reinforcement work paid for by Customer B
Electricity Distributor Administrative Expenses	-£100	£100 assumed for the illustration.
Total	£1,399,000	

Example 15: Reinforcement Works Fully Funded by the Customer; Speculative Scheme

Description	Purpose
First connection pays in full for Reinforcement as a Speculative Connection	Shows that a Second Connection is not charged if it is made to assets that were paid for by First Connection that paid in full for Reinforcement as it was a Speculative Connection.

1.147. In this example, Customer A (a generator with an export capacity of 650kW) connects to the network using the existing HV network. The application has been determined to be "Speculative".

1.148. The existing network was unable to deliver the Required Capacity, so HV Reinforcement Works were required. The total cost of the HV Reinforcement Work was £124,800. Following the Reinforcement Work, the new network capacity was 8000kW.

1.149. If the development is considered to be speculative then the Reinforcement costs will be charged to the customer in full.

1.150. Customer B (a generator with an export capacity of 1000kW) subsequently connects to the HV network. In addition, Customer B wholly funds a new section of network (Network B). The cost of installing Network B is £25,000.

Figure 17: Reimbursement Payment to the Electricity Distributor – Security CAF

Identification of Eligible Persons

1.151. In this scenario, there is one Eligible Person, the Initial Contributor (Customer A)

1.152. Although Customer B uses the Reinforced Network, which was paid for by Customer A. Where the first connection customer has contributed in full towards Reinforcement, the second comer will not be required to reimburse the first comer.

Calculate Reimbursement Payment value and connection costs

1.153. As Customer A is Speculative, and has fully funded the Reinforcement work, Customer B is not required to make a Second Comer contribution.

Connection costs

1.154. A detailed explanation of the costs incurred by Customer B is outlined below.

Description of cost item	Section of network	Cost	Explanation
Wholly funded works	Network B Extension Assets	£25,000	The new Network is solely used by Customer B. The costs incurred are therefore funded in full by Customer B.
Total		£25,000	

Reimbursement Payment value

1.155. An explanation of the Reimbursement Payment received by the Electricity Distributor is outlined below:

Description of cost item	Value	Explanation
Reimbursement Payment to the Electricity Distributor	£0	The first connection customer has fully funded the Reinforcement, the second comer will not be required to reimburse the first comer.
Reimbursement Payment to the Eligible Person	£0	
Total	£0	

1.156. In summary, in this scenario, Customer B's connection charges would be £25,000 as no reimbursement to Customer A is required.

Example 16: Reinforcement Works Fully Funded by the Customer; 3 Phase Upgrade

Description	Purpose
First connection pays in full for Reinforcement as it requests a th4ree phase service	Shows that a Second Connection is not charged if it is made to assets that were paid for by First Connection that paid in full for Reinforcement as it requested a three-phase service not necessary for the load requested.

1.157. In this example, Customer A (a Demand with a capacity of 20kVA) connects to the network using the existing LV network. Customer A has requested a 3phase connection.

1.158. The existing network was able to deliver the Required Capacity, however, it is a split phase network. HV Reinforcement Works are required to introduce the additional phase. The total cost of the HV Reinforcement Work was £50,000. Following the Reinforcement Work, the new network capacity was 11,000kVA.

1.159. Where a customer requests a three-phase connection and/or a supply voltage that is not necessary to meet the Required Capacity, and the local Distribution System is not of the requested number of phases and/or voltage, then they will pay in full the cost of Reinforcement of the Distribution System to their specified number of phases and/or voltage.

1.160. Customer B (a demand customer with a capacity of 15kVA requesting a 3phase connection) subsequently connects to the LV network. In addition, Customer B wholly funds a new section of network (Network B). The cost of installing Network B is £18,000.

Figure 18: Reimbursement Payment to the Electricity Distributor – Security CAF

Identification of Eligible Persons

1.161. In this scenario, there is one Eligible Person, the Initial Contributor (Customer A)

1.162. Although Customer B uses the Reinforced Network, which was paid for by Customer A. Where the first connection customer has contributed in full towards Reinforcement, the second comer will not be required to reimburse the first comer.

Calculate Reimbursement Payment value and connection costs

1.163. As Customer A has fully funded the earlier Reinforcement work, Customer B is not required to contribute towards a proportion towards the earlier Reinforcement works.

Connection costs

1.164. A detailed explanation of the costs incurred by Customer B is outlined below.

Description of cost item	Section of network	Cost	Explanation
Wholly funded works	Network B Extension Assets	£18,000	The new Network is solely used by Customer B. The costs incurred are therefore funded in full by Customer B.
Total		£18,000	

Reimbursement Payment value

1.165. An explanation of the Reimbursement Payment received by the Electricity Distributor is outlined below:

Description of cost item	Value	Explanation
Reimbursement Payment to the Electricity Distributor	£0	The first connection customer has fully funded the contributed in full towards Reinforcement, the second comer will not be required to reimburse the first comer.
Reimbursement Payment to the Eligible Person	£0	
Total	£0	

1.166. In summary, in this scenario, Customer B's connection charges would be £18,000 as no reimbursement to Customer A is required.