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Option 1.1

SCHEDULE 22: COMMON CONNECTION CHARGING METHODOLOGY

Independent System Operator and Planner (ISOP) Charges

- 1.72 We have an obligation under the CUSC to discuss certain requests for connection or changes in connection with the ISOP. Such requests are typically for large electrical demand or generation projects. Under certain circumstances, as determined by the ISOP, they may apply charges to assess the potential impact on the GB Transmission System of a request or the combined effect of a number of requests and these will be included in the Connection Charge, or through a separate mechanism agreed between you and us.
- 1.73 Subsequent to such assessment, the ISOP may also require works to be undertaken on the GB Transmission System as a condition of the connection being permitted. In the event of ISOP applying charges for these works, we will not reflect these charges in our charges to you.
- 1.74 Should GB Transmission System works be required, ISOP may apply a cancellation charge in the event that your project is cancelled or the capacity of your project reduces. The ISOP also calculates a secured amount in respect of this cancellation charge (being a percentage of the cancellation charge, which reduces at certain trigger points). We may ask you for security in respect of this cancellation charge, but we will not ask you for more than the secured amount calculated by the ISOP.

Option 1.2

SCHEDULE 22: COMMON CONNECTION CHARGING METHODOLOGY

Independent System Operator and Planner (ISOP) Charges

- 1.72 We have an obligation under the CUSC to discuss certain requests for connection or changes in connection with the ISOP. Such requests are typically for large electrical demand or generation projects. Under certain circumstances, as determined by the ISOP, they may apply charges to assess the potential impact on the GB Transmission System of a request or the combined effect of a number of requests and these will be included in the Connection Charge, or through a separate mechanism agreed between you and us.
- 1.73 Subsequent to such assessment, the ISOP may also require works to be undertaken on the GB Transmission System as a condition of the connection being permitted. In the event of ISOP applying charges for these works, we will reflect these charges in our charges to you if the transmissions works are required exclusively for your use, otherwise no charge for this work will be made to you.
- 1.74 Should GB Transmission System works be required, ISOP may apply a cancellation charge in the event that your project is cancelled or the capacity of your project reduces. The ISOP also calculates a secured amount in respect of this cancellation charge (being a percentage of the cancellation charge, which reduces at certain trigger points). We may ask you for security in respect of this cancellation charge, but we will not ask you for more than the secured amount calculated by the ISOP.

Option 1.1 with Option 1.4

SCHEDULE 22: COMMON CONNECTION CHARGING METHODOLOGY

Costs to be paid in full by you

- 1.17 ISOP charges for Transmission work for the Minimum Scheme in excess of the Transmission High-Cost Project Threshold, shall be charged to you in full as a Connection Charge. For the avoidance of doubt, where Paragraph 1.37 applies, the Transmission High-Cost Project Threshold will not apply. The calculation of this charge will include all costs charged by ISOP. The Transmission High-Cost Project Threshold is £125 /kW. ISOP charges up to and including the High-Cost Project Threshold will follow the methodology outlined under paragraphs 1.73 to 1.75.

Costs to be paid in full by us

- ~~1.36~~1.37 We will fully fund Reinforcement carried out to allow the installation of all equipment at an existing Premises which remain connected via an existing low-voltage single, two or three phase service fused at 100 amperes or less per phase which is metered with whole-current metering; provided that (to the extent relevant):
- the Reinforcement is carried out to allow the installation of equipment as part of a single application for a single or multiple installations;
 - any and all electricity generation equipment installed has a rated output not greater than 16 amperes per phase (or not greater than 16 amperes per phase at any single Premises if a single application for multiple installations);
 - any and all equipment installed which does not constitute a modification to the existing service conforms with the technical requirements of the following standards (notwithstanding that the equipment may have an input current that is more than 16 amperes per phase):
 - BS EN 61000-3-2 Electromagnetic compatibility (EMC). Limits. Limits for harmonic current emissions (equipment input current ≤ 16 A per phase); and
 - BS EN 61000-3-3 Electromagnetic compatibility (EMC). Limits. Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current ≤ 16 A per phase and not subject to conditional connection.

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Independent System Operator and Planner (ISOP) Charges

- ~~1.72~~1.73 We have an obligation under the CUSC to discuss certain requests for connection or changes in connection with the ISOP. Such requests are typically for large electrical demand or generation projects. Under certain circumstances, as determined by the ISOP, they may apply charges to assess the potential impact on the GB Transmission System of a request or the combined effect of a number of requests and these will be included in the Connection Charge, or through a separate mechanism agreed between you and us.
- ~~1.73~~1.74 Subsequent to such assessment, the ISOP may also require works to be undertaken on the GB Transmission System as a condition of the connection being permitted. In the event of ISOP applying charges for these works, we will not reflect these charges in our charges to you.
- ~~1.74~~1.75 Should GB Transmission System works be required, ISOP may apply a cancellation charge in the event that your project is cancelled or the capacity of your project reduces. The ISOP also calculates a secured amount in respect of this cancellation charge (being a percentage of the

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cancellation charge, which reduces at certain trigger points). We may ask you for security in respect of this cancellation charge, but we will not ask you for more than the secured amount calculated by the ISOP.

Option 1.2 with Option 1.4

SCHEDULE 22: COMMON CONNECTION CHARGING METHODOLOGY

Costs to be paid in full by you

1.17 ISOP charges for Transmission work for the Minimum Scheme in excess of the Transmission High-Cost Project Threshold, shall be charged to you in full as a Connection Charge. For the avoidance of doubt, where Paragraph 1.37 applies, the Transmission High-Cost Project Threshold will not apply. The calculation of this charge will include all costs charged by ISOP. The Transmission High-Cost Project Threshold is £XXX /kW. ISOP charges up to and including the High-Cost Project Threshold will follow the methodology outlined under paragraphs 1.73 to 1.75.

Costs to be paid in full by us

1.361.37 We will fully fund Reinforcement carried out to allow the installation of all equipment at an existing Premises which remain connected via an existing low-voltage single, two or three phase service fused at 100 amperes or less per phase which is metered with whole-current metering; provided that (to the extent relevant):

- the Reinforcement is carried out to allow the installation of equipment as part of a single application for a single or multiple installations;
- any and all electricity generation equipment installed has a rated output not greater than 16 amperes per phase (or not greater than 16 amperes per phase at any single Premises if a single application for multiple installations);
- any and all equipment installed which does not constitute a modification to the existing service conforms with the technical requirements of the following standards (notwithstanding that the equipment may have an input current that is more than 16 amperes per phase):
 - BS EN 61000-3-2 Electromagnetic compatibility (EMC). Limits. Limits for harmonic current emissions (equipment input current ≤ 16 A per phase); and
 - BS EN 61000-3-3 Electromagnetic compatibility (EMC). Limits. Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current ≤ 16 A per phase and not subject to conditional connection.

Independent System Operator and Planner (ISOP) Charges

1.721.73 We have an obligation under the CUSC to discuss certain requests for connection or changes in connection with the ISOP. Such requests are typically for large electrical demand or generation projects. Under certain circumstances, as determined by the ISOP, they may apply charges to assess the potential impact on the GB Transmission System of a request or the combined effect of a number of requests and these will be included in the Connection Charge, or through a separate mechanism agreed between you and us.

1.731.74 Subsequent to such assessment, the ISOP may also require works to be undertaken on the GB Transmission System as a condition of the connection being permitted. In the event of ISOP applying charges for these works, we will reflect these charges in our charges to you if the

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transmissions works are required exclusively for your use, otherwise no charge for this work will be made to you.

1.741.75 Should GB Transmission System works be required, ISOP may apply a cancellation charge in the event that your project is cancelled or the capacity of your project reduces. The ISOP also calculates a secured amount in respect of this cancellation charge (being a percentage of the cancellation charge, which reduces at certain trigger points). We may ask you for security in respect of this cancellation charge, but we will not ask you for more than the secured amount calculated by the ISOP.

Option 2.1

SCHEDULE 22: COMMON CONNECTION CHARGING METHODOLOGY

Recovery of costs for previous works

1.34 Where, in order to provide your connection;

- we propose to utilise existing Distribution System or GB Transmission System assets that were previously installed to provide a connection to another customer, and
- the other customer has paid us (either in part or in full) a Connection Charge for those assets or paid an ICP for those assets which were adopted by us,

you may be required to make a payment towards them. The ECCR prescribes the circumstances where such payment is required. Charges for such works only apply where the new connection is provided within the ECCR Prescribed Period.

Independent System Operator and Planner (ISOP) Charges

1.72 We have an obligation under the CUSC to discuss certain requests for connection or changes in connection with the ISOP. Such requests are typically for large electrical demand or generation projects. Under certain circumstances, as determined by the ISOP, they may apply charges to assess the potential impact on the GB Transmission System of a request or the combined effect of a number of requests and these will be included in the Connection Charge, or through a separate mechanism agreed between you and us.

1.73 Subsequent to such assessment, the ISOP may also require works to be undertaken on the GB Transmission System as a condition of the connection being permitted. In the event of ISOP applying charges for these works, ~~we will reflect~~ these charges will be apportioned between you and us and reflected in our charges to you.

1.74 The ISOP charges will be apportioned using one of two Cost Apportionment Factors (CAFs), dependent upon which factor is driving the requirement for the work:

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

1.75 The following definitions are used in the application of the CAFs:

<u>Existing Capacity</u>	<p><u>For existing Customers their Existing Capacity will be either:</u></p> <p>a. <u>the Maximum Capacity used in the calculation of their use of system charges; or</u></p> <p>b. <u>for Customers who are not charged for use of system on the basis of their Maximum Capacity the lower of:</u></p> <ul style="list-style-type: none"> o <u>No. of phases x nominal phase-neutral voltage (kV) x fuse rating (A); and</u> o <u>The rating of the service equipment.</u>
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<u>Fault Level Contribution from Connection</u>	<u>is the assessment of the Fault Level contribution from the equipment to be connected taking account of its impact at the appropriate point on the Distribution System. Where an existing Customer requests a change to a connection then the “Fault Level Contribution from Connection” is defined as the incremental increase in Fault Level caused by the Customer.</u>
<u>New Fault Level Capacity</u>	<u>is the Fault Level rating, following work, of the equipment installed after taking account of any restrictions imposed by the local network Fault Level capacity. For the avoidance of doubt this rule will be used for all equipment types and voltages.</u>
<u>New Network Capacity</u>	<u>is either the secure or non-secure capacity of the Relevant Section of Transmission Network (RSTN) following Transmission work.</u> <u>The capacity to be used will be based on our assessment of the thermal ratings, voltage change and upstream restrictions and compliance with ISOP’s relevant design, planning and security of supply policies. The equipment ratings to be used are the appropriate operational rating at the time of the most onerous operational conditions taking account of seasonal ratings and demand.</u>
<u>Relevant Section of Transmission Network (RSN)</u>	<u>is that part or parts of the Transmission System which require(s) work. Normally this will comprise:</u> <ul style="list-style-type: none"> <u>the existing assets, at the Voltage Level that is being reinforced, that would have been used to supply you (so far as they have not been replaced) had sufficient capacity been available to connect you without work; and/or</u> <u>the new assets, at the same Voltage Level, that are to be provided by way of work.</u> <u>Where it is unclear what assets would have supplied the Customer in the event that sufficient capacity had been available, the existing individual assets with the closest rating to the new assets will be used.</u> <u>There may be more than one RSTN (e.g. at different Voltage Levels).</u>
<u>Required Capacity</u>	<u>is the Maximum Capacity agreed with the Customer. In the case of multiple connections (e.g. a housing development) it may be adjusted after consideration of the effects of diversity. Where an existing Customer requests an increase in capacity then it is the increase above their Existing Capacity.</u>

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1.76 The ‘Transmission Security CAF’ 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 ISOP charges that should be paid by you as detailed below:

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$$\text{TransmissionSecurityCAF} = \frac{\text{RequiredCapacity}}{\text{NewNetworkCapacity}} \times 100\% \text{ (max100\%)}$$

1.77 The 'Transmission Fault Level CAF' 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:

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$$\text{TransmissionFaultLevelCAF} = 3 \times \frac{\text{FaultLevelContributionFromConnection}}{\text{NewFaultLevelCapacity}} \times 100\% \text{ (max100\%)}$$

1.78 For clarity, where you require an augmentation to an existing connection, both the Security and Fault Level CAFs will be based on the increase in Required Capacity and increase in Fault Level Contribution from the connection respectively. Any related increases within the previous three year period will be taken into account in determining the increase in the Required Capacity or increase in the Fault Level Contribution from the connection to be applied within the CAF.

1.79 On some Schemes there may be interaction between the two rules. In such cases, the 'Security' CAF will be applied to costs that are driven by the security requirement. The 'Fault Level CAF' will be applied to costs that are driven by Fault Level requirements. See the Examples for illustrations on the application of the CAFs.

Option 2.2

SCHEDULE 22: COMMON CONNECTION CHARGING METHODOLOGY

1.34 Where, in order to provide your connection;

- we propose to utilise existing Distribution System or GB Transmission System assets that were previously installed to provide a connection to another customer, and
- the other customer has paid us (either in part or in full) a Connection Charge for those assets or paid an ICP for those assets which were adopted by us,

you may be required to make a payment towards them. The ECCR prescribes the circumstances where such payment is required. Charges for such works only apply where the new connection is provided within the ECCR Prescribed Period. Where GB Transmission System assets are utilised to provide your connection, you will not be required to make a payment if [the capacity of your connection is less than 5MW][the voltage of your Point of Connection is at HV or LV.]

Independent System Operator and Planner (ISOP) Charges

- 1.72 We have an obligation under the CUSC to discuss certain requests for connection or changes in connection with the ISOP. Such requests are typically for large electrical demand or generation projects. Under certain circumstances, as determined by the ISOP, they may apply charges to assess the potential impact on the GB Transmission System of a request or the combined effect of a number of requests and these will be included in the Connection Charge, or through a separate mechanism agreed between you and us.
- 1.73 Subsequent to such assessment, the ISOP may also require works to be undertaken on the GB Transmission System as a condition of the connection being permitted. In the event of ISOP applying charges for these works, ~~we will reflect~~ these charges will be apportioned between you and us and reflected in our charges to you.
- 1.74 Should GB Transmission System works be required, ISOP may apply a cancellation charge in the event that your project is cancelled or the capacity of your project reduces. The ISOP also calculates a

secured amount in respect of this cancellation charge (being a percentage of the cancellation charge, which reduces at certain trigger points). We may ask you for security in respect of this cancellation charge, but we will not ask you for more than the secured amount calculated by the ISOP.

1.75 The ISOP charges will be apportioned using one of two Cost Apportionment Factors (CAFs), dependent upon which factor is driving the requirement for the work:

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

1.76 The following definitions are used in the application of the CAFs:

<u>Existing Capacity</u>	<p><u>For existing Customers their Existing Capacity will be either:</u></p> <p>c. <u>the Maximum Capacity used in the calculation of their use of system charges; or</u></p> <p>d. <u>for Customers who are not charged for use of system on the basis of their Maximum Capacity the lower of:</u></p> <ul style="list-style-type: none"> o <u>No. of phases x nominal phase-neutral voltage (kV) x fuse rating (A); and</u> o <u>The rating of the service equipment.</u>
<u>Fault Level Contribution from Connection</u>	<p><u>is the assessment of the Fault Level contribution from the equipment to be connected taking account of its impact at the appropriate point on the Distribution System. Where an existing Customer requests a change to a connection then the "Fault Level Contribution from Connection" is defined as the incremental increase in Fault Level caused by the Customer.</u></p>
<u>New Fault Level Capacity</u>	<p><u>is the Fault Level rating, following work, of the equipment installed after taking account of any restrictions imposed by the local network Fault Level capacity. For the avoidance of doubt this rule will be used for all equipment types and voltages.</u></p>
<u>New Network Capacity</u>	<p><u>is either the secure or non-secure capacity of the Relevant Section of Transmission Network (RSTN) following Transmission work.</u></p> <p><u>The capacity to be used will be based on our assessment of the thermal ratings, voltage change and upstream restrictions and compliance with ISOP's relevant design, planning and security of supply policies. The equipment ratings to be used are the appropriate operational rating at the time of the most onerous operational conditions taking account of seasonal ratings and demand.</u></p>
<u>Relevant Section of Transmission Network (RSN)</u>	<p><u>is that part or parts of the Transmission System which require(s) work. Normally this will comprise:</u></p>

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	<ul style="list-style-type: none"> the existing assets, at the Voltage Level that is being reinforced, that would have been used to supply you (so far as they have not been replaced) had sufficient capacity been available to connect you without work; and/or the new assets, at the same Voltage Level, that are to be provided by way of work. <p>Where it is unclear what assets would have supplied the Customer in the event that sufficient capacity had been available, the existing individual assets with the closest rating to the new assets will be used.</p> <p>There may be more than one RSTN (e.g. at different Voltage Levels).</p>
Required Capacity	is the Maximum Capacity agreed with the Customer. In the case of multiple connections (e.g. a housing development) it may be adjusted after consideration of the effects of diversity. Where an existing Customer requests an increase in capacity then it is the increase above their Existing Capacity.

1.77 The 'Transmission Security CAF' 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 ISOP charges that should be paid by you as detailed below:

$$\text{TransmissionSecurityCAF} = \frac{\text{RequiredCapacity}}{\text{NewNetworkCapacity}} \times 100\% (\text{max}100\%)$$

1.78 The 'Transmission Fault Level CAF' 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:

$$\text{TransmissionFaultLevelCAF} = 3 \times \frac{\text{FaultLevelContributionFromConnection}}{\text{NewFaultLevelCapacity}} \times 100\% (\text{max}100\%)$$

1.79 For clarity, where you require an augmentation to an existing connection, both the Security and Fault Level CAFs will be based on the increase in Required Capacity and increase in Fault Level Contribution from the connection respectively. Any related increases within the previous three year period will be taken into account in determining the increase in the Required Capacity or increase in the Fault Level Contribution from the connection to be applied within the CAF.

1.80 On some Schemes there may be interaction between the two rules. In such cases, the 'Security' CAF will be applied to costs that are driven by the security requirement. The 'Fault Level CAF' will be applied to costs that are driven by Fault Level requirements. See the Examples for illustrations on the application of the CAFs.

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Option 2.1 with Option 2.4

SCHEDULE 22: COMMON CONNECTION CHARGING METHODOLOGY

Costs to be paid in full by you

1.17 ISOP charges for Transmission work for the Minimum Scheme in excess of the Transmission High-Cost Project Threshold, shall be charged to you in full as a Connection Charge. For the avoidance of doubt, where Paragraph 1.37 applies, the Transmission High-Cost Project Threshold will not apply. The calculation of this charge will include all costs charged by ISOP. The Transmission High-Cost Project Threshold is £XXX /kW. ISOP charges up to and including the High-Cost Project Threshold will follow the methodology outlined under paragraphs 1.73 to 1.81.

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Recovery of costs for previous works

1.34 Where, in order to provide your connection;

- we propose to utilise existing Distribution System or GB Transmission System assets that were previously installed to provide a connection to another customer, and
- the other customer has paid us (either in part or in full) a Connection Charge for those assets or paid an ICP for those assets which were adopted by us,

you may be required to make a payment towards them. The ECCR prescribes the circumstances where such payment is required. Charges for such works only apply where the new connection is provided within the ECCR Prescribed Period.

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Costs to be paid in full by us

1.36 We will fully fund Reinforcement carried out to allow the installation of all equipment at an existing Premises which remain connected via an existing low-voltage single, two or three phase service fused at 100 amperes or less per phase which is metered with whole-current metering; provided that (to the extent relevant):

- the Reinforcement is carried out to allow the installation of equipment as part of a single application for a single or multiple installations;
- any and all electricity generation equipment installed has a rated output not greater than 16 amperes per phase (or not greater than 16 amperes per phase at any single Premises if a single application for multiple installations);
- any and all equipment installed which does not constitute a modification to the existing service conforms with the technical requirements of the following standards (notwithstanding that the equipment may have an input current that is more than 16 amperes per phase):
 - BS EN 61000-3-2 Electromagnetic compatibility (EMC). Limits. Limits for harmonic current emissions (equipment input current ≤ 16 A per phase); and
 - BS EN 61000-3-3 Electromagnetic compatibility (EMC). Limits. Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current ≤ 16 A per phase and not subject to conditional connection.

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Independent System Operator and Planner (ISOP) Charges

1.72 We have an obligation under the CUSC to discuss certain requests for connection or changes in connection with the ISOP. Such requests are typically for large electrical demand or

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generation projects. Under certain circumstances, as determined by the ISOP, they may apply charges to assess the potential impact on the GB Transmission System of a request or the combined effect of a number of requests and these will be included in the Connection Charge, or through a separate mechanism agreed between you and us.

1.731.74 Subsequent to such assessment, the ISOP may also require works to be undertaken on the GB Transmission System as a condition of the connection being permitted. In the event of ISOP applying charges for these works, ~~we will reflect~~ these charges will be apportioned between you and us and reflected in our charges to you.

1.741.75 Should GB Transmission System works be required, ISOP may apply a cancellation charge in the event that your project is cancelled or the capacity of your project reduces. The ISOP also calculates a secured amount in respect of this cancellation charge (being a percentage of the cancellation charge, which reduces at certain trigger points). We may ask you for security in respect of this cancellation charge, but we will not ask you for more than the secured amount calculated by the ISOP.

1.76 The ISOP charges will be apportioned using one of two Cost Apportionment Factors (CAFs), dependent upon which factor is driving the requirement for the work:

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

1.77 The following definitions are used in the application of the CAFs:

<u>Existing Capacity</u>	<p><u>For existing Customers their Existing Capacity will be either:</u></p> <p>a. <u>the Maximum Capacity used in the calculation of their use of system charges; or</u></p> <p>b. <u>for Customers who are not charged for use of system on the basis of their Maximum Capacity the lower of:</u></p> <ul style="list-style-type: none"> ○ <u>No. of phases x nominal phase-neutral voltage (kV) x fuse rating (A); and</u> ○ <u>The rating of the service equipment.</u>
<u>Fault Level Contribution from Connection</u>	<p><u>is the assessment of the Fault Level contribution from the equipment to be connected taking account of its impact at the appropriate point on the Distribution System. Where an existing Customer requests a change to a connection then the "Fault Level Contribution from Connection" is defined as the incremental increase in Fault Level caused by the Customer.</u></p>
<u>New Fault Level Capacity</u>	<p><u>is the Fault Level rating, following work, of the equipment installed after taking account of any restrictions imposed by the local network Fault Level capacity. For the avoidance of doubt this rule will be used for all equipment types and voltages.</u></p>

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<u>New Network Capacity</u>	<p>is either the secure or non-secure capacity of the Relevant Section of Transmission Network (RSTN) following Transmission work.</p> <p>The capacity to be used will be based on our assessment of the thermal ratings, voltage change and upstream restrictions and compliance with ISOP's relevant design, planning and security of supply policies. The equipment ratings to be used are the appropriate operational rating at the time of the most onerous operational conditions taking account of seasonal ratings and demand.</p>
<u>Relevant Section of Transmission Network (RSN)</u>	<p>is that part or parts of the Transmission System which require(s) work. Normally this will comprise:</p> <ul style="list-style-type: none"> the existing assets, at the Voltage Level that is being reinforced, that would have been used to supply you (so far as they have not been replaced) had sufficient capacity been available to connect you without work; and/or the new assets, at the same Voltage Level, that are to be provided by way of work. <p>Where it is unclear what assets would have supplied the Customer in the event that sufficient capacity had been available, the existing individual assets with the closest rating to the new assets will be used.</p> <p>There may be more than one RSTN (e.g. at different Voltage Levels).</p>
<u>Required Capacity</u>	<p>is the Maximum Capacity agreed with the Customer. In the case of multiple connections (e.g. a housing development) it may be adjusted after consideration of the effects of diversity. Where an existing Customer requests an increase in capacity then it is the increase above their Existing Capacity.</p>

1.78 The 'Transmission Security CAF' 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 ISOP charges that should be paid by you as detailed below:

$$\text{TransmissionSecurityCAF} = \frac{\text{RequiredCapacity}}{\text{NewNetworkCapacity}} \times 100\% (\text{max}100\%)$$

1.79 The 'Transmission Fault Level CAF' 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:

$$\text{TransmissionFaultLevelCAF} = 3 \times \frac{\text{FaultLevelContributionFromConnection}}{\text{NewFaultLevelCapacity}} \times 100\% (\text{max}100\%)$$

1.80 For clarity, where you require an augmentation to an existing connection, both the Security and Fault Level CAFs will be based on the increase in Required Capacity and increase in Fault Level Contribution from the connection respectively. Any related increases within the previous three year period will be

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taken into account in determining the increase in the Required Capacity or increase in the Fault Level Contribution from the connection to be applied within the CAF.

1.81 On some Schemes there may be interaction between the two rules. In such cases, the 'Security' CAF will be applied to costs that are driven by the security requirement. The 'Fault Level CAF' will be applied to costs that are driven by Fault Level requirements. See the Examples for illustrations on the application of the CAFs.

Option 2.2 with Option 2.4

SCHEDULE 22: COMMON CONNECTION CHARGING METHODOLOGY

Costs to be paid in full by you

1.17 ISOP charges for Transmission work for the Minimum Scheme in excess of the Transmission High-Cost Project Threshold, shall be charged to you in full as a Connection Charge. For the avoidance of doubt, where Paragraph 1.37 applies, the Transmission High-Cost Project Threshold will not apply. The calculation of this charge will include all costs charged by ISOP. The Transmission High-Cost Project Threshold is £XXX /kW. ISOP charges up to and including the High-Cost Project Threshold will follow the methodology outlined under paragraphs 1.73 to 1.81.

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Recovery of costs for previous works

1.341.35 Where, in order to provide your connection;

- we propose to utilise existing Distribution System or GB Transmission System assets that were previously installed to provide a connection to another customer, and
- the other customer has paid us (either in part or in full) a Connection Charge for those assets or paid an ICP for those assets which were adopted by us,

you may be required to make a payment towards them. The ECCR prescribes the circumstances where such payment is required. Charges for such works only apply where the new connection is provided within the ECCR Prescribed Period. Where GB Transmission System assets are utilised to provide your connection, you will not be required to make a payment if [the capacity of your connection is less than 5MW][the voltage of your Point of Connection is at HV or LV.]

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Costs to be paid in full by us

1.361.37 We will fully fund Reinforcement carried out to allow the installation of all equipment at an existing Premises which remain connected via an existing low-voltage single, two or three phase service fused at 100 amperes or less per phase which is metered with whole-current metering; provided that (to the extent relevant):

- the Reinforcement is carried out to allow the installation of equipment as part of a single application for a single or multiple installations;
- any and all electricity generation equipment installed has a rated output not greater than 16 amperes per phase (or not greater than 16 amperes per phase at any single Premises if a single application for multiple installations);
- any and all equipment installed which does not constitute a modification to the existing service conforms with the technical requirements of the following standards (notwithstanding that the equipment may have an input current that is more than 16 amperes per phase):

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- BS EN 61000-3-2 Electromagnetic compatibility (EMC). Limits. Limits for harmonic current emissions (equipment input current ≤ 16 A per phase); and
- BS EN 61000-3-3 Electromagnetic compatibility (EMC). Limits. Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current ≤ 16 A per phase and not subject to conditional connection.

Independent System Operator and Planner (ISOP) Charges

1.731.73 We have an obligation under the CUSC to discuss certain requests for connection or changes in connection with the ISOP. Such requests are typically for large electrical demand or generation projects. Under certain circumstances, as determined by the ISOP, they may apply charges to assess the potential impact on the GB Transmission System of a request or the combined effect of a number of requests and these will be included in the Connection Charge, or through a separate mechanism agreed between you and us.

1.731.74 Subsequent to such assessment, the ISOP may also require works to be undertaken on the GB Transmission System as a condition of the connection being permitted. In the event of ISOP applying charges for these works, ~~we will reflect~~ these charges will be apportioned between you and us and reflected in our charges to you.

1.741.75 Should GB Transmission System works be required, ISOP may apply a cancellation charge in the event that your project is cancelled or the capacity of your project reduces. The ISOP also calculates a secured amount in respect of this cancellation charge (being a percentage of the cancellation charge, which reduces at certain trigger points). We may ask you for security in respect of this cancellation charge, but we will not ask you for more than the secured amount calculated by the ISOP.

1.76 The ISOP charges will be apportioned using one of two Cost Apportionment Factors (CAFs), dependent upon which factor is driving the requirement for the work:

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

1.77 The following definitions are used in the application of the CAFs:

<u>Existing Capacity</u>	<p><u>For existing Customers their Existing Capacity will be either:</u></p> <ul style="list-style-type: none"> c. <u>the Maximum Capacity used in the calculation of their use of system charges; or</u> d. <u>for Customers who are not charged for use of system on the basis of their Maximum Capacity the lower of:</u> <ul style="list-style-type: none"> ○ <u>No. of phases x nominal phase-neutral voltage (kV) x fuse rating (A); and</u> ○ <u>The rating of the service equipment.</u>
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<u>Fault Level Contribution from Connection</u>	<u>is the assessment of the Fault Level contribution from the equipment to be connected taking account of its impact at the appropriate point on the Distribution System. Where an existing Customer requests a change to a connection then the “Fault Level Contribution from Connection” is defined as the incremental increase in Fault Level caused by the Customer.</u>
<u>New Fault Level Capacity</u>	<u>is the Fault Level rating, following work, of the equipment installed after taking account of any restrictions imposed by the local network Fault Level capacity. For the avoidance of doubt this rule will be used for all equipment types and voltages.</u>
<u>New Network Capacity</u>	<u>is either the secure or non-secure capacity of the Relevant Section of Transmission Network (RSTN) following Transmission work.</u> <u>The capacity to be used will be based on our assessment of the thermal ratings, voltage change and upstream restrictions and compliance with ISOP’s relevant design, planning and security of supply policies. The equipment ratings to be used are the appropriate operational rating at the time of the most onerous operational conditions taking account of seasonal ratings and demand.</u>
<u>Relevant Section of Transmission Network (RSN)</u>	<u>is that part or parts of the Transmission System which require(s) work. Normally this will comprise:</u> <ul style="list-style-type: none"> <u>the existing assets, at the Voltage Level that is being reinforced, that would have been used to supply you (so far as they have not been replaced) had sufficient capacity been available to connect you without work; and/or</u> <u>the new assets, at the same Voltage Level, that are to be provided by way of work.</u> <u>Where it is unclear what assets would have supplied the Customer in the event that sufficient capacity had been available, the existing individual assets with the closest rating to the new assets will be used.</u> <u>There may be more than one RSTN (e.g. at different Voltage Levels).</u>
<u>Required Capacity</u>	<u>is the Maximum Capacity agreed with the Customer. In the case of multiple connections (e.g. a housing development) it may be adjusted after consideration of the effects of diversity. Where an existing Customer requests an increase in capacity then it is the increase above their Existing Capacity.</u>

1.78 The ‘Transmission Security CAF’ 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 ISOP charges that should be paid by you as detailed below:

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$$\text{TransmissionSecurityCAF} = \frac{\text{RequiredCapacity}}{\text{NewNetworkCapacity}} \times 100\% (\text{max}100\%)$$

1.79 The 'Transmission Fault Level CAF' 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:

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$$\text{TransmissionFaultLevelCAF} = 3 \times \frac{\text{FaultLevelContributionFromConnection}}{\text{NewFaultLevelCapacity}} \times 100\% (\text{max}100\%)$$

1.80 For clarity, where you require an augmentation to an existing connection, both the Security and Fault Level CAFs will be based on the increase in Required Capacity and increase in Fault Level Contribution from the connection respectively. Any related increases within the previous three year period will be taken into account in determining the increase in the Required Capacity or increase in the Fault Level Contribution from the connection to be applied within the CAF.

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1.81 On some Schemes there may be interaction between the two rules. In such cases, the 'Security' CAF will be applied to costs that are driven by the security requirement. The 'Fault Level CAF' will be applied to costs that are driven by Fault Level requirements. See the Examples for illustrations on the application of the CAFs.

Option 3.1

SCHEDULE 22: COMMON CONNECTION CHARGING METHODOLOGY

Independent System Operator and Planner (ISOP) Charges

- 1.72 We have an obligation under the CUSC to discuss certain requests for connection or changes in connection with the ISOP. Such requests are typically for large electrical demand or generation projects. Under certain circumstances, as determined by the ISOP, they may apply charges to assess the potential impact on the GB Transmission System of a request or the combined effect of a number of requests and these will be included in the Connection Charge, or through a separate mechanism agreed between you and us.
- 1.73 Subsequent to such assessment, the ISOP may also require works to be undertaken on the GB Transmission System as a condition of the connection being permitted. In the event of ISOP applying charges for these works, we will ~~reflect these charges~~ any Relevant Charges in our ~~charges~~ Connection Charge to you.
- 1.74 Should GB Transmission System works be required, ISOP may apply a cancellation charge in the event that your project is cancelled or the capacity of your project reduces. The ISOP also calculates a secured amount in respect of this cancellation charge (being a percentage of the cancellation charge, which reduces at certain trigger points). We may ask you for security in respect of this cancellation charge, but we will not ask you for more than the secured amount calculated by the ISOP.

Competition in Connections

- 1.95 Where you choose to have any Contestable Work undertaken by an ICP, we levy CIC Charges associated with the design approval, inspection and adoption of the Contestable Works as set out in Section [6] and Section [7].

Section 2 – Glossary of Terms (extract)

Connection Charge	the payment to be made by the applicant to us for the provision of the connection.
<u>Relevant Charges</u>	<u>the Connection Charges for the relevant Transmission Connection Assets excluding any Non-Capital Components (as defined by the CUSC).</u>

(Please note: The following extract is from the Electricity Distribution Licence, not the DCUSA.)

Electricity Distribution Licence

Special Conditions

Chapter 1: Interpretation, definitions and common procedure

Special Condition 1.2 Definitions and references to the Electricity Distributors

Introduction

- 1.2.1. The purpose of this condition is to provide for the special conditions: (a) the meaning of defined terms; and (b) acronyms used to refer to the Electricity Distributors.

Part A: The use of definitions in these special conditions

1.2.2. In the special conditions the following defined terms, which are capitalised throughout these special conditions, have the meanings given in the table below.

1.2.3. Where it is stated in the special conditions that the outputs, delivery dates and allowances for a Price Control Deliverable are located in another document, the following defined terms also have the meanings given in the table below in that document.

1.2.4. Where the table below states that a defined term has the meaning given to it by:

- (a) another condition of this licence;
- (b) the ED2 Price Control Financial Instruments;
- (c) an Associated Document;
- (d) the RIGs;
- (e) the Smart Meter Communication Licence;
- (f) a Transmission Licence;
- (g) a Gas Transporter Licence;
- (h) the Grid Code;
- (i) an Act of Parliament; or
- (j) the Electricity System Operator Licence

the defined term is to have the meaning given in that provision or document as amended from time to time.

(extract)

New Transmission Capacity Charges	means those elements of Transmission Connection Point Charges that are attributable (in whole or in part) to connection assets first becoming energised on or after 1 April 2023 pursuant to a requirement of the licensee for the provision of new or reinforced connection points between the GB Transmission System and the licensee's Distribution System <u>and that are not recovered as Connection Charges.</u>
Transmission Connection Point Charges	means the sum of: (a) charges payable by the licensee that are levied by a Transmission Licensee or the ISOP as connection charges by direct reference to the number or nature of connections between the licensee's Distribution System and the GB Transmission System, and includes any associated Transmission Network Use of System Charges and any Remote Transmission Asset rentals payable by the licensee <u>and that are not recovered as Connection Charges;</u> and (b) charges payable by the licensee to another Electricity Distributor in respect of units transported from that Electricity Distributor's Distribution System, less any charges under (a) or (b) that meet the definition of New Transmission Capacity Charges.