



Connections and Extensions Methodology

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1. Introduction

1.1 About Orion

We own and operate the electricity distribution infrastructure in central Canterbury, including Ōtautahi Christchurch. Our network is both rural and urban and extends over 8,000 square kilometres from the Waimakariri River in the north to the Rakaia River in the south, from the Canterbury coast to Arthur's Pass. We deliver electricity to more than 220,000 homes and businesses and are New Zealand's third largest Electricity Distribution Business.

Our network is constantly growing, with new connections, increased loads at existing connections, and alterations to accommodate development. People and businesses continue to be drawn to settle in central Canterbury, and growth in customer numbers reached record levels at over 7,000 new customers in the year ending March 2023.

When customers apply for new connections, it is important that our approach to cost sharing, and price is clear and takes into consideration the ongoing impact on existing established customers.

1.2 Purpose and scope of document

This document is Orion's commercial terms for extensions to its network, for new connections in areas with existing supply, and for alterations to existing connections. It sets out the nature of the connection services offered by Orion, and the charges that apply for those connection services.

We have applied economic considerations of which the primary objective is the balance between socialisation (shallow charging) and causer pays (deep charging) in respect of the three arms of the energy trilemma- equity, sustainability and security.

These terms form part of our broader efficient pricing policies and our economic approach to recovery of costs of providing our delivery service. With this approach, customers (particularly prospective customers) make efficient decisions about which form of energy to use, and where to locate new load. We endeavour to provide new connections and enhanced capacity wherever it is economically viable, and this document sets out to establish this economic viability. However, there may be situations where it is imprudent, environmentally unsound or physically impracticable to provide supply or enhanced capacity, and we will tell you if this is the case and if we are unable to provide a new connection or enhanced capacity.

Ideally, each new connection would pay for any necessary extension and reinforcement through its future delivery charges. However, a number of factors prevent this balance from occurring:

- we must apply price averaging over large groups of connections, because it is not practical to single out individual connections for cost-specific delivery pricing;
- the life and future utilisation of new connections are not known, so the present value of future delivery charges cannot be calculated with certainty;
- the assets involved have very long lives and it is not viable to lock customers into a contract over a matching period;
- network reinforcement is incremental - it is often more efficient for us to add large amounts of capacity at a time (unlocking economies of scale);

- dedicated assets often become shared assets as the network expands. Existing customers should share in the benefit of greater utilisation of shared assets (and other enhanced economies of scale).

1.3 Connecting to the Orion distribution network

A connection is the physical link between a distribution system and a customer's premises to allow the flow of electricity. All customers will require network connection services to connect their premises to Orion's distribution system. Typically, a meter is also required to measure the amount of electricity that flows through the connection.

1.3.1 Connection services provided by Orion

As a distribution network service provider, Orion is responsible for providing connection services to customers to physically connect their premises to the Orion distribution system. We describe our connection services with reference to the network connection point (NCP). The Network connection point is defined, and illustrative examples are provided, in accordance with our Network Connection Standard¹ available on our website. These services include:

- Connecting new premises (at the NCP)- components of a distribution system used to provide connection services at the customers network connection point (new connections)
- Making alterations (at the NCP) to existing connections where those existing connections are no longer able to meet customers' requirements e.g., increasing the number of phases that supply a premises, relocating the incoming supply to a premises or changing from an overhead to an underground service (connection alterations)
- Establishing micro-embedded generator and embedded generator connections (at the NCP) which may involve new connections, extensions or augmentations.

The provision of connection services may involve the establishment or modification of assets dedicated to the particular customer (connection assets), as well as extensions to, or augmentations of, the shared distribution network. Extensions and augmentations are described as;

- Extensions (beyond the NCP)- An augmentation that requires the connection of a power line or facility outside the present boundaries of the transmission or distribution network owned, controlled or operated by Orion
- Augmentations (before the NCP)- augmentation of a transmission or distribution system means work to enlarge the system or to increase its capacity to transmit or distribute electricity - includes all augmentation other than extensions (commonly known as shared network)

Charges for connection services will typically depend upon the customer connection type and the classification of the customer connection services required to make the connection.

¹ [Network Connection Standard » Orion \(oriongroup.co.nz\)](#)

1.3.2 Installation of meters

Apart from very limited cases where an unmetered connection is appropriate, customers connecting to Orion's distribution network will require a meter to measure the flow of electricity onto or from the network at the connection point, both for billing purposes and to access other services.

Orion is not responsible for installing or replacing meters at customers' premises. Instead, it is the responsibility of the customer's nominated electricity retailer to appoint a metering equipment provider to provide this service. Consequently, charges for new and replacement metering installations are the responsibility of the customer or their electricity retailer and are not discussed here.

The installation of metering establishes an Installation Control Point (ICP). Note that we consider all newly established ICP numbers (the industry's unique numbering system for all electrical connections) as new connections, even where the new ICP replaces a previously decommissioned ICP.

1.4 Supporting and technical documentation

This methodology should be read in conjunction with Orion's Network Connection Standard² and technical standards³. Current versions of these documents, as well as further information on the connection application process and applicable charges⁴, are available on the Orion website: www.oriongroup.co.nz.

1.4.1 Ownership

This document sets out the basis on which we will contribute toward network extensions and upgrades which we subsequently take full ownership and control. We do not contribute to assets (electrical or otherwise) on the customer side of the network connection point (as defined in our *network connection standard*).

1.5 Contact details

You can contact our customer support centre via our website: www.oriongroup.co.nz; or by contacting customersupport@oriongroup.co.nz; or by calling: 0800 363 9898.

² <https://www.oriongroup.co.nz/assets/Customers/Network-Code-700015.pdf>

³ <https://www.oriongroup.co.nz/customers/how-to-connect-to-our-network/connection-standards/>

⁴ <https://www.oriongroup.co.nz/customers/how-to-connect-to-our-network/>;
<https://www.oriongroup.co.nz/customers/connecting-your-solar-or-diesel-generation/>

2. Classification of customer connections

In discussing connection services and charging arrangements, this policy refers to three types of customer connections, namely:

- small (general) customer connections; and
- commercial and industrial connections
- property developments

The relevant type is determined by Orion based on the levels of expected energy consumption and generation, using information provided by the connection applicant in accordance with Orion's processes and procedures.

2.1 Small connections

Small connections are for those customers that fall within the residential and small commercial category under Orion's Pricing Methodology, which is available on our website⁵.

Small connections typically include the connections of:

- residential dwellings and small commercial premises generally connected at low voltage where the installed capacity is less than 60 amps per phase;
- unmetered supply connections; and
- micro-embedded generating units (as defined in Australian Standard AS/NZS 4777 "Grid connection of energy systems via inverters") with an installed capacity of less than or equal to 45kVA e.g., solar, thermal or wind powered systems, energy storage (e.g., batteries), or hybrid systems (e.g., solar PV plus batteries).

Generally, most small connections in the urban environment will only require standard connection assets which Orion will provide. However, in some instances, there may need to be changes to the existing connection assets, or an extension to, or augmentation of, the shared distribution network.

2.1.1 Residential and small commercial premises

Small customer connections are typically for residential customers and small commercial premises. The connection will involve either a low voltage overhead service connection or a low voltage underground service connection, depending on whether the distribution network in the customer's area is overhead or underground.

Underground service cables and overhead service lines and associated equipment are typically dedicated connection assets used to connect a particular customer's electrical installation to the shared distribution network.

For premises located in an area with overhead power lines, the connection typically involves an overhead service conductor and service fuses from an Orion-owned pole to a connection point on the customer's property. This is illustrated in the following diagram and other configurations can be seen in our network connection standards on our website⁶.

⁵ <https://www.oriongroup.co.nz/corporate/corporate-publications/pricing-guides-and-information/>

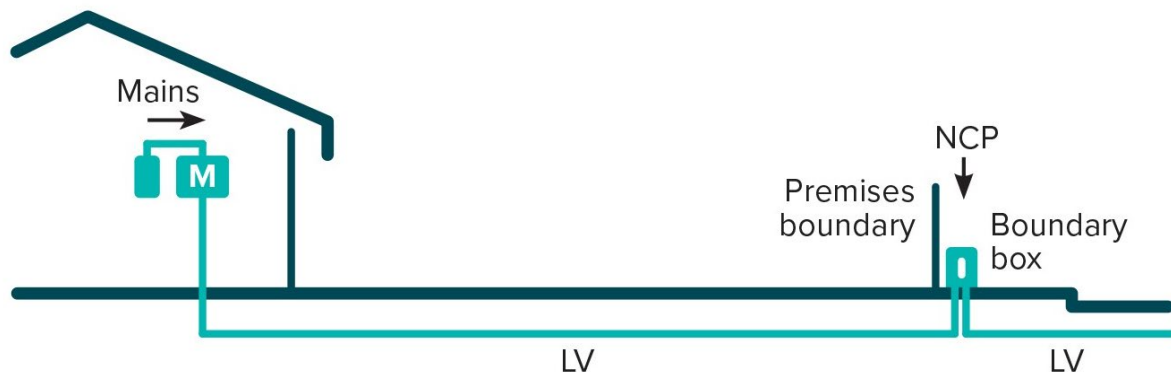
⁶ <https://www.oriongroup.co.nz/assets/Customers/Network-Code-700015.pdf>

Figure 1 Typical overhead connection for residential and small commercial customer



For premises located in an area with underground electricity supply, the network connection point (NCP) to Orion's network typically occurs at an Orion-owned boundary distribution box. The customer is responsible for installation of the low voltage (LV), typically called a consumer's servicemain, from the boundary distribution box to the meter board (M). This is illustrated in the following diagram.

Figure 2 Typical underground connection for residential and small commercial customer



2.1.2 Unmetered supply

Orion offers unmetered supply connections in certain circumstances when it is considered impractical to read or maintain a meter or where metering equipment would be susceptible to damage. Connections that are eligible for unmetered supply are typically small, but must have a steady and uniform load, i.e., where the energy consumption can be accurately assessed without the need for a meter. Unmetered supply connections are generally provided for facilities such as customer-owned and operated streetlights, bus shelters, security lights, illuminated signs, security cameras or traffic monitoring equipment. Our preference is to meter load wherever practicable.

2.1.3 Micro-embedded generating units

An embedded generating unit is an electricity generator that is connected to the distribution network (rather than the transmission network), and which may export electricity back into that distribution network. This term includes micro-embedded generating units that are connected to the network via an inverter and are defined in Australian Standard AS/NZS 4777 (generally up to 45 kVA capacity). Micro-embedded generating units include solar, thermal or wind powered systems, energy storage (e.g., batteries), or hybrid systems (e.g., solar PV plus batteries).

The connection of one or more micro-embedded generating units is a small customer connection where the aggregate capacity of the generating units is less than or equal to 45 kVA. These micro-embedded generating units must comply with Orion's technical standards which can be found on our website.

2.2 Commercial and Industrial connections

Commercial and Industrial connections are those connections that typically require more complex reticulation and technical solutions. Connection activity could be required for new sites or alteration/upgrade at an existing site. An extension to, or augmentation of, the shared distribution network may be required to meet the customer's needs.

Commercial and Industrial (also referred to as major customer connections and large capacity connections) will typically include:

- large commercial premises with an installed capacity of greater than 100 amps per phase;
- micro-embedded generating units with an installed capacity of greater than 45 kVA;
- and
- standalone and public EV charging connections
- property developments, which include the commercial development of land in one or more of the following ways:
 - commercial and / or industrial subdivisions e.g., retirement villages, businesses and manufacturers;
 - commercial and / or industrial multi-tenanted premises, e.g., shopping centres and office buildings; and
 - multi-residential premises, e.g., residential high rise or blocks.⁷
- Industrial operations

Connection assets are all components used to connect a particular customer's electrical installation to the shared distribution network, which are not used by other customers (including any dedicated extension). The connection assets required to connect a major or large capacity customer to the network can include:

- high voltage overhead or underground;
- low voltage overhead or underground services;
- distribution transformers; and
- protection systems.

⁷ A property development involves the development of "land itself" for commercial gain. That is, where once developed, the land and any improvements thereon will generally be sold for commercial gain, e.g., a residential high rise or block. This is to be distinguished from the development or construction of commercial or industrial premises on land, where that premises will be used for ongoing commercial or industrial purposes, e.g., a factory or mine site.

The network connection point (NCP) marks the boundary between the dedicated connection assets and the shared distribution network.

2.3 Property Developments

Property developers are generally responsible for the design and construction of electrical reticulation and connection assets within the development. Two types of development are common:

- greenfield development- generally areas of development previously unreticulated
- brownfield development- generally areas of redevelopment that may previously have been reticulated e.g., infill housing, redevelopment of an existing area of commercial.

Particularly for greenfield development, the connection of property developments to the Orion distribution network will typically involve both an extension to the distribution network and augmentation of the shared distribution network to cater for the expected future intended usage of the premises within the development. Brownfield development may not require an extension depending on the nature of the redevelopment and original reticulation arrangements at the site. However, brownfields developments do have significant incremental impact on upstream shared network over time.

When determining connection charges for brownfield developments with multiple connections the Developer will attract the standard connection charge per premises, as published and applicable for single phase urban residential and small commercial connections. Other connection charges to establish the development will generally be funded by Orion.

When determining connection charges for greenfield developments with multiple connections, the Developer will pay the connection charges to establish the development. Further, Orion may pay a purchase contribution per premises provided our design standards are met. The purchase contribution is currently set at two thirds of the standard connection charge per premises, as published and applicable for single phase urban residential and small commercial connections. The purpose of the purchase contribution is to recognise the vesting of any shared low voltage assets installed to reticulate the development located on the Network side of the customer's network connection point.

3. Connection Offers

We provide three types of connection offers for new or connection alterations: basic, standard and non-standard.

The type of connection offer required will depend on criteria such as the connection type, the size and complexity of the connection and whether Orion will need to undertake work to extend or augment the distribution network. Many small customer connections are entitled to a basic connection offer (unless augmentation of connection assets, a network extension or augmentation of the shared network is needed to make connection and/or the customer elects to negotiate the terms of their contract). Major and large capacity connections will typically require a negotiated connection offer.

The table below summarises the most common connection offers based on the nature of the premises being connected.

Table 1 Connection Offer Types

Connection type	Eligibility Criteria	Connection Offer Type	Section
Urban residential premises or small commercial property	Single phase at less than or equal to 60 amps and located less than 30m from existing connectable network	Standard	3.2
	Three phase at less than or equal to 60 amps per phase and located less than 30m from existing connectable network	Standard	3.2
	Infill development (less than or equal to 3 premises) at less than or equal to single phase 60 amps per premise and located less than 30m from existing connectable network capable of accommodating the new capacity	Standard	3.2
	Greater than 60 amps per phase	Non-standard	3.3
Rural single residential premises and small commercial	Rural locations up to 60A and with high voltage augmentation/extension less than 150m from existing connectable network capable of accommodating the new capacity. Installation of low voltage servicemain is the responsibility of the customer.	Standard	3.2
Rural other	Rural locations not meeting the criteria for rural single residential premises. Includes rural commercial connections and novel connections	Non-standard	3.3

Urban temporary connection	For connections within 30m of existing connectable network and less than or equal to 60 amps per phase	Basic ⁸	3.1
	Greater than 60 amps per phase	Non-standard	3.3
Rural temporary connection	All situations	Non-Standard	3.3
Unmetered supply and other devices	Public utility connections (such as street lights).	Basic	3.1
	Other metered or unmetered devices (advertising displays, traffic signals, tsunami sirens etc). Must be less than 680W.	Non-Standard	3.3
	Customer-owned and operated streetlights (Right of Way)	No service provided	
Commercial and industrial (major and large capacity connections)	Greater than 60 amps per phase	Non-Standard	3.3
Property developments	Brownfields (multiple connections greater than 3 premises) of less than or equal to single phase 60 amps per premises and located less than 30m from existing connectable network	Standard	3.2
	Greenfields developments (multiple connections)	Non-standard	3.3
Micro-embedded generating units	For connections to existing connectable network less than or equal to 5kVA rated capacity per phase with export limit of 5 kVA per phase	Basic	3.1
	For connections to existing connectable network between 15kVA and up to 45kVA rated capacity with export limit assessed on a case-by-case basis	Basic	3.1

⁸ Orion pays connection and living with customer paying all other associated costs.

	For connections to existing connectable network between 45kVA and up to 1MVA rated capacity with export limit assessed on a case-by-case basis	Non-Standard	3.3
Utility scale embedded generation	All others greater than 1MVA with export limit assessed on a case-by-case basis	Non-Standard	3.3

3.1 Basic connection offer

Orion provides standing offers for the provision of basic connection services. These are available on Orion's website. Once the customer accepts the terms of a standing offer, a connection contract for basic connection services is formed.

A basic connection offer will generally apply to the following connections:

- connection of residential and small commercial premises where:
 - the premise is in an established greenfield development and it's the first time a premise is connected, and
 - supply is available, i.e., there is a line available, at the required voltage and it is capable of accommodating the required capacity for the proposed connection and
 - there is no network augmentation required; and the maximum connection capacity is 60 amps per phase.
- connections of micro-embedded generation
 - capacity is available, i.e., there is a line available and the network assets in that area have sufficient rated capacity to support the connection;
 - generation is balanced across phases;
 - export limits do not restrict inverter size;
 - the micro-embedded generating units are connected to the network and have:
 - a rated capacity of up to and including 45kVA and export limit of 5 kVA per phase; or
- connection of certain unmetered supplies such as
 - where the device to be connected is a public utility connection (such as, streetlights) where supply is available and minimal network augmentation is required; and
- temporary connections for short term supply (see Sections 4.2 Table 2: Alternative services, and 4.8.3 for further detail) with
 - a maximum connection capacity of 60 amps per phase.

Customers eligible for a basic connection offer will generally not be required to pay an upfront fee for the installation of connection assets. Instead, Orion will recover the costs for the connection assets through the annual network charges paid by all customers who use the distribution network (see section 4.3).

From time to time, Orion may offer other basic connection services in addition to those listed above. Current information on standing offers for basic connection services will be maintained on the Orion website.

3.2 Standard connection offer

In a similar manner to basic connection services, Orion offers standard connection services for a particular class of connection service and publishes standing offers known as fixed capital contributions.

A standard connection offer will generally apply for the following connections:

- urban residential or small commercial property⁹ where:
 - connection capacity is less than or equal to 60 amps per phase and
 - the connection is located less than 30m from existing connectable network.
- urban residential or small commercial developments where:
 - connection capacity is for in-fill development with less than or equal to 3 premises and
 - brownfields development.
- rural single residential premises or small commercial property where:
 - connection capacity is up to 60 amps per phase and
 - the connection is less than 150m from existing connectable network.

Note : at Orion’s discretion an exception may apply to a premise previously reticulated unless connecting that premise requires the installation of additional network equipment.

Current information on standing offers for standard connection services will be maintained on the Orion website.

3.3 Non-Standard connection offer

A non-standard connection offer will generally apply for the following connections:

- connection of residential and small commercial premises where:
 - supply is not readily available and / or network augmentation is required; or
 - the maximum connection capacity exceeds 60 amps per phase for urban premises¹⁰; or
 - it’s a new property development (greenfields) or
 - the connection is for a rural premises not meeting the criteria for a rural single residential premises or small commercial property as detailed in Table 1 Connection Offer Types;
- connection of certain unmetered supplies not covered by basic connection services, such as more complex street lighting arrangements, or where capacity is not available and network augmentation is required.
- connection of micro-embedded generating units where;
 - supply is not available and / or network augmentation is required; or

⁹ as designated by the relevant council authority

¹⁰ Premises connecting to an Orion feeder classified as either a “CBD feeder” or “urban feeder” (refer glossary for definitions)

- the micro-embedded generating unit does not fall within the relevant capacity and export limitations for a standard connection service.
- commercial and industrial connections and, property developments excluding qualifying in-fill housing considered standard.
- standalone and public EV charging connections

The connection charges associated with these connection offers will vary, depending on customer type and the specific requirements of the connection service (see section 4 for information on connection charges).

A connection contract is entered into when a customer accepts Orion's connection offer.

4. Charges for connection services

4.1 Basis for determining charges for connection services

The connection charges payable by a customer to Orion will (where applicable) be comprised of the following components:

- connection charges for services classified as alternative services;
- fixed capital contributions for services classified as standard control services; and
- connection charges for extension assets to which a pioneer scheme may apply.

These connection charges are explained below.

4.2 Connection charges for alternative services

Alternative services are generally customer-specific or customer-requested services. These services are commonly provided by Orion or an authorised service provider (subject to competition). Where an alternative service is provided by Orion, the full cost of the service can be recovered from customers using that service.

Consequently, customers will generally be required to pay a connection charge for each of the services detailed in the table below (where applicable).

Table 2: Alternative services

Service	Description
Connection application and management services	Works initiated by a customer or retailer which are specific to the connection point. Includes, but is not limited to: <ul style="list-style-type: none">• connection application related services;• de-energisation;• re-energisation;• protection and power quality assessment;• customer-requested change requiring primary and secondary plant studies for safe operation of the network (e.g., change to protection settings);• rectification of illegal connections or damage to overhead conductors or underground service cables;• calculation of a site-specific distribution loss factor on request in respect of a generating unit greater than 1MW¹¹• power factor correction.
Premises connections for major customer connections (including dedicated network)	New or upgraded connection assets including any extension required to connect a power line or facility outside the present boundaries of the distribution system where that extension will be dedicated to the exclusive use of the major customer.

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https://www.ea.govt.nz/documents/938/Guidelines_on_the_calculation_and_use_of_loss_factors_for_reconciliation_purpo_OVJpM5V.pdf,

clause 58 page 18

extensions for the connection)	<p>This service includes the design, construction, commissioning and energisation of those assets (including associated administration services, e.g., reconciling project financials) and any generation that may be required to supply existing customers while equipment is de-energised to allow the testing, commissioning and energisation of the assets to occur.</p> <p>Orion reserves the right to define a customer in this category as a large capacity customer</p>
Property development connections	<p>Brownfields developments- Orion provides connection services associated with brownfield connections and will cover design assessment and contract negotiation, and the design, construction, audit, commissioning and energisation of network assets.</p> <p>Greenfield development- developer obtains design from approved service providers, Orion reviews against our design standards for approval and accepts design. Developer engages contract of choice who manages the build.¹²</p>
Temporary connections	<p>Temporary connection for short-term supply (including temporary builder's supply) requested by a customer (or by a retailer or other agent on behalf of a customer).</p> <p>We do not contribute to the cost of installing temporary connections and builder's temporary supplies. However, we do provide the administrative function for the creation and subsequent decommissioning of temporary connections free-of-charge. Temporary connections are generally limited to a maximum term of two years.</p>
Connection alterations	<p>Work initiated by a customer specific to an existing connection, including, but not limited to, supply decommissioning (i.e. where the connection is no longer required), relocation of the network connection point or metering, re-arrangement of connection assets, replacement of an overhead service line (e.g. as a result of a point of attachment relocation), supply enhancement (e.g. upgrade from single phase to three phase) and conversion from overhead to underground service.</p>
Non-standard unmetered supply	<p>Augmentation of connection assets at the customer's connection point or network extension dedicated to the exclusive use of the customer required to provide the connection service.</p>
Enhanced connection services	<p>Other or enhanced connection services provided at the request of a customer or third party that include those that are:</p> <ul style="list-style-type: none"> • provided with a higher quality of reliability standards, or lower quality of reliability standards (where permissible) than industry standard or any other applicable regulatory instruments; • in excess of levels of service or plant ratings required to be provided by the distributor; • in excess of security of supply standards applied by Orion • associated with augmenting the shared network to remove a constraint faced by an embedded generator, including micro-embedded generating units with an aggregate nameplate capacity greater than 45 kVA.

¹² The property developer is required to pay connection charges for the electrical works needed to make supply available to the development in accordance with the relevant council development application conditions and Orion standards. The connection assets are "vested" to Orion following final product audit and acceptance of the installation. Orion will provide a purchase contribution towards this for greenfield developments only.

Information on specific charges is available in the Connection Charges Price Schedule or the Associated Service Fees Schedule, which is available on the Orion website.

4.3 Capital contributions for standard control services

Standard control services are generally those services that are central to the supply of electricity and provided by Orion, including the design, construction and operation of the shared network, and small customer connections.

Orion’s network charges for standard control services are based on assumptions about the typical nature of connections and the number of new connections to be made over the planning horizon¹³, which in turn determines the required capacity of the network. Where a new connection or connection alteration is non-standard and / or made outside the planning horizon, Orion incurs costs that are not recovered through the network charges for standard control services.

Capital contributions are contributions by the connection applicant towards the cost of network extension, other network augmentation or connection assets required to enable the new connection or connection alteration to be made. Orion seeks a contribution by customers towards the costs associated with a standard control service known as capital contributions. This is a fixed amount published relevant to each connection offer type in our connection charges price schedule and will be specified in the connection offer and will be required to be paid as set out in section 4.7.

Table 3: Standard Control Services

Service	Description
Premises connections for small customer connection	An addition or alteration to connection assets dedicated to the relevant connection point. Where a connection does not meet the criteria for a standard approach a contract manager may revert to a non-standard approach assessing the connection on its own basis.
Network extension	An extension required to connect a power line or facility outside the present boundaries of the distribution system to facilitate: <ul style="list-style-type: none"> • a new or altered major customer connection where there is a reasonable likelihood that the network extension will be used to supply another customer or customers within the planning horizon; or • a new or altered small customer connection.
Augmentation of the shared network	Any shared network enlargement or enhancement undertaken to facilitate a new or altered small customer connection or major customer connection (other than an embedded generator connection).

¹³ The planning horizon for Orion’s future works is five years.

4.3.1 Fixed Capital Contributions

Orion determines fixed capital contributions for standard control services using a sample of typical works for these types of connections.

Table 4: Fixed Capital Contributions

Service	Description
Premises connections for urban residential or small commercial property connections	<p>New or upgraded connection assets located less than 30m from existing connectable network where supply is less than or equal to 60 amps per phase per premises including infill (housing and small commercial) less than or equal to 3 premises. This includes any extension required to connect a power line or facility outside the present boundaries of the distribution system where that extension will be dedicated to the exclusive use of the residential or small commercial property.</p> <p>Orion reserves the right and discretion to charge a single-phase contribution for three phase applications where only minor augmentation is required e.g., provision of fusing in existing boundary box.</p> <p>Exclusions for any connection greater than 60 amps per phase, and property developments (greenfield) as these will be treated on a non-standard case-by case basis.</p> <p>Orion is responsible for the connection and livening of a connection. Customers are responsible for their own electrical installation (service main), including the provision and installation of the line or cable from the network connection point to their premises or plant. The customer is able to seek a quotation directly from a number of approved service providers for this work.</p> <p>We will supply and install the service protective fitting and connect (terminate) the customer's electrical installation.</p>
Rural single residential premises	<p>New or upgraded connections with a power supply up to 60 amps per phase, within 150 meters of our existing network, this category includes extensions for facilities beyond our current distribution boundaries, exclusively serving residential or small commercial properties. Note that connections exceeding 60 amps per phase and property developments require non-standard approach.</p> <p>Our service encompasses the design, construction, commissioning, and energization of these assets.</p>
Property developments of in-fill housing	<p>Infill development (housing or small commercial brownfields) applies to:</p> <p>All small to medium connections within new infill subdivisions which require new electrical reticulation within a previously reticulated premises to supply (less than or equal to 3 premises) of less than or equal to 60 amps per phase as new connections.</p> <p>The new infill must be within 30 metres or immediately adjacent to existing urban/township areas within our electrical reticulation, must be within urban/township residential, commercial or industrial areas as designated by the relevant council authority.</p>

	<p>Orion is responsible for the connection and livening of a connection. Customers are responsible for their own electrical installation (service main), including the provision and installation of the line or cable from the network connection point to their premises or plant. The customer is able to seek a quotation directly from a number of approved service providers for this work.</p> <p>We will supply and install the service protective fitting and connect (terminate) the customer's electrical installation.</p> <p>Note: Greenfield developments with multiple connections, greater than 3 premises will be treated as non-standard and will be assessed on a case-by-case basis.</p>
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Information on specific charges is available in the Connection Charges Price Schedule and the Associated Service Fees Schedule, which is available on the Orion website.

4.4 Determining when a capital contribution is required

Orion will, on a case-by-case basis where a fixed capital contribution has not already been determined, assess whether a customer is required to make a capital contribution towards the costs associated with providing a connection service, taking into consideration whether:

- augmented connection assets are required for a small customer connection, in which case the customer may be required to make a capital contribution towards the costs (depending on the outcome of the cost-revenue-test outlined in section 4.4.2 below);
- network extension assets are required solely for the benefit of a small customer connection (i.e. dedicated to the exclusive use of the customer), in which case the customer may be required to make a capital contribution towards the costs (depending on the outcome of the cost-revenue-test outlined in section 4.4.2 below);
- augmentation of connection assets and / or network extension is required solely for the benefit of a major or large capacity customer (i.e., dedicated to the exclusive use of the customer). That is the customer will not be subject to a standard capital contribution however the customer will fully fund the assets and associated connection works through assessed non-standard capital contributions and line charges (the assessment will be communicated with the relevant customer); and
- augmentation of the shared distribution network is required for either a small customer connection that exceeds the shared network augmentation threshold (see section 4.4.1 below) or a major or large capacity customer connection, in which case a capital contribution may be required (depending on the outcome of the cost-revenue-test outlined in section 4.4.2 below).

4.4.1 Shared network augmentation threshold

Capital contributions for network augmentation (other than a network extension beyond the standard service line) are not applicable where the maximum demand at the connection point:

- does not exceed 60 amps per phase for urban premises;¹⁴
- does not exceed 60 amps per phase for rural premises;

¹⁴ Premises connecting to an Orion feeder classified as either a “CBD feeder” or “urban feeder” (refer to glossary in section 7 for definitions).

4.4.2 Method of calculating capital contributions (the revenue-cost-test)

Where applicable, the capital contribution amount will be calculated in the following manner:

$$\text{Capital Contribution (CC)} = \text{ICCS} + \text{ICSN} - \text{IR}(n=X)$$

Where:

ICCS	=	Incremental Cost Customer Specific
ICSN	=	Incremental Cost Shared Network
IR (n=X)	=	Incremental Revenue

A capital contribution is only payable where the incremental costs exceed the incremental revenue, i.e., $CC > \$0$.

The **Incremental Cost Customer Specific (ICCS)** is the incremental costs incurred by Orion that are specific to the connection, such as:

- costs of providing or augmenting any connection assets at the customer's premises;
- costs of any dedicated network extension;
- administration costs (including design and certification costs);
- costs of providing any other standard control services which are used solely by the customer; and
- tender costs (where applicable).

The **Incremental Cost Shared Network (ICSN)** is the network costs incurred by Orion as a result of the new or altered connection, but which are not specific to the connection, such as network augmentation (other than an extension beyond the standard service line). The ICSN is determined on the basis of unit rates, as follows:

$$\text{ICSN} = \text{Unit Rate} \times \text{Demand Estimate}$$

Where:

Unit Rate = Average cost of network augmentation (other than an extension beyond the standard service line) per unit of added capacity, expressed as \$/kVA

Demand Estimate = Estimated maximum demand at the connection point, measured in kVA

The unit rates used to determine the ICSN for the 2024-2025 financial year are set out in the table below.¹⁵ The process for determining the estimated maximum demand is set out in section 4.4.4 of this policy.

¹⁵ For subsequent years of the 2020-2025 regulatory control period, the unit rates will be escalated using the NZ Reserve Bank Consumer Price Index (CPI) All Groups, Weighted Average, March to March Quarter

Table 5: ICSN unit rates for 2024-2025

Connection Type	Peak Load replacement cost \$/kVA
LV Network	\$138
HV Network	\$1,011

Note: Orion will set the proportion of shared network augmentation costs on a case-by-case basis based on the connection type, customer's expected demand and location of the connection on the distribution network.

The **Incremental Revenue** (IR(n=X)) will be the net present value of all of the expected Distribution Use of System (DUoS) charges recoverable from the customer. Orion will apply the following principles in estimating the IR:

- forecast DUoS revenue will be based on the price path set out in the Commerce Commission's DPP determination and the relevant network tariffs as set out in Orion's approved Pricing Methodology and Schedule of Delivery Prices (both available on our website). For the period from 1 April, Orion will assume a constant tariff in real terms;
- a discount rate based on Orion's approved regulatory weighted average cost of capital converted to pre-tax terms using the estimated average effective tax rate for the regulatory control period will be applied;
- a 30-year discount period will be applied for residential customers;
- if the customer is a business customer, then an assumed connection period of 15 years will be applied when calculating the expected DUoS charges recoverable from the customer. However, where a 15-year connection period does not reflect a reasonable estimate of the time that the connection service will be connected, Orion may apply an alternative assumed connection period for that connection service;
- for basic connection offers and where the connection falls below the shared network augmentation charge threshold Orion will exclude from the IR the portion of DUoS charges attributable to augmentation of the shared network where it is estimated to be material; and Orion will ensure that operational and maintenance costs have no net impact on the capital contribution payable by the customer.

For standard connection offers Orion pre-calculates a fixed capital contribution that it publishes for identified connections (refer Table 1 Connection Offer Types)

4.4.3 Accounting treatment of augmentation assets

Under the Input Methodologies, Orion may not recoup a return on, or of,¹⁶ the asset to the extent that the asset was funded through a capital contribution. Accordingly, to the extent that these assets have been so funded, they will not be considered in determining the revenue to be recovered from standard control services.

4.4.4 Measuring demand and consumption

Where the connection applicant is required to make a capital contribution, the connection offer made by Orion will set out the demand and consumption estimates used to determine the amount of the capital contribution.

Orion will generally determine the consumption and demand based on the information supplied in the connection application. Where specific consumption and demand information is not provided in the connection application, Orion will base the estimates on load patterns of similar customers and apply the general principles we use to determine a customer's price category, as set out in our annual Schedule of Delivery Prices. Similarly, Orion may also take into account the impact of complementary technologies, such as solar PV and energy storage systems, on likely demand and consumption.

4.5 Pioneer scheme for customer funded network extension assets

We do not currently operate a Pioneer Scheme at Orion. We intend reviewing this in 2024 and so reserve the right to introduce new terms or schemes in the future.

4.6 Security fee

Orion may require the payment of a security fee where we consider that there is a high risk that we may not earn the estimated incremental revenue from the connection services Orion is to provide.

Should Orion require a security fee, it may require an amount to be paid either upfront, or by way of a financial security (e.g., a bank guarantee) to be provided (in Orion's discretion) in the amount which is the lesser of the incremental revenue at risk of non-recovery or the incremental cost incurred by Orion.

Where the security fee is provided as an upfront payment, Orion will rebate the security fee via annual instalments, with the annual rebate being the:

- interest earned on the security,¹⁷ calculated at the interest rate (cost of debt) determined by the Commerce Commission at revenue determination; plus
- the lower of:
 - the actual incremental revenue received from the customer for the year; and

¹⁶ The return of the asset refers to depreciation.

¹⁷ Generally, Orion does not earn interest on the security fees it holds.

– the security fee that was paid for that year.

Orion will not:

- require a security fee for an amount that exceeds the value of the incremental revenue which is at risk of not being recovered;
- require a security fee for an amount that exceeds the present value of the incremental costs incurred by Orion; or
- require a security fee where the total value of the network augmentation or connection asset augmentation is valued at less than \$10,000.

Security fees are not intended to cover defects in workmanship where the connection assets are constructed by a third party. Separate warranties will be sought to cover these risks.

4.7 Payment of connection charges

Charges for connection services are payable directly to Orion, depending on the type of connection. Customers will be advised of connection charges and payment requirements in their connection offer.

4.7.1 Payment of small customer connection charges

Orion will generally invoice customers directly for most connection charges. Under certain circumstances, Orion may seek advance payment of connection charges for connection application and management services before the commencement of construction work.

When a customer is required to pay a fixed capital contribution for a standard control service, payment will be required prior to commencement of construction.

4.7.2 Payment by customers of major or large capacity connection charges

Orion will generally require the connection applicant to pay the charges for connection application, technical studies and management services at the time the services are provided.

Orion will also typically require advance payment of connection charges, including capital contributions, for major or large capacity connections prior to commencement of construction work.

Where these connection charges are more than the prepayment threshold of \$5,000 (\$, real 2024),¹⁸ the payments may be staged if the construction:

- is not expected to commence for three months or more; or
- can be logically segmented into distinct stages of construction.¹⁹

¹⁸ This threshold will be escalated annually using the NZ Reserve Bank Consumer Price Index (CPI) All Groups, Weighted Average, March to March Quarter

¹⁹ For large capacity connections Orion may negotiate an individual construction contract that will include a detailed payment schedule

Non-staged construction later than or equal to 3 months away:

Where the connection charges are greater than the prepayment threshold and construction is not expected to commence for three months or more, the following staged payments may apply:

- at connection offer acceptance:
 - sunk costs for design and administration already incurred by Orion;
 - costs for design and administration that Orion will incur immediately after offer acceptance; and
 - costs for specialised or non-standard assets that Orion will need to procure prior to construction commencing; and
- the balance of all connection charges three weeks prior to construction commencement.

Staged construction:

Where the connection charges are greater than the prepayment threshold and construction can be logically segmented into distinct construction stages, the following staged payments may apply (and may differ by negotiation):

- at connection offer acceptance:
 - sunk costs for design and administration already incurred by Orion;
 - costs for detailed design and administration that Orion will incur immediately after offer acceptance; and
 - costs for specialised or non-standard assets that Orion will need to procure prior to construction commencing; and
- three weeks prior to commencement of each construction stage, a staged payment of the connection charge that reasonably reflects the costs that Orion will incur in the construction stage.

4.8 Additional considerations

4.8.1 Land and easements

Network extensions often require new land or easements. Where we expect to utilise the new extension for provision of services or capacity to the wider network, we will make a contribution toward the value of the land. For dedicated capacity we will generally require the customer or developer to provide or obtain the necessary land or easements at no cost to Orion.

4.8.2 Livening new connections

To facilitate our compliance with safety, regulatory and market reporting requirements, we are the sole provider of the livening service, the final step to provide a new connection.

We contract with approved agents to provide this service and we cover the associated costs.

4.8.3 Temporary connections

We do not contribute to the cost of installing temporary connections and builder's temporary supplies. However, we do provide the administrative function for the creation and subsequent decommissioning of temporary connections free-of-charge. Temporary connections are generally limited to a maximum term of two years.

4.8.4 Changes to existing network or network connections

4.8.4.1 No increase in capacity

We accommodate changes to the route or configuration of our existing network (to supply substantially the same load) where the person requiring the changes pays for the entire cost of the alterations.

4.8.5 Design variations

Our contribution to network extensions is based on and limited to our standard design practices utilising the lowest cost construction methods and supply route. We are willing to accommodate design enhancements or variations (e.g., underground supply in a rural area) where the customer pays for the difference between the actual cost and the cost using our standard practice.

4.8.6 Non-Economical/Novel Connections

Any connection we consider to be non-economical, or novel will be assessed on a case-by-case basis. Orion reserves the right to negotiate alternative approaches to reduce cost, technical complexity, increase regulatory compliance or to decline such connection applications.

4.8.7 Power Factor Correction

Orion reserves the right to apply a charge to connections whose power factor profile (leading, lagging or high harmonic content) disturbs the quality of supply for other customers or creates in premise quality issues.

5. Contestability of services

There is currently limited contestability for the provision of electricity distribution network connection services in Central Canterbury.

The following works in relation to major or large capacity customer connections may only be carried out by Orion or an approved service provider:

- augmentation of the distribution network;
- the design and construction of any part of the connection assets within an Orion bulk supply or zone substation (e.g., 66/11kV, 66/11 kV substations);
- the design and construction of relay operated switchgear that will be part of Orion's direct network system; and
- the testing, commissioning and energisation of works.

For some connections defined as major customer connections or large capacity connections, a customer may be able to choose either Orion or an approved service provider to undertake the design and construction of new connection assets to be funded by the customer. However, the design and construction of connection assets by approved service providers/authorised contractors is only permitted for certain asset types and must meet Orion's design standards and technical specifications.

Orion may exclude certain categories of works required for the design and construction of connection assets from being undertaken by external providers based on safety, technical or environmental reasons. In these cases, the works will be undertaken by Orion and funded by the customer. These exclusions will be subject to review from time to time.

6. Dispute resolution

Disputes between Orion and customers will be managed in accordance with Orion's standard complaints and dispute resolution procedure²⁰, details of which are available on Orion's website. Orion will make every endeavour to resolve connection disputes in a timely manner.

Where agreement on the terms and conditions of the connection offer cannot be reached, Orion and the customer will refer the matter to mediation in accordance with the Mediation Rules of the New Zealand Dispute Resolution Centre.

²⁰ <https://www.oriongroup.co.nz/customers/our-complaints-process/>

7. Glossary

7.1 Abbreviations

Commission- Commerce Commission
Authority- Electricity Authority
CC- Capital Contribution
CPI- Consumer Price Index
Orion- Orion New Zealand Limited
ICCS- Incremental Cost Customer Specific
ICP- Installation Control Point
ICSN- Incremental Cost Shared Network
IR- Incremental Revenue
kVA- Kilovolt amperes
kW- Kilowatt
MVA- Megavolt amperes
NCP- Network Connection Point
PV- Photovoltaic

7.2 Definitions

Term	Definition
Alternative Services (AS)	A distribution service provided by Orion.
Approved Service Provider	A person or organisation authorised by Orion to carry out the design and / or construction of certain electrical works.
Augmentation	Work to enlarge the distribution system or to increase its capacity to transmit or distribute electricity.
Basic connection services	A connection service that meets the requirements for a basic connection service, as set out in section 3.1 of this Connection and Extensions Methodology.
Capital contribution	A contribution by a connection applicant towards costs associated with a standard control connection service.
CBD feeder	A feeder supplying predominantly commercial buildings, supplied by a predominantly underground supply network containing significant interconnection and redundancy when compared to urban areas.
Commerce Commission (Commission)	The government body responsible for the economic regulation of electricity distribution services provided in the National electricity system.
Connectable network	Network meeting the criteria defined by the requested connection offer (see Table 1), subject to compatibility and suitability for the intended connection
Connection	A physical link between a distribution system and a retail customer's premises to allow the flow of electricity.
Connection alteration	An alteration to an existing connection including an addition, upgrade, extension, expansion, augmentation or any other kind of alteration.

Term	Definition
Connection and Extensions Methodology	A document, approved as a connection policy setting out the circumstances in which connection charges are payable and the basis for determining the amount of such charges.
Connection applicant	An applicant for a connection service who is a retail customer, a retailer or other person acting on behalf of a retail customer or a property developer.
Connection application	An application made to Orion for connection or alteration.
Connection assets	The components of a distribution system used to provide connection services.
Connection charge	A charge imposed by a Distribution Network Service Provider for a connection service.
Connection contract	A contract formed by the making and acceptance of a connection offer.
Connection offer	An offer by a Distribution Network Service Provider to enter into a connection contract with a retail customer or a property developer.
Connection point/Network Connection Point (NCP)	The agreed point of supply established between Network Service Provider(s) and another Registered Participant, Non-Registered Customer.
Connection service	Means either or both of the following: (a) A service relating to a new connection for premises; (b) A service relating to a connection alteration for premises.
Contestable	but, to avoid doubt, does not include a service of providing, installing or maintaining a metering installation for premises. A service is contestable if distribution area in which the service is to be provided permit the service to be provided by more than one supplier as a contestable service or on a competitive basis.
Determination	The Commission's Determination sets the revenue and pricing control regime that Orion must comply with for the regulatory control period.
Distribution Network Service Provider	A person who engages in the activity of owning, controlling, or operating a distribution system. Orion is a Distribution Network Service Provider.
Distribution system	A distribution network, together with the connection assets associated with the distribution network, which is connected to another transmission or distribution system. Connection assets on their own do does not constitute a distribution system.

Term	Definition
Embedded generator	A person that owns, controls or operates an embedded generating unit. It includes those customers with micro-embedded generation as per Australian Standard AS/NZS 4777 (Grid connection of energy systems via inverters) with an installed capacity of up to 45 kVA.
Extension	An augmentation that requires the connection of a power line or facility outside the present boundaries of the transmission or distribution network owned, controlled or operated by a Network Service Provider.
Major customer connection	Connections for those customers who fall within the tariff classes of Large Capacity Customer and Major Customer, embedded generators, as defined in Orion's Annual Pricing Proposal, and property developments.
Micro-embedded generator	A retail customer who operates, or proposes to operate, an embedded generating unit for which a micro-embedded generator connection is appropriate.
Micro-embedded generator connection	A connection between an embedded generating unit and a distribution network of the kind contemplated by Australian Standard AS/NZS 4777 (Grid connection of energy systems via inverters).
Model standing offer	An offer to provide basic connection services or standard connection services.
Negotiated connection Network	A connection that is not a basic or standard connection. The apparatus, equipment, plant and buildings used to convey, and control the conveyance of, electricity to customers (whether wholesale or retail) excluding any connection assets. In relation to a Network Service Provider, a network owned, operated or controlled by that Network Service Provider.

Term	Definition
Network connection point	The point at which connection assets join a distribution network, used to identify the distribution service price payable by a customer.
Network service provider	A person who engages in the activity of owning, controlling or operating a transmission or distribution system Orion is a network service provider.
New connection	A connection established or to be established in accordance with the Electricity Industry Participation Code, where there is no existing connection.
Non-registered embedded generator	An embedded generator that is neither a micro-embedded generator nor a Registered Participant. ²¹
Original customer	The connection applicant who triggered the requirement and paid for the construction of an extension asset.
Pioneer scheme	A scheme to enable a customer who has either fully funded or paid a capital contribution towards a dedicated network extension to receive a refund if the network extension is subsequently used by other customers within seven years after its installation and energisation.
Premises	A premises is defined as an asset that has a network connection point as defined by Orion's Network Connection Standard and requires an Installation Control Point in accordance with the Electricity Industry Participation Code (the Code)
Property developer Property development	A person who carries out a property development. The commercial development of land including its development in one or more of the following ways: <ul style="list-style-type: none"> • residential housing and commercial and / or industrial subdivisions; • commercial and / or industrial multi-tenanted premises; and • multi-residential premises.
Registered Participant (Industry Participant or Participant)	A person who is defined as an Industry Participant in Part 2, Subpart 1, section 7 of the Electricity Industry Act 2010 and referenced in the Electricity Industry Participation Code (the Rules).
Regulatory control period	A period of no less than five regulatory years for which the Distribution Network Service Provider is subject to a control mechanism imposed by a distribution determination.
Retail customer	A small customer or a large customer, including a non-registered embedded generator and a micro-embedded generator.
Rules	The Electricity Participation Code National Electricity Rules.

²¹ In reference to the Electricity (Exemptions form Registration) Regulations 2022 means embedded generators with less than 100kW of nameplate capacity

Small customer connection	Connections for those customers that fall within the General tariff class in accordance with Orion's pricing.
Standard connection service	A connection service (other than a basic connection service) for a particular class (or sub-class) of connection applicant and for which a model standing offer is made.
Standard service line lengths	New connections within urban residential, commercial or industrial areas (as designated by the relevant council authority), connectable within 30m of our existing reticulation.
Subsequent customer	A connection applicant, other than the original customer, who connects to an extension subject to a pioneer scheme.
Urban feeder	Urban means a circuit, or a section of a circuit, installed in an area where the average HV span length is approximately 40 - 50 metres, located in urbanised locations but does not include those circuits located in rural, remote and/or rugged areas. A feeder which is not CBD feeder.

8. Regulatory considerations

8.1 Commerce Commission

The Commerce Commission's information disclosure determination²² includes a number of requirements regarding capital contributions, and this section sets out how we have addressed the requirements.

Specifically, as they relate to this document the requirements are:

Disclosure of capital contributions

2.4.6 Every EDB must at all times publicly disclose—

(1) A description of its current policy or methodology for determining capital contributions, including—

(a) the circumstances (or how to determine the circumstances) under which the EDB may require a capital contribution;

(b) how the amount payable of any capital contribution is determined. Disclosure must include a description of how the costs of any assets (if applicable), including any shared assets and any sole use assets that are included in the amount of the capital contribution, are calculated;

(c) the extent to which any policy or methodology applied is consistent with the relevant pricing principles;

(2) A statement of whether a person can use an independent contractor to undertake some or all of the work covered by the capital contribution sought by the EDB;

(3) If the EDB has a standard schedule of capital contribution charges, the current version of that standard schedule.

8.2 Our consistency with information disclosure requirements

This document addresses the information disclosure requirements (IDRs) 2.4.6 (1) (a) and (b).

In terms of 2.4.6(1)(c) we address this in section 4.4., 4.4.1 and 4.4.2

In terms of 2.4.6 (2) of the IDRs, customers are not able to select an independent contractor for connections established under section 3.1 and 3.2, but are able for connections established under sections 2.2, 2.3 and 3.3 and as per Clause 5: Contestability of services of this document.

In terms of 2.4.6 (3) of the IDRs, the standard schedule of capital contribution charges is available in the Connection Charges Price Schedule and the Associated Services Fees Schedule, which is available on the Orion website.

²² Commerce Commission, Electricity Distribution Information Disclosure Determination 2012, 2.4.6.

8.3 Electricity Authority

The pricing principles referred to in 2.4.6 (1) (c) of the Commerce Commission's information disclosure requirements are those published by the Electricity Authority.²³ These are discussed in detail in our Pricing Methodology²⁴ document. The pricing principles are repeated here for completeness:

(a) Prices are to signal the economic costs of service provision, including by:

(i) being subsidy free (equal to or greater than avoidable costs, and less than or equal to standalone costs);

(ii) reflecting the impacts of network use on economic costs;

(iii) reflecting differences in network service provided to (or by) consumers; and

(iv) encouraging efficient network alternatives.

(b) Where prices that signal economic costs would under-recover target revenues, the shortfall should be made up by prices that least distort network use.

(c) Prices should be responsive to the requirements and circumstances of end users by allowing negotiation to:

(i) reflect the economic value of services; and

(ii) enable price/quality trade-offs.

(d) Development of prices should be transparent and have regard to transaction costs, consumer impacts, and uptake incentives

During 2022 the Electricity Authority's pricing practice note²⁵ was updated to include expectations around capital contributions. The high-level expectation is that:

Capital contribution policies need to align

70. How expansion or upgrade of networks is funded is often the nexus of asset planning and pricing, as expansion and upgrade investments indicate that customer needs of the network are currently not being met. Capital Contribution policies are a disclosure requirement under Commerce Commission regulation.

²³ <https://www.ea.govt.nz/operations/distribution/pricing/>

²⁴ <https://www.oriongroup.co.nz/corporate/corporate-publications/pricing-guides-and-information/>

²⁵ Distribution Pricing Practice Note Version 2.2edition, October 2022. Available at <https://www.ea.govt.nz/assets/dms-assets/30/Distribution-Pricing-Practice-Note-v-2.2-October-2022.pdf>

71. Currently there is no regulatory oversight of the content, design or intent of these policies which has led to distributors having a wide range of approaches. Without a single overarching goal of contribution policies – such as to recover the proportion of costs directly related to the beneficiary - there is the scope for significant cross-subsidisation and inefficient investment.

72. The role of contribution policies is another relevant question connected to the Authority's distribution pricing reform work. We expect to see all distributors bringing their contribution policies within the scope of their pricing structures and aligning with the Pricing Principles.

Further detail is provided on page 22 of the practice note on how capital contribution apply. In particular, capital contribution approaches “...mostly attempt to charge new connections in a manner that does not impose additional costs on existing customers that do not benefit from the new connection.”

Additional guidance is also provided in respect of distributed generation connecting to distribution network:

In terms of any anticipatory capacity²⁶ built that anticipates DG connecting as a second or subsequent mover, the Authority considers that the best interpretation of Schedule 6.4 to the Code is that it allows distributors to seek capital contributions from all subsequently connecting DG (expanding first mover; second and subsequent movers). This is consistent with Schedule 6.4 to the Code (clauses 2(i)-(m)) and the Authority's 2019 distribution pricing principles.

8.4 Our consistency with pricing principles

We consider that our commercial terms for connections and extensions are consistent with the principles in the following respects:

- We seek to signal the economic costs of service provision, and specifically the direct and indirect costs of extensions and upgrades. (See principles (a) (i), (ii) and (iii)).
- Our terms allow us to take a connection specific approach, and therefore customers, at their cost, can achieve non-standard outcomes. (See in particular principle (c) (ii)).

²⁶ “Anticipatory capacity” refers to the extra capacity built into connection assets over and above what the initial connecting party (the first mover) needs.