Jemena Electricity Networks (Vic) Ltd

2026-31 Electricity Distribution Price Review Regulatory Proposal

Attachment 05-09

Connection Policy

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Glossary

Augmentations	Means the augmentation of a distribution system means works undertaken to enlarge the distribution system or to increase its capacity.
Basic connection	Has the meaning set out in section 4 of this Connection Policy.
Basic micro embedded generator connection	Means a connection between an embedded generating unit (with aggregate inverter capacity as outlined in our Model Standing Offer) and a distribution network of the kind.
Business customers	A retail customer whose connection service is used for business purposes but not including residential homes from which business is conducted.
Connection applicant	Means an applicant for a connection service of one of the following categories: (a) retail customer (b) retailer or other person acting on behalf of a retail customer (c) real estate developer.
Connection assets	Those components of a transmission or distribution system which are used to provide connection services.
Connection charge	Charge imposed by Jemena Electricity Networks (Vic) Ltd. (JEN) for a connection service in accordance with this Connection Policy.
Connection offer	An offer by JEN to enter into a connection contract with: (a) a retail customer or (b) a real estate developer.
Connection service(s)	Means connection service(s) 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.
DER Technical Standards	Means the requirements for a micro embedded generator under Australian Standards AS4777.1:2016, AS4777.2:2020 and the Common Smart Inverter Profile Australia, SA HB 218:2023 Handbook as in force from time to time.
Embedded generator	A person who owns, controls, or operates an embedded generating unit.
Enhanced connection services	Enhanced connection services provided at the request of a customer or third party, they: • are provided with different levels of reliability of service or quality of service (where permissible) than required by the NER or any other applicable regulatory instruments. This includes reserve feeder installation and maintenance • are in excess of levels of service or plant ratings required to be provided by JEN • include management of export and load at a customer site that provides the customer with greater network capacity than they would otherwise be eligible for. This category also includes connections for both load and export.
Extensions	An extension of the distribution network (owned, controlled and operated by JEN) to provide a connection.
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.

Basic micro embedded generator connection / Micro DER connection	Means a connection between an embedded generating unit and a distribution network of the kind contemplated by Australian Standard AS 4777.
Micro Resource Operator	A small customer, large customer, or small resource aggregate customer who owns, operates, or controls or proposes to own, operate or control a distribution-connected generating unit for which a micro DER connection is appropriate.
Model standing offers	A document approved by the AER as a model standing offer to provide connection services.
Negotiated connection process	The process by which JEN and the connecting customer come together to agree on the terms, conditions and price of a new connection
New connection	A connection established or to be established, in accordance with Chapter 5A of the NER and applicable energy laws, where no connection exists
Non-registered embedded generators	An embedded generator that is neither a micro embedded generator nor a registered participant in the National Electricity Market under the NER.
Original customer	The original connection applicant who triggered the requirement and paid for the construction of an extension asset
Pioneer scheme	A scheme to enable original customer(s) to be refunded for their capital contributions where other customers use the network extension. See section 7 of this Connection Policy.
Real estate developer	A person who carries out a real estate development
Real estate development	Means the commercial development of land, including its development in one or more of the following ways: (a) subdivision (b) the construction of commercial or industrial premises (or both) (c) the construction of multiple new residential premises.
Registered Participant	A person who is registered by the Australian Energy Market Operator (AEMO) in any one or more of the categories listed in Rules 2.2 to 2.7 of the NER (in the case of a person who is registered by AEMO as a Trader, such a person is only a Registered Participant for the purposes referred to in Rule 2.5A of the NER. However, as set out in clause 8.2.1(a1), for the purposes of some provisions of Rule 8.2 of the NER only, AEMO, connection applicants, metering providers and metering data providers who are not otherwise Registered Participants are also deemed to be Registered Participants.
Residential customer	A retail customer whose connection service is used for residential purposes.
Retail customer	A person to whom electricity is sold by a retailer and supplied in respect of connection points, for the premises of the person, and includes a non-registered embedded generator and a micro embedded generator.
Static zero export limit	A maximum specified capacity to supply into the distribution network of zero at all times of day and in all network operating conditions.

Abbreviations

AER	Australian Energy Regulator
Ampres (amps)	a measure of electrical current
DER	Distributed Energy Resources (May also be known as a Consumer Energy Resource)
ICCS	means Incremental Cost Customer Specific. It is the incremental cost incurred by us for the connection services, which are used solely by the retailer customer. This may include network extension and augmentation of connection assets at the premises of the retail customer.
ICSN	means Incremental Cost Shared Network. It is the incremental cost of augmentation of the shared distribution network attributable to the new or increased connection service.
IR	means Incremental Revenue. It is the present value of the standard control service revenue we expect to receive in providing the connection service over 30 years for residential customers or 15 years for non-residential customers or as otherwise determined in accordance with the AER's Connection Charges Guideline.[1]
JEN	Jemena Electricity Networks (Vic) Ltd
kVA	means 1000 volt-amps
NER	National Electricity Rules
Rules	National Electricity Rules

[1] AER, *Connection charge guidelines for electricity customers – Under chapter 5A of the National Electricity Rules*, October 2024.

Overview

Jemena Electricity Networks (Vic) Ltd. (**JEN**) owns and operates the electricity network that safely, reliably and affordably services over 387,000 homes and businesses across North West Melbourne—from Clarkefield to Footscray and Gisborne South to Heidelberg. Our role is to deliver power when our customers need it. We build and manage the infrastructure that transports electricity through more than 950km^2 of Melbourne's north-west suburbs and provides energy to support businesses and critical infrastructure such as Melbourne Airport, which sits almost in the middle of our patch.

Anyone who is currently connected to the electricity distribution network in our area is a customer of ours. We also connect new customers and provide distribution services to other groups like property developers, landlords and businesses of all sizes, from sole traders all the way through to large energy consumers such as Melbourne Airport and hospitals. Our distribution area covers approximately 12 per cent of the population of Victoria and nearly 13 per cent of the state's manufacturing output.

Below is a map of JEN's distribution area. To find out if you are in our distribution area, please refer to the Victorian Government's website.[2]

Purpose of this document

This document is JEN's connection policy for the 2026-31 regulatory control period. The document outlines:

- our connection services
- sets out the circumstances in which a retail customer or real estate developer may be required to pay for a connection charge to JEN in respect of connection services
- how those charges are calculated
- how we will set a zero export limit and the circumstances that trigger this.

The connection policy has been prepared in accordance with Part DA of Chapter 6 of the National Electricity Rules (**NER**).[3] It has also been prepared in accordance with the:

[2] https://www.energy.vic.gov.au/electricity/electricity-distributors.

[3] As applied in Victoria through the *National Electricity (Victoria) Act 2005*,as amended from time to time.

- Connection charge principles set out in Part E of Chapter 5A of the **Rules**, as applied in Victoria
- Connection charge guidelines for electricity retail customers published by the Australian Energy Regulator (**AER**)[4]
- AER's final framework and approach (**F&A**) for the Victorian distributors for the 2026-31 regulatory control period
- Electricity Industry Act 2000 - Ministerial Order Specifying Licence Condition 2023[5] and Electricity Industry Act 2000 - Ministerial Order Specifying Licence Condition 2024[6] placed on JEN and other Victorian distributors.
- Victoria Electricity Distributors **Services & Installation Rules**, October 2022[7]

And as amended from time to time.

The connection policy applies from 1 July 2026 to all new or modified connections. It does not apply to **Registered Participants** or intending Registered Participants (such as large generators) seeking to connect to our distribution network, these types of connections are considered under Chapter 5 of the Rules.

For definitions and abbreviations used in this document please refer to the **Glossary and Abbreviations** section, or otherwise refer to the definitions under the NER.

Related information

This Connection Policy should be read in conjunction with:

- JEN's model standing offers for the provision of basic connection services to retail customers
- JEN's model standing offer for micro embedded generation basic connection services
- the schedule of charges for basic connection services in our published Distribution Services Price Schedule
- Micro embedded generator emergency backstop procedures
- Negotiated connection offer and acceptance processes on our website
- Victorian Service Installation Rules
- Victorian Electricity Distribution Code of Practice.

[4] AER, *Connection charge guidelines for electricity customers – Under chapter 5A of the National Electricity Rules*, Version 4.0, October 2024.

[5] The Electricity Industry Act 2000 - Ministerial Order Specifying Licence Condition 2023 (No. 1) was released on 11 October 2023 and applies from 25 October 2023 for new or modified Generating Unit sizes of 200 kVA or more. Victoria Government Gazette No. S 542 Wednesday 11 October 2023 https://www.gazette.vic.gov.au/gazette/Gazettes2023/GG2023S542.pdf.

[6] The Electricity Industry Act 2000 - Ministerial Order Specifying Licence Condition 2024 was released on 31 January 2024 and applies from 1 July 2024 for new or modified Generating Unit sizes of 200 kVA or less. Victoria Government Gazette No. S 31 Wednesday 31 January 2024 https://www.gazette.vic.gov.au/gazette/Gazettes2024/GG2024S031.pdf.

[7] https://www.victoriansir.com.au/.

1. Connecting to JEN's distribution network

JEN is the distribution network service provider responsible for providing connection services to retail customers, real estate developers, and **embedded generators** in JEN's distribution area.

We offer a range of connection services, including:

- connecting new premises and developments
- making alterations to existing connections, including additions, upgrades, **extensions**, relocation, or any other kind of alterations (for example, to increase the number of phases that supply a premise, to relocate a supply connection point at a premise or to change from overhead to underground service)
- establishing connections for micro-embedded generators and embedded generators.

Chapter 5A of the NER sets out the criteria JEN needs to take into account in setting a charge for connecting retail customers to the distribution network, including charges for **connection assets**, network extensions and **augmentations**. The NER also requires customers to enter into a connection contract with JEN when connecting their premises to the network or altering an existing connection. To do so, customers will apply to JEN for a **connection offer**.

The type of connection offer we provide to you (which may either be a basic connection offer or a negotiated connection offer) and the associated **connection charges** will vary depending on the type of connection service you need. This is explained in further detail in the remainder of this Connection Policy.

Contact us

For further information, you can contact us via our website or by calling our New Connections Team on 1300 131 871 or via email network.connections@jemena.com.au.

2. Connection services

We offer two categories of connection services, which cover a range of different connection types:

- basic connection services
- negotiated connection services.[8]

2.1 Summary of connection services and associated offers

When we receive a connection application, we will assess whether your requirements meet the criteria for a basic connection service or a negotiated connection service and provide you with the relevant connection offer that sets out the terms and conditions for the connection service.

We have two **model standing offers** approved by the AER for basic connection services—one for load connection and the other for **basic micro embedded generator connection**. Both are available on our website.

Table 2–1 summarises the most common connection types and the type of offers we make.

Table 2–1: Connection types and related connection offers

Connection type	Demand (capacity)	Type of connection offer
New connection including connection alterations	Up to 100 amps per phase	Model standing offer for basic connection services
Temporary connection (e.g. builder's supply)	Up to 100 amps per phase	Model standing offer for basic connection services
Basic micro embedded generator connection for solar panels and battery storage[9]	With inverter capacity of up to 10 kVA per phase or otherwise in accordance with the JEN's approved Model Standing Offer	Model standing offer for micro embedded generator basic connection services
Temporary supply for construction of buildings and major public infrastructure	Greater than 100 amps per phase	Negotiated connection offer
Undergrounding an existing overhead electricity supply to an underground supply	Not Applicable	Negotiated connection offer
New connection including connection alterations (small commercial property, e.g. small shops, other small commercial premises)	Greater than 100 amps per phase	Negotiated connection offer
New connection (multi-tenancy residential and/or commercial premises, e.g. block of flats, small shopping complex, apartment building, mixed use developments)	Greater than 100 amps per phase	Negotiated connection offer
Large commercial or industrial premises, e.g. manufacturer, shopping centre, university, hospital	Greater than 100 amps per phase	Negotiated connection offer
Real estate developments/ new land subdivision (residential or commercial)	Not Applicable	Negotiated connection offer

8 We may at a later date offer standard connection service for a particular class of connection service (that is currently offered as negotiated services) for which there will be a model standing offer approved by the AER. Such offers when approved by the AER will be published on our website.

9 Micro-embedded generating units must be emergency backstop enabled, meaning it can communicate with JEN's utility server via a communication channel compliant with IEEE 2030.5 CSIP-AUS or any other technology or method acceptable to JEN. We outline the requirements for the emergency backstop mechanism on our website.

Connection type	Demand (capacity)	Type of connection offer
New public lighting in real estate developments	Not Applicable	Quoted alternative control services
Embedded generator connection, other than a micro embedded generator[10]	More than 10 kVA per phase or otherwise in accordance with the JEN's approved micro embedded generator Model Standing Offer	Negotiated connection offer

All connections must comply with the technical standards set out in the current Victorian Service & Installation Rules and JEN's relevant technical standards. In case of inconsistency between the Victorian Service & Installation Rules and our technical standards, our technical standards will prevail.

2.2 Basic connection service

Basic connection services are for connections that require a capacity of no more than 100 amps per phase (or 70kVA). We routinely provide them to residential and small business retail customers and involve minimal or no augmentation to the distribution network and where no network extension is required**.**

More specifically, our basic connection services include:

- new connection
- connection alteration
- basic micro embedded generator connection to the distribution network via an inverter that conforms to the DER Technical Standards and is connected in accordance with *JEN's Model Standing Offer for Micro Embedded Generator Basic Connection Services*.

The scope of these services is set out in Table 2-2.

[10] Embedded generating units must be emergency backstop enabled, meaning it can communicate with JEN's utility server via a communication channel compliant with IEEE 2030.5 CSIP-AUS or any other technology or method acceptable to JEN. We outline the requirements for the emergency backstop mechanism on our website.

Table 2–2: Scope of basic connection services

Connection Type	Description
Basic new connection up to 100 amps (or 70kVA)	A *basic new c*onnection service means the establishment of a permanent or temporary connection (single or three-phase) with a capacity of less than 100 amps per phase that is either: • a physical connection between an agreed connection point at the supply address and JEN's distribution network where: – the connection assets are comprised of an overhead single span service cable from an existing pole; and – where the length of the service cable does not exceed 45 meters in total, and there is no need for a service pole in order to meet the minimum ground clearance requirements under the safety regulations; and – does not exceed 20 metres over the customer's property at the supply address; *or* • a physical connection between the supply address and JEN's distribution network via an underground cable where the connection point is in an existing service pit located at the property boundary at the supply address and the supply cable does not exceed 20 metres.
Basic connection alteration	A basic connection alteration includes upgrades and alterations to an existing connection. Alterations may include: • connection upgrade to a higher capacity of up to 100 amps per phase; • connection upgrade from single phase to three phase supply up to 100 amps; and • relocation of an existing connection up to 100 amps per phase.
Basic micro embedded generator	A basic micro embedded generator connection service is: • a basic connection service for a retail customer who has a micro embedded generator (such as a rooftop solar power system) that is connected to the distribution network via an inverter that conforms to the DER Technical Standards, and • the lesser of the total generating capacity at the connection point is no greater than 10 kVA per phase (with emergency backstop enabled) or the maximum limit specified in our model standing offer for basic micro embedded generator. In case of inconsistency between this connection policy document and the model standing offer, the model standing offer will prevail. When connecting embedded generators where the total generating capacity is greater than the lesser of 10 kVA per phase or the maximum limit specified in our model standing offer for basic micro embedded generator, a negotiated connection service will be required. See section 2.3.

A new connection or upgrade that requires installing a service pit and extending the distribution network to the pit does not fall within the scope of the basic connection services. A negotiated connection service will be required.

JEN has two model standing offers for basic connection services—one for load connection (i.e. new connections and connection alterations where electricity supply is delivered to a connection point) and the other for basic micro embedded generator connections. Further detail is provided on our website. Even if a customer is eligible for a basic connection service, a customer may elect to negotiate the terms and conditions of the basic connection service (in which case a negotiated connection service will be provided).

Our approval to connect a micro embedded generator is not automatic and is subject to the network's capacity to receive export energy from your micro embedded generator. The micro embedded generator connection process is described in our model standing offer for basic micro embedded generators, which can be found on our website.

The connection charges for basic connection services are set out in our Distribution Services Price Schedule.

The process for applying for a basic connection service is set out in JEN's Model Standing Offers.

2.3 Negotiated connection services

Where a connection request does not meet the criteria for a basic connection service, the **connection applicant** will be required to apply for a negotiated connection service for which a negotiated connection offer applies.

Typically, a negotiated connection service is required when the connection applicant requires a supply capacity exceeding 100 amps per phase (or 70 kVA) or a network extension. Examples include:

- new connection or connection alteration where the electricity demand is up to 100 amps per phase (or 70 kVA) and a network extension and/or augmentation is required
- new connection or connection alteration where the demand is greater than 100 amps per phase (or 70 kVA)
- connection of a micro-embedded generator with a capacity up to 10 kVA per phase and a network extension and/or augmentation is required
- connection of an embedded generator where single or multiple inverters in aggregate exceeds 30 kVA
- connection of new real estate developments and subdivisions.

Negotiated connection services are provided under a negotiated connection contract. Accordingly, we will provide a connection applicant a negotiated connection offer in accordance with chapter 5A of the NER.

Information of our negotiated connection processes including preliminary enquiry, connection application, offer and acceptance processes is published on our website.

3. Overview of charges for connection services

The AER classifies JEN's connection services, and the service classification determines how the charges are determined.

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

- connection charges for services classified by the AER as alternative control services;
- capital contributions for services classified by the AER as standard control services; and
- connection charges for extension assets to which a **pioneer scheme** applies.

Key features of these charges are summarised in Table 3–1, and further detail is provided in the following sections.

Table 3–1: Key features of connection charges

Connection charge	Connection charges for alternative control services	Capital contributions for standard control services	Connection charges under a pioneer scheme
Circumstances in which the charge may be imposed	Where the connection is a basic connection for which we have a model standing offer approved by the AER—e.g. a new connection, supply upgrade or alteration of an existing connection up to 100 amps per phase. See section 2.2.	Where the connection is not a basic connection—e.g. a new connection, supply upgrade or alteration of an existing connection above 100 amps per phase. See section 5.	Where the connection is made to a network extension which was fully funded by one or more customers. See section 7.
Persons who may be required to pay the charge	The connection applicant or the retailer representing the retail customer seeking a connection.	The connection applicant, real estate developer or embedded generator.	Subsequent customers who connect to the network extension within seven years from the time of commissioning the network extension.
Aspects of JEN's connection services to which the charge relates	The connection charge relates to the cost incurred by JEN in providing the connection service and recovered from the Connection Applicant.	The connection charge is the shortfall between the incremental cost incurred by JEN in providing the connection service and the incremental revenue expected to be received by JEN from the new or upgraded connection. See section 5.3.	The charge relates to the amount we are required to refund the **original customer** or customers who funded the network extension. See section 7.
Basis on which the charge is calculated	The charge is approved by the AER.	The capital contribution is calculated in accordance with AER's connection charges guideline[11] which is the basis of our method of calculating the capital contribution. See section 5.	The charge is calculated by taking into account the portion of the network extension used and depreciation. See section 7.2.

[11] AER, *Connection charge guidelines for electricity customers – Under chapter 5A of the National Electricity Rules*, Version 4.0, October 2024.

3.1 Metering

All connections must be metered except where the energy consumption can be accurately assessed without a meter.[12] JEN is responsible for providing type 5 (including smart metering) metering services, which are classified as alternative control services.

The cost of installing a meter for basic connection services is included in the fixed fees approved by the AER. A meter reconfiguration fee may apply in some circumstances. Refer to section 4.2.

For negotiated connection services, JEN is responsible for metering services where the customer's annual energy consumption is less than 160 MWh per year. Where we are responsible for metering, we will include the labour cost of installing a meter in the connection offer. The cost of the meter will not be charged at the time of connection but will be recovered through the ongoing metering services charges approved by the AER.

3.2 How we calculate connection charges

The box below provides an overview of how the total connection charge payable by a connection applicant is calculated.

Total connection charge = AC + CC + PS

Where:

- AC—is the total charge payable to us for all relevant alternative control services (refer to section 4)
- CC—is the total capital contribution payable to us for all relevant standard control connection services. This is calculated with reference to the cost-revenue-test (refer to section 5.3 Method for calculation capital contributions)
- PS—is the total charge payable to us to account for any pioneer scheme applying to the distribution network to which the connection applicant connects (refer to section 7.)

Under certain circumstances, customers may be required to pay a security fee (see section 6.2).

[12] Unmetered supply connections are generally provided for facilities such as streetlights, bus shelters, telephone booths, telecommunication cabinets, etc., and comprise a load with a capacity of around 2 Amperes.

4. Charges for connection services classified as alternative control services

4.1 Overview

Alternative control services are customer-specific or customer-requested services. Where JEN provides alternative control services, the full cost of the service can be recovered from customers using that service. Some connection services, including basic new connections, connection application and management services, and enhanced connection services, are classified as alternative control services.

Alternative control services are charged on either:

- fixed fee basis – this is where the scope of the connection service is predictable and generally uniform, and the AER has approved a fee for the service. See section 4.2
- quoted basis – using the labour rates approved by the AER, along with a pass-through of material, contractor costs, a tax allowance and margin. We determine charges on a quoted basis where the scope of the service vary significantly between customer requests and prices can only be determined when the scope of the work in known. See section 4.3.

The list of connection service which are delivered on a fixed fee basis by JEN are set out in the Distribution Services Price Schedule.

4.2 Charges applicable to basic connection services

Customers of basic connection services described in section 2 are required to pay the relevant fees approved by the AER. These customers are not required to pay any capital contributions.

We have fixed fees for basic connection services having a supply up to 100 amps such as:

- new single or three-phase basic connections (permanent and temporary)
- supply upgrade from a single to three phase
- replacement of an overhead supply cable with another overhead supply cable—for example, due to the customer changing the point of attachment at the property to another position.

The cost of installing a meter is included in the fixed fees for basic connection services. Where a basic micro embedded generator is connected to an existing connection, a remote meter reconfiguration fee will apply. The remote meter reconfiguration is necessary to enable the meter to record export energy flowing into the distribution network.

Where a basic micro embedded generator is connected alongside a new connection service, the remote meter reconfiguration charge will not apply as the meter would have been preconfigured to record the export energy.

Where a connection is made to a part of the network that is subject of a pioneer scheme (i.e. the network extension was fully funded by one or more retail customers), then an additional pioneer scheme charge may apply in addition to the relevant connection charges. Refer to section 7 for details on pioneer schemes.

4.3 How we calculate connection service charges on a quoted basis

Our method for determining the charge for a connection service on a quoted basis is set out below.

Method for determining quoted price

Price = Labour + Materials + Contractor Services + Margin + Tax

Where:

- Labour costs consist of all labour costs directly incurred in providing the service, including labour on-costs, fleet on-costs and overheads. The AER-approved labour rates are escalated annually for CPI and labour escalators approved by the AER
- Materials costs reflect the cost of materials directly incurred in the provision of the service, material storage and logistics on-costs and overheads
- Contractor Services costs reflect all costs associated with the use of external labour, including overheads and any direct costs incurred. The contracted services charge applies the rates under existing contractual arrangements. Direct costs incurred are passed on to the customer
- Margin is an amount approved by the AER as a part of its 2026-31 price determination.
- Tax is an amount approved by the AER as a part of its 2026-31 price determination,

4.4 Charges for connection application and management services

The AER has classified a range of connection and connection-related services as alternative control services. These customer-requested connection services include, but are not limited to:

- connection application related services such as:
  - undertaking design work to assess connection costs and technical studies to assess network impacts of new connections
  - assessing applications to undertake network asset relocations
- non-basic connection services related to connections that are greater than 100 amps per phase (or 70 kVA), such as:
  - temporary connection services
  - overhead service line replacements or relocation
- upgrade from overhead to underground service.

Each of these connection services are provided on a quoted basis and are only applicable if obtaining a negotiated connection service.

We may require a connection applicant for a negotiated service to pay a connection application fee upfront to cover the reasonable costs of work anticipated to be incurred by JEN in preparing to make a negotiated connection offer. The application fee will be commensurate with the size and complexity of the negotiated connection service. As it will vary between projects, JEN will advise the connection applicant of the connection fee amount when responding to a connection enquiry.

4.5 Charges for Enhanced Connection Services

Enhanced connection services provided at the request of a customer or third party, they:

- are provided with different levels of reliability of service or quality of service (where permissible) than required by the NER or any other applicable regulatory instruments. This includes reserve feeder installation and maintenance
- are in excess of levels of service or plant ratings required to be provided by JEN
- include management of export and load at a customer site that provides the customer with greater network capacity than they would otherwise be eligible for.

This category also includes connections for both load and export.

For these types of services, the connection applicants are required to fully fund the cost of constructing the connection asset and any augmentation of the shared distribution network needed to support the necessary capacity. Connection applicants will be provided with a negotiated connection offer, and the charges will be determined on a quoted basis.

A separate charge ($/kVA) will apply for the enhanced connection's ongoing operation and maintenance. The approved unit rate is shown in our Distribution Services Price Schedule, published on our website. The enhanced connection operation and maintenance charge will apply where an enhanced connection service has been provided.

5. Capital contribution for connection services classified as standard control services

5.1 Overview

A customer may be required to make a capital contribution towards a standard control connection service where JEN is unable to fully recover the costs of providing the connection service through its standard control service charges, i.e. the charges paid by customers who use JEN's distribution network.

The AER has classified negotiated connection services as standard control services, and therefore a capital contribution may be payable in addition to any applicable charges for alternative control services. As discussed in section 5.2, capital contributions are not payable in respect of basic connection services.

Specifically, a capital contribution will be charged when it is determined through the application of the cost-revenue-test described in this section 4.4, that there is a difference between the cost to provide the connection service (i.e. incremental cost) and the revenue that JEN will receive from the connection service through network charges (i.e. incremental revenue).

The payment of a capital contribution means that those costs are paid for by the Connection Applicant and not shared by all customers connected to the network.

5.2 Shared network augmentation threshold

The shared network augmentation threshold is a demand or capacity threshold below which retail customers (other than **non-registered embedded generators** and real estate developers) will not be required to make a capital contribution towards the cost of any augmentation of the distribution network.

The shared network augmentation threshold in JEN's distribution area is a maximum capacity of 100 amps per phase (or 70 kVA).

Connections below this threshold are referred to as basic connections for which we have a model standing offer approved by the AER. Therefore, a connection applicant who seeks basic connection services is exempt from the requirement to pay a capital contribution towards network augmentation.

5.3 Method for calculation capital contributions

The amount of any capital contribution payable for a negotiated connection service will be determined using the following cost-revenue-test.

Cost-revenue-test

CC = ICCS + ICSN – IR

Where:

- CC = Capital contribution for negotiated *connection service*
- CC ≥ 0
- ICCS = Incremental cost of customer specific connection assets
- ICSN = Incremental cost of the shared distribution network
- IR = Incremental revenue.

We require a connection applicant to pay a capital contribution in circumstances where the incremental cost of the negotiated connection service exceeds the estimated incremental revenue expected to be derived from that connection service.

A real estate developer will be treated as a single customer for purposes of calculating capital contribution.

The calculated capital contribution amount is the difference between the incremental cost attributable to the negotiated connection service and the incremental revenue. Where the calculated capital contribution is equal to or less than zero, no capital contribution is payable by the connection applicant.

Our approach to calculating the incremental costs and how they are calculated are detailed in sections 5.4, 5.5 and 5.6. The cost-revenue test will only include the incremental cost attributable to the negotiated connection service.

Incremental revenue is the revenue stream (directly attributable to the new load connection) in present value terms expected to be received by us over a period of time. Our approach to calculating the incremental revenue is detailed in section 5.7.

5.4 Principles for determining the incremental cost

There are two components that make up the incremental cost under the cost-revenue-test:

ICCS—the incremental costs incurred, which are used solely by the connection applicant. This may include extensions and augmentation of premises connection assets at the retail customer's connection point.

ICSN—the costs incurred, which are not used solely by the connection applicant. This may include any augmentation (insofar as it involves more than an extension) attributable to the new connection.

5.5 Incremental cost of shared distribution network

The ICSN represents the capital cost in adding capacity to the shared network as a direct result of the new or altered connection, measured in kVA.

The augmentation unit rates we use to determine the incremental cost of the shared network are those that the AER approves in the electricity distribution price determination process for the 2026-31 regulatory control period.

> The incremental cost of the shared network (ICSN) will be calculated as follows:
>
> ICSN = unit rate x coincidental peak demand estimate or requested capacity.
>
> Where:
>
> - Unit rate is the average cost of *augmentation* of the shared network expressed in $/kVA of added capacity based on the recent actual project costs
> - Demand estimate or requested capacity of the maximum electrical energy flow (measured in kVA) that the connection applicant will consume at the connection point.

We have augmentation unit rates for the following network components:

a) Sub-transmission line
b) Zone substation
c) High voltage feeder
d) Distribution substation
e) Low voltage mains.

The augmentation unit rates were determined by analysing the costs of recent augmentation projects. We apply the same unit rates in all areas of our distribution network.

The calculation of augmentation unit rates takes into account the useful life of the network component and the assumed period for which the connection applicant will be using the network. If the incremental revenue is assumed to be received over a 30 year period, which is the default period for **residential customers**, and the augmentation assets is longer than 30 years, then the augmentation unit rate will be discounted. Similarly, the augmentation rate will be discounted for **business customers** where the incremental revenue is assumed to be received over a 15 year period or as otherwise determined by the AER's Connection Charges Guideline.[13]

The augmentation unit rate that applies for a particular connection will be the discounted cumulative unit rate of the level of the network at which the connection occurs. If the connection does not make use of one or more of the network components, those components will not be included in the calculation of the incremental cost of shared network. For example, if the tie-in point of the connection assets is at the high voltage component, then only the discounted cumulative rate of the high voltage feeder would be used in the calculation of the incremental costs of the shared network.

The discounted cumulative augmentation unit rates to be applied in the 2026-31 regulatory control period are shown in Table 5–1. The average augmentation unit rates are escalated each year by the Consumer Price Index (**CPI**).

Table 5–1: Augmentation unit rates for residential and business customers - $ per kVA ($ June 2024, dollars)

Network component	Residential customers	Business customers
Low voltage mains	$1,072.80	$766.29
Distribution substation	$871.85	$622.75
High voltage feeder	$666.50	$476.07
Zone substation	$451.77	$322.69
Sub-transmission line	$63.86	$45.61

Note: Unit rates exclude overheads.

5.6 Incremental cost of customer specific connection assets

5.6.1 Customer specific connection cost

The cost of customer specific connection assets is the sum of the following cost items:

a) design and construction of new customer specific connection assets

b) augmentation of the premises connection assets at the retail customer's connection point

c) network extension

d) administration (including any design approval and contractor accreditation, certification)

e) conducting a tender process in accordance with the contestability options provided in section 5.6.3 of this Connection Policy

f) provision of any other connection services that are used solely by the connection applicant.

[13] AER, *Connection charge guidelines for electricity customers – Under chapter 5A of the National Electricity Rules*, 2024.

5.6.2 Costs based on an efficient cost standard

We will calculate the incremental cost of the connection assets and network extensions (if any) to an efficient cost standard necessary for the load connection.

If we are required by the connection applicant to prepare a design specification to allow a connection service to be performed on a contestable basis, we will design the connection service based on the efficient cost standard. If the connection applicant is a real estate developer, we will prepare a design specification that efficiently provides for the forecast load growth.

5.6.3 Options to contest connection design and construction work

A connection applicant may choose us to undertake both the design and construction works as per the connection offer and waive their rights to call for tenders. Alternatively, the applicant may choose to contest the connection design and construction work. However, not all works attributable to a connection service are contestable. We will identify the contestable and non-contestable components of the connection service in the connection offer.

Non-contestable works may include, but are not limited to:

a) Audit of design undertaken by the connection applicant

b) Audit of construction where the connection applicant undertakes the construction works

c) Overall project management of the connection service having regard to the contestability options chosen by the connection applicant

d) Commissioning and testing of the constructed connection assets to JEN

e) Integrating the newly created connection assets, including any extensions and augmentation into our asset management systems

f) Writing switching instructions and issuing access permits for line workers to access our network for tie-in works.

The design and construction of connection assets, network extensions and real estate developments are considered contestable works. In such circumstances, a connection applicant has the following options:

a) A connection applicant may elect us to only undertake the design works and request us to conduct a tender process for the construction works on behalf of the connection applicant for a fee to recover the reasonable costs incurred by us in conducting the tender. We will provide the connection applicant with an estimate of the cost of conducting the tender process and seek agreement before we commence the tender process

b) A connection applicant may elect us to only undertake the design for a fee and elect to undertake the construction works themselves. Under such an arrangement, the connection works must be performed to our issued design and construction standards and by contractors approved by us

c) A connection applicant may elect to undertake the design and connection works. Under such an arrangement, the design must first be approved by JEN, and connection works must be performed to JEN's technical and construction standards and by contractors approved by us.

Contestable works guideline

JEN has developed a contestable works guideline to provide guidance around those tasks that are contestable and non-contestable for the different types of projects undertaken on our network when a connection applicant has elected to undertake the design and construction works themselves under this Connection Policy. Our contestable works guideline is published on our website.

5.7 Incremental revenue calculation

The incremental revenue (**IR**) calculated under the cost-revenue-test is the present value of the incremental standard control service revenue that we expect to receive in providing the negotiated connection service.

When calculating the incremental revenue, we will:

a) Use the forecast energy consumption, summer demand incentive charge and minimum contract demand applicable to a tariff that we believe is reasonably suited for the retail customer based on the information provided by the connection applicant, our experience with similar customers and other external information sources. Further information is provided in section 5.8. Assume a connection period of:

   i) 30 years when calculating the expected standard control service revenue recoverable from residential customers in a real estate development,

   ii) 15 years when calculating the expected standard control service revenue recoverable from a business customer. However, where a 15 year connection period does not reflect a reasonable estimate of the time that the connection will remain in service, we may apply an alternative assumed connection period for that connection service,

   iii) an alternative period as determined by JEN if circumstances warrant an alternative timeframe, for example, the customer specifies a shorter, fixed timeframe for the connection. (In these cases, we may use the marginal cost of reinforcement rather than the augmentation unit rates for determining the augmentation component of the augmentation costs)

b) Use the network tariffs that will be assigned to the retail customer (or customers) by agreement at the time the connection offer is made; or in circumstances where the retail customer is not known, the forecast energy consumption and minimum demand for the tariff suitable for the connection will be determined by us based on the information provided by the connection applicant on likely use of the development or based on other sources such as similar customer profiles or other external information sources.

c) When estimating the incremental revenue, we will exclude the component attributable to the operational and maintenance costs from the network tariff (consistent with not including the same costs in the incremental cost calculation).

d) Use a flat real price path after the end of the current price determination period for the remaining life of the connection—that is, the expected real standard control service tariff in the final regulatory control period will be escalated by forecast CPI in nominal terms.

e) Use a discount rate equal to JEN's real pre-tax weighted average cost of capital as set out for the relevant year in the relevant AER price determination when calculating the present value of the revenue stream.

In circumstances where the retail customer and we cannot agree on the demand or consider that there is a risk that we may not receive the expected incremental revenue, we may require a security fee. See section 6.2 for details of our security fee policy.

5.8 Estimating customers' energy consumption and demand

When a connection applicant submits a connection application to us, the connection applicant must also submit a range of information, including the maximum demand estimate calculations in accordance with AS/NZS 3000 and details of any large equipment to be connected.

5.8.1 Energy consumption

We will estimate the energy consumption taking into consideration the information submitted by the connection applicant and load factor having regard to the connection applicant's specific connection characteristics, for example, load factor, whether the connection is a medium or large, low or high voltage, or combined load and generator connection and information of similar connection types or other external information.

We may adjust the forecast usage pattern based on typical load factors for similar customer installations or industry types. The estimated consumption will be used to calculate the incremental revenue, where the cost-revenue-test is applied.

5.8.2 Maximum demand and summer demand incentive charge

We will estimate the maximum demand at the connection point based on the submitted information, information of similar connection types, other external information and the connection applicant's specific connection characteristics, including connection voltage, type of load, combined load, and generator connection.

The maximum demand agreed between us and the connection applicant will be used to determine the peak coincident demand by applying diversification. The peak coincident demand is used to calculate the incremental costs of the shared distribution network for all negotiated load connections, as well as incremental revenue, where the cost-revenue-test is applied.

A similar approach will be followed to calculate the Summer Demand Incentive Charge, if applicable, within the target tariff structure.

When a retail customer applies for a contract demand reset to a lower demand than was agreed to at the time of the connection offer and acceptance process, it will trigger reapplication of the cost-revenue-test and may result in the retail customer being charged a true-up payment.

5.8.3 Provisional estimate

If we and a connection applicant (other than a real estate developer) cannot reach an agreement on appropriate estimates of consumption and/or demand, then:

a) We will determine and apply a provisional estimate.

b) No later than three years after the connection works occur, a refund or additional charge will be payable to/by the relevant connection applicant based on the difference between the estimated and actual consumption or the demand experienced over the period.

c) The additional charge or refund will be calculated assuming the actual consumption or demand experienced over the period will continue for the duration of the total connection period.

d) If the connection applicant becomes insolvent or ceases to utilise the property within three years, then we will not make a refund.

We and real estate developers may enter into agreements with similar effect to the above arrangement that applies to a retail customer, if an estimate for consumption and/or demand cannot be agreed upon.

5.8.4 Real estate development

A real estate developer's incremental revenue will be estimated based on all the connection points within the real estate development.

When a real estate developer submits a connection application that relates to commercial and or industrial premises, the maximum demand details of prospective retail customers may not be known at the time of the connection offer. In such circumstances, we will use the information gathered from the real estate developer and typical loading figures from a similar development or other external information to:

a) determine an assumed total maximum demand required for the development, and

b) determine the total energy consumption based on assumed maximum demand for each of the premises within the real estate development.

New public lighting services

The provision of new public lighting assets is classified as alternative control services by the AER. Therefore, *real estate developer*s are required to fully fund the provision of new public lighting assets.

A real estate developer may request the design and construction of new public lighting services in a real estate development to be included in the negotiated connection offer for the design and construction of the connection assets in a real estate development, given the design and construction for both public lighting and connection assets are generally undertaken together.

Embedded networks

In the case an embedded network that is a residential and or commercial real estate development, the forecast energy consumption and minimum demand applicable to the tariff that we believe would be suited for the connection as reasonably determined by us based on the information (e.g. number of residential apartments, number of commercial connections, development phases etc) provided by the connection applicant and similar installations.

5.9 Charges for embedded generator connection services

A connection applicant seeking to connect an embedded generator (excluding retail customers who apply to connect a basic micro embedded generator) must pay the full costs of the connection assets and any cost of removing distribution network constraints that are specific to the connection of the embedded generator.

The connection applicant is required to pay a non-refundable application fee at the time the connection applicant submits the connection application. The application fee is to cover the expenses reasonably incurred by us in responding to any information the applicant reasonably requires in order to negotiate on an informed basis, assess the applicant's application and make a connection offer. The fee will be commensurate with the size and complexity of the negotiated connection service. As it will vary between connection projects, we will advise the connection applicant of the connection fee amount at the time of the connection enquiry.

The embedded generator Connection Offer will be subject to the cost-revenue test. The capital contribution for the connection of an embedded generator that is also a load connection will be calculated based on the total cost of the connection works required to support both the expected generation output and load.

6. Connection payments

We may require prepayment of the connection charges applicable for any connection service. Our prepayment policy is outlined in section 6.1 below.

In certain circumstances, we require security fees, either in the form of a prepayment or a bank guarantee. Our security fee policy is outlined in section 6.2 below.

6.1 Prepayments

For connection services involving construction works, connection applicants can either pay the total connection charge up front at the time the connection offer is accepted or in instalments in accordance with the following pre-payment policy.

We require advance payment of the connection charge before the commencement of any construction work when:

a) the construction work is not scheduled to commence for three months or more after the connection offer is accepted or

b) the construction work can be logically segmented into distinct construction stages.

Where the construction work is of the nature described above in (a) or (b), we will request payment, at the time the connection offer is accepted, of all the costs we have already incurred to that point in time and prepayment of any costs that it will incur before the commencement of construction work. The prepayment may include but is not limited to:

a) the costs of any specialised or non-standard connection assets (that are not normally held in our store) and

b) design, tendering and administration costs.

Where the customer requests for an instalment payment arrangement and the construction work can be logically segmented into distinct stages, we will include details of the prepayment(s) required in the connection offer prior to the commencement of each construction stage. Each prepayment will be reasonably reflective of the costs that will be incurred in that particular construction stage and needs to be paid prior to the commencement of works for each stage specified in the connection offer.

6.2 Security fee

Section 5.7 of this policy outlines a fair and reasonable assessment of the incremental revenue used in the cost-revenue-test when determining the required capital contribution.

In circumstances where we believe there is a risk that JEN will not receive the estimated incremental revenue, we may require a security fee, which may be in the form of either an upfront prepayment or a bank guarantee.

We will operate the security fee scheme in accordance with the following principles:

a) The security fee will not be greater than the amount of the incremental revenue, which we assess as having a risk of not being recovered.

b) The security fee will not exceed the present value of the incremental costs that we will incur in undertaking any relevant new works and augmentation.

c) Where the security fee has been provided as an upfront payment, we will rebate the security fee annually over the period of the security fee scheme. The first rebate will be in the calendar year after the connection services are provided, and subsequent rebate payments will be made annually on the same date thereafter until the earlier of:

i. the actual incremental revenue realised over the period of the security fee scheme exceeds the estimated incremental revenue or

ii. we refund the security fee in full.

d) The security fee scheme will not result in us recovering more than the total estimated incremental revenue. If the actual incremental revenue realised over the period of the security fee scheme exceeds the estimated incremental revenue, we will refund the security fee in full

e) The period of the security fee scheme will not be more than the revenue period applied in the calculation of the customer contribution

f) Where the security fee has been provided as an upfront payment, we will pay interest on the security fee, commensurate to the manner in which the security fee is treated by us. Interest is not payable on security held in the form of a bank guarantee

g) The connection applicant will not be rebated an amount greater than the total of the security fee deposit plus interest from us over the security fee period.

7. Pioneer schemes

We operate a pioneer scheme in which the connection applicant (being the original customer) is required to pay the full cost of the extension assets; however, some of the upfront cost of the extension assets may be refunded if other retail customers subsequently connect to the extended network.

Where connection applicants collectively make a connection request that requires a network extension, we will determine on a fair and equitable basis the contribution that each connection applicant must make towards the group extension having regard to the location and/or load of each connection.

All real estate developers are entitled to access our pioneer scheme for extension assets they fund.

7.1 Pioneer scheme charge

We will levy a pioneer scheme charge to subsequent customers who connect to a network extension that was triggered by the original customer by:

a) taking into account the physical length of line a subsequent customer requires relative to other customers already connected to the extension and

b) taking into account the amount of electricity demand used by a subsequent customer relative to other customers already connected to the extension and

c) depreciating the extension assets over 20 years using a straight-line depreciation method.

If an original customer requests a connection to be constructed to a higher standard or capacity, then only the cost of constructing the connection to the efficient cost or capacity will be subject to the pioneer scheme—that is, the cost attributed to the higher standard or capacity will be completely borne by the original customer and not be included in the pioneer scheme.

When an independent service provider (accredited by us) performs the extension work in green field sites, we will establish the pioneer scheme by estimating the amount it would have charged the original customer to perform the extension.

Who would pay the pioneer scheme charge?

Subsequent customers who connect to a network extension that is still subject to a pioneer scheme must pay the pioneer scheme charge determined by us. We will pay the total amount received from subsequent customers to the original customer and other eligible customers who may have already connected to the network extension. We will operate our pioneer scheme so that it remains financially neutral.

A pioneer scheme has a life of seven years from the time of commissioning the network extension. In other words, there shall be no refunds in relation to a pioneer scheme after seven years. Pioneer scheme refund payments will be made only if those payments exceed the threshold as set out in the AER's Connection Charges guideline adjusted for inflation.[14] If we do not refund customers because of this threshold, then we will not levy the pioneer scheme charge to any subsequent customer connecting to the network extension.

In some circumstances, we may not be able to find the customers who are party to a pioneer scheme because they have sold their premises. In such circumstances, we will discount the pioneer scheme charge to subsequent customers by the amount not refunded.

[14] As of the Oct 2024 version of the AER's connection charges guideline, the threshold amount is $1,000 ($2012)

8. Static Zero Export Limit

JEN will communicate to our stakeholders explaining the reasons for *static zero export limits* in the network. Our communications will include customers and stakeholders, including local councils, relevant businesses (such as retailers and solar installers), and community groups, in a way that enables a clear understanding of why static zero export limits may ben imposed on micro resource operators.

JEN will use its best endeavours to identify and specify suitable dynamic response systems for all locations in its distribution area.

8.1 Imposition of a static zero export limit

In accordance with section 7A of the AER's Connection Charges Guideline[15] and s5.7A.1 of the NER, JEN may impose a *static zero export limit* on a new or altered micro resource operator connection (after 1 July 2025), where:

a) the connection applicant expressly requests such connection conditions; or

b) JEN considers that both of the following apply:

1. the export from the Micro embedded generator or Micro Resource Operator will have a high probability of resulting in JEN not meeting a regulatory obligation or maintaining the network within its technical limits—for example, not meeting the voltage level and power quality standards, relevant safety requirements and network security requirements (the technical consideration); and

2. having regard to the National Electricity Objective (as defined in the National Electricity Law at the time of the assessment), the cost of augmenting the network assets in order to allow a reasonable export capacity level by the micro resource operator connection applicant more than marginally outweighs the benefits arising from providing the additional export capacity to this micro DER connection, taking into consideration the expected future new micro resource outputs that will be able to export to the grid arising from the augmentation (the economic consideration).

JEN will not apply a *static zero export limit* in circumstances where:

a) JEN has specified a suitable dynamic response system and the connection applicant is utilising or proposing to utilise that system; or

b) the connection applicant has elected to fund the necessary network augmentation to meet their needs.

If JEN does deploy a *static zero export limit* on a new or altered Micro embedded generator or Micro Resource Operator connection, we will inform the connection applicant:

a) of the technical and economic considerations that led to the static zero export limit being imposed; and

b) of any option of installing a dynamic response system in order to avoid a static zero export limit being imposed (where JEN has identified a suitable dynamic response system); and

c) how to access an independent technical review of our reasons for imposing the static zero limit; and

d) whether there are alternative dispute resolution channels available to help negotiate a suitable export limit other than a static zero limit.

[15] AER, *Connection charge guidelines for electricity customers – Under chapter 5A of the National Electricity Rules*, October 2024.

8.2 Review of a static zero export limit

If a connection offer includes a static zero export limit, we will include a review clause that provides that the connection applicant may seek a review of the static zero export limit conditions after 5 years of the date of completion of the initial connection.

We will also review the static zero export limit imposed on existing Micro Resource Operators following network augmentation works designed to expand micro DER export capacity.

Where JEN performs a review pursuant to the above and concludes that a static zero export limit is no longer is appropriate having regard to the relevant criteria, we will inform the relevant Micro Resource Operators that they could apply for a new connection agreement with the static zero export limit lifted.

9. Dispute resolution

Disputes between JEN and customers regarding connection services will be managed in accordance with JEN's standard complaints and dispute resolution procedure, details of which are available on our website. JEN will endeavour to resolve connection disputes in a timely manner.

Where agreement on the terms and conditions of the connection offer cannot be reached, the AER is responsible for determining customer connection disputes with electricity distribution businesses under Part 10 of the National Electricity Law. Information on the AER's customer connection dispute resolution process is available on the AER's website: www.aer.gov.au.