



# Revised Proposal

## Attachment 5.17

# Connection Policy

January 2019

# Connection Policy

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## Connection Policy

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**Purpose** This policy is Ausgrid’s Connection Policy prepared in accordance with the National Electricity Rules (the Rules), the Electricity Supply Act 1995 and the AER Connection Charge Guidelines. It outlines the circumstances when a customer is required to pay Ausgrid for connection services and how these connection charges are calculated.

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**Applies to** Customers requesting a new connection, or connection alteration under Chapter 5A of the Rules.

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**Effective period** This policy applies to the period from 1 July 2019 to 30 June 2024.

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**Introduction** In NSW, the majority of work to establish a new, or alter an existing, connection to Ausgrid’s distribution system is performed by Accredited Service Providers (ASPs). Ausgrid determines whether the work required to make a new connection or connection alteration is a contestable service according to the AER service classification.

There are some connection services that can only be provided by Ausgrid and for which Ausgrid charges the customer. These services and associated charges are regulated by the Australian Energy Regulator (AER).

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## 1 Key principles and requirements

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**1.1 Connection works** Connection works are the works on or related to the electricity network required to connect a customer's installation to the electricity network, or to alter an existing connection (including disconnecting an existing supply). The works may involve augmenting the network by installing new network infrastructure; or upgrading, reconfiguring or decommissioning existing infrastructure. They do not include works within a customer's electrical installation. Connection works may be provided by a customer funded ASP, or by Ausgrid.

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**1.2 Connection services funded by the customer** Connection services funded by the connection customer are:

1. **Contestable services provided by an ASP.** This includes the design and construction of connection assets at the customer's premises and may include augmentation of the distribution system. These services are provided to the customer by ASPs in the contestable marketplace and are known as contestable services.
2. **Ancillary services** that can only be provided by Ausgrid and that are either necessary for the connection or requested by the customer. Connection charges for ancillary services are regulated by the AER and are published on Ausgrid's website.
3. **Customer requirements.** Where a customer requests a higher standard of supply beyond the least cost technically acceptable standard offered by Ausgrid, the customer is required to fund the marginal cost of the additional work Ausgrid incurs.
4. **Pioneer scheme contribution.** Where a new customer uses a network extension that was paid for by another customer within 7 years, the new customer may be required to make a payment towards the cost of the extension assets.
5. **Providing land for connection assets.** The customer may be required to provide a location for connection assets on their site or a third party's site.

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**1.3 Types of connection services** Ausgrid offers three categories of connection services:

- **Basic services** are offered to customers who are under the threshold set in 1.5; or to customers (including those installing micro embedded generation) who require minimal or no augmentation of the network.
- **Standard services** are offered for most other connections.
- **Negotiated services** are offered to customers who do not qualify for Ausgrid's basic or standard services, or who prefer a negotiated agreement.

The AER approves model standing offers that cover the terms and conditions under which basic and standard services are provided.

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- 1.4 Contestable services** If Ausgrid determines that any of the required work is a contestable service, the customer must engage a suitably accredited and authorised Accredited Service Provider (ASP) to complete this work. The charges for contestable services are unregulated and subject to agreement between the customer and their selected ASP. The contestable services required for a new connection or connection alteration may include:
- providing and installing connection assets at the customer's connection point and also within the customer's electrical installation;
  - providing and installing an extension from the connection point to Ausgrid's existing network boundary; and
  - augmenting the existing Ausgrid network (except for retail customers below the threshold in section 1.5 of this policy).
- Distribution system assets that are constructed as a contestable service must be gifted to Alpha Distribution Ministerial Holding Company (the owner and lessor of the Ausgrid network) as a contributed asset and form part of the Ausgrid network when they are energised.
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- 1.5 Threshold for retail customers** Ausgrid does not require a retail customer (other than a real estate developer or a non-registered embedded generator) to fund an augmentation of the existing network if they are a low voltage customer with maximum capacity less than:
- 100 amps single phase for a customer in a rural area; or
  - 100 amps per phase, three phase, in a non-rural area.
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- 1.6 Scope of augmentation works for the connection** Ausgrid specifies the least cost technically acceptable standard for works required to make the new connection or connection alteration in accordance with its network policies, standards and legal obligations to adequately supply the assessed maximum demand.
- If a real estate developer applies for a new connection or connection alteration, or the connection services are provided under a negotiated connection contract, Ausgrid's assessment of the electrical load requirements of customers may include forecast load growth.
- If Ausgrid determines that the supply of electricity required by a customer exceeds that which can be provided by a service line from the street mains, then Ausgrid may require the customer fund the installation of transformers, switchgear and other equipment.
- The customer is only responsible for the cost of network augmentation that is required to enable the connection to be made.
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- 1.7 Interests in land** The customer is required to provide Ausgrid, free of cost, a place on their premises, or (if appropriate) a third party's premises, to accommodate network infrastructure required for their connection; and easements, leases or any other reasonable interests in land required by Ausgrid in order to provide the connection.
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### 1.8 Where Ausgrid funds augmentation works

Ausgrid funds augmentation works associated with a connection in the following circumstances:

- Any augmentation of the shared network required for customers who qualify for basic connection services.
- Where Ausgrid asks the customer's ASP to construct network infrastructure additional to that necessary for the connection as set out in 1.6.
- Where Ausgrid uses a network extension that was paid for by another customer within 7 years to supply general network load, Ausgrid will make a payment towards the cost of the extension assets under the pioneer scheme reimbursement scheme set out in section 4.
- Certain augmentation works that are required for the connection that can only be done by Ausgrid and which are not ancillary services to be funded by the customer. In these circumstances Ausgrid may require the customer to provide a financial guarantee to cover its costs as set out in section 3 of this policy.
- Under exceptional circumstances, where Ausgrid has agreed to fund the augmentation works under a negotiated connection agreement with a customer (generally a customer with demand greater than 10MVA). Ausgrid will only agree to fund these works where appropriate revenue security mechanisms are in place (e.g. negotiated tariffs or a financial guarantee) so that the cost of those works will be recovered from that customer and not materially from the general customer base.

These works are classified as standard control services and Ausgrid does not charge the customer a connection charge for these works.

### 1.9 Customer requirements

If a customer requests any alternative or additional augmentation works to Ausgrid's standards, and Ausgrid agrees with the request, the customer is required to pay any additional costs incurred by Ausgrid. This charge is payable to Ausgrid and is determined as follows:

- labour costs are calculated by multiplying the estimated number of hours to complete the work by the relevant hourly ancillary service rate; and
- other costs, including material and subcontract costs, are charged at cost.

### 1.10 Work outside normal business hours

If Ausgrid is required to perform work outside of normal business hours, either at the customer's request or because works must be carried out after hours, then Ausgrid will charge its overtime rate for the service.

### 1.11 Payment of charges

Ausgrid will seek payment of ancillary service fees for all connection services it provides. Generally, an upfront payment will be required prior to the service being performed.

Where Ausgrid completes works under section 1.9 of this policy, if the connection works can be logically segmented into distinct stages of construction then a payment schedule that aligns with the construction stages may be negotiated.

## 2 Maximum capacity

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**2.1 Definition** The maximum capacity of a connection is the maximum load approved by Ausgrid that a connected customer may draw from the distribution system.

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**2.2 When applying to connect** When an applicant submits a connection application to Ausgrid, they must also submit the expected and planned future maximum demand calculations in accordance with AS/NZS 3000. The maximum demand worksheet must be included with a connection application for standard connection services or negotiated connection services.

Ausgrid takes into consideration the capacity applied for, but is not obliged to agree to the requested capacity, and may offer a different figure, taking into account, for example, network limitations, load diversification and timing of augmentation works.

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**2.3 Exceeding the maximum capacity** If a premises owner exceeds the maximum capacity for their premises, then they are required, at their expense, to either:

- remediate their demand to within the agreed limit (e.g. by installing a load limiting device at their premises); or
- enter into a new connection agreement for a greater maximum capacity.

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**2.4 Ausgrid may reduce the maximum capacity** Ausgrid may subsequently reduce the maximum capacity of a connection to a premises if:

- the customer's measured demand (as determined by standards published by us from time to time) has remained less than the agreed maximum capacity for at least the previous two years;
- Ausgrid requires the unused network capacity to relieve a forecast network constraint; and
- the premises owner does not have a current negotiated agreement with Ausgrid to reserve this capacity.

Ausgrid will notify the premises owner in writing if this occurs. The revised maximum capacity will not be less than the demand measured during the previous two years.

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### 3 Financial guarantee for Ausgrid works

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#### 3.1 Ausgrid works

There are certain types of work that can only be done by Ausgrid due to system security, reliability or health and safety obligations, or because the work requires specialised services that cannot be provided by other parties. To decide if work required for a new connection or connection alteration can only be done by Ausgrid, we carry out a risk assessment and make a decision based on our risk management principles.

Where Ausgrid carries out this work and the work is not ancillary services to be funded by the customer:

- it is funded by Ausgrid as a standard control service and the costs are recovered on an ongoing basis via distribution use of system charges; and
- Ausgrid may require the customer to provide a security fee to ensure the costs are adequately recovered from that customer.

The security fee is required where the Ausgrid funded work is substantial (nominally \$1m or more) and the augmentation is initially only for the customer's benefit. In these circumstances Ausgrid considers there is a material risk that Ausgrid may not receive the estimated incremental revenue from the construction of the augmentation works.

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#### 3.2 Security fee is provided as a financial guarantee

The security fee is provided in the form of a financial guarantee.

The financial guarantee is a binding legal agreement the customer commits to pay Ausgrid a minimum level of network revenue each year to cover the costs of the Ausgrid funded augmentation works. The period of the financial guarantee is between 5 and 10 years as determined by Ausgrid.

The financial guarantee is secured by a bank guarantee or other suitable financial instrument as agreed by Ausgrid. Ausgrid is entitled to draw down on the bank guarantee any shortfall in revenue in accordance with the terms stated in the bank guarantee or other financial instrument.

The financial guarantee is established at the same time as the design of the augmentation and prior to the works being initiated.

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#### 3.3 Amount of the security fee

The maximum amount of a security fee will be:

1. the present value of the incremental costs incurred by Ausgrid in undertaking the work; and
  2. (if this amount is smaller) the estimated incremental revenue that Ausgrid assesses as having a high risk of not being recovered,
- and is determined in accordance with the AER Connection Charge Guidelines.
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## 4 Pioneer Reimbursement Scheme

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**4.1 Establishing Pioneer schemes** A customer (the original customer) who has fully funded a network extension is entitled to have some of their costs reimbursed by Ausgrid if new customer(s) connect to that network extension within 7 years of the asset being electrified under Ausgrid's pioneer scheme.

A pioneer scheme only applies to connection applicants connecting to the network extension at a point outside the boundary of the original customer's development. The pioneer scheme commences on the date the extension asset was electrified.

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**4.2 Payment of the refund** Ausgrid may recover the reimbursement amount from the new customer(s) as part of their connection charges.

As soon as practicable after the new customer pays Ausgrid the reimbursement amount, Ausgrid will pay the reimbursement to either:

- the current owner of the original premises, if the original premises has a single customer; or
- the original connection customer who funded the extension, if the original premises has multiple connected customers.

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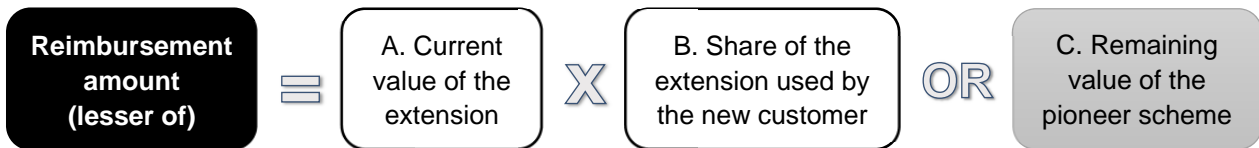
**4.3 How much is the reimbursement amount** The reimbursement amount is the lesser of the calculated refund and the remaining value of the pioneer scheme. The calculated refund is determined based on:

- the current value of the network extension assets, depreciated on a straight line basis over a 20 year period, calculated at the date the new customer accepts the connection offer; and
- the share of the extension used by the new customer(s) relative to other customer(s) already supplied by the extension in terms of maximum capacity, and/or other physical attributes (e.g. length) as applicable.

However, no amount is payable if the total reimbursement payable to all customers already connected is less than \$1000 (\$, real, 2012), adjusted for CPI.

Details of this calculation are provided on the following page.

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$$\text{A. Current value of the extension} = \text{original value of the extension} \times \frac{\text{CPI (2)}}{\text{CPI (1)}} \times \text{depreciation factor}$$

where: **original value of the extension** means Ausgrid’s estimate of the value of the works and only includes the construction works funded by the original customer(s). If the extension assets were constructed to a higher standard or capacity than the least cost technically acceptable standard required by Ausgrid, then only the cost of constructing the extension to the standard required by Ausgrid will be subject to the pioneer scheme.

**CPI(1)** is the average of the consumer price indices (All Groups, All Capital Cities), published by the Australian Bureau of Statistics, for the previous 4 quarters immediately prior to the date that the original customer’s works are completed.

**CPI(2)** is the average of the consumer price indices (All Groups, All Capital Cities), published by the Australian Bureau of Statistics, for the previous 4 quarters immediately prior to date of the new customer’s application for customer connection services.

**The depreciation factor** is determined as follows:

$$\text{Deemed asset life (20 years – asset age) / (Deemed life (20 Years))}$$

$$\text{B. Share of the extension used by a customer} = \frac{\text{customer's use of the extension}}{\text{total utilisation of the extension}}$$

where: **customer’s use of the extension** is the proportion of the extension used by a particular customer as specified on their application for connection services, generally expressed in:

- for a distribution feeder, the customer’s maximum capacity in kVA multiplied by the length of the feeder used by the customer in km; or
- for substations, the customer’s maximum capacity in kVA.

**total utilisation of the extension** is the total utilisation of the extension by all customer who use or will use the extension, including prospective customers, and usually expressed in:

- for a distribution feeder, load in kVA multiplied by the length of the feeder in km
- for substations, load in kVA.

$$\text{C. Remaining value of the pioneer scheme} = \frac{\text{current value of the extension (A)}}{(1 - \text{share of the extension used by the original customer (B)})} \text{ less: total refunds paid by new customers to Ausgrid in respect of those works as at date of the new customer's application for customer connection services.}$$

## 5 Dictionary

Terms marked by an asterisk (\*) have the meaning given in the Rules, the Electricity Supply Act 1995 and the National Electricity Law as amended from time to time. These terms (as at the time of publication of this policy) are reproduced here for convenience of the reader.

<b><i>ancillary services</i></b>	Non-routine services provided to the customer by Ausgrid on an as needed basis and for which ancillary service fees are payable.
<b><i>augmentation*</i></b>	Work to enlarge the distribution system or to increase its capacity to transmit or distribute electricity
<b><i>AER</i></b>	The Australian Energy Regulator
<b><i>ASP</i></b>	An Accredited Service Provider, accredited under the Electricity Supply Act 1995 (NSW).
<b><i>connection*</i></b>	a physical link between a distribution system and a retail customer's premises to allow the flow of electricity
<b><i>connection alteration*</i></b>	an alteration to an existing connection including an addition, upgrade, extension, expansion, augmentation or any other kind of alteration.
<b><i>connection point</i></b>	The agreed point of supply established between Ausgrid and its customer.
<b><i>contestable service</i></b>	A service that Ausgrid determines must be provided by an ASP
<b><i>customer</i></b>	A retail customer, or a real estate developer who requests (or on whose behalf a request is made for) a new connection or connection alteration.
<b><i>distribution system</i></b>	Ausgrid's distribution network, together with the associated connection assets .
<b><i>extension</i></b>	An augmentation that requires the connection of a power line or facility outside the present boundaries of the distribution network owned, controlled or operated by Ausgrid.
<b><i>feeder</i></b>	Any overhead line or underground cable that is part of Ausgrid's distribution system.
<b><i>maximum capacity</i></b>	As defined in section 2 of this policy
<b><i>micro embedded generator</i></b>	A retail customer who operates, or proposed to operate, an embedded generating unit for which a micro EG connection is appropriate (being a connection of the kind contemplated by Australian Standard AS 4777 (Grid connection of energy systems via inverters))
<b><i>network*</i></b>	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 Ausgrid, the electricity network owned, operated or controlled by Ausgrid.
<b><i>new connection*</i></b>	A connection established or to be established, in accordance with Chapter 5 of the NER and applicable energy laws, where there is no existing connection.
<b><i>the Rules</i></b>	The National Electricity Rules
<b><i>real estate developer*</i></b>	A person who carries out real estate development (being the commercial development of land including its development in one or more of the following ways: <ul style="list-style-type: none"> <li>• subdivision;</li> <li>• the construction of commercial or industrial premises (or both); and</li> <li>• the construction of multiple new residential premises.)</li> </ul>
<b><i>retail customer</i></b>	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 an embedded generator and a micro embedded generator (as those terms are defined in the Rules).
<b><i>rural area</i></b>	An area zoned as rural under a local environment plan made under the Environmental Planning and Assessment Act 1979 (NSW).