



**Proposed Customer Connection Services Policy
2019 - 2024**

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1. Introduction

1.1. Power and Water Corporation - Power Networks Role

Power and Water Corporation (Power and Water) is the Government Owned Corporation responsible for the provision of electricity networks and water and sewerage services across the Northern Territory (NT).

This document refers only to Power and Water in its capacity as a network provider, licensed by the Utilities Commission under the *Electricity Reform Act*.

1.2. PURPOSE AND SCOPE OF DOCUMENT

This Connection Policy (the Policy) sets out the circumstances in which Power and Water requires a retail customer or real estate developer to pay a connection charge and how these charges are calculated for the provision of connection services.

The Policy applies to connections requested from 1 July 2019 for new or modified connections during 2019-2024 regulatory control period (1 July 2019 to 30 June 2024) inclusive.

The Policy was prepared in accordance with:

- the NT National Electricity Rules (NT NER) Chapter 6 Rule 6.7A.1 (a);
- the connection charge principles set out in Part E of Chapter 5A of the NT NER; and
- the connection charge guidelines for electricity retail customers published by the Australian Energy Regulator (AER).

The Policy applies only to connection applicants for electrical installations in the local electricity systems as defined in Schedule 2 of the *National Electricity (Northern Territory) (National Uniform Legislation) Act*.

1.3. CONTACT DETAILS FOR FURTHER INFORMATION

For further information about this Policy, please contact:

Executive General Manager Power Networks
Power and Water Corporation
GPO Box 3596
Darwin NT 0801
Phone: (08) 8985 8431
Email: customerservice@powerwater.com.au



2. Who Is A Connection Applicant?

A connection applicant is typically one of the following:

- a retail customer;
- a retailer or other person acting on behalf of a retail customer; or
- a real estate developer.

3. What Are Connection Services?

Connection services involve the following types of work:

- extending the existing network to reach a connection applicant (extension);
- connecting a home, business or other premises to the electricity distribution network (premises connection);
- accessing more electricity from the shared distribution network than currently possible (augmentation).

There are two types of connection services offered by Power and Water:

- basic connection services (as described in Section 3.1); and
- non-standard connection services (as described in Section 3.2).

3.1. BASIC CONNECTION SERVICES

In general, basic connection services include:

- connection of residential and small non-residential premises where:
 - supply is available (i.e. there is a line available at the required voltage and with sufficient capacity for the proposed connection);
 - high voltage network extension is not required;
 - low voltage network extension is limited to one span of overhead or 25 metres of underground cable;
 - there is no network augmentation required; and
 - the maximum demand of the electrical installation is less than or equal to 10 kVA single phase or 25 kVA three phase.
- connection of micro embedded generation (e.g. PV installations) with exporting capability and inverter capacity as per the definition in AS4777 and consistent with Power and Water's process regarding small inverter connected generators¹, where there is no network augmentation required;
- temporary low voltage connections for short term supply, which is defined as a connection for a period of 12 months or less; or
- connection of unmetered supply (other than public lighting).

¹ Power and Water's small inverter connected generators process can be found at powerwater.com.au/solar



Basic connection services do not apply to non-standard connections, such as:

- real estate developers; or
- embedded generators that are not micro-embedded generators.

3.2. NON-STANDARD CONNECTION SERVICES

Non-standard connection services are:

- dedicated services that only supply the connection applicant requirements, at the time of application;
- not basic connections services; and
- meet the capacity requirements of the connection applicant.

Examples of these non-standard connection services include:

- Extension of the existing high voltage network.
- Upgrading existing distribution substation capacity where it only supplies the applicant.
- Establishment of a dedicated zone substation and/ or line(s) for a large applicant.
- Augmentation of the shared network only if the requested increase in demand is greater than planned for within Power and Water's planning horizon.

4. Shared Network Augmentation

Shared network augmentation refers to works undertaken to increase the capacity of Power and Water's network to supply more than one customer.

The types of work under this category include:

- Creating new zone substations or increasing the capacity of existing zone substations.
- Creating new transmission lines or increasing the capacity of existing transmission lines.
- Increasing the capacity of distribution lines and distribution transformers that supply more than one customer.

All shared network augmentation to meet increases in demand is performed by Power and Water.

Power and Water produces an annual update to its network management plan that considers the forecast changes in electricity demand to all parts of the network and develops an efficient investment plan to meet the required reliability for that demand. Any increase in capacity by a connection applicant that falls outside the planning horizon and causes investment to be brought forward will be treated as a non-standard connection service.

5. Who Can Provide Connection Services?

5.1. BASIC CONNECTION SERVICES

All basic network connection services are provided by Power and Water.



5.2. NON-STANDARD CONNECTION SERVICES

Power and Water can provide all non-standard connection services to a connection applicant or the connection applicant can choose to undertake some elements of connection works as set out below.

The connection applicant may choose to use an accredited service provider as an alternative to Power and Water to undertake design and / or construction work downstream of the connection to Power and Water's existing network, where it can be constructed safely in isolation of Power and Water's existing network. This may include extensions and all reticulation within property developments.

Under this circumstance, the following is required:

- The infrastructure must be designed and constructed to Power and Water standards and guidelines as published on Power and Water's website.
- The connection applicant must create registered electricity easements in favour of Power and Water, as required, for the accommodation of the necessary network assets, in accordance with Power and Water's Guidelines for Developers of Subdivisions and Electricity Infrastructure (NP020). The costs associated with establishing registered easements will be met by the connection applicant.
- The distribution system assets that are funded by the connection applicant are to be vested to Power and Water upon acceptance by Power and Water. Acceptance will include inspecting, testing and making the final connection to works undertaken by third parties.
- The connection applicant is to provide a warranty on the installed infrastructure covering workmanship and defects for two years.

The market for the provision of works associated with non-standard connection services via an alternative accredited service provider is variable in the NT and Power and Water will undertake these works in the absence of an alternative provider or as requested by a connection applicant.

6. What Are The Charges For Connection Services?

This section sets out how Power and Water will calculate charges for basic and non-standard connection services for work it undertakes.

6.1. BASIC CONNECTION SERVICES

Basic connection services are classified as standard control services (SCS) by the AER.

Power and Water charges a fixed capital contribution fee at standard terms and conditions for its basic connection services. This has been set to provide Power and Water with full cost recovery.

In addition, where a customer is seeking the connection of micro embedded generation, a charge for reconfiguration of the electricity meter (where Power and Water is the meter provider) may be levied.



The relevant fees are the AER approved tariffs for the year, contained in Power and Water's published Pricing Schedule².

If the connection applicant elects to negotiate Power and Water's basic connection services terms and conditions, the service requested ceases to be a basic connection service and becomes a non-standard connection service.

6.2. NON-STANDARD CONNECTION SERVICES

Non-standard connection services are classified as standard control services (SCS) by the AER.

Under the NT NER, Power and Water is permitted to seek a capital contribution for non-standard connection services where the future incremental revenue received from those services (through Power and Water's common distribution network charges) does not cover the costs incurred by Power and Water in providing the services.

Power and Water will fully recover the capital costs from the connection applicant. This ensures that revenue from shared network charges is not used to fund capital works for non-standard connection services, minimising cross subsidies between existing customers and new/upgraded service customers.

The total charge (TC) for a non-standard connection service is:

$$TC = AC + ICCS + ICSN - \text{Rebate} + PS + ES + SF$$

Where:

AC = Ancillary Charges

These are upfront fees for the preparation of a non-standard connection service offer in accordance with Power and Water's published Pricing Schedule.

ICCS = Incremental Cost Customer Specific

These costs are for works undertaken by Power and Water which are dedicated to the connection applicant to meet the requested demand and will be fully funded by the connection applicant.

ICSN = Incremental Cost Shared Network

These are the costs incurred by Power and Water on its shared network which are not used solely by the connection applicant to meet the requested demand.

Generally, there will be no charge for shared network augmentation as these costs are recovered through Power and Water's shared network charges which apply to all customers.

The exception is when the requested demand has not been allowed for in Power and Water's network planning cycle. In this situation, a charge will be applied that reflects the cost of bringing forward investment from future regulatory control periods.

² Power and Water's Pricing Schedule is available at powerwater.com.au/networkpricing



Rebates

Rebates will only be considered where:

- A. additional capacity over and above the foreseeable forecast growth in the connection applicant's demand is installed; and
- B. there is a high degree of certainty of that capacity being utilised by other subsequent connection applicants within Power and Water's planning horizon.

If a rebate is available, it will be applied at the time of connection of the applicant. If a rebate is not available, connection applicants, other than real estate developers, have access to the Pioneer Reimbursement Scheme.

Rebates will only apply to the installed cost of distribution transformers and the rebate will be calculated as:

$$\text{\$Rebate} = \text{\$ Installed distribution transformer} \times \left(\frac{\text{unused capacity (kVA)}}{\text{distribution transformer nameplate rating (kVA)}} \right)$$

Rebates may also be applied to a connection applicant who has used an accredited service provider and Power and Water have required the applicant to install capacity, or the scope of works is greater than the capacity required for the foreseeable requirements of the development, and Power and Water forecast to utilise the additional capacity within its planning horizon. Examples of this include – larger cables, large distribution substations, additional cables or conduits, etc. In this circumstance Power and Water will rebate the incremental amount that would have applied if Power and Water installed the additional incremental capacity.

PS = Pioneer Reimbursement Scheme

A connection applicant who has fully funded³ a network extension is entitled to have some of their costs reimbursed by Power and Water if a new customer(s) connects to that network extension within 7 years of the asset being energised⁴ under Power and Water's pioneer scheme. The scheme is capped by the funding outlaid by the original connection applicant.

The scheme only applies to distribution network assets that have been provided by Power and Water and where a rebate has not been applied.

If the total refund to all customers under the pioneer scheme, in respect of a new connection, would be less than \$1,000, then the new customer will not be charged .

Power and Water may recover the refund amount from the new connection applicant(s) as part of the connection charges paid by the subsequent connection applicants. Power and Water will pay the refund as soon as practicable after the new customer pays Power and Water the refunded amount.

³ Being the original connection applicant or current owner of the property where no rebate has been applied.

⁴ However, no amount is payable if the total reimbursement payable to all customers already connected is less than \$1000 (2019\$) adjusted for CPI (Consumer Price Index).



Power and Water will pay the refund to either:

- the current owner of the original premises, if the original premises is owned by a single entity; or
- where two or more connection applicants have jointly procured and/or funded the original works, the rebates will be divided between the current owners in accordance with the proportions in which they procured and/or funded the works.

The reimbursement payable under the pioneer scheme by a new connection applicant to an existing customer is calculated as:

$$(\$PS) = (Asset\ Value) \times (Asset\ Fraction) \times (Capacity\ Fraction)$$

- Asset Value - the current value of the network extension assets, depreciated on a straight-line basis over a 20 year period;

$$(Asset\ Value) = (Original\ Infrastructure\ Value) \times \left[1 - \frac{(Asset\ Age)}{20} \right]$$

- Asset and Capacity Fractions - the share of the common part of the extension used by the new connection applicant(s) relative to other connection applicant(s) already supplied by the extension in terms of maximum capacity, and/or other physical attributes (e.g. length) as applicable.

$$(Asset\ Fraction) = \frac{\sum_{k=1}^n (Length\ of\ Common\ Segment)_k}{(Total\ Length)}$$

$$(Capacity\ Fraction) = \frac{(Est\ Max\ Demand)}{(Est\ Max\ Demand) + (Existing\ Max\ Demand)}$$

The pioneer scheme commences on the date the extension asset was energised. The reimbursement amount is determined at the date the subsequent customer accepts the connection offer.

If the extension assets were constructed to a higher standard or capacity than the least cost technically acceptable standard required by Power and Water, then only the cost of constructing the extension to the standard required will be subject to the pioneer scheme.

A pioneer scheme is not available to a real estate developer.

ES = Equalisation Scheme

The equalisation scheme only applies where a rebate has been paid within seven years of the original connection applicant's premises being energised. The scheme is designed to minimise subsidies between existing users and new customers. The equalisation scheme applies to all connection applicants where surplus capacity, through previously funded extension assets, is accessed by a subsequent connection applicant. The amount payable by the connection applicant under the equalisation scheme is:

$$\$ES = \$\text{Installed distribution transformer} \times \left(\frac{\text{applicant requested capacity (kVA)}}{\text{distribution transformer nameplate rating (kVA)}} \right)$$

SF = Security Fee

If Power and Water determine there is a reasonable risk that it may not earn the incremental revenue on which the investment in the shared network was based,



Power and Water may require an applicant to provide an unconditional, irrevocable bank guarantee (or equivalent financial instrument), under terms acceptable to Power and Water. The bank guarantee must guarantee the portion of new revenue that Power and Water considers to be at risk of not being recovered (excluding the operating and maintenance component) while providing services to the connection applicant.

Circumstances where Power and Water may require a security fee, include but are not limited to, the following:

- The connection applicant is a large connection applicant or concurrent multiple applicants.
- The forecast capital costs associated with augmenting the shared network exceed \$100,000 for any connection applicant.

If Power and Water determine there is reasonable risk that an extension or upgrade will not proceed, Power and Water may require a connection applicant to enter into an Early Works Agreement and provide an unconditional, irrevocable bank guarantee (or equivalent financial instrument), under terms acceptable to Power and Water, to cover the costs incurred during the design phase of the project.

Where a connection applicant is required to provide security under this clause, they will be required to provide such security before the commencement of works to connect to Power and Water’s network.

The value of the security fee will be the estimated shortfall in the present value of the costs that Power and Water will incur in undertaking any shared network augmentation less the present value of the incremental revenue relating to the shared network capacity capital expenditure, including Power and Water’s assessment as having a high risk of not being recovered.

The present value of revenue is calculated over the following periods, noting that Power and Water, at its reasonable discretion, may apply a shorter time period reflecting connection tenure risk:

Residential	30 years
Non-residential	15 years

6.2.1. Special Conditions for Non-registered Embedded Generators

Connection services for non-registered embedded generators (other than micro embedded generators) will be fully funded by the connection applicant and will be calculated based on the total cost of the works required to support both the generation (expected electricity output) and load components of the connection service.

Non-registered embedded generators who seek to remove a specific network constraint will generally be required to pay for the cost of removing the constraint.

Rebates and the Pioneer Scheme will not apply.



6.2.2. Non-standard Connection Offer

Power and Water will use its best endeavours to provide a non-standard connection offer within 65 business days of a connection application being lodged.

Power and Water will advise the connection applicant within 20 business days of receiving the application if there is any additional information that must be supplied prior to making an offer. The time taken by the applicant to provide the additional information is excluded from the 65 business day period.

Power and Water's non-standard connection offer will, where applicable, include the following details for the total connection charge:

- A. Ancillary costs associated with providing the offer (including any variable components and the basis of calculation).
- B. Cost of network extension assets:
 - i. contestable component (i.e. built-in isolation from Power and Water's existing distribution network or as determined by Power and Water); and
 - ii. non-contestable component (i.e. work required to connect the contestable component to Power and Water's existing distribution network)
- C. Applicable rebate.
- D. Details of the applicant's cost allocation towards upstream pioneer scheme(s).
- E. Details of the applicant's cost allocation towards upstream equalisation scheme(s).
- F. Any other incidental costs and the basis of their calculation including, if relevant, costs of minor deviations from the standard specification for a basic connection service.
- G. A security fee.

7. Prepayment

For works undertaken by Power and Water with a value greater than \$5,000, the payment of the connection service charges will be recovered through a single up-front payment from the connection applicant to Power and Water. The payment must be made to Power and Water before the related works commence, unless otherwise negotiated with the connection applicant. For staged construction work, partial prepayments for works with a value greater than \$5,000 may be applied by Power and Water.

In the case of works that are gifted to Power and Water, and are installed with excess capacity at Power and Water's request, payment for the cost of the excess capacity to the connection applicant will take place at a time agreed to by Power and Water and the party undertaking the works and/or the connection applicant.

8. Dispute Resolution

Any dispute with Power and Water in relation to connection offers will be managed via the following process.



8.1. ALL DISPUTES ARISING DURING THE COURSE OF NEGOTIATING A NEGOTIATED DISTRIBUTION SERVICE MUST BE DEALT WITH IN ACCORDANCE WITH:

- A. Part 10 of the National Electricity Law (NEL) and Part L of Chapter 6 of the NT NER in the event that those provisions have commenced and are in force in the Northern Territory at the time the dispute arises and apply to the dispute; or
- B. such alternative measures as are approved for that purpose under a Northern Territory Regulatory Instrument; or
- C. in the event that neither 8.1 (a) nor 8.1(b) applies, the following process:
 - (i) Representatives of Power and Water and a connection applicant must meet within 5 business days after a written request by a disputing party, and must attempt to resolve the dispute by negotiations in good faith.
 - (ii) If the dispute is not resolved within 10 business days after their first meeting, the dispute must be referred to the senior executive officer of each disputing party who must attempt to resolve the dispute by negotiations in good faith.
 - (iii) If the dispute is resolved under sub-clause (i) or (ii), the disputing parties must enter into a written agreement or deed recording the terms of the resolution, sign the agreement or deed, and must adhere to its terms.

8.2. IN THE EVENT THAT THE DISPUTE RESOLUTION PROCESS REFERRED TO IN CLAUSE 8.1(B)(IF APPLICABLE) OR 8.1(C) DOES NOT RESOLVE THE DISPUTE, THEN THE DISPUTE MUST BE DEALT WITH IN ACCORDANCE WITH:

- a) the NT National Electricity Law and Chapter 8 of the NT NER in the event that those provisions have commenced and are in force in the Northern Territory at the time the dispute arises and apply to the dispute; or
- b) such alternative measures as are approved for that purpose under a Northern Territory Regulatory Instrument; or
- c) in the event that neither 8.2 (a) nor 8.2(b) applies, then the parties must endeavour to resolve any dispute by mediation as follows:
 - (i) Such mediation is to be conducted by a mediator who is independent of the parties and appointed by agreement of the parties or, failing agreement within 7 days of receiving any party's notice of dispute, by a person appointed by the Chair of Resolution Institute, (ACN 008 651 232, Level 2, 13-15 Bridge Street, Sydney NSW 2000; telephone: 02 9251 3366, email: infoaus@resolution.institute) or the Chair's designated representative.
 - (ii) The Resolution Institute Mediation Rules will apply to the mediation.
 - (iii) It is a condition precedent to the right of either party to commence arbitration or litigation other than for interlocutory relief that it has first offered to submit the dispute to mediation.

9. Types of Customer Contracts

There are two types of connection contracts:



- a **(physical) connection contract** associated with establishing or altering the physical connection to the distribution network (described in Section 9.1 of this Policy); and
- a **customer (supply) connection contract** associated with the ongoing supply of electricity to a retail customer's premises. This contract is normally⁵ deemed to apply and the customer does not need to sign or agree to the contract. It commences upon energisation or when a customer starts consuming energy.

9.1. (PHYSICAL) CONNECTION CONTRACT – ESTABLISHING OR ALTERING A PHYSICAL CONNECTION

There are two types of physical connection contracts for establishing or altering connections:

- A. Model standing offer (MSO) – that must be approved by the AER and can be accepted by a retail customer, either by:
 - i. accepting the terms and conditions of the MSO when they make an application for a new or altered connection (i.e. an expedited process); or
 - ii. formally receiving and accepting a connection offer. It should be noted that both the offer and the acceptance must be in writing and can delay connection by up to 55 business days.
- B. non-standard connection contract – where Power and Water negotiate the terms and conditions with a connection applicant, including the price of the connection offer. A formal offer by Power and Water and acceptance of the connection contract by the connection applicant occurs via this process.

9.2. CUSTOMER (SUPPLY) CONNECTION CONTRACT

There are three types of customer connection contracts for the ongoing supply of electricity:

- A. Deemed Standard Supply Contract⁶ – applies to all small customers (i.e. electricity consumption less than 750MWh per annum) unless they have a non-standard customer connection contract (Non-standard customer supply contract – see below). The Deemed Standard Supply Contract commences when a customer's premises is energised or when a customer commences consumption of electricity.
- B. Deemed Large Supply Contract – terms and conditions must be approved by the AER. Where a Deemed Large Supply Contract has not been approved, the Deemed Standard Supply Contract applies to a large customer (i.e. electricity consumption is more than 750MWh per annum) unless they have a Non-standard customer supply contract. A Deemed Large Supply Contract commences when a customer's premises is energised or when a customer commences consumption of electricity.

⁵ These contracts are always deemed to apply unless they have been negotiated between Power and Water and the retail customer. If negotiated, they commence when signed by both parties.

⁶ Power and Water's DSSC is based on the Model terms and conditions detailed in the National Energy Retail Rules (NERR) Schedule 2



- C. Non-standard customer supply contract – terms and conditions are negotiated between Power and Water and the customer and a fee covering the costs of the negotiation will be charged in advance.

Note – copies of both deemed contracts are available on Power and Water’s website [add link once approved].

10. Accounting Treatment of Connection Services

10.1. BASIC AND NON-STANDARD CONNECTION SERVICES

The cost of Power and Water’s assets funded by customers will be entered into Power and Water’s regulatory asset base at zero value. The value of any rebate paid at the time of connection will be funded from the standard control capital expenditure allowance approved by the AER and, over time, offset by subsequent equalisation payments by future connection applicants.

10.2. SHARED NETWORK AUGMENTATION

The cost of this shared network augmentation will be funded from the standard control capital expenditure allowance approved by the AER net of any contribution for advancing investment as described under section 6.2 “ICSN = Incremental Cost Shared Network”.

10.3. ASSETS GIFTED TO POWER AND WATER

The value of assets gifted to Power and Water by a connection applicant will be entered into Power and Water’s regulatory asset base at zero value.



11. Definitions

The following definitions are provided to assist a connection applicant in understanding some of the terminology that may be encountered during interactions with Power and Water in relation to connections.

Term	Definition
Accredited Service Provider	A service provider who has been accredited by Power and Water in accordance with its relevant policies to design, construct, install and commission electricity distribution system assets.
AER	Australian Energy Regulator
Connection	A physical link between a distribution network and a retail customer's premises to allow the flow of energy.
Connection alteration	Any kind of alteration to an existing connection including, but not limited to, an addition, upgrade, extension, expansion or augmentation.
Connection applicant	An applicant for a connection service from one of the following categories: <ol style="list-style-type: none"> 1) a retail customer; or 2) retailer or other person acting on behalf of the customer; or 3) real estate developer.
Distribution network	The 22kV and 11kV electricity system owned and operated by Power and Water.
Distribution substation	A modular 22kV or 11kV to low voltage ground mounted transformer and switching assembly to provide capacity and facilitate connection of multiple supplies and customers.
Low voltage network	The 400V / 230V electricity system connecting low voltage supplied customers.
Northern Territory Regulatory Instrument	An Act, regulation, licence, code, guideline or other regulatory instrument to which Power and Water is subject under Northern Territory law.
NT NER	Northern Territory National Electricity Rules
Planning Horizon	Routine forward network development plan for future works: <ul style="list-style-type: none"> • distribution networks (up to 11/22kV) – 5 years; and • zone substations and transmission networks (66kV and 132kV) – 10 years.
Real Estate Developer	<ol style="list-style-type: none"> 1) Two or more property titles are created from one or more allotments; or 2) multi tenanted sites with two or more metered retail customers; or 3) amalgamation of multiple allotments to a single title.
Retail customer	A person to whom electricity is sold by a retailer.
Standard Control Service	Services that are central to electricity supply and therefore relied on by most (if not all) customers such as building and maintaining the shared distribution network. These services are regulated by the AER.
Zone substation	A substation for the purpose of connecting a distribution network to a sub-transmission network.