Attachment 2: Connection policy

Revised regulatory proposal for the ACT electricity distribution network 2019–24

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evoenergy

Table of contents

List of tables

Overview

Evoenergy's connection policy sets out the circumstances in which connection charges are payable and the basis for determining the amount of such charges. The policy has been prepared in accordance with the requirements in Chapter 5A of the National Electricity Rules (Rules) and the Australian Energy Regulator's (AER's) *Connection charge guidelines for retail electricity customers, under Chapter 5A of the National Electricity Rules, version 1.0* (AER connection charge guidelines). The policy uses the terminology and concepts used in the Rules and the AER connection charge guidelines. This overview provides a simplified summary of the key elements of the policy.

The connection charges payable by a connection applicant will depend on the type of connection and the connection assets and services involved. In general, the total charge for a new connection or altered connection may comprise:

- *A capital contribution toward the costs of the assets used to provide the connection.* Where the estimated incremental costs of a connection exceed the estimated incremental revenue, the connection applicant may be required to make a contribution toward the costs of the premises connection assets and any required network extensions. A shared network augmentation charge may also apply where the customer's estimated maximum demand exceeds the threshold of 100 Amps per phase and augmentation of shared network assets is required.
- *Charges for ancillary services, services provided at above minimum standard requirements at the customer's request, and special connection requirements*. Ancillary services may include asset removals or relocations, temporary connections and service upgrades. Connection applicants pay for any required ancillary services, on a cost recovery basis at rates approved by the AER. The additional costs above least cost acceptable solution or special requirements (for example due to difficult site conditions) must also be paid by the connection applicant, at AER approved rates.
- *Charges payable under the pioneer scheme.* Where a connection involves the use of extension assets paid for by an original customer, within the past 7 years, the subsequent customer may be required to make a contribution towards the cost of the extension assets. The original customer may be eligible for a refund.

Following the introduction of the Power of Choice reforms on 1 December 2017, which introduce contestability to metering services, Evoenergy will no longer be providing metering services for new connections or connection change requests. Retailers will provide metering services and customers will need to obtain a metering quotation from their retailer during the connection process.

The connection policy sets out the connection charges that may apply for 14 different types of connections (see Chapter 4), ranging from basic connections (requiring no augmentation of the network) for residential and small commercial customers on unserviced blocks in urban areas, through to large (>100 Amps) commercial connections requiring a new substation, subdivision estate reticulation, and embedded generator connections.

Residential and small low voltage commercial customers in urban areas seeking a basic connection, which does not require network augmentation or extension and involves maximum demand of less than 100 Amps, will generally not be required to make a capital contribution. Charges will apply, on a fee or quoted basis, where the connection involves customer specific ancillary services (such as a temporary connection) or services above the least cost technically acceptable solution (LCTAS), or special requirements. The pioneer scheme will generally not apply to residential and small commercial customers, although it may in some cases – for example for rural connections requiring network extensions.

Larger commercial customers and real estate developers may be required to make a capital contribution toward the costs of premises connection assets and network extensions, depending on the outcome of the incremental cost-revenue-test (ICRT). Design and administration costs will be included in the calculation of the required contribution. Charges will also apply where the connection involves ancillary services and higher standard services or special requirements. The pioneer scheme may also apply to these connection applicants. Large commercial customers and real estate developers connecting a load to the network may also be required to pay a shared network augmentation charge. No shared network augmentation charge will apply for subdivision estate reticulation.

The connection policy also contains requirements for financial guarantees and prepayments. Where Evoenergy considers there is a significant risk that it may not earn the estimated incremental revenue from the connection applicant, it may require a financial guarantee in the form of a bank guarantee. This will generally only apply to large connections that are the subject of a negotiated offer. For connections where the estimated connection charges are greater than $50,000, Evoenergy requires an advance payment of 50 per cent of the total charges and a bank guarantee for the balance. Full prepayment is required at the time the connection offer is formally accepted for connections where the estimated connection charges are less than $50,000.

1. Purpose and scope

Evoenergy has prepared this connection policy in accordance with the requirements in Chapters 5A and 6 of the *National Electricity Rules* (Rules) and the Australian Energy Regulator's (AER's) *Connection charge guidelines for retail electricity customers, under Chapter 5A of the National Electricity Rules, version 1.0* (AER connection charge guidelines). The connection policy sets out the circumstances in which connection charges are payable and the basis for determining the amount of such charges.

The connection policy applies to all:

- new connections to Evoenergy's electricity network; and,
- modifications or alterations to existing connections to Evoenergy's electricity network;

requested after 1 July 2019, provided that the party requesting the new or modified connection is not a registered participant, as defined in the Rules.[1] In the event that the party is a registered participant, Evoenergy will assess the connection application in accordance with Chapter 5 of the Rules.

As well as the requirements relating to connection charges and connection policies (in Part E), Chapter 5A of the Rules contains requirements for model standing offers (MSOs), connection contracts, negotiated connections, connection applications and dispute resolution. These matters are beyond the scope of the connection policy.[2] Information on connection application processes, timeframes and contracts and copies of Evoenergy's MSOs is available on Evoenergy's website.[3]

This connection policy applies for the regulatory period from 1 July 2019 to 30 June 2024. It replaces the connection policy approved by the AER for the regulatory period, from 1 July 2015 to 30 June 2019.

[1] Rules, Chapter 10, Glossary

[2] Connection policy is defined in the Chapter 5A of the Rules: "*connection policy* means a document, approved as a connection policy by the *AER* under Chapter 6, Part E, setting out the circumstances in which *connection charges* are payable and the basis for determining the amount of such charges".

[3] Please refer to https://www.evoenergy.com.au/en/residents/documents

2. Evoenergy's connection services

Evoenergy provides three broad types of connection services, as described in the following sections of this policy.

2.1 Basic connection services

Basic connection services involve a connection between a distribution system and customer's premises (excluding a non-registered embedded generator's premises) in the following circumstances:

a. Either:
   i. the retail customer is typical of a significant class of retail customers who have sought, or are likely to seek, the service; or
   ii. the retail customer is, or proposes to become, a micro-embedded generator; and
b. Provision of the service involves minimal or no augmentation of the distribution network; and
c. In any case, maximum demand is not more than 100 Amps per phase.

Basic connections are provided under a basic connection offer. In accordance with Chapter 5A of the Rules, Evoenergy has prepared two model standing offers (MSOs) for basic connection services – one for retail customer connections which do not include micro-embedded generators and one for customer connections which include micro-embedded generators.[4] The MSOs have been approved by the AER.

2.2 Major connection services

Major connections are primarily connections which have one or more of the following characteristics:

- maximum demand is greater than 5 MVA; or
- the site includes embedded generation of greater than 30 kW; or
- the site situation is complex or sensitive.

Major connections are provided under a negotiated offer.

2.3 Minor or routine connection services

Minor or routine connection services are all remaining types of connections which fall outside the basic connection and major connection services categories described above. Minor and routine connections are too complex to be considered basic, but too small to be considered major connections. These connections are generally for projects between 100 Amps per phase and 5 MVA.

Evoenergy's minor or routine connection services are usually provided under a negotiated offer due to large variations in the scope of works and possible solutions.

[4] Micro-embedded generators are up to 5 kW for single phase generators and 30 kW for three phase connections

However, relatively simple connection works within this category are provided under the basic connection offer.

Major and minor/routine connections usually include some components which are negotiated and other components which are subject to regulated charges, depending on the parameters of the job. For example, a customer may have special requirements relating to reliability or the location of a substation.

An indicative classification of connection types into the basic, minor/routine and major categories is shown in Table 1. The exact classification depends on individual job parameters and the scope of work.

The connection charges that apply to each of the connection types listed in Table 1 will depend on the connection services and ancillary services required – for example whether network extensions or augmentations are required, whether asset removals and relocations are required, and whether the customer requests services to a standard above the least cost technically acceptable solution (LCTAS). The full list of ancillary services offered by Evoenergy is provided in Attachment A to this policy.

Table 1. Indicative classification of connection types

	Type of connection	*Basic*	*Minor / Routine*	*Major*
1	Single service connection – residential or small commercial load, urban location, greenfield	✓	✓	
2	Single service connection – residential or small commercial load, urban location, brownfield/already serviced block	✓	✓	
3	Single service connection – residential or commercial load, rural area	✓	✓	
4	Low voltage (LV) consumer mains		✓	
5	LV commercial or residential connection (no substation required)	✓	✓	
6	LV commercial or residential connection (substation required)		✓	✓
7	High voltage (HV) commercial connection		✓	✓
8	Subdivision estate reticulation, residential underground, Category 1		✓	
9	Subdivision estate reticulation, residential or commercial or mixed load, other than Category 1		✓	✓
10	Multi-unit block (no substation required)		✓	
11	Multi-unit block (substation required)		✓	
12	Extra-large block reticulation (multi hectare blocks)		✓	✓
13	Embedded generator < 30 kW	✓	✓	
14	Temporary connections	✓	✓	

Connection offers will include an itemised statement of the relevant cost components and connection charges.[5] The potential cost components are listed in Table 2. The first three items (A, B and C) are the most commonly applied.

[5] As required by clause 5A.E.2 of the Rules.

Table 2. Customer connections – potential cost components

	Cost component	*Description*
A	Premises connection assets	These assets are dedicated (or predominantly dedicated) to the single customer's connection, normally located on the customer's premises or in the immediate vicinity of the customer's premises (the location may depend on planning requirements). These assets are unlikely to be used for the supply of other customers. Customers may be required to make a reasonable capital contribution towards the cost of premises connection assets in certain circumstances (see Chapters 3 and 4 of this policy). The required capital contribution will be determined using the incremental cost-revenue-test (ICRT) as specified in the AER connection charge guidelines (see Attachment B of this policy). The required capital contribution may be adjusted for in-kind contributions made by the customer (for example it may be more efficient for a developer to provide some civil works). The in-kind contribution will generally be valued at the avoided cost to Evoenergy.
B	Extensions	Extensions involve extending the network outside the present boundaries. For load customers, the extension assets are located between the existing network (upstream linkage point) and the premises connection assets. For reticulation, such as subdivision estate reticulation, extension assets are located between the existing network (downstream linkage point) and estate reticulation assets. These are shared assets or dedicated assets that could be shared. These assets extend the existing network to a connected new site – for example: • Point-of-Entry cubicle that can be looped out of to supply another customer, chamber substations (even those located within a customer block) that can be used to supply an alternative customer, HV and LV cables that are extended to a new customer, but can be used to supply an alternative customer. Customers may be required to make a reasonable capital contribution towards the cost of extension assets in certain circumstances. The required capital contribution will be determined using the ICRT. More information is provided in Chapters 3 and 4 and Attachment B of this policy. The required capital contribution may be adjusted for in-kind contributions made by the customer (for example it may be more efficient for a developer to provide some civil works). The in-kind contribution will generally be valued at the avoided cost to Evoenergy.
C	Design and administration	Design and administration costs relating to the connection, including but not limited to design, asset acceptance, project management, project administration, tendering and procurement.[6] These may be included in the ICRT, in accordance with the AER connection charge guidelines.
D	Shared network augmentation	*Augmentation* means works to enlarge the capability of the distributor's network to distribute electricity. The works may include: • Replacement of existing assets with assets of increased capacity or capability – for example, replace HV or LV cable

[6] For connections which require significant design early in the process and, in the assessment of Evoenergy, there is a high risk of the project not going ahead, a deposit for detailed design may be required before design commences (see detailed schedule of services for which a charge may apply in Attachment A). Some network technical enquiry and connection enquiry costs related to specific connections may be recovered up-front through ancillary charges, in particular those that involve costs which are incurred as part of feasibility studies and assessment of connection options.

	Cost component	Description
		with a larger cable, transformer upgrade to a larger transformer; • Installation of a new asset to increase the capacity of an existing segment of the network – for example, install an additional transformer in an existing substation; • Installation of a new asset to increase the performance, functionality or capability of the existing shared network – for example, install additional switchgear into the network. Augmentation may involve augmentation of shared or dedicated assets. This cost category (D) only covers shared network augmentation. Augmentation of the shared network refers to shared network assets capacity and capability increases, other than extensions. Augmentation of dedicated assets is included in premises connection assets (cost category A above) or extensions (category B above) as applicable. Shared network augmentation ($/kVA) charges may apply in certain circumstances, as described in Chapters 3 and 4 of this policy. Customers with load below the 100 Amps per phase threshold are exempt from the shared network augmentation charges.
E	Requirements above least cost technically acceptable solution (LCTAS) and special requirements	Special requirements may be related to legal or statutory requirements, specific site requirements, or other parameters of the job. Examples of above standard requirements include: • provision of a chamber substation instead of a padmount substation, higher reliability, better security of supply, excess length of cable to supply a substation at the back of the customer's block to satisfy architectural requirements, provision of a basement substation, developer requirements for subdivision estate reticulation. Special connection requirements may also be a result of the works scope or parameters . For example: • difficult ground conditions with high rock content (if there are alternative cable routes to meet the safety regulations on the required cable depth), difficult site access, and significant additional costs related to traffic management. Customers requesting a connection service of a higher standard than the LCTAS, or with special requirements, will be required to pay the additional costs. More information is provided in Chapters 3 and 4 of this policy.
F	Asset relocation and removal	Relocation/removal of existing shared or dedicated assets where the request to relocate/remove is integral to the connection works. If the relocation or removal is not part of the connection works (for example if a pole relocation is requested by a customer), the work is not covered by Chapter 5A of the Rules. These charges will be set on a cost reflective basis, with standard fees applying to typical services (for example a simple relocation of a single dwelling service) while non-typical services will be offered on a quoted basis. The charges will be as approved by the AER in the relevant ACT distribution determination.
G	Other ancillary services	The connection may also require other ancillary services – for example a temporary connection or a disconnection. The full list of ancillary services is provided in Attachment A to this policy. Ancillary services charges are set on a cost reflective basis, with standard fees applying to typical services while non-typical services are offered on a quoted basis. The charges will be as approved by the AER in the relevant ACT distribution determination.

Cost component	Description

The installation of new Type 5 and Type 6 meters has ceased following commencement of the *Power of Choice* reforms to metering contestability on 1 December 2017. Instead of Type 5 and Type 6 meters, new and replacement meters must be Type 4. Type 1 to 4 meters[7] are provided in a contestable market by accredited metering service providers selected by the customer's retailer.

The itemised schedule of charges for a connection may also include an amount calculated under Evoenergy's *pioneer scheme*. The scheme involves refunds and charges which may apply to extension assets which are paid for by an original customer but are shared with a subsequent customer within 7 years. Details on the pioneer scheme are provided in Chapter 6 of this policy.

Evoenergy's policy for determining the connection charges for each of the potential cost components shown in Table 2 and the basis on which the connection charges are determined are described in Chapters 3 and 4 of this policy. The policy is consistent with the connection charge principles in Chapter 5A of the Rules and the AER connection charge guidelines.

[7] For more information on meter types refer to the Chapter 7 of the National Electricity Rules

3. Basis for determining connection charges

The method Evoenergy applies in determining connection charges depends on how the connection service is classified by the AER in the relevant ACT distribution determination.[8]

3.1 Standard control services

The costs of providing standard control services are generally recovered through network tariffs. An up-front capital contribution may only be required if provisions for the costs have not already been made through existing distribution use of system charges or a tariff applicable to the connection.[9]

Where an up-front capital contribution is required for standard control services, it is calculated using the incremental cost-revenue-test (ICRT). Under this test, Evoenergy may seek a capital contribution for standard control connection services from a connection applicant if the incremental cost of the standard control connection services exceeds the estimated incremental revenue expected to be derived from the connection.[10] Details of the application of the ICRT are provided in Attachment B to this policy. The cost components included in the ICRT calculation for different types of connections are explained in Chapter 4 of this policy.

As permitted under clause 5.5 of the AER connection charge guidelines, Evoenergy offers a pre-calculated capital contributions for some types of connection services. The pre-calculated capital contributions are based on the application of the ICRT averaged across similar services and expected usage characteristics.

Evoenergy has pre-calculated capital contributions for the following types of connections:

- Subdivision estate reticulation; and
- Connection of HV customers

For other types of connections, the ICRT is applied on a case-by-case basis.

3.2 Alternative control services

Connections may also include services which are classified by the AER as *alternative control services*. Typically, alternative control services include ancillary services, such as asset relocations and removals, customer requirements above LCTAS and special customer requirements.

The cost of these services is not recovered in network tariffs. The charges for ancillary services are paid individually by customers at the time the service is provided. The charges are determined either on a fixed fee or quoted basis.[11] Fixed fees will generally apply for standard or typical services, where costs can be averaged across similar service characteristics. Ancillary fees are approved by AER. Where the service varies from the standard type, a quote will be provided. For example, service upgrades will be subject to fixed charges unless the specific requirements make the job more complex, for example due to significant obstacles to site access or distances beyond the typical

[8] This is consistent with the approach set out in the AER connection charge guidelines, Chapters 2 to 5

[9] Rules clause 5A.E.1(c)(6)

[10] AER connection charge guidelines, clause 5.1.2

[11] AER connection charge guidelines, clause 4.1.2

parameters of a service connection. Where service specifications change or new services are added during the regulatory period, for example as a result of new planning or other regulatory requirements, Evoenergy will submit to the AER proposed amendments to the relevant model standing offers.[12]

3.3 Negotiated services

For services classified by the AER as *negotiated services*, the connection charges will be agreed by the connection applicant and Evoenergy, in accordance with the provisions in Chapter 5A of the Rules and the negotiating framework approved by AER. Evoenergy may require an offer fee for negotiation and preparation of a negotiated connection offer.[13] Where such a fee is required, it may be payable prior to any negotiations and Evoenergy providing an offer to connect.

3.4 Summary

The potential cost components (or aspects of the connection service),[14] the AER classification, and the basis for determining the charges are summarised in Table 3. Details of the charges that may apply for each type of connection are provided in Chapter 4 of this policy.

[12] In accordance with clause 5A.B.6 of the NER

[13] As permitted under clause 5A.C.4 of the NER

[14] Clause 6.7A.1(b)(ii) requires the connection policy to set out the "aspects of a connection service" for which a connection charge may apply.

Table 3. AER classification of services and the basis for connection charges

	Cost component	*Basis for connection charges*
A	Premises connection assets	Where an up-front capital contribution is applied for standard control services, it is calculated using the ICRT for a specific connection or a category of connections. Details on the ICRT and its application to each type of connection are provided in Chapter 4 and Attachment B.
B	Extensions	As above
C	Design and administration	As above
D	Shared network augmentation	Capital contributions for shared network augmentation do not apply to load connections of 100 Amps per phase and below. Customers with load above 100 Amps per phase are required to make a $/kVA contribution toward the cost of augmentation of shared network assets. More details on the shared network augmentation charge are provided below this table. Shared network augmentation charges may apply to embedded generation connections (other than micro generators <30kW connected as part of the basic connection under the relevant model standing offer). Where shared network augmentation charges apply to embedded generators, they are calculated using the ICRT to ensure that any load is taken into account for a connection which includes load as well as generation.
E	Customer requirements above the least cost acceptable solution (LCTAS) and special connection requirements	The charges will be set to fully recover the capital cost of the above-standard requirements and special connection requirements. The charges will generally be on a quoted basis. The LCTAS charge is consistent with the "user pays" principle and ensures that any additional capital cost is allocated to the customer who requires a connection solution that is above the LCTAS. If the customer pays for a solution above LCTAS, the customer's connection agreement may include a requirement to pay for the operations and maintenance costs in relation to the above LCTAS assets
F	Asset relocations and removals	The charges for these ancillary services are on either a fixed fee or quoted basis, as specified in the relevant ACT distribution determination.‡ Fixed fees will generally apply for services typical to the category of connection, where costs can be averaged across similar service characteristics. Where the service varies from the standard type, a quote will be provided.
G	Other ancillary services relating to connections†	The charges are levied either on a fixed fee or quoted basis. The charges are as approved by the AER in the relevant ACT distribution determination.

*The standard control service refers to the premises connection assets, extensions, administration and design costs and augmentations which are provided as part of the LCTAS. Additional requirements above LCTAS are classified as alternative control.

‡Consistent with the AER connection charge guidelines, clause 4.1.2

†The full list of Evoenergy's ancillary services is provided in Attachment A to this policy.

3.5 Shared network asset augmentation charge – upstream augmentation

The upstream augmentation charge is not intended to recover the full cost of shared network augmentation. It is intended to provide a pricing signal to discourage customers and developers from requesting excessive capacity to service developments. The charge provides an incentive for customers to request only capacity sufficient to meet their requirements. The charge is levied in $/kVA where kVA refers to the estimated customer

maximum demand. The charge partially covers the costs of future augmentation of distribution substations and 11 kV and 22 kV feeders. Other upstream assets such as zone substations, switching stations and transmission and sub-transmission lines are fully funded by Evoenergy and are not subject to the charge.

The upstream augmentation charge is calculated by first establishing an average (or benchmark) cost per kVA for augmenting:

- High Voltage (11 kV and 22 kV) feeders; and
- Distribution substations.

The cost applicable to each asset is adjusted by the relevant diversity factor. The factor takes into account the fact that consumers' peak demand draws on the capacity of the network at different times. Therefore, the capacity required for many customers is less than the sum of their capacity requirements. Evoenergy's $/kVA charge is designed to recover relatively small proportion of shared network costs, with the bulk of the cost being recovered through network tariffs.

Developers or customers connecting directly to the HV feeders will pay the upstream augmentation charge applicable for augmenting HV feeders. Developers connecting to a distribution substation will pay the upstream augmentation charges applicable to distribution substations and HV feeders. Developers connecting to the LV circuits would pay the upstream augmentation charge applicable to the distribution substation and HV feeder. If the customer already pays for the upstream asset, such as in the case of dedicated feeders for HV customers, the charge is not levied on those customers to ensure there is no double charging.

The $/kVA charges are calculated by Evoenergy (AER Connection charge guidelines, clause 5.2.8 refers) guidelines and approved by the AER in accordance with the guidelines. The approved $/kVA rates are published in the Schedule of Electricity Network Charges on Evoenergy's website.[15].

To apply the charge, a customer's estimated maximum demand will be calculated using the method applied for the ICRT. The ICRT application details are provided in Appendix B to this policy.

The revenue received from upstream augmentation charges is offset against the regulated asset base. That is, the value of the asset contributed by the customer through the shared network augmentation charge is not included the regulated asset base.[16]

[15] Please refer to https://www.evoenergy.com.au/en/residents/documents

[16] Consistent with clause 11.1.1 of the AER connection charge guidelines (Treatment of augmentation assets).

4. Charge components by connection type

The connection charges payable for each type of connection will depend on the outcome of the application of the ICRT and the particular requirements of the connection. If the outcome of the ICRT is that the estimated incremental revenue exceeds the estimated incremental costs, then the connection is said to “pass the ICRT”, so no capital contribution will be required for premises connection assets or network extensions.

The connection types listed in this chapter correspond to the list in Table 1 (in Chapter 2 of this policy). The following legend applies to the tables for each of the connection types.

Legend for connection charges tables in Chapter 4	
✓	Charge applies
X	Charge does not apply or applies only in rare circumstances
+	Charge may apply depending on the scope and parameters of the connection

4.1 New single service connection (<100 Amps), residential or commercial customer, greenfield and unserviced blocks, urban location

Generally, these types of connections are classified as basic connections and pass the ICRT. Residential and small commercial customers seeking a basic connection (as defined in Chapter 2 of this policy and the approved MSOs) on unserviced blocks will not be required to make a contribution to the costs of premises connection assets (A), network extensions (B), design and administration (C) or augmentation of shared network assets (D). The ICRT will be applied (and a capital contribution required) only in more complex cases. The pioneer scheme does not apply to this type of connection.

Table 4. Breakdown of costs – single service connections to residential or commercial customers, greenfield and unserviced blocks, urban location

	Cost component	*Charge*	*Comment*
A	Premises connection assets	X	No charge for LCTAS connection.
B	Extensions	X	No charge for LCTAS connection.
C	Design and administration	X	No charge for design and administration relating to LCTAS connection.
D	Shared network augmentation	X	No charge. The load is below the shared network augmentation charge threshold.
E	Customer requirements above LCTAS and special connection requirements	+	May apply but generally does not apply to new connections of this type.
F	Asset relocation and removal	+	Generally, not relevant to new connections of this type in greenfield locations.
G	Other ancillary services	+	Some ancillary service charges may apply.

Note: The table shows the breakdown of costs for a typical connection for this category which passes the ICRT. If the connection does not pass the test, additional customer contributions may apply.

4.2 New single service connection (<100 Amps), residential or commercial customer, brownfield or already serviced blocks, urban location

Residential or commercial customers seeking a basic single service connection on serviced blocks will generally not be required to make a contribution to the costs of premises connection assets (A), network extensions (B) or design and administration (C) up to the cost equivalent to a new LCTAS connection in a greenfield area. These customers are not required to contribute to the cost of augmentation of shared network assets (D) as they are below the threshold.

New service connections in brownfield areas and already serviced blocks often require additional work due to constrained access to the site and accessibility of the network linkage point. For high volume residential connections, a fixed fee reflecting an average additional cost applies. For other types of connections, if the cost of connection is higher than the LCTAS greenfield connection, a contribution equivalent to the additional cost is charged to the customer. That is, the customer seeking a new service connection in brownfield areas receives a rebate equivalent to the cost of the LCTAS greenfield connection.

Standard service upgrades are charged in accordance with the approved ancillary charges. Other ancillary charges may apply for various work components. For example, a new service connection in already serviced blocks may require relocation/removal of the existing service. Standard service relocations are subject to the AER approved ancillary charges. For non-standard services or special requirements quoted charges may apply.

The pioneer scheme does not apply to this type of connection.

Table 5. Breakdown of costs – single service connections (<100 Amps) to residential or commercial customers, brownfield or already serviced blocks

	Cost component	*Charge*	*Comment*
A	Premises connection assets	✓	For a typical brownfield residential connection, a fixed fee reflecting a higher cost of connection compared with LCTAS applies. No charge for premises connection if the cost does not exceed the LCTAS greenfield connection. For residential service upgrades, generally a fixed fee will apply. For other types of connection in this category the capital contributions will be based on quoted cost minus the rebate equivalent to LCTAS greenfield connection.
B	Extensions	X	Rarely applies to connections of this type.
C	Design and administration	X	Rarely applies to connections of this type.
D	Shared network augmentation	X	No charge. The load is below the shared network asset charge threshold.
E	Customer requirements above LCTAS and special connection requirements	+	Often applies to this type of connection in brownfield areas. Charges will apply on a quoted basis.
F	Asset relocation and removal	+	Likely to apply in brownfield areas and already serviced blocks. Fixed fees apply to typical residential asset relocations and removals. Quoted charges apply to other asset relocations and removals.
G	Other ancillary services	+	Other ancillary service charges will apply where relevant.

Note: The table shows the breakdown of costs for a typical connection for this category which passes the ICRT. If the connection does not pass the test, additional customer contributions may apply.

4.3 New single service connection (<100 Amps) residential or commercial load, rural area

The ICRT is applied to standard components of the connection cost: premises connection assets (A); extensions (B); and design and administration (C). If the connection passes the ICRT, the treatment is the same as for single service connections in an urban area (see section 4.1 above). If the connection does not pass the ICRT, the applicable capital contribution is calculated by applying the ICRT to the connection. A rebate equivalent to the cost of a new greenfield LCTAS connection is applied.

If the customer pays a capital contribution towards the cost of network extension (B), the extension will be subject to the pioneer scheme for a period of 7 years.

Table 6. Breakdown of costs – connection which does NOT pass the ICRT test, new single service connection, residential or commercial load, rural area

	Cost component	*Charge*	*Comment*
A	Premises connection assets	✓	Capital contribution calculated using ICRT, less rebate equivalent to the LCTAS greenfield connection.
B	Extension	✓	As above.
C	Design and administration	✓	As above.
D	Shared network augmentation	X	No charge. The load is below the shared network augmentation charge threshold.
E	Customer requirements above LCTAS connection and special connection requirements	+	Generally, does not apply, but may apply depending on the specific requirements of the connection.
F	Asset relocation and removal	+	Generally, does not apply to new connections of this type.
G	Other ancillary services	+	Some ancillary service charges may apply.

4.4 LV commercial or residential connection (> 100 Amps) (no distribution substation required)

These connections are provided from an existing substation located in the vicinity of the load through a low voltage cable or overhead line. Generally, all connections of this type pass the ICRT, so a capital contribution is not required for connection assets (A), extension (B) and design or administration (C) for the LCTAS connection. A $/kVA charge is levied towards augmentation of the shared network upstream assets if the load is above 100 Amps per phase.

Charges may apply due to above standard and special requirements (E), asset relocation and removal (F) and other ancillary services (G), depending on the connection requirements.

Generally, the pioneer scheme does not apply to this type of connection.

Table 7. Breakdown of costs – (>100 Amps) typical LV commercial or residential connection (no distribution substation required), brownfield or greenfield

	Cost component	*Charge*	*Comment*
A	Premises connection assets	X	No charge for LCTAS connection.
B	Extensions	X	No charge for LCTAS connection
C	Design and administration	X	No charge for LCTAS connection
D	Augmentation shared network	✓	$/kVA charge applies.
E	Customer requirements above the LCTAS connection and special connection requirements	+	May apply depending on customer requirements and special connection requirements.
F	Asset relocation and removal	+	Generally, not applicable in greenfield areas. Likely to apply in brownfield areas and on already serviced blocks. Usually a quoted service.
G	Other ancillary services	+	Some charges may apply depending on the scope of the job. For example, disconnection charges may apply on already serviced blocks.

Note: The table shows the breakdown of costs for a typical connection for this category which passes the ICRT. If the connection does not pass the test, additional customer contributions may apply.

4.5 LV consumer mains connection

This is an LV connection provided to a customer through LV consumer mains from the point of entry to a designated location on the customer's block or from an Evoenergy substation to a designated location on the customer's block. With respect to connection charges, this type of connection is treated in the same way as the LV connections described in sections 4.4 and 4.6. However, if the load is below 100 Amps, the $/kVA charges for augmentation of the shared network assets do not apply. Evoenergy is normally responsible for the installation of premises connection assets, network extensions and augmentations. The customer is expected to install consumer mains and provide a trench/conduit to the boundary of the block to enable a customer's connection to the network by Evoenergy.

4.6 LV commercial or residential connection (> 100 Amps) (distribution substation required)

For these connections, the distribution substation is provided either as a part of the premises connection assets or as part of the network extension, depending on whether the substation is a dedicated asset or a shared network asset.

Typically, connections in this category pass the ICRT, so no capital contribution is required for premises connection assets (A), network extension (B), or design and administration (C).

Generally, the pioneer scheme does not apply to this type of connection because the connections pass the ICRT.

Table 8. Breakdown of costs – typical LV commercial or residential connection >100 Amps (distribution substation required)

	Cost component	*Charge*	*Comment*
A	Premises connection assets	X	No charge for LCTAS connection
B	Extensions	X	No charge for LCTAS connection.
C	Design and administration	X	No charge for LCTAS connection
D	Shared network augmentation	✓	$/kVA charge applies.
E	Customer requirements above LCTAS connection and special connection requirements	+	May apply depending on the customer requirements.
F	Asset relocation and removal	+	Generally, not applicable in greenfield areas. Likely to apply in brownfield areas and on already serviced blocks. Quoted service.
G	Other ancillary services	+	Some charges may apply depending on the scope of the job – for example disconnection charges may apply on already serviced blocks. *

Note: The table shows the breakdown of costs for a typical connection for this category which passes the ICRT. If the connection does not pass the ICRT, additional customer contributions may apply.

*Network technical enquiry and network study charges, and contract negotiation charges may also apply. These charges are more likely to apply to this connection type than to other smaller connections. Connections of this type may involve considerable design costs. An upfront design deposit may be requested before design commences.

4.7 HV commercial connections

HV connection means that the customer receives supply at 11 kV. Evoenergy's HV tariffs published on the Evoenergy website in the schedule of network charges The HV tariff reflects the fact that HV customers are charged a capital contribution for connection assets (A), extensions (B), and design and administration (C). HV customers effectively pay for all the capital works on the dedicated distribution feeders and distribution substations including increases in capacity/upgrades.

Generally, the HV connection applies to high demand and/or high consumption customers. For avoidance of doubt, Evoenergy does not specify the load threshold above which the HV connection is mandatory. Evoenergy's position is that for a load above 5 MVA, HV connection is usually beneficial to the customer and preferred by Evoenergy. However, the HV connection is not mandatory i.e the customer can select LV connection instead. When connecting to the network, HV customers are required to cover the cost of connection assets (Table 9 refers) and ongoing operations and maintenance costs for assets located downstream of the HV connection point. A HV customer needs to consider the additional capital and ongoing operations & maintenance costs vs tariff savings when making a decision.

Generally, the pioneer scheme does not apply to HV connections, because extension assets for which the customer pays remain dedicated assets.

Table 9. Breakdown of costs – typical HV commercial connection

	Cost component	*Charge*	*Comment*
A	Premises connection assets	✓	Capital contribution. Customer pays for the premises connection assets.
B	Extension	✓	Capital contribution. Customer pays for extensions.
C	Design and administration	✓	Capital contribution. Customer pays for the design and administration costs
D	Augmentation shared network	X	Generally, does not apply. A $/kVA charge applies only in relation to assets for which customer does not pay in part A or B.
E	Customer requirements above LCTAS connection and special connection requirements	+	May apply depending on the customer requirements and special connection requirements.
F	Asset relocation and removal	+	May apply depending on the location and scope of connection. Likely to apply in brownfield areas and on already serviced blocks.
G	Other ancillary services	+	Some charges may apply depending on the scope of the job. *

Note: The table shows the breakdown of costs for a typical connection for this category which passes the ICRT. If the connection does not pass the ICRT, additional customer contributions may apply.

*Network technical enquiry and network study charges, and contract negotiation charges may apply. Connections of this type may involve significant design costs. An upfront design deposit may be requested before design commences.

4.8 Category 1 subdivision estate reticulation, residential underground

The reticulation of a subdivision estate is initiated at the request of the real estate developer. To reticulate a subdivision estate, Evoenergy must install network electrical infrastructure, in particular substations, pits or mini pillars, and cables. The developer provides civil infrastructure including the trench used for electrical reticulation and other shared services.

A subdivision is reticulated from the connection point with the upstream network to the downstream connection points which are later used to connect individual customers to the network. The downstream connection point is usually either at the pit or pillar (depending on the type of underground reticulation system employed). The reticulation assets are located between these linkage points.

Evoenergy decides on a case by case basis whether a capital contribution towards the estate reticulation should be calculated on the basis of ICRT (section 4.9 refers) or per block capital contributions (this section 4.8 refers). If the estate is a Category 1 estate, per block capital contributions are applied to calculate the capital contribution in accordance with this section 4.8. Per block capital contributions for Category 1[17] estates are listed in the network schedule of charges available from Evoenergy's website.

[17] In the Connection Policy applying during 2014-2019 regulatory control period Category 1 estates were referred to as "typical" estates. These estates were common approximately until the year 2016. In this policy for the 2019-24 period, the terminology was changed because significant proportion of estates developed since 2016 do not meet the criteria for "typical" estates.

The main criteria for Category 1 estate is that it does not require significant departure from Evoenergy electricity subdivision reticulation standards and there are no factors or requirements which materially impact:

- Evoenergy's cost of providing estate reticulation (e.g. related to configuration of an estate, street layout, verge widths, block sizes, non-residential load such as schools, offices or shopping) and
- A revenue stream estimates which Evoenergy is likely to receive from the estate (e.g. mandatory development conditions or incentives for PV generation, mandatory requirements for EV charging stations, mandated energy efficiency of dwellings, no gas reticulation)

Due to the large number of possible considerations and developer requirements, it is not practical to specify all characteristics of a Category 1 estate. The key Category 1 characteristics for a residential subdivision estate are:

- Predominantly single residential dwellings, no more than 10% of medium or higher density dwellings within the subdivision
- Estimated PV generation penetration of no more than 25% within the subdivision (for residential built or to be built premises)
- No other factors which materially impact cost or revenue

The application of per block contributions allows Evoenergy to streamline processing of estate applications and provides up front certainty to the developers. In the future, Evoenergy may define other categories of estates (in addition to Category 1) and may calculate per block capital contributions for newly defined categories. For those categories, capital contributions will be calculated applying per block contributions specific to those categories.

Most multi-unit developments (that is, medium density and higher density developments) are economic i.e. the result from ICRT is that the developer does not have to pay capital contribution. For more information on the treatment of multi-unit blocks refer to section 4.10.

Table 10 summarizes cost components applicable to the Category 1 estates or other categories which may be defined by Evoenergy.

Table 10. Breakdown of costs - residential subdivision estate reticulation – Category 1 estates[18]

	Cost component	*Charge*	*Comment*
A	Connection assets (i.e. *reticulation assets)*	✓	Capital contribution charged on per block basis for single dwelling blocks.
B	Extension (i.e. headworks)	X	Generally, no charge. See exceptions in section 4.8
C	Design and administration	✓	As above for the connection assets.
D	Augmentation shared network	X	$/kVA charge does not apply
E	Customer requirements above least cost technically acceptable connection and special connection requirements	+	May apply depending on the developer requirements and special reticulation requirements, e.g. special mini-pillar offsets or locations, changes in scope by the developer after design commences.
F	Asset relocation and removal	+	Applicable in many cases due to a need for relocation or removal of the existing assets within the estate. Quoted service.
G	Other ancillary services	+	Some charges may apply depending on the scope of the job.

*Contract negotiation charges may apply. Connections of this type may involve considerable design costs. An upfront design deposit may be requested before design commences. Additional charges may apply to changes of scope and requirements by developers after design commences.

Additional comments in relation to Table 10:

- In the case of subdivision estate reticulation, the electrical infrastructure within the estate (that is, cables, pillars/pits, and substations) is treated in a way similar to connection assets (A) of a load customer i.e. the estate reticulation assets are treated in the same way as load customer connection assets.
- Any headworks required between the existing network and the estate is considered to be an extension (B). An extension may involve multiple cables installed in single trench for the connection of future estates and customers. Usually the capacity of an extension is taken up by the load within a reasonably short period of time, therefore extensions are generally excluded from the ICRT for Category 1 estates and consequently they are not subject to a capital contribution. The extension cost (B) is included in the ICRT only if it is used for a single estate and there is no reasonable prospect that it will be used for other estates within 7 years (as typically applies to subdivisions in rural locations). If the developer pays a capital contribution towards an extension for a single subdivision, the extension will be subject to the pioneer scheme. Apart from the exceptions mentioned above, generally the pioneer scheme does not apply, because extensions (headworks) are not subject to capital contributions for most estates.

[18] Applies to Category 1 estates and other categories of estates which may be defined by Evoenergy.

If the subdivision estate reticulation is not assessed as Category 1[19] estate, the ICRT is applied to calculate the capital contribution (section 4.9 below refers).

4.9 Subdivision estate reticulation other than Category 1, residential or commercial or mixed load

This section 4.9 applies if an estate is not assessed as by Evoenergy as Category 1[20] nor as another category which may be defined by Evoenergy. The ICRT must be applied to calculate the required capital contribution for that estate.

Table 11 summarises cost components which apply to reticulation of subdivision estate other than Category 1.

Table 11. Breakdown of costs – advanced characteristics residential, commercial and mixed subdivision estate reticulation.

	Cost component	*Charge*	*Comment*
A	Connection assets (i.e. estate reticulation assets)	✓	Capital contribution. Subject to ICRT.
B	Extension (i.e. headworks)	X	Generally, no charge. See exceptions below this table.
C	Design and administration	✓	As above for the connection assets. Subject to ICRT.
D	Augmentation shared network	X	$/kVA charge does not apply
E	Customer requirements above the LCTAS connection and special connection requirements	+	Often applies to due to developer requirements and/or estate requirements.
F	Asset relocation and removal	+	Applicable in many cases, due to need for relocation or removal of the existing assets within the estate. Quoted service.
G	Other ancillary services	+	Some charges may apply depending on the scope of the job. *

Note: The table shows the breakdown of costs for a typical connection for this category which passes the ICRT. If the connection does not pass the ICRT, additional customer contributions may apply.

*The reticulation usually requires considerable investment from Evoenergy. Contract negotiation charges may apply. Connections of this type may involve considerable design costs. An upfront design deposit may be requested before design commences. Additional charges may apply to changes of scope and changes in requirements by developers.

Additional comments in relation to Table 11:

The electrical infrastructure assets within the estate (that is, cables, pillars/pits, substations) are considered to be connection assets (A).

Any headworks required between the existing network and the estate are considered to be extensions (B). Most extensions are built for the use of many retail customers or several developers. The cost of headworks (that is, extensions) is generally excluded from the ICRT. Therefore, the pioneer scheme usually does not apply to subdivision estates.

[19] Nor it is assessed by Evoenergy as another category defined by Evoenergy in accordance with the section 4.8

[20] Nor it is assessed by Evoenergy as another category defined by Evoenergy in accordance with the section 4.8

The extension cost (B) is included in the ICRT only if it is used for a single estate and there is no reasonable prospect that it will be used for other estates within 7 years. This may apply to subdivisions in rural locations. Thus, capital contributions may apply in these circumstances to the cost of extensions.

If the developer pays a capital contribution towards an extension, the extension will be subject to the pioneer scheme.

4.10 Multi-unit block (no substation required)

The connection of a load on multi-unit blocks consists often of two distinct parts. The first part is the connection of the block and, if applicable, the second part is the reticulation of power within the block. Depending on the design, not all multi-unit blocks require internal block reticulation.

The first part, the connection of the multi-unit block, is treated in similar way to the LV connection (no substation required) described in section 4.4 above. The second part, the reticulation within the block, is the responsibility of the developer.

Generally, a multi-unit block connection will pass the ICRT, so no capital contribution charges will apply to the connection assets (A), extension (B) and design and administration (C).

If a developer elects for Evoenergy to design and construct the reticulation system within the block, the cost of work will be quoted and charged to the developer. If the developer chooses to reticulate the block, they will do it at their own expense.

Some ancillary charges, for example relating to asset acceptance, may apply.

The pioneer scheme usually does not apply to this type of connection.

4.11 Multi-unit block (substation required)

For the treatment of connection of multi-unit blocks when a substation is required refer to section 4.10.

4.12 Extra-large block reticulation (multi hectare blocks)

The charges relating to connection and reticulation of the extra-large blocks are treated in the same way as reticulation subdivision estates described in the section 4.9.

4.13 Embedded generators up to 30 kW (micro-generators)

4.13.1 Connected as part of the basic connection

If the micro embedded generator is connected as part of a basic connection, the generator connection is made under the relevant MSO. No extensions or augmentation of the existing network are required and, consequently, no capital contribution is required. In relation to the meter connection, the customer must contact their retailer who may charge a fee. A requirement for a new/replacement meter will depend on the existing meter installed on the premises and PV installation requirements determined by the retailer.

Similar treatment is extended to any micro generation connection which does not require changes to the existing network other than installation of metering.

Table 12. Breakdown of costs – typical installation of a micro-generator provided as part of a basic connection.

	Cost component	*Charge*	*Comment*
A	Premises connection assets	✓	No charge for the premises connection assets, however a charge for a new/replacement compliant meter may be applied by the customer's chosen retailer.
B	Extension	+	Generally, not relevant to basic connections
C	Design and administration	+	Generally, not relevant to basic connections
D	Augmentation shared network	X	No charge.
E	Customer requirements above LCTAS connection and special connection requirements	+	Generally, does not apply, but may apply in some circumstances.
F	Asset relocation and removal	+	Generally, not relevant to basic generator connection
G	Other ancillary services	+	Some charges may apply depending on the scope of the job

Note: The table shows the breakdown of costs for a typical connection for this category which passes the ICRT. If the connection does not pass the test, additional customer contributions may apply.

4.13.2 Not connected as part of a basic connection

If a connection requires modification to the network, the customer may be charged the cost of network modifications and is responsible for any metering charges levied by the retailer.

If the connection involves an embedded generator and a load, the capital contribution is based on the total incremental cost of the work. The relevant load for the purpose of the cost relating to the shared network is the gross peak demand of the load regardless of the generators expected output.

Generally, the pioneer scheme does not apply to this type of connection.

Table 13. Breakdown of costs – typical installation of embedded micro generator which requires modifications to the existing network.

	Cost component	*Charge*	*Comment*
A	Premises connection assets	✓	Charges apply if changes to the connection assets are required. In addition, the retailer may apply a charge for a new/replacement compliant meter (if applicable).
B	Extension	✓	Charges apply if extension of the network is required.
C	Design and administration	✓	Charges apply if connection contains a design and administration component
D	Augmentation shared network	+	Generally, not relevant to small generators since they cover the cost if augmentation required and the generator is the main beneficiary.
E	Customer requirements above LCTAS connection and special connection requirements	+	Generally, does not apply, but may apply in some cases.
F	Asset relocation and removal	+	Generally, not relevant to generator connections, but may be required in some cases.
G	Other ancillary services	+	Some charges may apply depending on requirements of the connection

4.14 Temporary connections

Temporary connections are usually required to provide electricity supply during construction. Temporary connections may also be required to provide electricity supply to special events.

The costs of providing a temporary connection are recovered from the customer. Standard and typical temporary connections are provided on a fixed fee basis. Larger construction projects may require larger capacity supply arrangements including a requirement for a temporary substation. These larger connections are charged on a quoted basis.

5. Financial guarantees

If Evoenergy fairly and reasonably assesses that there is a high risk that it may not earn the estimated incremental revenue from a connection applicant and, as a result, the incremental revenues will be less than the incremental costs of the connection, it may require a financial guarantee in the form of a bank guarantee.[21] A financial guarantee will generally only be required in relation to connections that are the subject of a negotiated offer, the cost of connection funded by Evoenergy exceeds $200,000 and there is a significant difference between Evoenergy's and the customer's load forecasts.

A financial guarantee is a binding legal agreement between Evoenergy and the customer (which may be a real estate developer) where the customer guarantees to pay Evoenergy if the connection does not meet, within a specified period, the load required to make the incremental revenue equal to or greater than the incremental cost. The period will nominally be 5 years, although this can be varied on a case by case basis, depending on the nature of the risks involved.

The financial guarantee will be established at the time the connection offer is accepted and prior to the works commencing. The financial guarantee will be in the form of a bank guarantee provided by the customer, or other suitable financial instrument as agreed by Evoenergy. Evoenergy is entitled to withdraw from the bank guarantee any shortfall in actual revenue targets, in accordance with the terms stated in the deed and the bank guarantee.

The amount of the financial guarantee will not be greater than the amount of the connection service charge that Evoenergy would have charged had it forecast incremental revenue using a low risk forecast of the load and adjusted for time cost of money.

Any payments made to Evoenergy under the financial guarantee scheme must correspond to a difference between the guaranteed load and the actual load. Depending on the type and characteristics of the load, it may be appropriate to assume that the load increases to a guaranteed level over a period of time – for example 1 to 2 years. If the load is below the guaranteed level in one year and exceeds the guaranteed level in another year, relevant over and under adjustments apply.

[21] The AER connection charge guidelines refer to financial guarantees as security fees. Chapter 5A of the Rules instead uses the term financial guarantee.

6. Refund under a pioneer scheme

Where a customer has made a capital contribution towards the cost of a network extension, then within the next 7 years if a subsequent customer connects to those extension assets, Evoenergy will, under the circumstances described below, refund part of the original customer's capital contribution.

The pioneer scheme allows for sharing network extension costs in an equitable manner between customers who benefit from that extension. The pioneer scheme is designed to ensure that the first customer who funds or contributes towards a network extension does not bear the full cost of that extension (if other customers connect subsequently to the same extension). The pioneer scheme is cost neutral to Evoenergy.

The pioneer scheme may apply to connections located in either the rural or urban areas. The pioneer scheme applies when a customer requires Evoenergy to extend the network and there is no reasonable prospect that within 7 years other customers will connect to that extension and utilise available capacity of that extension. Such a situation is more likely to arise in rural locations where geographical density and a number of connections over time is generally lower than in urban areas.

In urban areas, the likelihood of other customers connecting within 7 year period and utilising the extension is generally significantly higher than in rural areas. Evoenergy assesses on case by case basis whether the pioneer scheme should apply to a network extension. For avoidance of doubt, pioneer scheme may apply either to urban connections or rural connections. An assessment whether to apply the pioneer scheme to a network connection which involves network extension, depends but is not limited to the following connection characteristics:

- ICRT indicates that a capital contribution from the customer is required (i.e. estimated revenue from the connection is not sufficient to cover the cost of connection) and the customer pays a capital contribution (full or partial) towards a network extension.
- Capital contribution from the customer towards network extension is material (i. e. greater than $1500 (2018/19)
- Geographical location of the network extension and load characteristics makes it unlikely that other customers will utilise that extension within 7 years period.

The types of connections and their likely treatment under the pioneer scheme are indicated in the Table 6.1 below. The table is based on the categories of connection covered by this Connection Policy.

Table 6.1. Likely treatment of connections under the pioneer scheme - summary

Type of connection	Is pioneer scheme likely to apply?
New single service connection (<100 Amps), residential or commercial customer, brownfield or already serviced blocks, urban location (Table 4 refers)	Does not apply
Single service connections (<100 Amps) to residential or commercial customers, brownfield or already serviced blocks (Table 5 refers)	Does not apply
Connection which does NOT pass the ICRT test, new single service connection, residential or commercial load, rural area (Table 6 refers)	May apply (subject to ICRC test)
(>100 Amps) typical LV commercial or residential connection (no distribution substation required), brownfield or greenfield (Table 7 refers)	Generally does not apply, but may apply in limited circumstances (subject to ICR Test).
LV commercial or residential connection >100 Amps (distribution substation required) (Table 8 refers)	Generally does not apply, but may apply in limited circumstances (subject to ICRC test).
Breakdown of costs – typical HV commercial connection (Table 9 refers)	Generally, does not apply, because extension assets for which the customer pays remain dedicated assets.
Subdivision estate reticulation, residential underground, Category 1 (table 10 refers)	Generally does not apply, but may apply in limited circumstances subject to ICRC test). Please refer to section 4.8
Subdivision estate reticulation, residential or commercial or mixed load, other than Category 1 (Table 11 refers)	Generally does not apply because developer does not pay for the extension, but may apply in limited circumstances. Please refer to section 4.9.
Installation of a micro-generator provided as part of a basic connection (Table 12 refers)	Does not apply
Installation of embedded micro generator which requires modifications to the existing network (Table 13 refers)	Does not apply

If a second customer connects within 7 years to the extension funded by the first customer, Evoenergy will calculate refund to the first customer according to the formulae in sections 6.1 to 6.4 below. In addition, Evoenergy will apply the ICRT test to the second connection. In the application of the ICRT for the second connection, Evoenergy will recognise the refund to the first customer as the cost component of providing a connection to the second customer

6.1 Eligibility for refund

To be eligible for a refund:

- the customer (including a real estate developer) must have paid connection charges for an extension asset installed to connect a single retail customer (including non-registered embedded generator or micro embedded generator); and

- the customer is either the current occupier of the premises or the original occupier (which paid for, or for part of an extension) of the premises. If there is a dispute between the current occupier and the original occupier of a premises as to who is eligible for a refund, and if there is no written evidence of an agreement to the contrary, the current occupier of the premises shall be taken to be entitled to any refund.

A customer is ineligible if:

- Evoenergy built the extension to take a higher capacity than required by the original customer and the capacity required by the new customer (and other subsequent customers) is less than the amount of the additional higher capacity constructed.
- the customer did not pay for the network extension
- it is more than 7 years since the extension assets were originally installed.

6.2 Value of assets subject to the pioneer scheme

The value of the extension assets subject to the pioneer scheme (before depreciation) is given by:

H= I – J

Where:

- H is the value of the extension assets subject to the pioneer scheme before depreciation
- I is the amount paid by the original customer for the extension assets; and
- J is the amount paid by the original customer for a higher standard or higher capacity than the least cost technically acceptable solution or capacity.

H may be equal to the full value of the extension assets (if full capital contribution was paid by the customer towards that extension) or may equal part of the value of extension assets (if partial capital contribution was paid by the customer towards that extension).

For avoidance of doubt, the connection assets (which are usually dedicated assets) are not subject to pioneer scheme.

The depreciated value of assets subject to the pioneer scheme is given by:

K = HL

Where:

- K is the depreciated value of the assets subject to the pioneer scheme
- L is the depreciation factor given by L = M/N

Where:

- M = is the remaining life of the assets (from date of commissioning) in days; and
- N = the life of the assets in days (corresponding to 20 years).

6.3 Amount of the refund to the first customer

The amount of the refund to the first customer is given by:

$P = K\gamma QR$

Where:

- P is the amount of the refund;
- $K\gamma$ is the depreciated value of the asset subject to the pioneer scheme inflated by the increase in the CPI since the initial connection
- Q is the subsequent customer's share of the length of the extension asset and is given by $Q = T/U$

Where:

- T is the length of asset used by the subsequent customer; and
- U is the length of the original asset.
- R is the subsequent customer's share of the capacity of the extension asset and is given by $R = S/(V+S)$

Where:

- S is the capacity required by the subsequent customer; and
- V is the capacity required by the original customer.

The second customer's connection is assessed separately in accordance with ICRT test and may be subject to the capital contribution from the second customer. The capital contribution is payable to Evoenergy. The refund given by Evoenergy to the first original customer, counts towards the cost of providing the connection to the second customer. Thus, that refund must be accounted for in the ICRT calculations for the second customer. If the second customer is required to pay a capital contribution towards network extension, that second customer may be a subject to the pioneer scheme (providing that the eligibility criteria for the pioneer scheme and the refund are met. Refer to section 6 and section 6.1)

The second customer may be eligible for the pioneer scheme if the capital contribution is material (i.e. $1500 (2018/19 or above) and the subsequent customers connect within 7 years of the original customer connection date.

If in addition, a second network extension is required for the second customer (in addition to the extension required for the first original customer), the second extension (independently from the original extension) will be subject to the pioneer scheme for 7 years. The subsequent connections may trigger the refunds to the first customer and the second customer. The amounts of refunds are calculated using formulae in sections 6.2, 6.3 and 6.4.

6.4 Subsequent refunds

For subsequent refunds, the assets subject to the pioneer scheme need to be recorded according to the ownership arrangements.

If a subsequent customer connects to the extension assets, the original customer will now hold two types of assets:

- Assets not shared, the value of which is given by: $W = K\gamma (1-Q)$
- Assets shared with the first customer, the value of which is given by: $X = K\gamma Q(1-R)$

The second customer to subsequently connect, has assets which they share with the original owner, the value of which is given by "P", the amount of the refund.

When a subsequent customer connects to the extension which is subject to the pioneer scheme, the refunds to the original and the second customers must be calculated. When calculating a subsequent refund, the value of assets (W, X & P) must be depreciated to reflect their remaining life and appreciated for the change in CPI since the previous refund. The depreciation factor applied to each of customer assets is given by:

$Y = 1- Z/N$

Where

- Y is the depreciation factor;
- Z is the period of time in days between the subsequent connection and the previous connection
- N is the original asset life in days corresponding to the life of 20 years

The depreciated value of the ownership components will be calculated by multiplying each ownership component by Y and then inflating the depreciated value of the asset in accordance with CPI for the period between the connections.

The amount of the refund for each ownership component of the original asset is to be calculated as for the original asset described under 6.3 above i.e. according to the use of the asset by the customer.

7. Prepayments

For connections where the estimated connection charges are greater than $50,000, Evoenergy requires an advance payment of 50 per cent of the total charges and a bank guarantee for the balance. The bank guarantee is used as payment upon completion of the works. Alternative payment arrangements may apply, as set out in agreed terms between Evoenergy and the connection applicant.

Full prepayment is required, at the time of formal acceptance of the connection offer, for connections where the estimated connection charges are less than $50,000.

8. Definitions

Augmentation of a transmission or distribution system means work to enlarge the system or to increase its capacity to transmit or distribute electricity.

Brownfield or *already serviced block new connection* is the connection of a load on a block which is electrically serviced, but a new service has to be provided due to redevelopment or change in load.

Connection contract means a contract formed by the making and acceptance of a connection offer.

Connection offer means an offer by Evoenergy to enter into a connection contract with: (a) a retail customer; or (b) a real estate developer.

Connection policy means a document, approved as a connection policy by the AER under Chapter 6, Part E, of the Rules setting out the circumstances in which connection charges are payable and the basis for determining the amount of such charges.

Connection service means either or both of the following: (a) a service relating to a new connection for premises; (b) a service relating to a connection alteration for premises.

Greenfield or *unserviced block new connection* refers to a connection of a load on a block which was not previously electrically serviced.

Embedded generator is a generator connected to the distribution network.

Extension means an augmentation that requires the connection of a power line or facility outside the present boundaries of the network owned, controlled or operated by Evoenergy.

HV customer connection is a load connection for which the linkage point(s) between the network assets and premises connection assets is at 11 kV or 22 kV.

Least Cost Technically Acceptable Solution (LCTAS) refers to the least cost service consistent with Evoenergy supply security and reliability standards. The LCTAS assumes typical site conditions and job characteristics for the particular category of connection.[22]

Linkage points mean points which define different parts of the electrical network. For example, an extension relates to assets between a linkage point to the existing network on the upstream side and a linkage point to premises connection assets on the downstream side. The premises connection assets are normally linked to customer installation on the downstream side.

Micro embedded generation connection means a connection between an embedded generating unit and a distribution network of the kind contemplated by Australian Standard AS4777 (Grid connection of energy systems via inverters).

Micro embedded generator means a retail customer who operates, or proposes to operate, an embedded generating unit for which a micro embedded generation connection is appropriate.

[22] The AER describes the least cost technically acceptable solution as “the cheapest connection method, including both material and labour costs that is consistent with industry practice and meets the requirements of any relevant legislation, guidelines or codes”. See AER 2012, *Connection charge guidelines under Chapter 5A of the NER, Final decision*, June, p. 30.

Model standing offer means a document approved by the AER as a model standing offer to provide basic connection services (see clause 5A.B.3 of the Rules) or as a model standing offer to provide standard connection services (see clause 5A.B.5 of the Rules).

Premises connection assets means the components of a distribution system used to provide connection services.

Relevant ACT distribution determination means, for this version 2.0 of the connection policy, the AER's determination for Evoenergy for the subsequent regulatory period 1 July 2019 to 30 June 2024.

Retail customer includes a non-registered embedded generator and a micro embedded generator.

Reticulation assets means electrical assets normally consisting of cables, substations and pillars/pits located between the upstream linkage point to the network and downstream linkage point to which customer connection assets will be connected (normally at a pit or a pillar).

9. Abbreviations

Term	Meaning
AER	Australian Energy Regulator
CT/VT	current transformer/voltage transformer
DUoS	distribution use of system
HV	high voltage
ICRT	incremental cost-revenue-test
kW	kilowatt
kVA	kilovolt-ampere
LCTAS	least cost technically acceptable solution
LV	low voltage
MSO	model standing offer
MVA	megavolt-ampere
NER	National Electricity Rules
OH	overhead
PV	photovoltaic
UG	underground

10. Point of contact

For more information visit Evoenergy website (https://www.evoenergy.com.au/) (or call 02 6293 5749

11. Disclaimer

While Evoenergy will periodically review this policy to account for the impact of any future changes to legislation or regulation, Evoenergy does not make any representation or warranty, express or implied, as to the currency, accuracy, reliability or completeness of this policy, or the information contained in it.

It is the customer's responsibility to ensure that the arrangements applicable to a specific connection are confirmed with Evoenergy at the time that an application to connect is made.

Appendix A: Evoenergy's connection services and ancillary services – AER classification and basis for charging

Table A1 shows Evoenergy's connection services and ancillary services, and the basis for charging. For standard control services the basis for charging is as set out in Chapter 3 of this policy, and for alternative control services the charge is either a fee (F) or on a quoted basis (Q), as approved by the AER in the relevant ACT distribution determination.

Table A1 shows existing services as well as those that are under consideration for introduction during the 2019-24 regulatory period to provide appropriate user pays price signals to customers. Table A2 below contains a description of those services from Table A1 which Evoenergy proposes to provide on a fixed fee basis 1 July 2019.

Table A1 Main Evoenergy's services – AER classification and basis for charging

	Type of service	*Basis for charging*
	Connection services	
1	**Service connections <=100 Amps (Note 1)**	Chapter 3
	New service - Residential - UG greenfield does NOT include meter installation	
	New service - Residential - UG brownfield front / does NOT include meter installation]	
	New service - Residential - UG backspine / does NOT include meter installation	
	New service - Commercial/Industrial (<=100 Amps) – OH / does NOT include meter installation]	
	New service - Commercial/Industrial (<=100 Amps) - UG front / does NOT include meter installation	
	New service - Commercial/Industrial (<=100 Amps) - Backspine /does NOT include meter installation	
	New service - Unmetered – OH	
	New service - Unmetered – UG	
2	**LV connections**	Chapter 3
	LV connection (>100 Amps) substation required	
	LV connection (>100 Amps) customer substation not required	
	LV connection – consumer mains	
3	**HV connection**	Chapter 3
	Connection (>100 Amps) HV customer	
4	**Subdivision estate reticulation**	Chapter 3
	Subdivision estate reticulation residential	
	Subdivision estate reticulation commercial	
	Extra-large blocks reticulation (multi -hectare sites)	
5	**Multi occupant sites connection**	Chapter 3
	Multi-occupant sites residential or commercial – substation required	

	Type of service	*Basis for charging*
	Multi-occupant sites residential or commercial – no substation required	
6	**Embedded generator connections**	**Chapter 3**
	Embedded generator connection =< 30 kW (which is part of the basic connection)	
	Embedded generator connection =<30 kW (which is not part of the basic connection)	
7	**Network technical enquiries, studies and negotiations (See box at end of this table)**	
	Network technical enquiry (Note 2)	F or Q
	Network capability assessment (Note 2)	F or Q
	Network technical studies (Note 2)	F or Q
	Connection design deposit (Note 3)	Q
	Connection enquiry (LV connection)	F
	Connection enquiry (HV connection)	F
	Negotiated connection offer negotiation charge	Q
	Negotiated customer contract negotiation fee	Q
8	**Asset relocations, removals, isolation and disconnections (Note 4)**	
8.1	**Service relocations (<=100 Amps)**	
	Residential service relocation - OH to OH	F or Q
	Residential service relocation - OH to OH [2 moves]	F or Q
	Residential service relocation - OH to UG	F or Q
	Residential service relocation - UG to UG [front]	F or Q
	Residential service relocation - UG to UG [backspine]	F or Q
	Residential service relocation - UG to OH [front]	F or Q
	Residential service relocation - UG to OH [backspine]	F or Q
8.2	**Disconnection for Demolition/Removal (<=100 Amps)**	
	Disconnection – OH	F
	Disconnection - OH to temporary	F
	Disconnection – UG	F
	Disconnection - UG to temporary	F
	Disconnection – UGT	F
	Disconnection - UGT to temporary	F
	Network isolation - HV	F or Q
	Network isolation - LV	F or Q
	Network isolation & drop - LV	F or Q
	Network isolation & drop - HV	F or Q
	UG service / meter box isolation < 100 Amps	F or Q
	Service / MSB isolation > 100 Amps	F or Q

	Type of service	*Basis for charging*
	OH service / MSB isolation & drop > 100 Amps	F or Q
	OH service / meter box isolation & drop < 100 Amps	F or Q
8.3	**Other assets relocations and removals (customer request)**	**F or Q**
9	**Service Upgrades (when the block is already serviced)**	
	Service 1 phase to 3 phase upgrade - OH [no cable change required]	F
	Service 1 phase to 3 phase upgrade - OH [service cable change required]	F or Q
	Service 1 phase to 3 phase upgrade - UG [no cable change required]	F
	Service 1 phase to 3 phase upgrade - UG [cable change required]	F or Q
10	**Temporary Supplies**	
	Temporary supply connections (<=100 Amps)	F or Q
	Temporary supply – OH	F or Q
	Temporary supply – UG	F or Q
	Temporary supply - UG (permanent location)	F
	Other temporary supplies (e.g. for complex projects)	Q
11	**Metering**	
	New Type 7 meter installation	F
12	**Miscellaneous charges**	
	Consumer mains terminations - substation	F or Q
	Consumer mains terminations - pillar/cubicle	F or Q
	Tiger tails - LV service	F or Q
	Tiger tails - LV mains	F or Q
	Tiger tails - HV mains	F or Q
	Warning flags - HV mains	F or Q
	Substation/network asset access supervision	F or Q
	Network data provision – moderate	F
	Network data provision – large	F or Q
	Re-commissioning of asset	F or Q
	Asset acceptance	F or Q
	Re-scheduled visit (e.g. when the site is obstructed or non -compliant)	F or Q
	Issue copies of electrical drawings	F or Q
	Underground boring under the driveway	F
	Underground boring under the footpath	F
13	**Retail Customer Services**	
	Premises re-energisation - after hours	F
	Premises re-energisation - business hours	F
	Premises de-energisation - business hours	F

Type of service	Basis for charging
Premises de-energisation - non-payment	F
Special meter reading	F
Paid meter test	F
Field visit only (de-energise site for non-payment)	F
Single premises no/part supply response & investigation	No charge

Note 1: Some components of connection work in brownfield areas are charged on a fixed fee basis (see items 526, 527 and 528 in Table A2 below).
Note 2: The fee may apply to connections or connection enquiries which require network studies. Specific fee based charges apply to various size connections of load and embedded generation. For more complex unusual projects a quote or hourly rate is provided.
Note 3: The deposit (7% to 10% of the project cost) is levied prior to the detailed design work on the project commences. The deposit is charged for projects which require considerable design effort in early stages of the project, but there is a risk of the project not going ahead.
Note 4: Standalone asset relocations and removals (for example a request by the customer to relocate a pole) not related to connections are not covered by Chapter 5A of the Rules. However, the cost of relocations/removals is included in the connection charges if assets are relocated/removed as part of connection works.

Network technical enquiry/studies charges and design deposits

A network technical study is usually required for a major new connection or a more complex project. The study identifies:

- the preferred option for system augmentation and connection
- the costs for design
- estimated costs for construction for the work to be undertaken.

This is usually an iterative process where the customer considers various load connection options and scenarios and information and feedback are exchanged multiple times between the customer and Evoenergy before the selection of the preferred connection. Network technical enquiry and studies charges are levied either on a fixed fee basis in accordance with the AER approved ancillary charges or a quotation basis for more complex enquiries/studies.

If a connection requires significant design effort early in the process and, in the assessment of Evoenergy, there is a significant risk of the connection not going ahead, Evoenergy may request a design deposit which will be offset against any other charges if the connection goes ahead.

Table A2 contains a description of those services from Table A1 which Evoenergy proposes to provide on a fixed fee basis 2014/from 920. The fees will be as approved by the AER in the relevant distribution determination and published on Evoenergy's website by 1 July 2019. The codes in the left-hand column correspond to the codes used in the schedule of proposed fees submitted to the AER in January 2014, as part of the regulatory proposal for the 2019-24 regulatory period.

Table A2 Ancillary Services Charged on the Fixed Fee Basis Proposed for 2019/20 – 2023/24

Code	Service	Service Description / Scope
501	Re-energise premises – Business Hours	Re-energisation of a premises that is already connected to the network, during business hours
502	Re-energise premises – after hours	Re-energisation of a premises that is already connected to the network, during after-hours periods
503	De-energise premises – business hours	De-energisation of a premises that is already connected to the network during business hours; excluding where the de-energisation is for debt non-payment
505	De-energise premises for debt non-payment	De-energisation of a premises that is already connected to the network where the de-energisation is for debt non-payment – Anytime
504	Meter test (whole current[23]) – business hours	Meter test for whole current Type 5 – 7 meters only during business hours. Fee is refunded if the meter is proven to be faulty
510	Meter test (CT/VT) – business hours	Meter test for meters utilising a CT or VT during business hours. Fee is refunded if the meter installation is proven to be faulty
506	Special meter read	Out of cycle meter read during business hours Use for the following: • Customer Initiated Check Read, • Data validation initiated Check Read - prior to billing, • Data validation Check Read - post billing • Customer initiated additional out of cycle read for billing purposes • Final read Fee associated with a Check Read is refunded if the original reading is proven to be incorrect
515	Move, remove, inspect or reconfigure meter	Customer initiated change to an Evoenergy metered site that requires a site visit to move, reseal, reprogram or inspect, but does not require a new meter
516	Establish supply	Energisation of a premise that is connected to the network for the first time
517	Faults investigation (meter malfunction)	Customer call to Evoenergy Faults and Emergencies where a subsequent site visit ascertains a non-Evoenergy meter has failed, cannot be safely bypassed, and customer is remains off supply
518	Faults investigation (meter bypassed)	Customer call to Evoenergy Faults and Emergencies where a subsequent site visit ascertains a non-Evoenergy meter has failed and has been bypassed so that the customer is back on supply
519	Faults investigation (customer's side of network boundary)	Customer call to Evoenergy Faults and Emergencies where a subsequent site visit ascertains a failure on the customers side of the network
520	Temporary builders' supply – Overhead (business hours)	Installation of a new temporary overhead supply connection **NOT** including associated metering during business hours; where the service connection complies with the following: • Load is <= 100 Amps/Phase • Single or multi-phase

[23] Whole current meters are directly connected to the electricity network without the use of the current transformers.

		• Meter location <= 25m from source network pole • Point of Attachment/Builders Pole supplied and installed by the customer Includes situations where the service connection point of attachment (POA) and meter are in the permanent location
522	Temporary builders' supply – Underground (business hours)	Installation of a new temporary underground supply connection **NOT** including associated metering during business hours; where the service connection complies with the following: • Load is <= 100 Amps/Phase • Single or multi-phase • Meter location <= 15m from source network pole / pillar / pit / cable end • Conduit between meter location and network connection point supplied and installed by the customer Includes situations where the service connection point of entry (POE) and/or meter are in the permanent location
523	New underground service connection – greenfield	Installation of a new underground service connection, **NOT** including associated metering, during business hours where the service connection complies with the following: • Service connection is the first / initial connection to that block/premises • Load is <= 100 Amps/phase • Single or multi-phase • Network connection point is located in the street frontage verge • Cable length within block <= 15m • Conduit between the POE/meter location (as applicable) and the property boundary is supplied and installed by the customer • Complete service connection including associated metering can be undertaken in a single visit
526	New overhead service connection – brownfield (business hours)	Installation of a new overhead service connection, **NOT** including associated metering, during business hours; where the service connection complies with the following: • Service connection is not the first / initial connection to that block/premises • Load is <= 100 Amps/Phase • Single or multi-phase • Service connection is continuous with a length <= 2 spans &/or 25 metres from source network pole Typically use in redevelopment scenario only where an underground service connection cannot be achieved.
527	New underground service connection – brownfield from front	Installation of an underground service connection, **NOT** including associated metering, during business hours where the service connection complies with the following: • Service connection is not the first / initial connection to that block/premises • Load is <= 100 Amps/Phase • Single or multi-phase • Service connection is continuous with a length <= 25 metres from network connection point • Network connection point is a pole, pillar or pit located in the street frontage verge • Conduit between the POE/meter location (as applicable) and the network connection point or property boundary is supplied and installed by the customer Where the service connection extends outside the customer property and Evoenergy is required to undertake additional civil

		works, fees may apply for the additional work beyond the scope of this item Typically use in redevelopment scenarios such as knockdown/rebuilds and/or dual occupancy premises.
528	New underground service connection – brownfield from rear	Installation of an underground service connection, **NOT** including associated metering, during business hours where the service connection complies with the following: • Service connection is not the first / initial connection to that block/premises • Load is <= 100 Amps/Phase • Single or multi-phase • Service connection is continuous with a length <= 25m from network connection point • Network connection point is a pole located in the section backspine • Conduit between the POE/meter location (as applicable) and the network connection point or property boundary is supplied and installed by the customer Where the service connection extends outside the customer property and Evoenergy is required to undertake additional civil works, fees may apply for the additional work beyond the scope of this item Typically use in redevelopment scenarios such as knockdown/rebuilds and/or dual occupancy premises.
541	Overhead service relocation – single visit (business hours)	Relocation of an overhead service connection in a single site visit during business hours where the service connection complies with the following: • Load <= 100 Amps/Phase • Single or multi-phase • Service connection is no more than two spans &/or 25m in length Scope involves: • De-energisation, physical disconnection / dismantling then re-attachment, connection and re-energisation • Replacement of overhead service cable if required
542	Overhead service relocation – two visits (business hours)	Relocation of an overhead service connection in two site visits during business hours where the service connection complies with the following: • Load <= 100 Amps/Phase • Single or multi-phase • Service connection is no more than two spans &/or 25m in length Scope involves: • De-energisation, physical disconnection / dismantling in first site visit • Re-attachment, connection and re-energisation in second visit • Replacement of overhead service cable if required
543	Overhead service upgrade – service cable replacement not required	Upgrade of an existing overhead service connection from single to multi-phase where the installed cable does not require replacement and the service connection complies with the following: • Load <= 100 Amps/Phase • Existing cable is physically able to be connected multi-phase without joints
544	Overhead service upgrade – service	Upgrade of an existing overhead service connection where the installed cable does not meet the increased load requirements

	cable replacement required	(multi-phase or capacity/rating) and the service connection complies with the following: • Load <= 100 Amps/Phase • Service connection is no more than two spans &/or 25m in length Use for single to multi-phase and capacity upgrades
545	Underground service upgrade – service cable replacement not required	Upgrade of an existing underground service connection from single to multi-phase where the installed cable does not require replacement and the service connection complies with the following: • Load <= 100 Amps/Phase • Existing cable is physically able to be connected multi-phase without joints
546	Underground service upgrade – service cable replacement required	Upgrade of an existing underground service connection where the existing cable does not meet the increased load requirements (multi-phase or capacity/rating) and the service connection complies with the following: • Load <= 100 Amps/Phase • Service connection is no more than 25m in length • Conduit between the meter location and the network connection point or property boundary is supplied and installed by the customer Where the service connection extends outside the customer property and Evoenergy is required to undertake additional civil works, fees may apply for the additional work outside the scope of this item
547	Underground service relocation – single visit (business hours)	Relocation of an underground service connection, or part thereof, in a single site visit during business hours where the service connection complies with the following: • Load <= 100 Amps/Phase • Single or multi-phase • Service connection is no more than 25m in length Scope involves: • De-energisation, physical disconnection/cutting away, installation of new service cable section, jointing and then termination, connection and re-energisation Where the service connection extends outside the customer property and Evoenergy is required to undertake additional civil works, fees may apply for the additional work outside the scope of this item
548	Install surface mounted point of entry (POE) box	Installation of a surface mounted point of entry box and conduit to ground level on the customer's structure to facilitate installation of a new or relocated underground service connection; where the service connection complies with the following: • Load <= 100 Amps/Phase • Single or multi-phase Scope involves: • Supply and installation of POE box, conduit and associated fixings Applicable where a recessed POE box cannot be provided by the customer Only use in conjunction with Item 526 New Underground Service – Brownfield and Item 547 Underground Service Relocation
549	Overhead service temporary disconnect reconnect same day (business hours)	A temporary disconnect and reconnect of an existing overhead service connection to a residential dwelling.

560	Temporary de-energisation – LV (Business Hours)	Temporary de-energisation and re-energisation of LV network infrastructure in business hours to allow safe customer / contractor approach and work in close proximity Scope does not include dismantling of lines or network infrastructure Use for tree pruning, mobile plant operation, oversize loads, construction activities
561	Temporary de-energisation – HV (Business Hours)	Temporary de-energisation and re-energisation of HV network infrastructure in business hours to allow safe customer / contractor approach and work in close proximity Scope does not include dismantling of lines or network infrastructure Use for tree pruning, mobile plant operation, oversize loads, construction activities
562	Supply abolishment / removal – overhead (business hours)	Decommissioning and removal of an overhead service connection and associated metering for meter type 5 & 6 only (all other meter types customer must contact their retailer) during business hours for service connections that comply with the following: • Load <= 100 Amps/Phase • Single or multi-phase • Service connection is no more than two spans &/or 25m in length • Removal of the service connection does not result in a consequential requirement to remove a network pole Use where a property is to be demolished, supply is no longer required, an alternative connection point is to be established / used, or a redundant supply is to be removed.
563	Supply abolishment / removal - underground (business hours)	Decommissioning and removal of an underground service connection and associated for meter type 5 & 6 only (all other meter types customer must contact their retailer) metering during business hours for service connections which comply with the following: • Load <= 100 Amps/Phase • Single or multi-phase • Removal of the service connection does not result in a consequential requirement to remove redundant network mains infrastructure such as a pole, pillar, pit Use where a property is to be demolished, supply is no longer required, an alternative connection point is to be established / used, or a redundant supply is to be removed.
564	Install & remove tiger tails – establishment (business hours)	Installation and removal of “Tiger Tail” covers on overhead lines including service lines, LV & HV during business hours – Establishment fee per site Use in conjunction with Item 565 to determine total service charge
565	Install & remove tiger tails - per span (business hours)	Installation and removal of “Tiger Tail” covers on overhead lines including service lines, LV & HV during business hours – Length based fee Use in conjunction with Item 564 to determine total service charge
566	Install & remove warning flags – installation (business hours)	Installation and removal of Warning Flags on overhead lines including service lines, LV & HV during business hours – Establishment fee per site Use in conjunction with Item 567 to determine total service charge
567	Install & remove tiger tails - per span (business hours)	Installation and removal of warning flags on overhead lines including service lines, LV & HV – Lengths based fee Use in conjunction with Item 566 to determine total service charge

568	Embedded generation opex fees - connection assets	Annual operational and maintenance charges for the dedicated connections assets of export only embedded generation.
569	Embedded generation opex fees - shared network asset	Annual operational and maintenance charges for the shared network assets associated with export only embedded generation
570	Embedded generation connection enquiry – class 1 (commercial)	Receipt, registration, processing and responding to a connection enquiry for Class 1 (commercial) embedded generation
596	Embedded generation connection enquiry – class 2	Receipt, registration, processing and responding to a connection enquiry with Preliminary Network Advice for Class 2 Embedded Generation
597	Embedded generation connection enquiry – class 3	Receipt, registration, processing and responding to a connection enquiry with Preliminary Network Advice for Class 3 Embedded Generation
598	Embedded generation connection enquiry – class 4	Receipt, registration, processing and responding to a connection enquiry with Preliminary Network Advice for Class 4 Embedded Generation
599	Embedded generation connection enquiry – class 5	Receipt, registration, processing and responding to a connection enquiry with Preliminary Network Advice for Class 5 Embedded Generation
600	Embedded generation connection enquiry – class 6	Receipt, registration, processing and responding to a connection enquiry with Preliminary Network Advice for Class 6 Embedded Generation
574	Embedded generation network technical study – Class 1 (commercial)	Technical assessment of Network Capability for connecting Class 1 (Commercial) Export Embedded Generation
575	Embedded generation network technical study – Class 2	Technical assessment of Network Capability for connecting Class 2 Export Embedded Generation
576	Embedded generation network technical study – Class 3	Technical assessment of Network Capability for connecting Class 3 Export Embedded Generation
577	Embedded generation network technical study – Class 4	Technical assessment of Network Capability for connecting Class 4 Export Embedded Generation
578	Embedded generation network technical study – Class 5	Technical assessment of Network Capability for connecting Class 5 Export Embedded Generation
579	Embedded generation – network technical study – Class 6	Technical assessment of Network Capability for connecting Class 6 Embedded Generation where Evoenergy provides the requisite network data and the Embedded Generator undertakes the Network Technical Study.
601	Embedded generation – connection contract establishment – Class 1 (commercial) to Class 6	Preparation of Non-Standard Connection Agreement and on site attendance of Evoenergy to witness commissioning of the embedded generation where Evoenergy is not required to make any network alterations or additions.
602	Embedded generator – network technical study – embedded generation over 5MW	The provision of network data for and an analysis of the results of the Embedded Generator Network Technical Study.
590	Rescheduled site visit – one person	Wasted site visit for a one-person team where the service was not able to be completed on attendance. Includes customer cancellations before the work is completed, Officer unable to access site to complete service on arrival, site not ready for

		service requested on arrival, site unsafe &/or installation defect prevents service being undertaken or completed including noncompliance with Evoenergy's Standards and/or Service & Installation Rules
591	Rescheduled site visit – service team	Wasted site visit for a Services Team where the service was not able to be completed on attendance. Includes customer cancellations before the work is completed, Team unable to access site to complete service on arrival, site not ready for service requested on arrival, site unsafe &/or installation defect prevents service being undertaken or completed including noncompliance with Evoenergy's Standards and/or Service & Installation Rules
592	Trenching – first 2 meters	First two meters of trenching service
593	Trenching – subsequent meters	Subsequent two meters of trenching service
594	Boring - under footpath	Under footpath boring charge
595	Boring - under driveway	Under driveway boring charge
603	Spiking/Cable Testing (Business Hours) - Evoenergy network cables only	Underground High Voltage/Low Voltage cable spiking/testing to prove whether the cable is energised or de-energised and abandoned. Charges applicable to Evoenergy underground cables only and applicable per cable test per site.
604	Spiking/Cable Testing (After Hours) – Evoenergy network cables only	
605	Substation HV/LV Earthing/Soil Resistivity Testing (Business Hours)	When a customer's works requires a re-test of pad mount or pole mount substation High Voltage and/or Low Voltage earth resistance or soil resistivity testing. Charges applicable per test per site.
606	Substation HV/LV Earthing/Soil Resistivity Testing (After Hours)	
607	1x 4 Core Or 4x 1 Core (1 Set) Consumer Mains (Business Hours)	Termination of consumer mains at point of entry cubicle or at pad mount or chamber substations for temporary or permanent supply. Copper Crimp Lugs to be supplied by Customer. Charges includes disconnection of existing temporary consumer mains if any. Charges applicable per site. Additional charges applicable for supply and installation of Low Voltage Switchgear or Fuses if required.
608	1x 4 Core Or 4x 1 Core(1 Set) Consumer Mains (After Hours)	
609	1x 4 Core Or 4x 1 Core (1 Set) Consumer Mains (Business Hours)	Termination of consumer mains at point of entry cubicle or at pad mount or chamber substations for temporary or permanent supply. Copper Crimp Lugs to be supplied by Customer. Charges includes disconnection of existing temporary consumer mains if any. Charges applicable per site. Additional charges applicable for supply and installation of Low Voltage Switchgear or Fuses if required.
610	1x 4 Core Or 4x 1 Core(1 Set) Consumer Mains (After Hours)	

611	2 x 4 Core Or 8 x 1 Core (2 Set) Consumer Mains (Business Hours)	
612	2 x 4 Core Or 8 x 1 Core (2 Set) Consumer Mains (After Hours)	
613	3 x 4 Core Or 12 x 1 Core (3 Set) Consumer Mains (Business Hours)	
614	3 x 4 Core Or 12 x 1 Core (3 Set) Consumer Mains (After Hours)	
615	4 x 4 Core Or 16 x 1 Core (4 Set) Consumer Mains (Business Hours)	
616	4 x 4 Core Or 16 x 1 Core (4 Set) Consumer Mains (After Hours)	
617	Including Capping/Abandoning - Underground (Business Hours)	Permanent disconnection of existing Evoenergy underground low voltage cable including capping/abandoning. Charges applicable per disconnection and per visit.
618	Including Capping/Abandoning - Underground (After Hours)	
619	Temporary or Permanent Consumer Mains as a Separate Request (Business Hours)	Permanent disconnection of existing consumer mains at point of entry cubicle or pad mount or chamber substation where reconnection is not required. Charges applicable per disconnection and per visit.
620	Temporary or Permanent Consumer Mains as a Separate Request (After Hours)	
621	Substation supervised access: 1-4 (business hours)	Access and supervision provided by an Evoenergy authorised person to an Evoenergy substation (pad mount or chamber substation) where customer's assets exist within an Evoenergy substation. Charges applicable per visit per substation
622	Substation supervised access: 1- 4 (After Hours)	
623	Substation supervised access: 4- 8 (Business Hours)	
624	Substation supervised access: 4- 8 (After Hours)	
625	Temporary De-energisation/Isolation of Overhead LV Network - Business Hours Work	Temporary de-energisation and re-energisation of the Evoenergy overhead low voltage network on customer's request. Charges applicable per isolation or de-energisation and re-energisation on the same day only
626	Temporary De-energisation/Isolation	

	of Overhead LV Network - After Hours Work	
627	Temporary De-energisation/Isolation of Overhead HV Network[2] - Business Hours Work	Temporary de-energisation and re-energisation of the Evoenergy overhead high voltage network on customer's request. Charges applicable per isolation or de-energisation and re-energisation on the same day only. Charges includes establishment of temporary earthing to overhead network and includes plant & equipment as required.
628	Temporary De-energisation/Isolation of Overhead HV Network[2] - After Hours Work	
629	Temporary De-energisation/Isolation of Underground/Overhead SLCC supply[3]- Business Hours Work	Temporary de-energisation and re-energisation of an Evoenergy underground or overhead low voltage network supply to Streetlight or Traffic light or similar controller on customer's request. Charges applicable per isolation or de-energisation and re-energisation on the same day only.
630	Temporary De-energisation/Isolation of Underground/Overhead SLCC supply[3] - After Hours Work	
631	Temporary De-energisation/Isolation of Underground HV Or LV Network[3]- Business Hours Work	Temporary de-energisation and re-energisation of an Evoenergy underground high or low voltage network on customer's request. Charges applicable per isolation or de-energisation and re-energisation on the same day only.
632	Temporary De-energisation/Isolation of Underground HV Or LV Network[3]- After Hours Work	
633	Temporary De-energisation/Isolation of Underground HV Network - If HV Cable Insulation Test Required (Isolation for more than 7 days)[4]- Business Hours Work	Temporary de-energisation and re-energisation of Evoenergy underground high voltage network on customer's request. Charges applicable per isolation or de-energisation and re-energisation on the same day only and per visit. Charges includes insulation testing of isolated high voltage cable prior to re-energisation.
634	Temporary De-energisation/Isolation of Underground HV Network - If HV Cable Insulation Test Required (Isolation for more than 7 days)[4]- After Hours Work	
635	Temporary Pole Support Work - Using Lifter/Borer[5]- Business Hours Work	To maintain the integrity of an existing Evoenergy network pole, upon a customer's request, provision of support using lifter/borer will be established. Charges applicable per pole per day or per visit. Charges includes plant operator as required. Network isolation is excluded and to be considered as separate request.
636	Temporary Pole Support Work - Using Lifter/Borer[5]- After Hours Work	

637	Temporary Pole Support Work - Using Concrete Blocks[5] - Business Hours Work	To maintain the integrity of an existing Evoenergy network pole, upon a customer's request, provision of support using concrete blocks will be established. Charges applicable per pole per day or per visit. Charges includes plant operator as required. Network isolation is excluded and to be considered as separate request.
638	Temporary Pole Support Work - Using Concrete Blocks[5] - After Hours Work	
639	Pole Stay Replacement With Standard Stay - Business Hours	Replacement of existing Pole Stay with new standard or side walk Stay to an existing Evoenergy network pole on customer's request. The charges applicable per stay per site.
640	Pole Stay Replacement With Standard Stay - After Hours	
641	Pole Stay Replacement With Side Walk Stay - Business Hours	
642	Pole Stay Replacement With Side Walk Stay - After Hours	
643	LVABC Replacement 1 Span - Business Hours	Replacement of existing span of low voltage bare conductors between two Evoenergy poles with insulated low voltage Aerial Bundled Cables (LVABC) on customer's request. Charges applicable for Evoenergy network only.
644	LVABC Replacement 1 Span - After Hours	
645	LVABC Replacement 2 Span - Business Hours	Replacement of existing two in-line spans of low voltage bare conductors between three Evoenergy poles with insulated low voltage Aerial Bundled Cables (LVABC) on customer's request. Charges applicable for Evoenergy network only.
646	LVABC Replacement 2 Span - After Hours	
647	LVABC Replacement 3 Span- Business Hours	Replacement of existing three in-line spans of low voltage bare conductors between four Evoenergy poles with insulated low voltage Aerial Bundled Cables (LVABC) on customer's request. Charges applicable for Evoenergy network only.
648	LVABC Replacement 3 Span - After Hours	
649	LVABC Replacement Cut & Shackle for LVABC Replacement - Per Cross arm One Direction - Business Hours	Establishment of new Cross Arm in one direction with Cut & Shackle for replacement of existing span/s of low voltage bare conductors with insulated low voltage Aerial Bundled Cables (LVABC) on customer's request. Charges applicable for Evoenergy network only.
650	LVABC Replacement Cut & Shackle for LVABC Replacement - Per Cross arm One Direction - After Hours	
651	LVABC Replacement Installation of LV Fuse Switch Disconnector for LVABC Replacement Work- Business Hours	Installation of new Low Voltage Fuse Switch Disconnector at Evoenergy Network Pole during replacement of existing span/s of low voltage bare conductors with insulated low voltage Aerial Bundled Cables (LVABC) on customer's request. This charges applicable only if the Low Voltage Fuse Switch Disconnector to be installed to replace existing Low Voltage Links to establish separation of Low Voltage networks as part Bare Overhead Replacement with LVABC.
652	LVABC Replacement Installation of LV Fuse Switch Disconnector for LVABC Replacement Work- After Hours	
653	LVABC Replacement Installation of LV termination cross- arm	Installation of new Low Voltage Termination Cross-arm at Evoenergy Network Pole if required during replacement of existing

	for LVABC Replacement Work - Business Hours	span/s of low voltage bare conductors with insulated low voltage Aerial Bundled Cables (LVABC) on customer's request.
654	LVABC Replacement Installation of LV termination cross- arm for LVABC Replacement Work - After Hours	
655	LVABC Replacement Installation of LV double strain cross - arm for LVABC Replacement Work - Business Hours	Installation of new Low Voltage double strain cross-arm at Evoenergy Network Pole if required during replacement of existing span/s of low voltage bare conductors with insulated low voltage Aerial Bundled Cables (LVABC) on customer's request.
656	LVABC Replacement Installation of LV double strain cross - arm for LVABC Replacement Work - After Hours	
657	LVABC Replacement 1 Way 630A Weber Fuse Switch Disconnector Installation for consumer mains termination work - Business Hours	Installation of new 1 Way 630A Weber Fuse Switch Disconnector unit (where the size of the consumer mains > 70mm2) within customer's point of entry cubicle or at Evoenergy Substation Low Voltage board for termination of consumer mains on customer's request. Charges includes removal of existing Holec Fuseways at point of entry cubicle as/if required.
658	LVABC Replacement 1 Way 630A Weber Fuse Switch Disconnector Installation for consumer mains termination work - After Hours	
659	LVABC Replacement 1 Way 1000A Weber Fuse Switch Disconnector Installation for consumer mains termination work - Business Hours	Installation of new 1 Way 1000A Weber Fuse Switch Disconnector unit (where the two sets and size of consumer mains is > 70mm² are to be terminated) within customer's point of entry cubicle or at Evoenergy Substation Low Voltage board for termination of consumer mains on customer's request. Charges includes removal of existing Holec Fuseways at point of entry cubicle as/if required.
660	LVABC Replacement 1 Way 1000A Weber Fuse Switch Disconnector Installation for consumer mains termination work - After Hours	
661	LVABC Replacement 1 Way 1250A Jean Muller Installation for consumer mains termination work - Business Hours	Installation of new 1 Way 1250A Jean Muller Type Fuse Switch Disconnector unit (where the four sets and size of consumer mains is > 70mm² are to be terminated) within customer's point of entry cubicle or at Evoenergy Substation Low Voltage board for termination of consumer mains on customer's request. Charges includes removal of existing Holec Fuseways at point of entry cubicle as/if required.
662	LVABC Replacement 1 Way 1250A Jean Muller Installation for	

	consumer mains termination work - After Hours	
663	LVABC Replacement 1 Way Weber POE Kit Installation for consumer mains termination work Business Hours	Installation of new 1 Way Weber Point of Entry Kit (where the size of consumer mains is more than 70mm²) within customer's point of entry cubicle for termination of consumer mains on customer's request.
664	LVABC Replacement 1 Way Weber POE Kit Installation for consumer mains termination work- After Hours	
665	LVABC Replacement 3 Way Weber POE Kit Installation for consumer mains termination work - Business Hours	Installation of new 3 Way Weber Point of Entry Kit (where the size of consumer mains is more than 70mm²) within customer's point of entry cubicle for termination of consumer mains on customer's request.
666	LVABC Replacement 3 Way Weber POE Kit Installation for consumer mains termination work - After Hours	
667	LVABC Replacement Holec Fuse Kit Installation for Termination of Consumer Mains - Business Hours	Installation of new Holec Fuse Kit (where the size of consumer mains is more than 70mm²) within customer's point of entry cubicle for termination of consumer mains on customer's request.
668	LVABC Replacement Holec Fuse Kit Installation for Termination of Consumer Mains - After Hours	

Appendix B: Incremental cost-revenue-test

Evoenergy applies an incremental cost-revenue-test (ICRT) to determine the capital contributions that may apply to connection services that the AER has classified as standard control services.

Under the ICRT, Evoenergy may seek a capital contribution (CC) for standard control connection services from a connection applicant, if the incremental cost of the standard control connection services exceeds the estimated incremental revenue expected to be derived from the standard control connection services (IR(n=X)). The incremental cost includes the customer specific connection costs (ICCS) (including costs of extensions and augmentation of premises connection assets at the connection point) and any shared network costs (ICSN) (including costs of augmentation, insofar as it involves more than an extension, attributable to the customer's connection). The ICRT is as follows:

CC = ICCS + ICSN – IR (n=X)

Where CC ≥ 0

ICCS = Incremental Cost Customer Specific—the incremental costs incurred by the distribution network service provider for standard control connection services, 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. The ICCS may include costs for: augmentation of premises connection assets at the retail customer's connection point; extension costs; administration costs (including any design and certification costs); and any costs for conducting a tender process. Table 2 in Chapter 2 of this policy provides further details on each of these cost components.

The ICCS will be calculated in accordance with clauses 5.2.1 to 5.2.4 of the AER connection charge guidelines. For connection upgrades and alterations only incremental costs and revenue are taken into account (the cost of the connection upgrade/alteration is compared against the incremental revenue). Only simple high-volume types of service upgrades (for example single dwelling) are alternative control.

ICSN = Incremental Cost Shared Network—the costs incurred by Evoenergy for standard control connection services, 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.

The ICSN will be calculated in accordance with clauses 5.2.1 to 5.2.3 and clauses 5.2.5 to 5.2.11 of the AER connection charge guidelines. As explained in Chapters 3 and 4 of this policy, as a general principle the ICSN term will be zero. However, a $/kVA charge in relation to augmentation of shared network assets applies to connections larger than 100 Amps per phase. The charge is applied to load customers and developers. **IR(n=X)** = Incremental revenue expected to be received from the new connection—the present value of an X-year revenue stream directly attributable to the new connection as described in section 5.3 of the AER connection charge guidelines. X is assumed to be 30 years for residential connections, and 15 years for commercial, unless otherwise agreed by the applicant and Evoenergy.

The revenue calculation is based on the Distribution Use of System (DUOS) tariff corresponding to the customer category (residential, LV commercial and HV commercial), as determined by the AER in the relevant distribution determination.

The estimates of demand and energy consumption are prepared with reference to existing similar loads taking into account the particular circumstances and load characteristics such as seasonality, load consumption curves, load factors and power factors. In addition, where relevant, the estimates take into account the following:

- For subdivision estates, in particular commercial estates, demand per square metre of land area

- For residential load including subdivision estates and multi-unit blocks, existing and projected per dwelling energy consumption figures.
- For commercial load, demand and energy consumption per meter of the gross, or if more appropriate net, building floor area.
- For unusual loads, information specific to the connection needs to be obtained from the connection applicant to allow for a bottom-up method estimate of consumption.

To ensure that the estimated revenues and costs are directly comparable, only DUoS tariff components corresponding to asset cost and operational costs relevant to the connection are included in the calculation, consistent with Evoenergy's cost of service model, and the AER connection charge guideline (clause 5.1.5).

The revenue stream is discounted using the real pre-tax weighted average cost of capital (WACC), as set out in the relevant ACT distribution determination[24], consistent with clause 5.3.4 of the AER connection charge guideline.

The assumed price path for calculating the incremental revenue is as specified in the AER connection guideline (clause 5.3.5):

a. Use the price path set out in the relevant distribution determination that is applicable at the time of the connection offer, until the end of the relevant distribution determination, and
b. A flat real price path[25] after the end of the relevant distribution determination, for the remaining life of the connection. This flat price path is the expected real DUoS charges in the final year of the regulatory control period.

The following incremental cost components of connection (items A to G from Table 2 in Chapter 2) are taken into account when applying the ICRT:

a. For load customers, the revenue is compared against the cost of standard components of premises connection assets (A), extensions (B) and design and administration (C)
b. For internal reticulation of the extra-large multi hectare blocks, the treatment is the same as for (b) above.
c. For embedded generator connections other than or micro generators (<30 kW) connected as part of a basic connection, the cost components included in ICRT are connection assets (A), extensions (B) and design and administration (C) and augmentation of shared network assets (D).

[24] The WACC determined by the AER for the 2019/20 to 2023/24 regulatory control period.

[25] This is equivalent to being escalated by CPI in nominal terms