

ATTACHMENT 6.1

CONNECTION POLICY – CONNECTION CHARGES

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1. Introduction

This document is Essential Energy's Connection Policy.

This connection policy sets out the circumstances in which Essential Energy requires a retail customer or real estate developer to pay the cost of connecting their premises or development to the Essential Energy *network*. The costs are also known as connection charges for the provision of connection services under Chapter 5A of the National Electricity Rules (*NER*).

A connection charge can be a fee payable to Essential Energy for a service, such as an inspection, or it could be a financial guarantee where Essential Energy has carried out an *augmentation* to its *network* or a combination thereof.

This policy has been prepared to be consistent with the following regulatory instruments, which regulate the fees and charges that Essential Energy can require a customer to pay:

- > The connection charge principles set out in Part E – Connection Charges, of Chapter 5A of the *NER*,
- > Part DA – Connection policies, of Chapter 6 of the *NER*,
- > The Australian Energy Regulator's (*AER*'s) Connection charge guidelines for electricity retail customers, under Chapter 5A of the *NER* (Connection Charge Guidelines), and
- > The *AER*'s determination for the 2015-19 regulatory control period in relation to the fees that Essential Energy can charge for Ancillary Network Services and Metering Services.

Note:

This policy does not apply to connections to Essential Energy's *network* by registered participants or intending registered participants in the wholesale market. These connections are covered by the provisions of Chapter 5 Network Connection of the *NER*.

1.1. General approach to funding connections

The fees and charges payable by a customer in order to connect to Essential Energy's *network* fall into two categories:

1. Third party fees and charges which relate to the services provided by Accredited Service Providers (*ASP*) and other third parties in relation to the provision and installation of *network* infrastructure; and
2. Essential Energy's fees and charges for connection services provided by Essential Energy.

A brief description of these fees and charges is set out below.

1.1.1. Third party fees and charges

The third party fees and charges are not payable to Essential Energy and therefore are not connection charges. They have been included in the connection policy to assist the customer to understand the scope of charges the customer may incur in establishing a connection to Essential Energy's *network*.

Contestable services provided by Accredited Service Providers

As a general rule, the services required to establish a customer's connection to Essential Energy's *network* are undertaken by Accredited Service Providers (*ASP*) and are known as contestable services. This means customers must fund the costs of *connection works* (i.e. make capital contributions), which include the following costs associated with establishing a new or altered connection of their installation or development to Essential Energy's *network*.

- > The costs of providing and installing the necessary *premises connection assets* at the customer's connection point or point of supply and also within the customer's electrical installation, and
- > The costs of providing and installing a dedicated *extension* from the connection point up to a defined point of connection on Essential Energy's existing *network* known as the *linkage point*.

The capital contributions payable by the customer for these contestable services are not specified in this Policy and are payable directly to the *ASP*.

1.1.2. Network Augmentations

Generally Essential Energy carries out and funds *augmentation* to the shared *network*. This is work on the shared assets beyond the *linkage point*. Connection applicants will be required to fund *augmentation* in the following circumstances:

- > All real estate developers must fund *augmentation* work.
- > Non registered embedded generators must fund *augmentation* work.
- > Retail customers: If the capacity applied for by the connection applicant exceeds the threshold set by Essential Energy in Section 3 of this policy, they will be required to make a capital contribution towards the cost of the *augmentation* of Essential Energy's shared *network*.

In all cases:

- > The capital contribution will be limited to the *augmentation* required to enable the connection to be made.
- > The *augmentation* work is contestable and undertaken by an *ASP* so the capital contribution is payable to the *ASP*, not Essential Energy.

Other third party fees and charges

In addition to *ASP* charges, the customer may also incur property tenure costs which relate to the granting and registration of leases and easements and associated plans over Essential Energy infrastructure located on the customer's premises. These costs are also not payable to Essential Energy, but directly to the relevant third party unless statutory or other requirements dictate that Essential Energy must perform the activity. In that case, costs will be payable direct to Essential Energy.

1.1.3. Essential Energy fees and charges

Ancillary network service fees

Ancillary Network Services are services which are provided to a customer on an "as needed" basis and are able to be directly attributed to the customer receiving the service. All customers will be required to pay the fees for Ancillary Network Services associated with their connection. These fees relate to the services that Essential Energy provides during the design and construction (on a contestable basis) of *premises connection assets*, *extensions* and *augmentation* by *ASPs*. An example would be inspection of assets built by a Level 1 *ASP*. These services and fees are explained in detail in section 4.

Metering Services

Other than metering related Ancillary Network Services, the only relevant metering services provided by Essential Energy in relation to connection services is the provision of the meter. The customer will be charged an upfront fee to cover the metering equipment costs, as approved by the *AER*, for new and upgraded metering installations. See section 5 for further details.

Other fees

In some circumstances, customers may be required to pay a site inspection fee if a site inspection is required. Customers who receive a negotiated connection offer can be required to pay Essential Energy's reasonable expenses in assessing the customer's connection application and preparing the offer. Essential Energy's approach to determining its reasonable expenses is set out in section 6.

Pioneer scheme payments

Retail customers or *real estate developers* who propose to connect to a part of the *network* funded by another customer in the previous seven years (a pioneer scheme) may be required to make a payment to connect to the pioneer scheme. See section 7.

Financial guarantees

In some circumstances, Essential Energy may require a customer to provide Essential Energy with a financial guarantee known as a Guarantee of Revenue (GoR) which guarantees Essential Energy a certain level of revenue in relation to a substantial *augmentation* that Essential Energy has funded in order for the customer to connect. Refer section 8.

1.1.4.Charges for Ongoing Supply Services

For information purposes only, this policy sets out miscellaneous fees that Essential Energy may charge once a new or altered connection has been energised. These fees are explained in Appendix D.

1.1.5.Connection Charges

The connection charges that customers seeking a new or altered connection of their premises to Essential Energy's distribution system are required to pay to Essential Energy are:

1. Ancillary network service fees for all Ancillary Network Services provided by Essential Energy in order for the customer to connect – see section 4;
2. Metering service fees for the provision of the metering equipment required for the connection – see section 5;
3. Other fees if a site inspection is required and/or negotiation fee for a negotiated connection offer – see section 6;
4. A pioneer scheme payment may be required – see section 7.
5. In addition, the customer may also be required to provide Essential Energy with a financial guarantee in certain circumstances, such as where Essential Energy funds a *network augmentation* – see section 8.

2. Customer Funded Connection Works & Augmentations

For ease of reference Essential Energy has described the types of *connection works* and services that customers fund by reference to whether the costs are incurred in relation to a basic, standard or negotiated connection services.

The charges for basic connection services are generally uniform and confined to funding the *premises connection assets* and paying Ancillary Network Service fees and metering service fees, as the connections to which they relate generally do not require any *network augmentation* other than *extensions* for *premises connection assets* and dedicated asset *augmentation*.

The charges for standard connection services also include the *extension* and *augmentation* costs as well as funding *premises connection assets* and ancillary network service fees and metering service fees. The *augmentation* costs are determined by reference to a capital contribution threshold set by Essential Energy.

Appendix A provides a summary of the fees and charges payable in relation to each connection offer.

2.1. Basic Connection Offers

These offers are for small Low Voltage connections and are typically applicable to single residential premises, small commercial premises and small multi-occupant developments. They are also applicable to customers who install a micro embedded generator within their installation.

Customers who receive one of Essential Energy's basic connection offers will be required to fund the contestable works (i.e. make a capital contribution) associated with:

- > their *premises connection assets*, and
- > any dedicated *network extension*, and
- > any dedicated asset *augmentation*.

These customers will not be required to fund any *augmentation* of Essential Energy's shared *network* beyond the *linkage point*. The capital contributions made by the customer are payable directly as charges to the *ASP* and are not set out in this policy.

The customer must also pay any Ancillary Network Services fees and metering services fees associated with their connection. These are explained in detail in sections 4 and 5, and Appendixes B and C.

Essential Energy may require lodgement of security bonds for financial guarantee (see section 8 and / or activities that remain incomplete at time of energisation (such as Crown land licences).

In some circumstances a site inspection fee or pioneer scheme payment may also be required.

The contestable work required to install or alter the customer's *premises connection assets*, any dedicated *network extension*, and any dedicated asset *augmentation*, will be carried out by the customer's ASP. This includes the provision of the service line and installation of the metering equipment by the customer's level 2 ASP, refer to Appendix A.

2.2. Standard Connection Offers

These offers are for low voltage connections and are typically applicable to large multi-occupant developments, and large commercial and industrial developments, as well as to *rural customers* who require *augmentation* work.

Essential Energy's standard connection offers apply to connections where *augmentation* of Essential Energy's shared *network* may be required to enable the customer's connection to occur.

In addition, if a *network extension* is required that involves design by a Level 3 ASP and/or construction by a Level 1 ASP, then a standard connection offer will usually be made.

Customers who receive standard connection offers will be required to fund the contestable works (i.e. make a capital contribution) associated with:

- > their *premises connection assets*,
- > any dedicated *network extension*, and
- > in relation to *real estate developers* and non-registered embedded generators, any *augmentation*,
- > in relation to *retail customers*, any *augmentation* of the shared *network*, if the capacity applied for exceeds the thresholds set out in section 3.

Different thresholds apply to *retail customers* depending on whether the connection is in an urban or rural area. Essential Energy will fund the shared *augmentation* works if a customer applies for a capacity below the threshold set out in section 3. This threshold has been established by Essential Energy to meet the requirements of clause 5A.E.1(b)(2) of the *NER* to indicate the threshold below which a *retail customer* will not be required to make a capital contribution towards the cost of the shared *network augmentation*.

The customer must also pay for ancillary network service fees and metering service fees associated with their connection. These are explained in detail in sections 4 and 5, and Appendixes B and C.

In some circumstances, a site inspection fee (see section 6) or pioneer scheme payment may also be required as explained in section 7 and Appendix D respectively.

Some customers may also be required to provide a financial guarantee or Guarantee of Revenue (GoR), where their connection requires substantial Essential Energy funded *augmentation* works. The circumstances in which a GoR may be required are set out in more detail in section 8.

Essential Energy may require lodgement of security bonds for activities that remain incomplete at time of energisation (such as Crown land licences).

The contestable work required to design and construct customer funded *augmentation* works will be carried out by the customer's Level 3 and Level 1 ASPs respectively. The capital contributions associated with the contestable works are payable as charges directly to the relevant ASP and are not set out in this policy.

Essential Energy will require reasonable prepayment of Ancillary Network Service fees associated with standard connection offers – see section 9. Ancillary Network Service fees are listed in the appendixes at the end of this connection policy.

2.3. Negotiated Connection Offers

These offers are for applications that are not eligible for either a Basic Offer or a Standard Offer, or for use when the connection applicant elects to use this option.

Customers who receive a negotiated connection offer for Essential Energy will be required to pay connection charges to Essential Energy and/or make capital contributions to the ASP for the *connection works* on the same basis as for customers who receive basic or standard connection offers.

In addition, these customers may also be required to pay a negotiation fees to cover expenses reasonably incurred by Essential Energy in assessing the customer's application and preparing a negotiated connection offer – refer to section 6.

Customers who receive a negotiated connection offer may be required to provide a financial guarantee or GoR, where their connection requires substantial Essential Energy funded *network augmentation* works. The circumstances in which a GoR may be required are set out in more detail in section 8.

Essential Energy will require reasonable prepayment of ancillary network service fees associated with a negotiated connection offer – see section 9. Ancillary network service fees are listed in the appendixes at the end of this connection policy.

2.4. Contestability of Connection Works

Under section 31 of the Electricity Supply Act 1995 (NSW), where a customer is required to procure and fund *connection works* or *network augmentations*, the customer may do this by engaging an *ASP* to design and/or construct those works as contestable works. The *ASP* must be suitably accredited under the NSW Accreditation Scheme administered by the Department of Trade and Investment Regional Infrastructure and Services (DTIRIS).

The customer pays the *ASP* directly for these services, including for any assets installed (i.e. a capital contribution).

2.5. Connection Works Carried out by Essential Energy

Essential Energy may determine that certain *connection works* or portions thereof which are *augmentation* that would normally be provided on a contestable basis will be carried out and funded by Essential Energy. Essential Energy will make this determination based on risk management principles, related to certain criteria such as safety, *network* security and reliability of supply to customers. These works will be carried out by Essential Energy and be funded by the customer.

2.6. Shared Connection Works

Essential Energy will consider the potential for any new dedicated high voltage (HV) mains *extension* supplying a multi occupant development or a customer substation in an *urban network*, to be used to supply other customers outside the development in the foreseeable future. This could occur via a direct connection to, or via a further HV mains *extension* of, the original HV mains *extension*. When Essential Energy receives the original application, it will determine any reasonable likelihood of such asset sharing taking place in the foreseeable future (maximum of seven years). This assessment by Essential Energy may determine that the original HV mains *extension* will be classed as *network augmentation*, with a funding contribution by Essential Energy.

2.7. Customer Requested Alternative or Additional Connection Works

Essential Energy specifies the economic optimum size *connection works* in accordance with its network standards, to adequately supply the assessed electrical load requirements of customers. However, if a customer requests any alternative or additional *connection works* to the standard Essential Energy construction, and Essential Energy agrees with the request, the customer will be required to fund any additional costs thereby incurred by Essential Energy. This includes the additional cost of any alternative or additional HV equipment that would otherwise be funded by Essential Energy in accordance with sections 2.5 and 2.6.

3. Capital Contribution Thresholds

A capital contribution is a payment made by a customer towards the cost of a connection to Essential Energy's *network*. In NSW, where a customer is required to fund *connection works*, the customer can engage an *ASP* to undertake the works (known as contestable services). This means the capital contribution is payable to the *ASP*, not Essential Energy. This policy sets out the circumstances when a capital contribution is payable. The amount of that capital contribution is separately determined between the customer and the *ASP* and is outside the scope of this policy.

A retail customer (other than a real estate developer or a non-registered embedded generator) will not be required to make a capital contribution towards the cost of *augmentation* on the shared *network* beyond the *linkage point* (to the extent that it involves more than an *extension*) if:

- > The connection services being sought by the connection applicant are basic connection services; or
- > The capital contribution thresholds set by Essential Energy are not exceeded.

3.1. Capital Contribution Thresholds

Essential Energy has established two thresholds below which retail customers will not be required to make a capital contribution towards the cost of *network augmentations*:

1. An urban threshold for customers in urban areas;
2. A rural threshold for customers in rural areas.

The Capital Contribution Thresholds will apply for the 2015-19 regulatory control period.

3.1.1. Real Estate Developments and Embedded Generators

Real estate developments and embedded generators that cannot be supplied by the adjacent Essential Energy *network* will be required to fund a substation on the development or additional capacity in the vicinity of the development or embedded generator.

In this case Essential Energy will require the connection applicant to fund as contestable works:

- > For substations (usually onsite): The design and construction by an *ASP* of the substation(s) and *network extension(s)* consisting of the dedicated HV mains to the substation;

Note: The standard reticulation is a loop-in arrangement, i.e. 2 cables, or if an alternative arrangement consisting of a single (radial) HV cable connection and an LV interconnector is agreed to by Essential Energy, this LV interconnector will also be funded by the customer.
- > For other *network augmentations*, in the vicinity of the premises or otherwise: The design and construction of any *network augmentations* that are required to make the required capacity available at the premises of the connection applicant;
- > The substation building construction for chamber substations; and any site preparation works, including special foundations, footings, piers, retaining walls and railings for kiosk substations;
- > All easement costs and other approvals, whether new or adjustments.

The connection applicant must provide a suitable substation site on their premises as close as possible to the street frontage where requested by Essential Energy.

3.1.2. Retail Customer Threshold for Urban Areas

Essential Energy has adopted the following threshold to determine when a *retail customer* must contribute to the cost of expanding the capacity of the Essential Energy *network* (i.e. make a capital contribution):

Retail Customer > 100 Amps

Where a retail customer in an *urban network* requires 100 Amps or more (per phase over 3 phases) and the adjacent Essential Energy *network* cannot supply the required load, the customer will be required to fund either:

- > One or more new substations on or in the vicinity of the premises of the development;
- > Additional *network* capacity in the vicinity of the premises of the development.

This will require the customer to fund as contestable works:

- > For substations (usually onsite): The design and construction by an *ASP* of the substation(s) and *network extension(s)* consisting of the dedicated HV mains to the substation;

Note: The standard reticulation is a loop-in arrangement, i.e. 2 cables, or if an alternative arrangement consisting of a single (radial) HV cable connection and an LV interconnector is agreed to by Essential Energy, this LV interconnector will also be funded by the customer.
- > For other *network augmentation* in the vicinity of the development: The design and construction of *network augmentations* that are required to make the required capacity available at the premises of the development.
- > The substation building, construction for chamber substations, and any site preparation works, including special foundations, footings, piers, retaining walls and railings for kiosk.

- > All easement costs and other approvals, whether new or adjustments.

The connection applicant may be required to provide a suitable substation site on their premises as close as possible to the street frontage where requested by Essential Energy.

The nature and scope of the additional capacity will be determined by Essential Energy to meet the proposed customer load and Essential Energy *network* requirements.

The new substation or additional *network* capacity will be designed to be the minimum economic size or accommodate the minimum number of transformers necessary to supply the ultimate forecast load requirements of the proposed development.

Essential Energy may fund certain equipment in accordance with clause 2.6.

3.1.3. Threshold for Rural Customers

Rural customers are required to fund any shared *network augmentation* that is required for their connection where the customer's new load is greater than 16kVA (63 amps).

Rural customers must also fund any *augmentation* or *network extension* by way of any required dedicated customer substation equipment.

Essential Energy may fund certain equipment in accordance with clause 2.6.

3.2. Calculation of Capital Contributions

This policy sets out the circumstances when a capital contribution will be payable by a customer. It does not set out how the amount of any capital contribution is calculated because the customer does not pay Essential Energy a capital contribution. When a customer is required to make a capital contribution, the connection work related to the contribution is a contestable service in NSW and the customer engages an *ASP* to undertake the work. The customer pays the capital contribution to the *ASP* and the cost is determined on a competitive basis.

Capital contributions arise in the following circumstances:

- > by real estate developers and non-registered embedded generators for all *connection works* including *extensions* and *augmentations*;
- > by retail customers below the Capital Contribution Thresholds identified in section 3.1 (i.e. for *premises connection assets*, *extensions*, and dedicated asset *augmentations*);
- > by retail customers above the Capital Contribution Thresholds identified in section 3.1.

If a pioneer scheme relates to the assets for which the customer has made a capital contribution, the customer may be entitled to a pioneer scheme refund. See section 7.

3.3. Estimation of Connection Applicant's Consumption and Demand

Essential Energy will generally use the information provided by the connection applicant on the connection application to estimate the connection applicant's consumption and demand. Essential Energy may use other methods to estimate the connection applicant's consumption or demand where the information provided on the connection application is not consistent with other customers of a similar type, or, where the existence of *network* constraints, emerging or otherwise, requires engineering intervention to manage impact on the *network*.

4. Ancillary Network Services and Fees

Ancillary Network Services provided by Essential Energy fall into three categories:

1. Ancillary Network Services which are required in order for a customer to connect to Essential Energy's *network* (connection related Ancillary Network Services);
2. Ancillary Network Services, which are provided to customers as part of their ongoing supply service provided by Essential Energy under a customer connection contract (Miscellaneous Ancillary Network Services); and
3. Metering related Ancillary Network Services, which are services provided on an 'as needed' basis relating to the provision, installation and maintenance of metering installations.

Connection related Ancillary Network Services

These are customer specific connection services, including processing of connection applications and contestable *connection works* carried out by *ASPs* and which are required for connection. These services are necessary to ensure that an appropriate level of reliability, quality of supply and safety is maintained in the operation of Essential Energy's *network*.

The *AER* reviews and approves these services and sets their rates and conditions. These services were previously known as Monopoly Services, but since 1 July 2014 are known as Ancillary Network Services.

A list of these services is contained in Appendix B for guidance. The current charges for Ancillary Network Services are approved by the *AER* for each financial year and are available at essentialenergy.com.au.

Miscellaneous Ancillary Network Services

These Ancillary Network Services are provided by Essential Energy on an "as needed" basis to the customer after the connection has been established. These Ancillary Network Services are not part of the connection service provided under Chapter 5A of the *NER* and are not connection charges under Chapter 5A.

These services are included in the Policy for information purposes and are payable by the customer under its ongoing supply contract with Essential Energy. A list of these services is contained in Appendix D.

Ancillary Network Services related to Metering

Essential Energy also provides Ancillary Network Services which specifically relate to metering, such as carrying out special meter readings and meter testing. It also provides and installs current transformer (CT) metering. A list of these services is contained in Appendix C for guidance. The current charges for Ancillary Network Services are approved by the *AER* and are available at essentialenergy.com.au.

5. Metering Services

Other than the metering related Ancillary Network Services, the only other relevant metering service provided by Essential Energy in relation to connection services is the provision of the metering equipment required for the connection. The customer will be charged an upfront fee to cover metering equipment costs for new and upgraded metering installations. The charge payable by the customer is called an upfront meter charge. It is approved by the *AER* for each financial year and is available at essentialenergy.com.au.

The service relating to the installation of the metering equipment is provided by an *ASP* and the cost of the service is payable to the *ASP*. Other metering services provided by Essential Energy are payable by the customer as part of the customer's ongoing supply *network* charges and are not subject to this connection policy.

6. Other Fees

Chapter 5A of the *NER* allows Essential Energy to charge certain fees to recover its costs from providing certain connection services relating to processing the connection application.

Site inspection fee

Where Essential Energy reasonably needs to make a site inspection in order to determine the nature of the connection service sought by the connection applicant, Essential Energy may charge its reasonable expenses to the connection applicant and recover those costs as a debt.

Essential Energy will calculate the fee payable in accordance with the labour charge rates that have been approved by the *AER*.

Negotiation fee

Where a connection applicant's application relates to a negotiated connection contract under Chapter 5A of the *NER*, Essential Energy may charge the applicant a reasonable fee to cover expenses directly and reasonably incurred by Essential Energy in assessing the applicant's application and making a connection offer.

Essential Energy requires the connection applicant to pay an upfront fee of \$250 to assess the applicant's application prior to the commencement of negotiations. Following Essential Energy's initial assessment of the connection application, Essential Energy will provide the connection applicant with an estimate of the charges the connection applicant will be required to pay in order for Essential Energy to assess the application and make a connection offer.

7. Pioneer Schemes

Under Chapter 5A of the *NER*, Essential Energy is required to operate a pioneer scheme which requires Essential Energy to make refunds to retail customers who funded connection assets within seven years, which are no longer being dedicated to the exclusive use of that customer. The refund is made by way of a connection charge (known in this policy as a pioneer scheme payment) payable by the new users of the assets.

The entitlement of real estate developers to access a pioneer scheme for *extension* assets they fund will be determined in accordance with the *AER* Connection Charge Guidelines.

Appendix E sets out how Essential Energy calculates the pioneer scheme payments and refunds in respect of assets which are subject to a pioneer scheme.

8. Financial Guarantees (Security Fee)

In accordance with Chapters 5A and 6 of the *NER*, Essential Energy will require a customer to provide a financial guarantee (also known as a security fee) or Guarantee of Revenue (GoR), where their connection requires substantial Essential Energy funded *network augmentation* works that is initially only for the customer's benefit, and where Essential Energy considers there is a high risk that Essential Energy may not earn the estimated incremental revenue from the construction of the *network augmentation* works.

A GoR is a legally binding agreement between Essential Energy and the connection applicant where the connection applicant guarantees to pay Essential Energy a minimum level of network revenue each year for the duration of the GoR agreement, to make up any shortfall in their actual Network Use of System (NUoS) charges over the period, which is nominally five years, although this can be varied between five and 10 years on a case by case basis. The security amount will not be greater than the present value of the incremental costs that Essential Energy incurred by undertaking the *network augmentation*. The security amount under the GoR will be calculated by reference to the incremental revenue that Essential Energy expects to receive from the *network augmentation*. The security amount will not be greater than the amount of estimated incremental revenue which Essential Energy assesses as having a high risk of not being recovered.

The GoR will be established at the same time as the connection offer is accepted and/or the design information package is issued and prior to the *network augmentation* works being initiated. This will allow the *network augmentation* works to proceed in parallel with the associated contestable works.

The GoR is secured by a bank guarantee provided by the customer, or other suitable financial instrument as agreed by Essential Energy. Essential Energy is entitled to withdraw from the bank guarantee any shortfall in actual NUoS payments, in accordance with the terms stated in the deed and the bank Guarantee.

9. Prepayments

Essential Energy will only seek prepayments in circumstances which are permitted by the regulatory environment and in particular Chapter 5A of the *NER* and the *AER* Connection Charge Guidelines.

10. Dispute Resolution

A dispute between a retail customer or real estate developer and Essential Energy about connection charges is an access dispute for the purposes of section 2A of the National Electricity Law, which may be referred to the *AER* for resolution in accordance with part G of Chapter 5A of the *NER*.

Prior to referring the matter to the *AER*, Essential Energy encourages customers to first attempt to resolve the dispute directly with Essential Energy, in accordance with Essential Energy's Complaints and Dispute Resolution Procedure. Details of how to apply for review of a decision by Essential Energy and how Essential Energy will conduct the review are available on Essential Energy's website: essentialenergy.com.au.

Small customers may also refer their dispute to the relevant Ombudsman to resolve the matter.

For small customers in New South Wales:

Energy and Water Ombudsman of New South Wales

Freecall: 1800 246 545

Freefax: 1800 812 291

Email: omb@ewon.com.au

Mail: Reply Paid Box K1343, Haymarket NSW 1239

For small customers in Queensland:

Queensland Energy Ombudsman

Freecall: 1800 662 837

Freefax: 1800 812 291

Email: complaints@ewoq.com.au or info@ewoq.com.au

Mail: PO Box 3640, South Brisbane QLD 4101

11. Definitions

As far as possible, Essential Energy has used terms and definitions which are consistent with Chapter 5A of the *NER*. So for instance we use the term “*premises connection assets*” to refer to the works required to extend Essential Energy’s *network* to enable a connection to occur, which are substantially located on a customer’s premises and generally dedicated to connecting that customer. However, in some instances we also use other terms, such as “*linkage point*”, as these terms are necessary to explain the extent to which a customer funds *premises connection assets, extensions and augmentations*.

The terms shown in *italics* throughout this document have the following meanings:

<i>augmentation</i>	Work to enlarge a distribution or transmission system or to increase its capacity to transmit or distribute electricity.
<i>AER</i>	The Australian Energy Regulator
<i>ASP</i>	An Accredited Service Provider, being an entity accredited under Part 3 of the Electricity Supply (Safety and Network Management) Regulation 2014 (NSW)
<i>connection works</i>	<p>In relation to a new customer, are those works yet to be constructed which will upon construction:</p> <ul style="list-style-type: none">(a) Enable Essential Energy to provide customer connection services requested by that new customer; and(b) Form part of the <i>network</i> on the side of the <i>linkage point</i> where all the <i>network</i> assets on that side are dedicated to one or more customers. <p>These include (without limitation)</p> <ul style="list-style-type: none">(c) In the case of services to new connection points (as defined in the National Electricity Rules) requested by a new customer, works to connect the customer’s premises at that connection point to the existing <i>network</i>; and(d) In the case of services to existing connection points:<ul style="list-style-type: none">(i) Replacements of existing assets servicing that connection point, where those existing assets , at the time of their replacement, satisfy (a) and (b) above; or(ii) Additional new works that satisfy (a) and (b) above in relation to that connection point, <p>in order to provide additional service at that connection point requested by the new customer.</p>
<i>extension</i>	New <i>network</i> infrastructure outside the present boundaries of Essential Energy’s <i>network</i> to a customer’s premises.

<i>linkage point</i>	The point on the <i>network</i> where the use of assets changes from being dedicated to one or more customers (where all the <i>network</i> assets on that side of the point are so dedicated), to being shared with customers generally. For this purpose, assets are considered to be dedicated to one or more customers only if they are: <ul style="list-style-type: none"> (a) Used by one customer exclusively; or (b) Shared by more than one customer in circumstances where Essential Energy has required that those customers together procure and fund the same <i>connection works</i>.
<i>NER</i>	The National Electricity Rules
<i>network</i>	Essential Energy's electricity distribution system
<i>premises connection assets</i>	The works required to extend Essential Energy's <i>network</i> to enable a connection to occur which are substantially located on a customer's premises and generally dedicated to connecting that customer.
<i>rural customer</i>	A new customer whose premises, the subject of its application for customer connection services, are connected or will be connected (once any relevant <i>connection works</i> are constructed) to the <i>network</i> at a point at which the <i>network</i> is a <i>rural network</i> .
<i>rural network</i>	The part of the <i>network</i> : <ul style="list-style-type: none"> (a) Where the average demand on the HV feeders within it is less than 0.3MVA/km; or (b) That is in an area zoned as rural under a local environment plan (made under the Environmental Planning and Assessment Act 1979 (NSW)); or (c) That is in an area predominantly used for agricultural purposes.
<i>urban network</i>	That part of the <i>network</i> that is not a <i>rural network</i> .

Appendix A: Summary of Essential Energy's connection offers and their associated connection charges

Connection Offer	Typical application	Fees and charges involved in establishing connection	Contestable work carried out by
Basic:			
1. Model Standing Offer for a Low Voltage Basic Connection Service	All Low Voltage connections not requiring <i>network augmentation</i> beyond the <i>linkage point</i>	<ul style="list-style-type: none"> Installation of dedicated <i>premises connection assets</i>, payable to the customers level 2 ASP. <i>Augmentation</i> of dedicated assets. 	Level 2 ASP, for the installation of the dedicated <i>premises connection assets</i> , i.e. the service line and the Type 5 whole current metering, and energising the connection.
2. Model Standing Offer for a Low Voltage Basic Connection Service with Micro Embedded Generation	All Low Voltage connections with micro embedded generator not greater than 30kW not requiring <i>network augmentation</i> beyond the <i>linkage point</i>	<ul style="list-style-type: none"> Ancillary Service fees associated with the contestable work, payable to Essential Energy Fee for new or upgraded meter Site inspection fee payable to Essential Energy, if a site inspection is required Pioneer Scheme costs as applicable 	In the event of <i>augmentation</i> being required level 3 and level 1 ASP, for the design and construction of the <i>premises connection assets</i> , <i>network extension</i> and <i>network augmentation</i> assets, as applicable.
Standard:			
(a) Model Standing Offer for a Low Voltage Standard Connection Service	All Low Voltage connections requiring <i>network augmentation</i>	<ul style="list-style-type: none"> <i>Premises connection assets</i> payable to ASP, refer to section 3 for customer substation thresholds, <i>Network augmentation or extension</i> payable to ASP, refer to section 3 for associated customer <i>network</i> thresholds, 	Level 3 and level 1 ASP, for the design and construction of the <i>network extension</i> and <i>network augmentation</i> assets, as applicable.
(b) Model Standing Offer for a Low Voltage Standard Connection Service with Micro Embedded Generation	All Low Voltage connections with micro embedded generator not greater than 30kW requiring <i>network augmentation</i>	<ul style="list-style-type: none"> Ancillary service fees associated with the contestable work payable to Essential Energy Pioneer Scheme costs as applicable Fee for new or upgraded meter Site inspection fee payable to Essential Energy, as applicable Property tenure costs payable to third parties A GoR may be required if the connection requires significant Essential Energy funded <i>network augmentation</i>, refer section 7 	Level 2 ASP, for the installation of the dedicated <i>premises connection assets</i> , i.e. the service line and the Type 5 whole current metering, and energising the connection.
Negotiated:			
In accordance with Essential Energy's Negotiation Framework	Connections not classified as Basic or Standard	<ul style="list-style-type: none"> As above for the Standard Offer Negotiation expenses, payable to Essential Energy 	As above for the Standard Offer

Appendix B: Connection Related Ancillary Network Services

The AER approved charges for the connection related Ancillary Network Services are available at essentialenergy.com.au

B1 Design Information

The provision of information by Essential Energy to enable an ASP accredited for Level 3 work to prepare a design drawing and to submit it for certification.

This may include without limitation:

- deriving the estimated loading on the system, technically known as the ADMD (after diversity maximum demand). This estimate depends on such factors as the number of customers served and specific features of the customer's demand;
- copying drawings that show existing low and high voltage circuitry (geographically and schematically) and adjacent project drawings;
- specifying the preferred sizes for overhead wires (conductors) or underground wires (cables);
- specifying switchgear configuration type, number of pillars, streetlights etc;
- determining the special requirements of Essential Energy's planning departments necessary to make electrical supply available to a development and cater for future projects;
- any necessary liaison with designers associated with assistance in sourcing design information and developing designs; or
- nominating *network* connection points.

B2 Design Certification

A certification by Essential Energy that a design (if implemented) will not compromise the safety or operation of Essential Energy's distribution system.

This may include, without limitation:

- certifying that the design information/project definition have been incorporated in the design;
- certifying that easement requirements and earthing details are shown;
- considering design issues, including checking for over-design and mechanisms to permit work on high voltage systems without disruption to supply to customers' (adequate low voltage parallels);
- certifying that funding details for components in the scope of works are correct;
- certifying that there are no obvious errors that depart from Essential Energy's design standards and specifications;
- certifying that shared assets are not over-utilised to minimise developer's connection costs and that all appropriate assets have been included in the design;
- auditing design calculations such as voltage drop calculations, conductor clearance (stringing) calculations etc;
- certifying that a bill of materials has been submitted;
- certifying that an environmental assessment has been submitted by an accredited person and appropriately checked.

B3 Design Rechecking

The rechecking of a design initially found to be uncertifiable due to significant defect or not meeting design information requirements. (Does not include the rechecking of minor amendments of an insignificant nature).

B4 Inspection of Construction Work (Level 1 Work)

The inspection by Essential Energy of work undertaken by an *ASP* accredited to perform Level 1 work, for the purpose of ensuring the quality of assets to be handed over to Essential Energy.

B5 Inspection of Service Work (Level 2 Work)

The inspection by Essential Energy, in accordance with the DTIRIS Accredited Service Provider Scheme of work undertaken by a Level 2 *ASP*, for the purpose of ensuring the quality of assets to be handed over to Essential Energy.

The minimum number of inspections required must correspond to the grade of the *ASP* in table 1 below:

Table 1: Inspection Rate

Grade	Number of Inspections
A	1 inspection per 25 jobs
B	1 inspection per 5 jobs
C	Each job to be inspected

B6 Re-Inspection (Level 1 and Level 2 Work)

The re-inspection by Essential Energy of work (other than customer installation work) undertaken by an *ASP* accredited to perform level 1 or level 2 work, for the reason that on first inspection the work was found not to be satisfactory.

B7 Re-Inspection of Work of a Service Provider

The re-inspection by Essential Energy of customer installation work undertaken by a service provider for the reason that on first inspection the work was found to be unsatisfactory.

B8 Customer Interface Coordination for Contestable Works

This service is proposed where customer developments may require a high level of Essential Energy involvement in order to coordinate a range of inputs from Essential Energy to help establish the development. These are usually projects with the following characteristics:

- Multiple components. For example, relocation and *connection works* associated with the one development, or work impacting multiple voltages.
- Projects with scheduling challenges such as rapid deployment requirements or constrained timeframes for particular tasks.
- Multiple and/or conflicting works to be undertaken in tandem or cooperation with other services or utilities.
- Projects where there are significant inter-relationships between capital and contestable works which would benefit from coordination.

The form of this service includes, but is not limited to, attendance at internal and external project meetings in accordance with the needs of particular customers. It requires strong communication skills and technical understanding. The nature of the project would determine the skill level of the assigned officer and the number of hours required.

B9 Access Permit

This service fee includes *network* access and may include without limitation:

- Access to Essential Energy's distribution *network* (e.g. direct distributors)
- Researching and documenting the request for access including a site visit as required;
- Documenting the actual switching process;
- Programming the work;
- Control room activities;
- Fitting and removing of access permit earths;
- The actual switching of the high voltage *network*;
- Identification of any customers who will be interrupted for carding by the *ASP*;
- Low voltage switching and paralleling of substations that permits high voltage work without disrupting supply to other customers;
- Excludes provision of MG (Motor Generator) and live line to maintain supply. These are services in addition and covered by another quoted service;
- Cable ID, stab, cut and phase;
- Reinstate *network* and testing;
- Meeting requirements of the National Energy Retail Law (NSW) and the National Energy Retail Rules;
- Travel costs.

The access permit charge is the maximum per access permit.

B10 Access to Network Assets (Standby Person)

The provision of access (standby) to switchrooms, substations and the like to an *ASP* who is accompanied by Essential Energy's staff member(s).

B11 Substation Commissioning

The commissioning by Essential Energy of a new substation, whether it is a single pole, padmount/kiosk or indoor/chamber and includes:

- all necessary pre-commissioning checks and tests prior to energising the substation via the high voltage switchgear and closing the low voltage circuit breaker, links or fuses; and
- the setting or resetting of protection equipment.

An Access Permit fee, in addition, may be required to gain access to the *network* in order to undertake the commissioning.

Essential Energy will perform the required testing and commissioning activities and the subsequent recording in Essential Energy's asset systems.

The substation commissioning charge will be applied per substation.

B12 Administration

Work of an administrative nature (not including work of an administrative nature described in service – Notice of Arrangement or Authorisation of *ASPs*), including the processing of Level 1 and/or Level 3 work, where the customer is lawfully required to pay for the Level 1 and /or Level 3 work.

This may include, without limitation:

- checking supply availability;
- processing applications;

- correspondence from application to completion;
- record-keeping;
- requesting and receiving fees (initially, then prior to design and after certification);
- receiving design drawings (registering and copying);
- raising an order for high voltage work;
- calculating value of any reimbursements under any applicable pioneer schemes;
- calculating the cost of a project and warranty/maintenance bond;
- organising refunds to developers for high voltage work;
- liaising with developers via phone and facsimile;
- updating geographic information systems (GIS) and mapping;
- supporting the process of design information, design certification and design rechecking.

B13 Notice of Arrangement

Work of an administrative nature performed by Essential Energy where a local council requires evidence in writing from Essential Energy that all necessary arrangements have been made to supply electricity to a development.

This may include, without limitation, a Notice of Arrangement or a Compliance Certificate involving:

- receiving and checking linen plans and 88B instruments;
- copying linen plans;
- checking and recording easement details;
- preparing files for conveyancing officers;
- liaising with developers if errors occur or changes are required;
- checking and receiving duct declarations and any amended linen plans and 88B instruments approved by a conveyancing officer;
- prepare Notification of Arrangement or Compliance Certificate;
- confirm the works are completed in accordance with Essential Energy's requirements including substations and ducts, service mains to the customer's 'point of supply' and peg all easements and lot frontages and complete the works.

Essential Energy may issue a Notice of Arrangement or Compliance Certificate prior to completion of the contestable works provided:

- the contestable design has been certified, and
- an additional bond has been deposited as a Banker's Guarantee, consisting of an amount equal to the value of the contestable works remaining to be complete, which is returned if all of the above requirements have been satisfied.

B14 Site Establishment

Site establishment services; including liaison with the Australian Energy Market Operator (AEMO) or market participants for the purpose of establishing NMIs in market systems, for new premises or for any existing premises for which AEMO requires a new NMI.

B15 Preliminary Enquiry Service

Providing prospective Connection Applicants with specific information and advice in relation to the connection process and requirements associated with establishing a new or altered connection or a relocation of existing *network* assets. This service is for initial advice and excludes more detailed investigations/advice which may subsequently be required from strategic planning studies and analysis and process facilitation.

B16 Connection Offer Service - basic

Services provided by Essential Energy in assessing connection applications and making basic connection offers. This may include, without limitation:

- Assessment of application by relevant staff.
- If the application is deemed to require a basic connection offer service the application is forwarded for processing.

B17 Connection Offer Service – standard

Services provided by Essential Energy in assessing connection applications and making standard connection offers.

This may include, without limitation:

- Assessment of application by relevant staff and if the application is deemed to require a standard connection offer – service, the application is allocated to Network Connections.
- Network Connections is responsible for deriving the estimated loading on the electrical distribution *network*, technically known as the ADMD (After Diversity Maximum Demand). This estimate depends on such factors as the number of customers served and specific features of the customer’s demand.
- Once the ADMD is derived, the customer is advised what is required to connect to the electrical distribution *network*. This could be one of the following methods of supply:
 - A direct distributor from an existing substation,
 - A direct distributor from a new kiosk substation,
 - A direct distributor from a new pole mounted transformer substation,
 - A direct distributor from a new chamber substation.
- Once the assessment has been completed by Network Connections, relevant staff forward the assessment of the standard connection offer to the customer.

B18 Planning Studies for Distribution Connection applications

Planning studies and associated technical analysis to determine suitable/feasible connection options for further consideration by proponents. The service applies mainly to large loads and generators where suitable connection options are not necessarily obvious and may result in potentially significant impacts on Essential Energy’s existing *network* development strategies and *augmentation* requirements.

B19 Services involved in obtaining Deeds of Agreement

Services related to the acquisition of tenure over and access to Essential Energy assets associated with contestable *connection works*. New assets being connected to the *network* may be positioned on land not legally accessible to Essential Energy. To ensure Essential Energy has appropriate tenure and access to these new assets into the future, a Deed of Agreement is established in advance of connecting the new assets to facilitate the necessary execution of formal arrangements that create appropriate easement or lease arrangements to be registered on the land title deed.

Services provided in relation to obtaining Deeds of Agreement for property rights associated with contestable *connection works*, including processes associated with obtaining registered leases and easements for land on which Essential Energy assets are located (i.e. those assets assigned or “gifted” to Essential Energy on electrification). These property rights are necessary in order to ensure Essential Energy is able to carry out ongoing maintenance in relation to its assets. As Essential Energy often connects assets before registered leases or easements have been obtained, it is necessary to obtain Deeds of Agreement from landowners in the interim.

B20 Connection / Relocation Process Facilitation

Providing connection applicants with ongoing information and advice in relation to the connection process and requirements associated with establishing a new or altered connection or a relocation of existing *network* assets. This service is additional to the published instructions available to all applicants and is not a mandatory

requirement of the connection process for standard connections to the distribution *network* ($\leq 11\text{kV}$). It would be recommended for first time contestable customers or customers with complex or challenging projects. The intent would be to help minimise project delays caused by customers not taking the required action at the optimum time in the process. This would be achieved by staff taking a proactive approach to communication and engagement with connection applicants. It is an essential requirement for major connection projects (greater than 10MW load or connected at $>11\text{ kV}$) because the process varies to meet particular project requirements (the electrical component potentially being a smaller but often critical part of a much larger project).

The form of this service includes, but is not limited to:

- Project coordination activities;
- One-on-one engagement to review project or process particulars;
- Consultation of connection particulars;
- Facilitation.

Appendix C: Metering Services and Metering Related Ancillary Network Services

The AER approved charges for metering services and metering related Ancillary Network Services are available at essentialenergy.com.au.

Metering Services

C1 Annual meter charges

Essential Energy will charge an annual metering fee for all NMIs where Essential Energy provides type 5 & 6 metering services. Essential Energy will be nominated as Responsible Person, Meter Provider and Meter Data Provider for the NMI in the National Electricity Market.

The annual meter charge covers the ongoing operating and replacement expenditure for providing type 5 & 6 metering services as well as the recovery of the capital costs of the meter/s installed at the connection point.

C2 Annual meter charges where customers fund their meter

Essential Energy will charge an annual metering fee for all NMIs where Essential Energy provides type 5 & 6 metering services. Essential Energy will be nominated as Responsible Person, Meter Provider and Meter Data Provider for the NMI in the National Electricity Market.

Essential Energy will charge a reduced annual metering charge for NMIs where the metering equipment has been subject to an upfront meter charge. This annual charge covers the ongoing operating and replacement expenditure for providing type 5 & 6 metering services.

C3 Upfront Meter Charge

Essential Energy will charge an upfront fee to cover metering hardware for all new and upgraded metering connections, this will include:

- A new metering installation on a new dwelling;
- A customer initiated upgrade to an existing metering installation which results in a meter change; and
- An additional meter installed at an existing site.

Upfront meter charges are reflective of the different type of meter that a customer may choose and the functionality of that meter. Essential Energy proposes to administer this charge against the ASP, with the ASP then able to seek cost recovery from the customer directly.

C4 Meter Exit Fee

A meter exit fee will be charged when a customer switches from type 5 & 6 regulated metering to metering provided by an alternate metering service provider.

Essential Energy will apply this exit charge following completion of an MSATS change request to change the Responsible Person, Meter Provider and Meter Data Provider for the NMI in the National Electricity Market.

This charge will be applied to the retailer's network bill for the NMI.

Metering Related Ancillary Network Services

C5 Franchise CT meter install

Essential Energy is responsible for type 5 and 6 metering installations connected to Essential Energy's *network* and must provide and install rule compliant metering for any new current transformer or current and voltage transformer installations.

C6 Special Meter Reading (including wasted visit)

This service has the same meaning as the meaning given to the expression 'special meter reading' in the AEMO Metrology Procedure: Part A National Electricity Market.

Essential Energy may be notified to conduct this service via the use of the 'Special Read' B2B service order. It excludes any special meter reading of metering installation types 1 to 4, which is an unregulated distribution service, but subject to a 'light-handed' form of control under Independent Pricing and Regulatory Tribunal of NSW (IPART) Rule 2004/1 Regulation of Excluded Distribution Services; and applies in each of the following circumstances:

- where a customer or a retailer requests Essential Energy to undertake a special meter read, (but does not apply where the special meter read was requested solely to verify the accuracy of a scheduled meter read and the special meter read reveals that the scheduled meter read was inaccurate or in error); or
- where Essential Energy attends a customer's premises for the sole purpose of discharging Essential Energy's obligation to read the customer's meter within the period specified by law (but not where Essential Energy merely chooses to read the customer's meter without being under a legal obligation to do so) and on attending the customer's premises Essential Energy is unable (through no act or omission of Essential Energy), to gain access to the meter; or
- where Essential Energy and the customer agree on an appointed time at which Essential Energy may attend the customer's premises to enable Essential Energy to discharge Essential Energy's legal obligation referred to in the above paragraph and when Essential Energy attended at the customer's premises at the appointed time Essential Energy (through no act or omission), was unable to gain access to the customer's meter.

Essential Energy will not levy a charge for this service where the service reveals that a scheduled meter reading was inaccurate (as outlined above).

C7 Meter test

The testing of a single Essential Energy meter in accordance with AEMO Metrology Procedure: Part A National Electricity Market. Essential Energy may be notified to conduct this service via the use of the 'Meter Investigation' sub type 'Meter Test' B2B service order. It excludes metering installation types 1 to 4, the testing of which is an unregulated distribution service, but subject to a 'light-handed form of control under IPART Rule 2004/1 Regulation of Excluded Distribution Services.

If the meter test is undertaken on premises serviced by more than one meter associated with the NMI the following applies:

- if the meter test reveals that all of the meters associated with the NMI are operating satisfactorily, Essential Energy will charge for each meter that a test was requested for; and
- if the meter test reveals that one or more of the meters associated with the NMI are not operating satisfactorily, Essential Energy will not levy any charge for the provision of the service.

Test results will be provided to the party requesting the meter tests in a standard Essential Energy format.

'Meter Test – 1st meter' charge will apply to the first meter tested for a NMI, all subsequent tests at the same NMI will be charged 'Meter Test – each additional meter' charge.

C8 Off-peak Conversion

The alteration of the off-peak metering equipment at a customer's premises for the purpose of changing the hours of the metering equipment's operation. A charge for this service may be levied for each occasion that the service is provided.

C9 Network Tariff Change Request

When a customer or retailer makes a request to alter an existing network tariff (for example, a change from an Anytime tariff to a Time of Use tariff or a demand tariff to a Time of Use tariff), Essential Energy conducts tariff and load analysis to determine whether the customer meets the relevant tariff criteria. Essential Energy also processes the change in both their information and market systems to reflect the tariff change.

Appendix D: Miscellaneous Ancillary Network Services

The AER approved charges for the miscellaneous Ancillary Network Services are available at essentialenergy.com.au

D1 Authorisation ASPs

The initial issue and annual renewal of authorisation by Essential Energy of individual employees or sub-contractors of an ASP to carry out work on or near Essential Energy's distribution system.

This may include without limitation:

- confirmation of accreditation status with DTIRIS;
- familiarisation Essential Energy's safety rules and access permit requirements;
- induction in the unique aspects of the *network*;
- verification that the applicant has undertaken the necessary regulatory safety training (resuscitation etc.) within the last 12 months;
- issuing authorisation cards;
- administration support directly related to authorisation.

D2 Authorisation of ASP Training

The provision of Access Permit Recipient training as required for Essential Energy's ASP authorisation purposes.

D3 Supply of Conveyancing Information

The provision of information regarding the availability of supply, presence of Essential Energy's equipment, power lines and related information for property conveyance purposes undertaken with or without any physical inspection of a site, other than the provision of information or the answering of enquiries relating to any matter under Freedom of Information legislation.

D4 Disconnection / Reconnection

Disconnection / Reconnection – site visit

A site visit to a customer's premises on an occasion for the purpose of disconnecting the customer's supply at the request of a retailer based on the customer's breach of a Customer Retail Contract or for breach of Essential Energy's Customer Connection Contract, where the disconnection does not occur on that occasion.

Disconnection may not occur due to a number of reasons, such as - but not limited to - the following:

- Customer has paid retail bill;
- Breach of Customer Connection Contract has been rectified;
- Safety of installation of Essential Energy's employee(s);
- Late cancellation by retailer;
- Change of customer or retailer for the NMI.

Disconnection / Reconnection – Disconnection completed

At the request of the retailer, a site visit to a customer's premises to disconnect the supply of electricity to a customer for breach by the customer of their customer retail contract or for a breach of Essential Energy's customer connection contract, or where a retailer has requested that the supply to the customer be disconnected.

The disconnection method will be at Essential Energy's discretion and will involve one of the following methods:

- rotate plug in meter; or
- removal of the service fuses; or
- removal of barge board fuses; or

- turn off and sticker covering main switch; or
- turn off and tag and leave card.

This charge includes the reconnection at the request of the retailer.

If, following a request from a retailer, the reconnection component of this service is provided outside the hours of 7.30am and 4.00pm on a working day, the additional 'Reconnection - outside normal business hours' charge, will apply.

Disconnection / Reconnection – Technical disconnection

At the request of the retailer, a site visit to a customer's premises to disconnect the supply of electricity to a customer for breach by the customer of their Customer Retail Contract or for a breach of Essential Energy's Customer Connection Contract, or where a retailer has requested that the supply to the customer be disconnected.

The disconnection method will be at Essential Energy's discretion and will involve a method not identified as a disconnection method for Disconnection/Reconnection – Disconnection completed (e.g. pull load tail out of meter).

This charge includes the reconnection at the request of the retailer.

If, following a request from a retailer, the reconnection component of this service is provided outside the hours of 7.30am and 4.00pm on a working day, the additional 'Reconnection - outside normal business hours' charge, will apply.

Disconnection / Reconnection - at Pole Top/Pillar Box

A site visit to a customer's premises to disconnect the supply of electricity to a customer at the pole top or pillar box for breach by the customer of their Customer Retail Contract or for a breach of Essential Energy's Customer Connection Contract, or where a retailer has requested that the supply to a customer be disconnected, where the customer has denied access to the meter or had prior to the visit, reconnected supply without authorisation by Essential Energy following a previous disconnection.

This charge includes the reconnection at the request of the retailer.

If following a request from a retailer the reconnection component of this service is provided outside the hours of 7.30am and 4.00pm on a working day, the additional 'Reconnection - outside normal business hours' charge, will apply.

Reconnection - Outside Normal Business Hours

At the request of the retailer:

- The provision of the reconnection component of either a 'De-energisation' sub type 'Remove Fuse (Non-Payment) or Pillar-Box Pit or Pole-Top (Non-Payment)' B2B service order, carried out, outside the hours of 7.30am and 4.00pm on a working day, or
- the reconnection of electricity to a new customer outside the hours of 7:30am and 4:00pm on a working day.
- Essential Energy may be notified to conduct this service via the use of the 'Re-energisation' B2B service order.

D5 Rectification works

Rectification of illegal connection

Work undertaken by Essential Energy to the property of Essential Energy or to the property of another person in order to:

- investigate
- de-energise and/or make safe the assets,
- inspect the assets following repair.

Following conduct that constitutes an offence under Part 6, Division 1 of the *Electricity Supply Act 1995* (NSW). For example, to rectify an unauthorised connection to Essential Energy's distribution system.

The assets will remain de-energised until an *ASP* has repaired the damaged assets (at the customer expense) and Essential Energy has inspected the repaired assets. .

Rectification works – provision of additional crew

If additional crew are required this will be charged at the R4 rate per hour

Rectification works - Fitting of tiger tails

Installation of temporary covering (known as 'torapoli pipes' or 'tiger tails') on overhead mains and service lines. NB: this does not include the installation of temporary covers by certain *ASPs* in association with their contestable work, in accordance with their Service Provider Authorisation, which is contestable work.

D6 High load escorts

Temporary relocation, or other manners of making safe, of overhead mains for high vehicle loads and high load escorts.

D7 Service to supply and connect temporary supply to one or more customers

The provision of an MG (Motor Generator) connection to the *network* or a direct distributor and / or use of HV Line Live Techniques when required to maintain a continued but temporary supply to otherwise impacted customers during contestable *connection works*. Service is in conjunction with but in addition to access permits and clearance to work.

The costs of MG hire and operation are not included as these are commercially available. Note also, there is no allowance for Essential Energy to supply an MG standby technician if required.

D8 Investigation, review and implementation of remedial actions associated with work performed by ASPs

The investigation, review and implementation of remedial actions associated with contestable *connection works*, leading to corrective and disciplinary action against an *ASP* due to unsafe practices, substandard workmanship or other serious circumstances.

D9 Recovery of Debt Collection Costs

Costs, including bank fees when a *network* customer's or *ASP's* cheque for the payment of network-related services is dishonoured.

D10 Retailer of Last Resort (ROLR)

Essential Energy may be required to perform a number of services as a distributor when a ROLR event occurs including: -

- preparing lists of affected sites, and reconciling data with AEMO listings;
- handling in-flight transfers;
- identifying open service orders raised by the failed retailer and determining actions to be taken in relation to those service orders;
- arranging estimate reads for the date of the ROLR event and providing data for final NUOS bills in relation to affected customers;
- preparing final invoices for NUOS and miscellaneous charges for affected customers;
- preparing final debt statements;
- extracting customer data, providing it to the ROLR and handling subsequent enquiries;
- handling adjustments that arise from the use of estimate reads;
- assist the retailer with the provision of network tariffs to be applied and the customer move in process; and
- Administration of any 'ROLR cost recovery scheme distributor payment determination'.

D11 Attendance at customers premises to perform statutory right where access is prevented

Recovery of costs associated with gaining access to a customer premises under statutory law, in order to carry out necessary Essential Energy functions.

This task normally involves a meter technician returning to a customer's premises to undertake a service for a second time due to customer dissent during previous visits.

D12 Vacant Property Disconnection / Reconnection

At the request of the retailer, a site visit to a customer's premises to disconnect or reconnect the supply of electricity due to:

- a vacant premises; or
- a site where the power is on.

This charge includes the reconnection at the request of the retailer.

If, following a request from a retailer, the reconnection component of this service is provided outside the hours of 7.30am and 4.00pm on a working day, the additional 'Reconnection - outside normal business hours' charge, will apply.

The disconnection/reconnection method will be at Essential Energy's discretion and will involve one of the following methods:

- rotate plug in meter; or
- removal of the service fuses; or
- removal of barge board fuses; or
- turn off and sticker covering main switch; or
- turn off and tag and leave card.

D13 Vacant Property Disconnection / Reconnection (site visit only)

Disconnection does not occur on that occasion, as customer payment is made or it is a wasted visit.

Disconnection may not occur due to a number of reasons such as but not limited to the following:

- Unable to access main switch board or metering;
- Safety of installation or Essential Energy's employee;
- Late cancellation by retailer;
- Change of customer or retailer for the NMI.

D14 Move in, move out meter reads

B2B service orders from retailers to obtain a final read for customer move-outs or to obtain a start read where a customer is moving in to a site that has been vacant.

These services are additional to the special meter reading, disconnection/reconnection and testing services.

Charges may also be levied due to a number of reasons, such as, but not limited to, the following:

- Unable to access main switch board or metering;
- Safety of installation or Essential Energy's employee;
- Late cancellation by retailer;
- Reconnection/disconnection for short periods, such as for holiday homes.

Appendix E: Pioneer Schemes

In accordance with the *AER Connection Charge Guidelines*, connection applicants may be required to make a contribution (payment) towards *connection works* that provide a connection to their premises and which were previously funded by another customer (within a seven year period).

The contribution by a subsequent customer to works previously funded by the original customer will be based on the physical attribute of the asset or the demand of a subsequent customer as applicable.

For new connections less than 50kVA, then a pre-calculated refund will be used and this is based on the length of distribution lines as well as a pre-calculated share of any distribution substation.

For new connections over 50kVA, the refund will be based on the demand of the new customer.

Depreciation calculated in accordance with clause E5 will also be taken into account in determining the contribution payable.

E1 Establishment and Administration of Schemes

A pioneer scheme will be established and administered in accordance with this appendix in relation to each original customer's works (as defined in clause E2.1) of the same category. For example, if the original customer's works included a distribution line and a substation, then one pioneer scheme will be established for the distribution line and a separate pioneer scheme will be established for the substation.

Essential Energy will bear the cost of establishing and administering the pioneer schemes.

E2 Contributions by Subsequent New Customers towards Connection Works

E2.1 General

Where:

- (a) a customer (the **original customer**) procures and funds, or becomes liable to procure and fund, *connection works* (**original customer's works**); and
- (b) within seven years of the date of the original customer's application for customer connection services, with respect to the original customer's works (**refund period**), a new customer requests customer connection services from Essential Energy; and
- (c) in order to provide those customer connection services to the new customer, Essential Energy will use all or any part of the original customer's works, then the new customer is liable, in addition to paying for any *connection works* for which that customer is liable, to pay Essential Energy a proportion of the costs of the original customer's works, calculated in accordance with clause E2.2 (**cost share refund**).

E2.2 Calculation of Cost Share Refund

- (a) Where the new customer's load (as specified in its application for customer connection services) is equal or less than 50kVA, the cost share refund will be the lesser of:
 - (i) the **pre-calculated refund** (see clause E2.3); and
 - (ii) the **original customer's outstanding amount** (see clause E2.5)
- (b) Where the new customer's load (as specified in its application for customer connection services) is greater than 50kVA, the cost share refund will be the lesser of:
 - (i) the **pro-rata refund** (see clause E2.4); and
 - (ii) the **original customer's outstanding amount** (see clause E2.5).

E2.3 Pre-calculated Refund

The **pre-calculated** refund (for the purposes of clause E2.2(a)(i)) is:

- (a) Where the original customer's works are a distribution line, an amount calculated in accordance with the following formula:

$$\frac{\text{Cost of original customer's works x Depreciation Factor}}{\text{Number of prospective new customers + original customer}} \times \frac{\text{Length of original customer's works used by the new customer (km)}}{\text{Total length of original customer's works (km)}} \times \frac{\text{CPI(2)}}{\text{CPI(1)}}$$

- (b) Where the original customer's works are other than a distribution line, an amount calculated in accordance with the following formula:

$$\frac{\text{Cost of original customer's works x Depreciation Factor}}{\text{Number of prospective new customers + original customer}} \times \frac{\text{CPI(2)}}{\text{CPI(1)}}$$

E2.4 Pro-rata Refund

The **pro-rated refund** (for the purposes of clause E2.2(b)(i)) is an amount calculated in accordance with the following formula:

$$\frac{\text{Cost of original customer's works x Depreciation Factor}}{\text{Number of prospective new customers + original customer}} \times \frac{\text{New utilisation of original customer's works}}{\text{Total utilisation of original customer's works}} \times \frac{\text{CPI(2)}}{\text{CPI(1)}}$$

E2.5 Original Customer's Outstanding Amount

The original customer's outstanding amount (for the purposes of clause E2.2(a)(ii) and E2.2(b)(ii)) is calculated as follows:

$$\begin{aligned} & \text{Cost of original customer's works} \times \text{Depreciation Factor} \\ & \times \\ & \frac{\text{Number of prospective new customers}}{\text{Number of prospective new customers} + \text{original customer}} \\ & \times \\ & \frac{\text{CPI(2)}}{\text{CPI(1)}} \\ & \text{less} \\ & \text{Total cost share refunds paid by new customers to Essential Energy in respect of those} \\ & \text{works as at date of the new customer's application for customer connection services.} \end{aligned}$$

E2.6 Minimum Refund

Despite any other provision in this appendix, a new customer is not liable to pay a cost share refund if the total amount payable to all customers already connected is less than \$1,000 plus CPI.

$$\begin{aligned} & \$1,000 + \text{CPI} \\ & \text{Where CPI} = \text{CPI(2)/CPI(3)} \text{ (see clause E2.7)} \end{aligned}$$

E2.7 CPI Adjustments

Despite any other provisions in E2 of this appendix:

- (i) The formulas in E2.3, E2.4 and E2.5 are deemed not to include any references to CPI in the case where the beginning of the relevant period for the calculation of CPI(2) is less than 12 months after the end of the relevant period for the calculation of CPI(1); and
- (ii) The formula in E2.6 is deemed not to include any references to CPI in the case where the beginning of the relevant period for the calculation of CPI(2) is less than 12 months after the end of the relevant period for the calculation of CPI(3).

E2.8 Explanation of Terms in this Appendix

Cost of original customer's works means:

- (a) where Essential Energy carried out the original customer's works as an *ASP*, the actual cost of those works; and
- (b) where an *ASP* carried out the original customer's works, the estimated amount that Essential Energy would have charged to carry out those works.

CPI(1) means the average of the consumer price indices (all groups, all capital cities), published by the Australian Bureau of Statistics, for the four quarters immediately prior to the date the original customer's works were completed.

CPI(2) means the average of the consumer price indices (all groups, all capital cities), published by the Australian Bureau of Statistics, for the four quarters immediately prior to the date of the new customer's application for customer connection services.

CPI(3) means the average of the consumer price indices (all groups, all capital cities), published by the Australian Bureau of Statistics, for the four previous quarters in the 2013/2014 financial year.

New utilisation of original customer's works means:

- (a) Where the original customer's works are a distribution line, a figure in kVA.km, representing the new customer's expected load in kVA (as specified in its application for customer

connection services), multiplied by the length of the original customer's works used by the new customer, in kilometres; and

- (b) Where the original customer's works are works other than a distribution line, a figure in kVA, representing the new customer's expected load (as specified in its application for customer connection services).

Number of prospective new customers means the number of new customers (excluding the original customer) that Essential Energy expects, prior to construction of the original customer's works, will use those works or any part of them during the refund period, determined in consultation with the original customer, and taking into account all relevant factors including but not limited to:

- the capability of the proposed works,
- the current number of properties that could potentially utilise those works,
- the current zoning of the area and any rezoning proposals,
- any proposed subdivisions or development applications, and
- historical patterns of customer connection in similar areas.

Total utilisation of original customer's works means:

- (a) where the original customer's works are a distribution line, a figure in kVA.km, representing the total loads of each customer (including the original customer and the new customer) who use or will use the original customer's works, in kVA (as specified in their respective applications for customer connection services), multiplied by the length of distribution line constituting the original customer's works, in kilometres; and
- (b) where the original customer's works are works other than a distribution line, a figure in kVA, representing the total loads of each customer (including the original customer and the new customer) who use or will use the original customer's works (as specified in their respective applications for customer connection services).

E3 Refunds

- (1) where a new customer pays to Essential Energy an amount under E2 of this appendix, Essential Energy will, as soon as practicable after receiving that amount, repay that amount to the current owner of the premises to which the original customer's works were connected.
- (2) Where there are two or more customers constituting the original customer, as a result of Essential Energy requiring those customers to procure and fund their common works together, the repayment by Essential Energy referred to in E3(1) must be divided between those customers in accordance with the proportions in which they funded the works.

E4 Obligation to Notify

- (1) Essential Energy will notify all new customers who apply to Essential Energy for customer connection services and who may be obliged to make refunds under an existing pioneer scheme, and all ASPs known to Essential Energy who are likely to have customers who will so apply, of the existence of the pioneer scheme and that connecting customers may be obliged to contribute towards refunds.
- (2) Essential Energy will also notify original customers, to which a pioneer scheme applies, of the existence of the pioneer scheme and that they may be entitled to receive a refund.

E5 Depreciation Factor

A straight line depreciation, over a twenty year asset life, is to be applied to unadjusted values to determine the current day depreciation value of the asset.

The depreciation factor is to be determined as follows:

$$\frac{(\text{Deemed asset life (20 years)} - \text{asset age})}{\text{Deemed life (20 years)}}$$

For example:

A distribution line cost \$12,000 and has an actual asset age of 2 years.

$$\begin{aligned} \text{Depreciation Factor} &= (20 - 2)/20 \\ &= 0.9 \end{aligned}$$

$$\begin{aligned} \text{Depreciated Asset value} &= \$12,000 \times 0.9 \\ &= \$10,800 \end{aligned}$$