

Connecting to the network information pack

Version 3

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This Information Pack describes the process for seeking and obtaining a new connection to Essential Energy's low voltage network or altering an existing connection.

1.0 What is a new connection or connection alteration?

A **new connection** is where no current physical link exists between a distribution network and a retail customer's premises; e.g. a new house or office block where there is no existing connection.

A **connection alteration** is an alteration to an existing connection including an addition, upgrade, extension, expansion, augmentation or any other type of change including embedded generation.

Connecting to the distribution network requires careful consideration of your load capacity, i.e. what the current network can handle and any specific connection requirements you may have, as well as your connection voltage.

Low Voltage applications (1000 volts or less) are assessed based on the information you provide us within the Application for Low Voltage Connection submitted via the Connection WebPortal - available at essentialenergy.com.au. To determine if you need to complete an application for connection, please see the matrix at the end of this pack.

For all High Voltage (HV) connections, 1000 volts and above, including HV generator connections please contact our Network Connections Team on 13 23 91 or email networkconnections@essentialenergy.com.au

2.0 Connection enquiry

If you are unsure of your connection requirements, Essential Energy encourages you to make a connection enquiry through Essential Energy's [Enquiry Portal](#) or by calling 13 23 91. We can determine if you need network augmentation in order for your connection to be completed and direct you to the appropriate type of Accredited Service Provider (ASP).

The *Electricity Supply Act 1995* (NSW) gives electricity customers the right to choose who carries out their connection work. To ensure the distribution network and your connection to the network remain reliable and safe, only ASPs may do this kind of work in NSW. The ASP scheme is administered by NSW Trade & Investment.

3.0 Connection application

If you are seeking a new connection or connection alteration, including the installation of embedded generation, you or your ASP, as required by the National Electricity Customer Framework, will need to submit an Application for Low Voltage Connection to be assessed by Essential Energy.

Only once your application has been approved and accepted by Essential Energy, in the form of a Connection Offer, can any physical work commence for your connection. The type of connection offer you receive will depend on the type of connection you require.

There are fees associated with Connection Offer Services for all Basic, Standard, and Negotiated Offers. Further information relating to these fees is available within the Price Schedule for Ancillary Network Services, available at <http://www.essentialenergy.com.au/asset/cms/pdf/electricitynetwork/PriceScheduleForAncillaryNetworkServices1July2016.pdf>

Each application has a unique Application Number. This will be referenced in communications regarding your application and is relevant while your application is being assessed by Essential Energy.

Connection offers also have a unique Connection Offer Number. This number is only issued once the application has been approved and an offer has been made and accepted. This number will be referenced in communications regarding your connection offer and must be included on any Certificate of Compliance of Electrical Work (CCEW), Request for CT Metering, Request of Service Work (RoSW) and Notification of Service Work (NoSW) forms related to that connection.

Details of all connection offers are available at <http://www.essentialenergy.com.au/content/connection-offers-and-contracts>. A summary of the offer types can also be found in the table overleaf.

Low Voltage Connection Offers available depending on the nature of connection:

Essential Energy Connection Service		Connection Offer Contracts			
		Basic		Standard	
		Basic - No Embedded Generation	Basic - With Embedded Generation	Standard - No Embedded Generation	Standard - With Embedded Generation
Offer Type*	Process Type				
1. Urban domestic New Connections and Connection Alterations and Rural Connection Alteration loads of ≤100 amps single phase connection or ≤63 amps three phase connection (LV) with no augmentation to the network	Automatic approval through the Connections Portal	X			
2. All other LV loads not requiring an augmentation to the network	Will require technical enquiries and or Contestable Works review before approval	X			
3. Embedded Generator with ≤3kW system for Rural customers and ≤5kW system for Urban customers with no augmentation to the LV network	Automatic approval through the Connections Portal		X		
4. Embedded Generator with >3kW Rural >5kW Urban and ≤30kW system with no augmentation to the LV network	Will require technical enquiries and or Contestable Works review before approval		X		
5. LV Standard Connection Service - Any service that does not meet the requirements of the LV Basic Connection Service	Will require technical enquires and or Contestable Works review before approval			X	
6. Embedded Generator with ≤30kW system with augmentation to the LV network	Will require technical enquires and or Contestable Works review before approval				X
7. Large Embedded Generator with >30kW system with or without augmentation to the LV Network.	Will require technical enquiries and or Contestable Works review before approval.				X

*thresholds are based on total load and generation capacity

Note: Your application for new connection or connection alteration acts as the technical schedule to your connection contract.

3.1 Processing your application for connection

3.1.1 Request to expedite

Depending on the nature of your connection, and if you request it, we may be able to expedite your connection application. This is recommended in circumstances where you do not have any unique connection requirements.

An expedited connection is the default selection in the Application for Low Voltage Connection Form. This is where you agree to accept the terms of our model basic or standard connection contracts. There is no need for you to sign and return the offer. You are taken to have made a connection agreement with us on those terms and conditions.

Note: After your application is submitted, Essential Energy will determine whether or not your application can be expedited. Please note that a request to expedite a connection application refers to the application and subsequent contracting process only - it does not mean that the connection itself will occur in an expedited manner.

However, you are not required to expedite your application. Instead, you may wish to have an opportunity to receive a connection offer and consider its terms and conditions before entering into a connection agreement with Essential Energy. Also, all customers have the ability to negotiate their connection offers.

3.1.2 Negotiation

If Essential Energy or you choose to negotiate your contract, Essential Energy will send you relevant information and advice on the negotiation framework and process. The negotiations framework is available at:
<http://www.essentialenergy.com.au/content/connection-offers-and-contracts>

Any negotiation process may involve an additional cost to you in moving away from the basic and standard connection offers. Negotiations and their cost will vary from application to application and on review of each connection application's requirements.

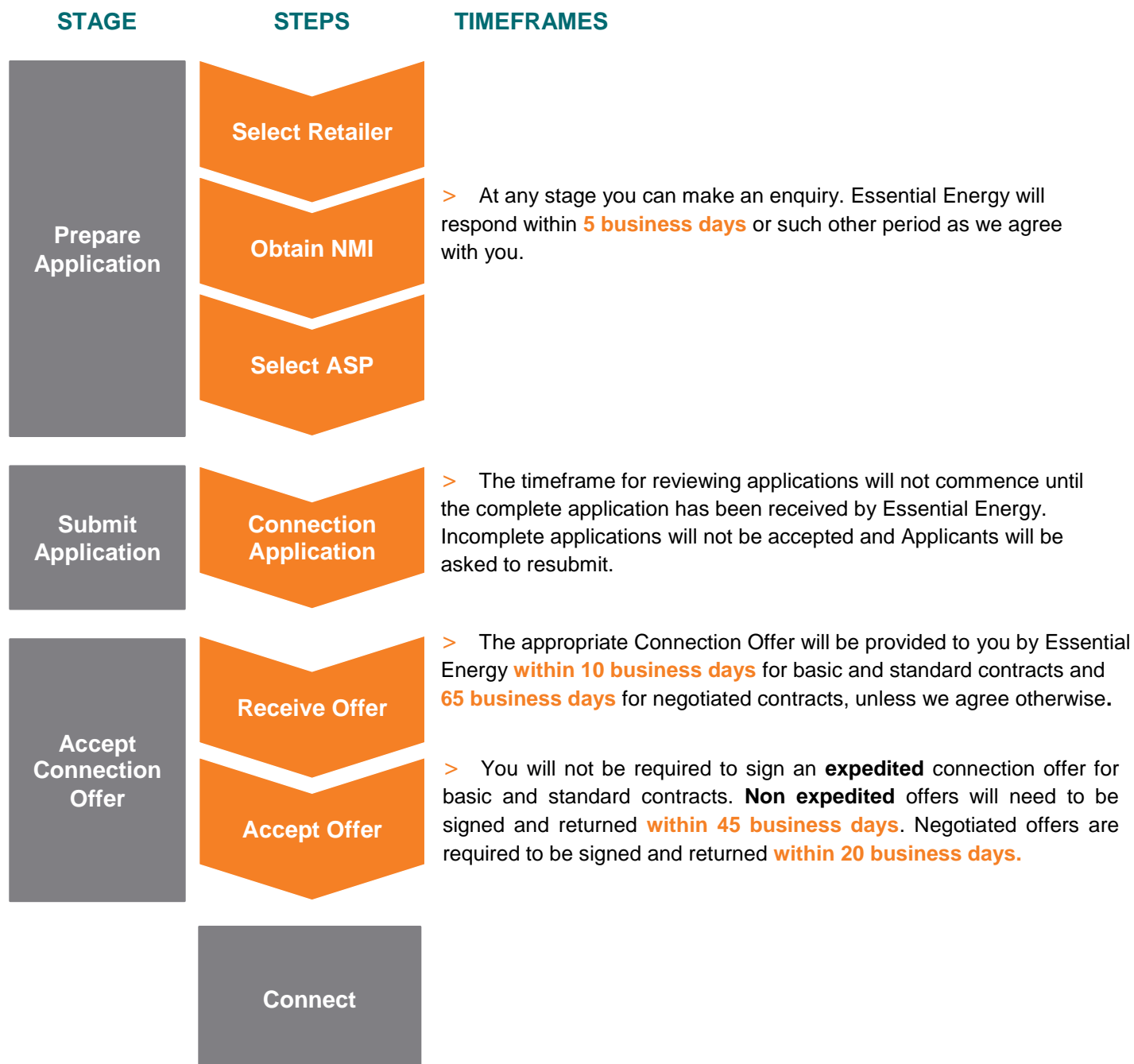
3.2 Ongoing connection services

A Deemed Standard Connection Contract comes into effect if you start taking power from the network and outlines the ongoing relationship between you and Essential Energy, in the absence of an agreement to the contrary. This operates in parallel with, and in addition to, the arrangements you make with Essential Energy for a New Connection or Connection Alteration. Copies of the Deemed Standard Connection Contract are available at:
<http://www.essentialenergy.com.au/content/connection-offers-and-contracts>

4.0 Connecting to the network – what do I need to do to connect?

Before any electrical work can begin to connect your premises to the network, or a connection alteration can take place, an Application for Low Voltage Connection Form must be completed, submitted to and approved by Essential Energy.

To submit an application for a new connection or connection alteration, the following steps need to be followed to ensure all information is provided and timeframes for responses can be adhered to:



4.1 Application Process

4.1.1 Prepare application

NEW CONNECTIONS

Select a retailer

To establish a new connection, you will first need to select and make contact with a retailer to commence the connection process. A **retailer** is a person or entity that is authorised to supply and sell energy to customers. A list of retailers can be found at www.aer.gov.au. If you have existing premises requiring a connection alteration, you will already have a retailer that is currently billing you for energy usage and these details can be included in your application.

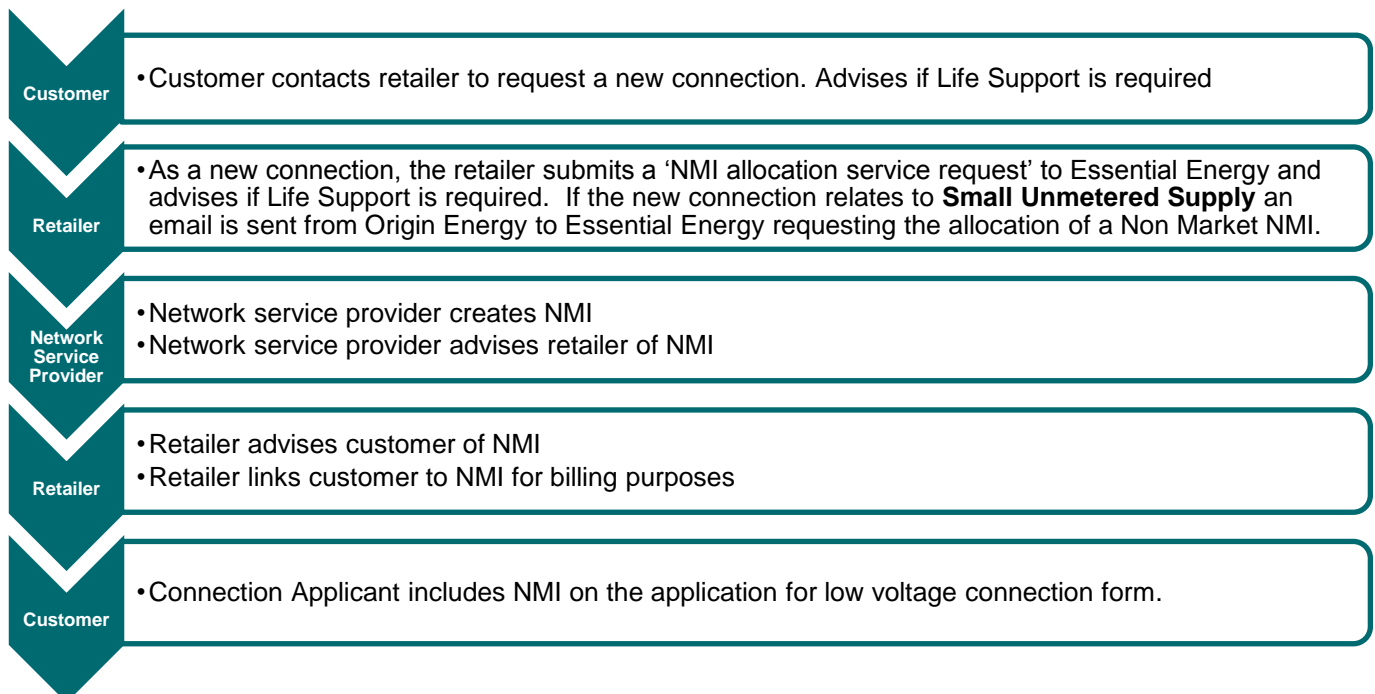
Obtain a National Metering Identifier (NMI) for metered or small unmetered sites

To complete an Application for Low Voltage Connection Form you must first obtain a NMI from your retailer. A NMI is a unique number used by electricity suppliers to identify the electricity meter at a premise and is included on all electricity accounts. If you have existing premises requiring a connection alteration, you will already have a NMI that can be located on your retail account.

Small Unmetered Supply connections require the allocation of a non-market NMI. The device must be public interest so therefore the owner of the device must be councils, RMS, or public organisations. Small Unmetered Supply are devices with a continuous site load of less than or equal to 400 watts or 1.67 amps including; sign lights, speed cameras, phone boxes and decorative lighting or for Public Lighting a load less than 850 watts.

As the Local Retailer, Origin Energy Electricity Limited are responsible for the allocation of all non market NMIs (prefixed with SU). It is important to make it clear when you contact Origin that you require a non market NMI for SUMS because this allocation is a manual process.

The diagram below shows the series of steps that you, your retailer and Essential Energy will need to take to progress applications for new low voltage connections:



CONNECTION ALTERATIONS

Select a retailer

If you have existing premises requiring a connection alteration, you will already have a retailer that is currently billing you for energy usage and can be included in your application.

Obtain a National Metering Identifier (NMI)

If you have existing premises requiring a connection alteration you will already have a NMI that can be located on your retail account.

4.1.2 Select an Accredited Service Provider (ASP)

Once you have obtained a NMI from your retailer, you may wish to engage the services of an ASP before applying for the connection. An ASP is an electrical contractor who is authorised by Essential Energy to perform work on the network directly. This includes installing meters, service lines and the physical connection. An ASP will provide guidance on the best connection option based on their technical knowledge and can submit the Application for Low Voltage Connection Form on your behalf.

The type of ASP required depends on the nature of the work. If you require construction of network assets, you will need a Level 1 and a Level 3 ASP. If you do not require construction of network assets you can engage the services of a Level 2 ASP.

In the majority of cases, the ASP will act on your behalf as the 'Applicant', in which case, the ASP may receive information or requests for additional information, or clarifying information. The ASP is then in charge of communicating any information to you, as Essential Energy will be communicating to the Applicant for most matters.

LEVEL 1 and LEVEL 3 ASP - CONSTRUCTION OF NETWORK ASSETS AND DESIGN OF NETWORK ASSETS

You will need a Level 1 ASP to extend the overhead or underground network to reach your property; or if you require the capacity of the existing network (the amount of electricity it can safely supply) to be increased. This may include high and low voltage works, substations and metering. A list of Level 1 ASP's can be found at: http://www.resourcesandenergy.nsw.gov.au/__data/assets/pdf_file/0004/469849/Level-1-ASPs.pdf

A Level 1 ASP may also engage a Level 3 ASP to assist in designing any distribution assets required for your connection. A list of Level 3 ASP's can be found at:

http://www.resourcesandenergy.nsw.gov.au/__data/assets/pdf_file/0007/469852/Level-3-ASPs.pdf

LEVEL 2 ASP - SERVICE WORK/CONNECTION SERVICES (NO NETWORK ASSET CONSTRUCTION)

You will need a Level 2 ASP to:

- > Install, repair or maintain the overhead or underground service lines between the electrical wiring on your premises and the electricity network.
- > Install electricity metering equipment.
- > Connect your service lines to the network and make the connection 'live'.

A list of Level 2 ASP's can be found at:

http://www.resourcesandenergy.nsw.gov.au/__data/assets/pdf_file/0005/469850/Level-2-ASPs.pdf

If you ask for a written reply to your enquiry or for specific advice about your situation we will reply to your enquiry as soon as reasonably practicable and in writing if requested.

4.1.3 Submit application

The submission of a complete Application for Low Voltage Connection Form is a mandatory requirement for all new connections or connection alterations. The Application for Low Voltage Connection Form is a standard Essential

Energy form completed by you and Electrical Contractors, installers, retailers and ASPs, real estate developers or anyone else acting on your behalf.

It is recommended that applications be completed and submitted in most cases by your ASP, electrical contractor or installer. Application Forms can be submitted:

- > **Preferred:** Online at essentialenergy.com.au through our Connections Portal
- > **By Post:** Essential Energy
Connections Team
PO Box 5730
Port Macquarie NSW 2444

When completing an Application for Low Voltage Connection Form, it is important that timely, accurate and legible information is provided to Essential Energy at all times, otherwise delays in connection may occur.

In addition to advising of the intent to connect new premises, or carry out a connection alteration at existing premises, the Application for Low Voltage Connection Form requires the Applicant to confirm that the installation will be compliant with the Service and Installation Rules of NSW. The Application for Low Voltage Connection Form will also provide a means for informing Essential Energy of other specific needs or special requirements relating to your installation, including Embedded Generation and Type of Service i.e. single phase or three phase supply.

Your application for connection will be approved only after Essential Energy has reviewed and assessed your application and has determined that no further information is required. You may be assisted by the guidelines below in preparing your application.

4.2 Application Form Guidelines

The following section of this Information Pack outlines the sections of the Application for Low Voltage Connection Form to assist you or your representative to complete it and make a valid connection application.

SECTION 1.0 AND 1.1 - APPLICANT/CUSTOMER DETAILS

The Application for Low Voltage Connection Form can be submitted by you, or a person acting on your behalf. This may include: ASPs, retailers, installers, real estate developers or another nominated party. There is also a question in relation to Life Support. If you are a Life Support customer, you will also need to discuss this requirement with your retailer. If you indicate that you are a Life Support customer, Essential Energy will contact you in relation to your requirements.

More information on how Essential Energy supports Life Support customers can be found at essentialenergy.com.au

SECTION 2.0 - PROPERTY DETAILS

This section of the form is to capture details of the property (premises). A premise is the address at which your connection services will be provided. The following information is required:

- > **Is a low voltage network available to this property?** It is important to state whether there is an existing Low Voltage Network to this property (Low Voltage relates to a connection up to 1000 volts). If you are unsure please contact Essential Energy on 13 23 91. **Note: A service main must not exceed 50 metres in total length. Technical detail on all aspects of service main configuration and installation can be obtained in the *Service and Installation Rules of NSW*.**
- > **National Metering Identifier (NMI) number (mandatory – first 10 characters only)** is crucial for processing electricity connections and is included on all electricity accounts. A NMI is a unique number used by electricity suppliers to identify the electricity meter at your premises. There is a requirement that the appropriate metering is installed at the property before connection to the electricity network is established. You must have electricity metering services provided to your premises before it can be energised. An Application for Low Voltage Connection Form must include a NMI when submitted - you must first contact your retailer of choice to obtain a NMI - refer to section 4.1.1 for step by step information on the process for new connections and connection alterations to existing premises.
- > **Deposited Plan (DP) No.** – this number is supplied on the rates notice for the property received from the local Council. The supply of this number greatly assists in the processing of applications when reference needs to be made to plans of the distribution network.
- > **Pit/Pole/Substation numbers** are stamped on a metal plate and are attached to the pole at approximately head height. If you have an underground supply to your property boundary, please include the asset number on the low voltage pit or pillar.
- > **Property address (mandatory)** is required on every occasion. It is important to offer accurate and complete information as this will assist Essential Energy in providing a timely reply to the application. Please note that when you enter the 10 digit NMI number it will auto populate the property details from the information contained within our system. If this address varies from your details then you need to check that you have the correct NMI.
- > **Premises type** – this information is for zoning and is available on your rates notice from Council – it's also where you will find the Deposited Plan (DP) number. Urban or rural should be selected based on the 'council rates land zoning'. If the new connection/connection alteration is for a business or non-domestic purpose (other than a small business run from within the home) you will need to select 'Rural or Urban /Commercial'. If you are unsure whether your premises are urban or rural, or commercial or domestic, please call Essential Energy on 13 23 91 for assistance.

- > **Sketch** –allows the Applicant to indicate if additional supporting documents are being lodged with the Application for Low Voltage Connection Form. Additional documents could include a site plan, detailed loading of equipment where there is insufficient space provided on the form and any other relevant supporting documentation. A blank page is provided at the end of the form for paper based applications. For online applications, please ensure any plans/sketches relevant to the new connection or connection alteration are uploaded.

SECTION 3.0 - ACCREDITED SERVICE PROVIDER (ASP)/ELECTRICAL CONTRACTOR/INSTALLER DETAILS

The type of connection requirements you have will determine which of the above will be contracted to your job.

- > For Electrical Contractors, the licence number is mandatory
- > For ASPs, the ASP number is mandatory
- > For Installers (Embedded Generation), the Clean Energy Council accreditation number is mandatory.

SECTION 4.0 – CONNECTION TYPE

This section of the form is to capture the details of the connection requirements of the premises. A premise is the address at which customer connection services will be provided. Your selection here will determine what fields become mandatory in online applications.

There may be more than one selection that applies to your connection e.g. a new house with embedded generation would select 'New Connection' and 'Embedded Generator':

- > **New Connection** box will need to be ticked for all new installations/new accounts i.e. a new house on an empty block.
- > **Connection Alteration/Additions** this will apply when new connection alterations/additions are proposed for previously established installations including embedded generation.
- > **New Embedded Generator** box must be ticked for connections required between an embedded generating unit and the distribution network
- > **Existing Embedded Generator** – select Yes if there is an existing embedded generator unit connected to the network
- > **Installing a new Battery Storage system** – select Yes if connection required is between a Battery storage unit and the distribution network
- > **Network Metering Trials** box should only be ticked if the new installation is part of a Network Metering Trial. To be part of a trial you would have accepted an offer to participate prior.
- > **Unmetered Supply Connection** box should only be ticked for connections to the grid that do not require a meter to be installed e.g. street lights/traffic lights.
- > **Multiple Connections** – number of units will apply for more than one installation with an additional requirement to nominate the number of units and the property title of the development if a multi-unit installation applies. The correct supply and metering arrangements for a multi-unit development cannot be determined until the property title under which the development was approved, has been determined. Reference to multiple installation requirements can be obtained in the *Service and Installation Rules of NSW*.
- > **Property title** would typically be either Torrens/Strata/Community.

LOADS TO BE APPLIED

- > The loads to be applied section requests details on whether the connection is a **single phase, three phase or other** (double phase). The respective phase details are required on the customer's Existing Load, Additional Load and Total Load (in amps per phase). Do not include the Embedded Generation as a load.

- > It is essential that the figures offered are accurate and provided in full when the installation's load requirements fall within the nominated parameters as outlined in clause 1.9.1 of the *Service and Installation Rules of NSW*. These figures must be nominated or calculated in accordance with the *AS/NZS 3000 Wiring Rules*, Section Max Demand.
- > Exact Load for both the Existing Load and Additional Load should be indicated to determine the overall Total Load to be applied. For a new connection, only Additional Load should be completed.
- > If three phase power is requested please indicate if it is currently available. If it is not available, or you do not know if it is available, please contact Essential Energy on 13 23 91 to find out and to determine possible costs associated with the three phase connection specific to your requirements.

SERVICE TYPE

Type of Service offers three drop down box options that should cover your service requirement and they include; Overhead, Underground and Underground from Overhead (UGOH).

Note: A service main must not exceed 50 metres in total length. Technical detail on all aspects of service main configuration and installation can be obtained in the *Service and Installation Rules of NSW*.

If you are installing or replacing a switchboard greater than 100 amps you will require approval from the Regional Inspector by contacting Essential Energy on 13 23 91.

MOTOR LOADS (WHERE APPLICABLE)

- > Motor Loads section requires input where the customer needs to include the connection of motor loads. The rating of the largest motor must be included. In addition, details of the motor starters' characteristics are required.
- > For installations involving multiple motor loads, it is necessary to capture the additional information on motors and their starting facilities on a separate sheet and lodge it as an attached document. Reference to motor starting limitations can be obtained in the *Service and Installation Rules of NSW*.

CONTESTABLE WORKS

This information is required if a contestable work project number is associated with your work. This information can be obtained by contacting your ASP directly.

SECTION 4.1 – GENERATION AND/OR STORAGE EQUIPMENT

This section of the form is to capture the connection requirements of the Proposed Generation and/or Storage Equipment.

Embedded Generation:

If an Embedded Generator connection type is selected, it is a requirement to complete this section of the form. This section details the generator type and device make/model, total panel or generation output, inverter kW rating, and inverter make and model. You will also need to select Yes or No to indicate if battery storage is currently installed at your premises..

Essential Energy must be advised before making any changes to the generation capacity, inverter type or wiring of the generation unit prior to installation. Failure to do so is in breach of network requirements and may result in disconnection of the unit from the distribution network without notice. Further information will be required for installations with a total generation capacity of >5kW in urban areas and > 3kW in rural areas ie voltage rise calculation.

Any inverter make and model specified in this form must be a currently approved inverter as certified by the Clean Energy Council. The approved inverter list can be found at:

<http://www.solaraccreditation.com.au/products/inverters/approved-inverters.html>

For inverters not on the Clean Energy Council list, supporting technical documentation will need to be provided for Essential Energy's review and approval

To complete the table in Section 4.1, please refer to the following:

- > Inverter kW Ratings are based on the AC Power (Watts) rating listed on the Clean Energy Council website
- > Panel Output Generation is the total rated capacity of all panels connected
- > Primary relates to the first/initial embedded generation system to be installed at the premise – gross or net metered.
Alteration to Primary relates to any change of inverter and/or alteration to the panel output of the initial installation.
- > Secondary relates to a second, and subsequent embedded generation systems to be installed at the premises.
- > Alteration to Secondary relates to any change of inverter and/or alteration to the panel output of the secondary installation.
- > Entries in the table will be in kW's to 1 decimal place (Example: 2.0).
- > Connection Arrangement will be either AC or DC Coupled.
- > Storage type is Battery.

IMPORTANT: If you are submitting an application for a Secondary embedded generation system you also need to include the details of the Primary system in the table supplied. Voltage rise calculations should be based on the total generation capacity of both the primary and secondary systems.

Single Line Diagram

A single line diagram is mandatory for all generation applications. Once the application is received, you may be contacted by Essential Energy for further details.

Voltage Rise Calculations

All applications for systems with a generating capacity or inverter rating of $\geq 5\text{kW}$ urban and $> 3\text{kW}$ rural must submit the following information (in addition to the requirements above for approval prior to the system being installed).

As per *Service Installation Rules of NSW 8.6.1.3.*, details of the voltage rise calculations for each of the three components of the generating system that indicate the system will operate correctly and not cause any adverse effects on the customers installation are required. The three components are the:

- > Service Mains (including any dedicated mains in rural situations)
- > Consumers mains
- > Conductors between the main switchboard and the inverter terminals.

Blank pages are provided at the end of the application for both the single line diagram and voltage rise calculations. The Connections Portal allows you to upload these items at the end of the application.

Storage and PV Connection Arrangement:

For combined battery storage and PV systems controlled for the purpose of load/generation levelling, where the charge/discharge of the batteries in relation to PV output is ramped directly proportional to the PV output, that control loop lag may cause a delay in the battery charger ramping down in synchronism with the PV ramp down rate. This difference may cause a Point of Common Coupling (PCC) import spike directly proportional to the charge rate before the PV step change. Such step changes of demand are known to cause significant power quality issues on the network, such as flicker, with the impact magnified on weak networks due to the high source impedance.

If Battery Storage connection type is selected it is a requirement to complete this section of the form. This section details the storage type, connection arrangement, Inverter make/model, Inverter kW rating and Storage capacity (kWh).

Generator Earthing Technical Requirements

The customer is required to ensure that the generator has an earthing system that has been designed to:

- > to limit any step, touch and transferred potentials to safe values using the principles detailed in [ENA EG-0:2012 – Power System Earthing Guide Part 1: Management Principles](#).

Generation schemes working in parallel with the distribution network in effect become an integral part of the electricity distribution network. Therefore neutral earthing arrangements for the private generators and any interconnection transformers must be designed to suit the requirements of both the distribution network and the customer's generation installation and details provided to Essential Energy.

High Voltage Generators

The generator's high voltage star point must be effectively isolated from earth (i.e. isolated or earthed via a high impedance) to avoid any earth fault contributions flowing into the Essential Energy system and to inhibit the flow of harmonic currents through the neutral. Each case will be discussed with the customer on its merits.

Low Voltage Generators

Generators connected to the network via a delta/star transformer with the delta on the network side may have their neutral directly connected to earth (i.e. via an MEN link). Effective isolation of this neutral may be required to inhibit the flow of harmonics through the neutral and the generator's method to limit harmonics must be discussed and agreed to by Essential Energy. The use of 4-pole switching may be required if the generator can operate in standby mode.

Additional Information for Large Scale Embedded Generation Installations >30kW

- > Solar installations above 100kW using multiple inverters will generally require an upstream circuit breaker with appropriate protection (including anti islanding) to 'back-up' the individual inverter protection
- > All multiple inverter installations must have a single point of isolation at their connection (aggregation) point
- > For 'Non Inverter' generation systems ie synchronous and induction machines, a protection report prepared by a protection engineer, including a maintenance plan if battery storage is incorporated will be required
- > The power factor of the customer's installation must meet the minimum requirement of 0.9 lagging to unity as required under the Service and Installation Rules of NSW. For inverter based systems Essential Energy may require the inverters to be set to leading power factor in some situations

A technical guidance document for large scale embedded generation is available from Essential Energy by emailing a request to; networkconnections@essentialenergy.com.au

SECTION 5.0 – OTHER CONSIDERATIONS AND SIGN OFF

By default, your application for connection will be expedited unless you select to not expedite, or negotiate your offer. Expediting your application basically means you remove the requirement, and additional time associated with receiving, approving, signing and returning a connection offer by indicating in advance that our model terms are acceptable to you.

I do not wish to expedite

By selecting to not expedite your application, you are selecting to:

- > wait for a hard copy of your connection offer
- > review it
- > approve it with signature
- > resend it to Essential Energy
- > await confirmation of acceptance prior to any work commencing on your new connection or connection alteration.

If you decide that you do not agree with the offer we send you, you may negotiate with us.

I request to negotiate

By selecting to negotiate your contract, you are unable to participate in the expedited process. You are also required to submit the details of what it is you'd like to negotiate. Following a request to negotiate, and review of your application, you will receive information from Essential Energy to discuss what you seek to negotiate, whether or not these negotiations are feasible, and costs associated with the negotiation process (e.g. legal reviews and advice). Negotiations will be done in accordance with Essential Energy's Negotiation Framework available at essentialenergy.com.au

ACCESSING RELATED POLICY DOCUMENTS

Connections must comply with Essential Energy's related policies in addition to various AS/NZS standards and the *Service and Installation Rules of NSW*. Applicable Essential Energy policy documents are available on Essential Energy's website at essentialenergy.com.au

AVAILABILITY

The Connections Portal is available on the Essential Energy website at:

<http://www.essentialenergy.com.au/content/connecting-to-the-network1>

The hard copy Application for Low Voltage Connection Form is also available upon request by calling 13 23 91.

4.3 Responding to your Application

ACCEPT CONTRACT: RECEIVE CONNECTION OFFER

Within 10 business days after receipt of a complete application for a basic or standard connection, a letter confirming the relevant connection offer will be sent to you by Essential Energy, unless we agree a different period. You do not need to sign an offer to connect if your request to expedite is accepted.

Essential Energy may contact the Applicant and the customer directly where a negotiated connection service is sought, in line with Essential Energy's negotiation framework available at essentialenergy.com.au

Within 65 business days after receipt of a negotiated connection application, Essential Energy will use best endeavours to make a negotiated connection offer together with a request to review, sign and return the offer. The connection offer will also include:

- > A schedule of amendments to the Standard Terms and Conditions (where these have been negotiated and agreed to by you).
- > A schedule of connection costs and charges.
- > A technical schedule comprising of your application for low voltage connection/alteration submitted to Essential Energy.

The schedule of connection costs and charges will be based on the negotiation fees payable (where applicable) and any other additional costs associated with alteration of the network to meet your connection requirements.

ACCEPT CONNECTION OFFER

- > Signed acceptance of the connection offer is not required if the application has been expedited by you or the Applicant acting on your behalf.
- > You must accept a non-expedited basic or standard connection offer within 45 days for the offer to remain valid.
- > You must accept a negotiated connection offer within 20 business days for the offer to remain valid.

5.0 Frequently asked questions

Question: I am building on a rural property and there is no current supply of electricity. Who do I contact to arrange for power to be connected?

Answer: You will first need to contact Essential Energy and make an enquiry in relation to your connection. Essential Energy will ask you for information relating to your property (e.g. Lot and Deposited Plan numbers, type of connection and load) which Essential Energy will use to determine whether network construction is required and advise if you require an ASP to undertake the work.

Question: I am extending/require an alteration to my existing property. Do I need to submit an Application for Low Voltage Connection Form?

Answer: Yes. Any alteration to your existing connection will require you, or someone acting on your behalf, to submit an Application for Low Voltage Connection Form to Essential Energy and seek approval. No physical work can commence on the network until Essential Energy approval is obtained.

Question: I am connecting to an existing property but the meters have been removed. Do I need to submit an Application for Low Voltage Connection Form?

Answer: Yes. You will first need to select and make contact with a retailer to request an NMI. You will also need to engage the services of an ASP to install the new meters following the submission and approval of an Application for Low Voltage Connection Form to Essential Energy.

Question: Can I use my existing NMI to apply for a connection alteration to my electricity supply?

Answer: Yes, but only if the application for connection you are making relates to an alteration to your existing premises e.g. the addition of solar panels. If this is not the case, you will need to obtain a new NMI before submitting an application to connect to the network.

Question: Can I use my existing NMI to apply for additional new connections at an existing premise?

Answer: No. Both sections of your property will need to have an individual NMI so you will need to contact your retailer to request a new NMI. It is recommended that you contact an ASP to determine if the separation is possible.

Question: I am building a set of units, can I request multiple NMIs?

Answer: Yes. You will need to select and make contact with your retailer and request the NMIs for each individual unit, as well as one for 'House Power' or 'Common Power' if required. The retailer will invoice you directly for any electricity used after the meters are installed and the building is connected.

Question: Can I request multiple NMIs but have them invoiced to several customer accounts instead of just a single customer account?

Answer: Yes. You will need to select and make contact with a retailer and request a customer account to be created for each NMI.

Question: Who should I contact if I requested a NMI from my retailer some time ago but I have not heard back from them?

Answer: You should contact your retailer again to request an update on the NMI request.

Question: When will the meters be installed at my new property?

Answer: In most cases an ASP will install the meters, not Essential Energy, so you will need to discuss this with your builder or electrician.

Question: My Application for Low Voltage Connection Form has been submitted. When will I be advised if it has been approved?

Answer: For basic or standard Connection Offers you will usually receive a confirmation that your application has either been approved or rejected within 10 business days. At this time, if your application has been approved you will receive an offer to connect. For negotiated connections, you will usually receive confirmation within 65 business days.

Question: What do I need to do if I want to install solar panels on my property?

Answer: You or your solar installation company will need to submit an Application for Low Voltage Connection Form to Essential Energy. Connection of the system to the network cannot be made until your application has been approved by Essential Energy. You will need to provide your NMI to your solar installer and contact your retailer to make them aware of your intentions to ensure a new retail contract can be created.

Question: I want to increase the capacity of the solar panels on my property that feed into the grid. Do I need to submit an Application for Low Voltage Connection Form?

Answer: Yes.

Question: Will there be a requirement for my property to be inspected?

Answer: Through the application process, Essential Energy will determine where further information or assessment may be required, and may arrange for an inspection of your connection site. The request for Essential Energy's inspection would be done in conjunction with your ASP.

Question: Will I be advised if any electrical issues are found during the inspection?

Answer: Yes. You will receive a courtesy copy of the Electrical Inspection Report completed by the inspector. A copy will also be sent to either the Electrical Contractor or the Accredited ASP advising them they have 30 days to rectify the defected work.

Question: Will I have to enter into a contract with Essential Energy for the ongoing supply of electricity?

Answer: In the absence of another agreement you will have a Deemed Contract with Essential Energy which will come into effect on the day your site becomes energised i.e. when you start taking power from the network. This contract allows for the ongoing network services that you need in order for electricity to be transmitted to your premises, once the New Connection or Connection Alteration has occurred. The Deemed contracts are available on the Essential Energy website.

Question: Will I be charged for the new connection service at my property?

Answer: Essential Energy charges the ASP a site establishment fee. This fee will ordinarily be passed onto you via the invoice for electrical work issued to you by your ASP or builder.

Question: I have an existing property but want to be invoiced separately for a part of the property i.e. granny flat. Do I request this through Essential Energy?

Answer: No. Both sections of your property will need to have an individual NMI so you will need to contact your retailer to request a new NMI. It is recommended that you contact an ASP to determine if the separation is possible.

6.0 Fees and charges

A schedule of fees and charges associated with a New Connection or Connection Alteration is available at essentialenergy.com.au

The basis for calculation of connection charges is contained within Essential Energy's Connections Policy. This document is available at essentialenergy.com.au

Any site inspections required during the connection process may incur charges in accordance with Essential Energy's price schedule for miscellaneous, emergency recoverable works and monopoly fees. A schedule of fees is available at essentialenergy.com.au

7.0 Connection Requirements Matrix and Sample Application Form

Please see overleaf for a Connection Requirements Matrix. This Matrix outlines a range of scenarios and the paperwork required. Following this is a sample application form. Please note – the fields on the paper sample mirror those in the Connections Portal. Submission of a sample stamped form is not a valid application and cannot proceed.

FOR MORE INFORMATION

This information has been provided to assist you to complete and submit an accurate and informed Application for Low Voltage Connection Form to Essential Energy. If after reading the information in this booklet you still have questions, please call 13 23 91.

Connection Requirements Matrix						
Scenario	Paperwork Required				Application Requirement Source	
	Application via Portal	NOSW via SWF	CCEW via SWF	CCEW to Customer only	Chapter 5A	Service and installation rules
New connection	✓	✓	✓		✓	
Meter installation**	✓	✓			✓	
Meter change**	✓	✓			✓	
Meter box replacement		✓	✓			✓
New or altered CT metering installation (request for CT metering CEOF2016)**	✓	✓	✓		✓	✓
Upgrade Consumer Mains or Service Mains – Service Main only replaced	✓	✓			✓	
Upgrade Consumer Mains or Service Mains – Consumer Mains and Service Mains replaced	✓	✓	✓		✓	
Switchboard or switchgear repair or replacement work		✓		✓		✓
Embedded generation installation or upgrade including gross/net metering**	✓	✓	✓		✓	
Installation of battery storage	✓		✓			✓
Stand-alone generation installed, not connected to network				✓		✓
Standby generator installed, including changeover switch	✓		✓			✓
Power points installed – additional circuit			✓			✓
Power points installed – no additional circuit				✓		✓
Light fittings installed				✓		✓

Hot water system replaced – no change in metering, load or location				✓		✓
Change of Point of Attachment position	✓	✓	✓		✓	
Installations in Hazardous Areas eg. Petrol Stations (compulsory site inspection prior to connection required)	✓		✓			✓
Load increase – Urban <100A single phase or <63A multiphase (total load)*	✓		✓		✓	
Load increase – Urban >100A single phase or <63A multiphase (total load)*	✓		✓		✓	
Load increase – Rural*	✓		✓		✓	

- > *Includes: appliance installations hard wired into electrical circuit, air conditioner installations, power connected to shed, additional circuits, switchboard or switch gear work other than repairs or replacement.
- > **Type 5-6 metering only as metering is owned by Essential Energy.
- > Note: Type 1 -4 metering is contestable and no application is required.
- > Appliances that are installed or removed that are plugged into power points do not require paperwork to be submitted.