

GETTING YOU CONNECTED

A CUSTOMER'S GUIDE TO ELECTRICITY
CONNECTIONS ON OUR NETWORK



GETTING YOU CONNECTED

We own the electricity distribution network responsible for getting power to your property when you need it.

Whether it's a house, a large industrial building, a new subdivision, a permanent disconnection for demolition work, or the relocation of existing lines, we can help.

If you need to GET CONNECTED to our Network, this simple guide will help walk you through the steps required to get you sorted.



WE'VE MADE IT EASY



IT'S SIMPLE

The process is managed end-to-end through our online system



IT'S COORDINATED

All parties involved in getting you connected have visibility in to your application



IT KEEPS YOU IN THE LOOP

You'll be alerted along the way so you know the status of your connection



FIVE SIMPLE STEPS TO GET YOU CONNECTED

STEP 1 ENGAGE A NEW ZEALAND REGISTERED ELECTRICIAN

Before any new site is connected you should engage a New Zealand registered electrician to carry out your electrical work.

Also, before any new site is connected, you must have a contract with an electricity retailer. For a list of retailers operating across the Aurora Energy network, go to www.auroraenergy.co.nz/get-connected/retailers/

STEP 2 SELECT AN AURORA ENERGY APPROVED CONTRACTOR & REGISTER TO CONNECT

Only approved contractors are allowed to connect new lines or cables to Aurora Energy poles or pillars. If you are ready to proceed, please register your interest to connect online at www.auroraenergy.nz. This registration will prompt your selected Approved Contractor to complete your full application. The contractor will determine what is required to provide the supply you need, complete your application, and give you a quote for the cost.

For a list of Aurora Energy approved contractors, go to www.auroraenergy.co.nz/get-connected/approved-aurora-energy-contractors/

STEP 3 YOUR AURORA ENERGY APPROVED CONTRACTOR COMPLETES THE REQUIRED WORK

Your contractor will make any upgrades required on the network and connect your new service line or cable at the pole or pillar. When they have completed all the necessary work they will let us know and we will authorise your retailer to liven the property.

STEP 4 YOUR RETAILER INSTALLS THE METER AND LIVENS THE CONNECTION

Electricity retailers have contractors who are approved by Aurora Energy to liven new connections once certain conditions have been met and to certify that the site is electrically safe.

STEP 5 YOUR CONNECTION IS NOW LIVE

All done! Your property is now connected to the Aurora Energy network.



To understand the full end-to-end process involved in getting you connected, please see the diagrams overleaf

SIMPLE CONNECTION THE END-TO-END PROCESS

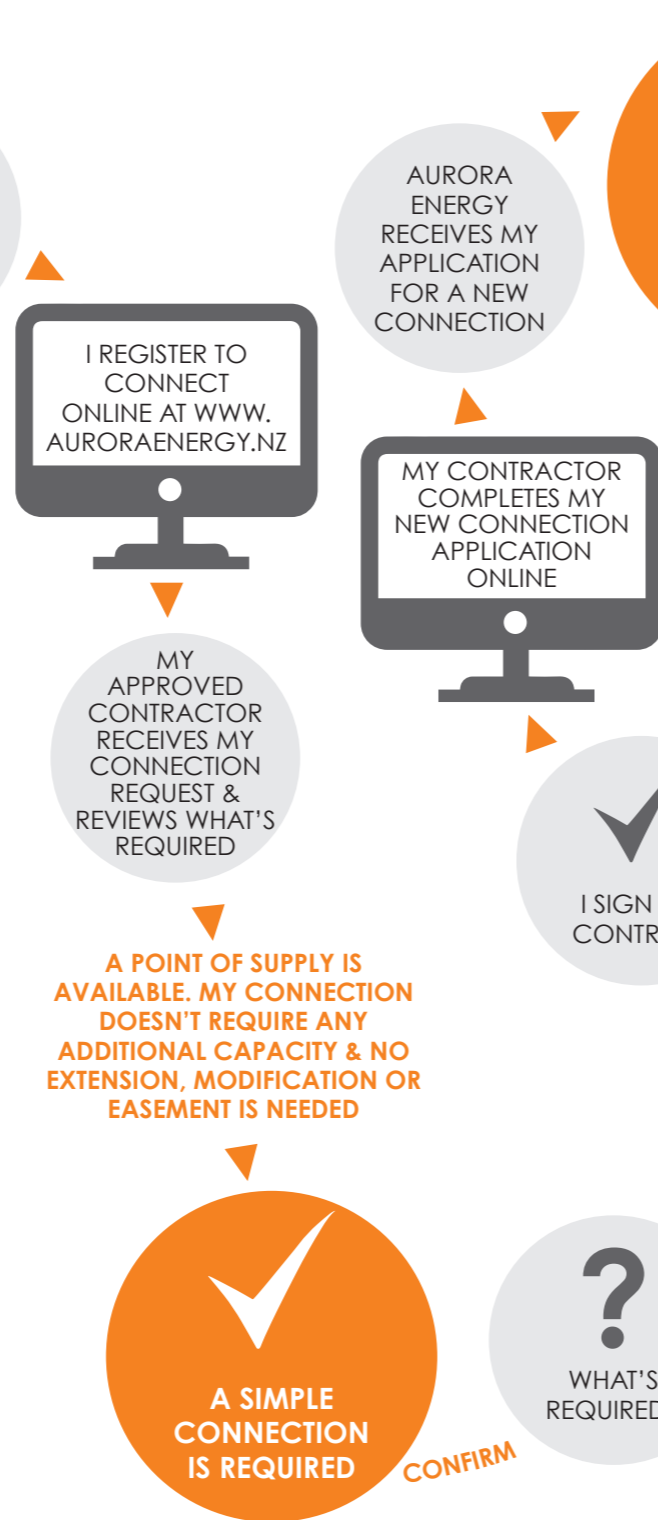
GET STARTED

RESEARCH / SELECT APPROVED CONTRACTOR



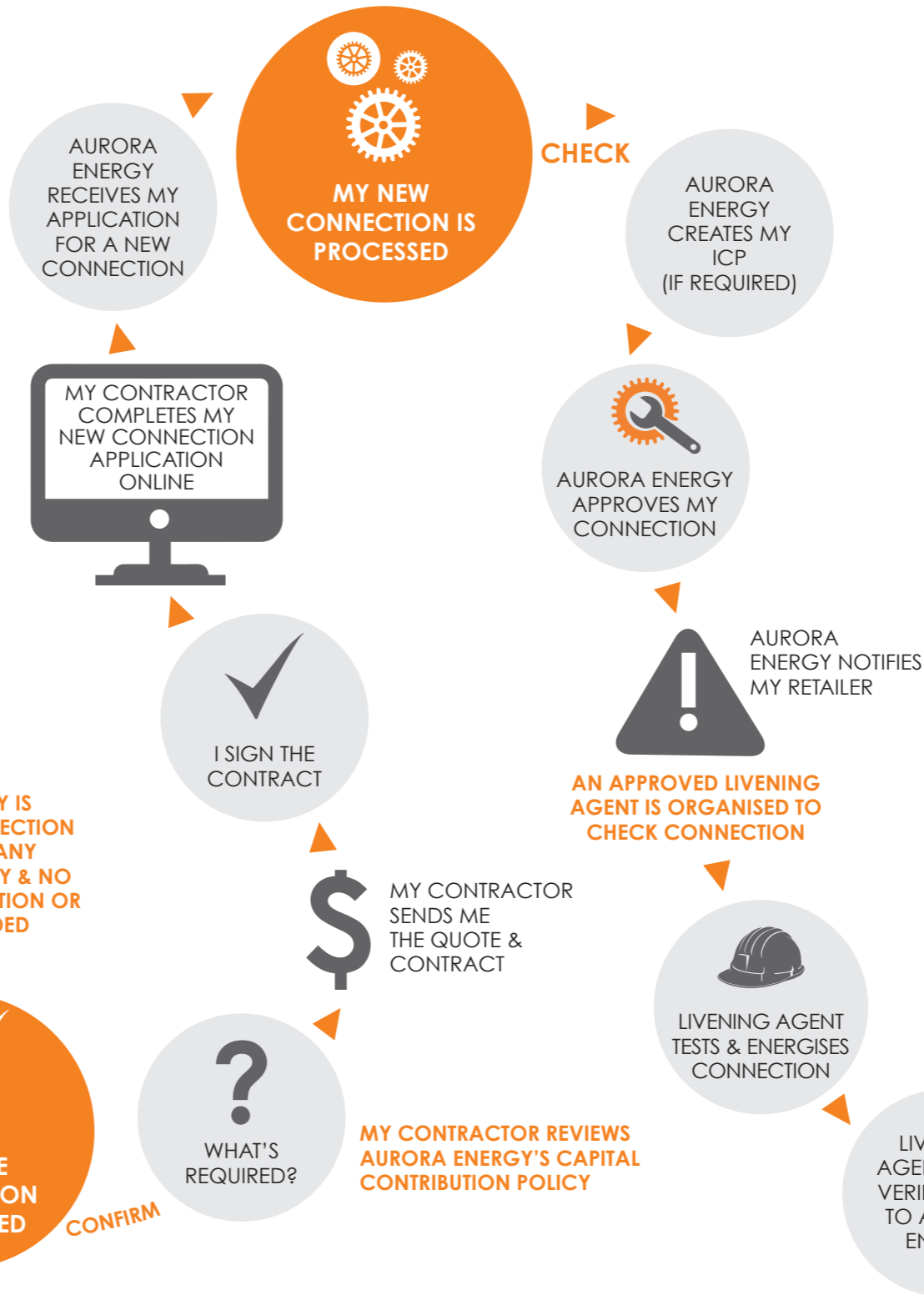
APPLICATION PROCESSED

ONLINE APPLICATION PROCESS UNDERWAY



GET CONNECTED

CONNECTION ESTABLISHED, TESTED & LIVENED



PROCESS IMPROVEMENT

RECORDS UPDATED & FEEDBACK



NOT A SIMPLE CONNECTION?
If your connection requires an extension, modification or easement, the Standard Connection process overleaf will be needed. Your Approved Contractor will be prompted in our online system for all additional requirements needed for this type of connection.

STANDARD CONNECTION THE END-TO-END PROCESS

GET STARTED

RESEARCH / SELECT APPROVED CONTRACTOR



APPLICATION PROCESSED

ONLINE APPLICATION PROCESS UNDERWAY

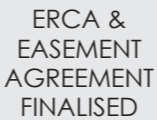
DEVELOPERS NEEDING CONFIRMATION OF SUPPLY AS PART OF RESOURCE CONSENT, PLEASE EMAIL THE TEAM AT getconnected@auroraenergy.nz



MY CONNECTION REQUIRES ADDITIONAL CAPACITY UP TO 150KVA. IT REQUIRES AN EXTENSION, A MODIFICATION, OR AN EASEMENT



CONFIRM

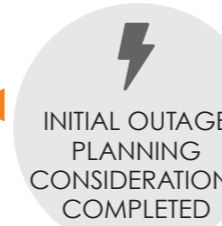
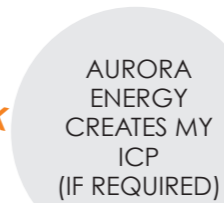


GET CONNECTED

CONNECTION ESTABLISHED, TESTED & LIVENED



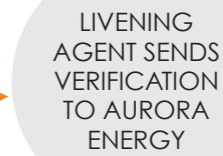
CHECK



MY CONTRACTOR INCLUDES:
 - Capital funding requests
 - Volt drop & arc flash calculations
 - Detailed design
 - Easement requirements

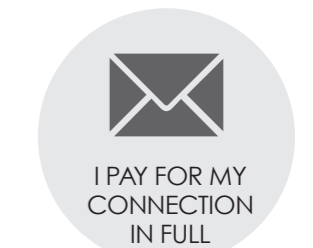
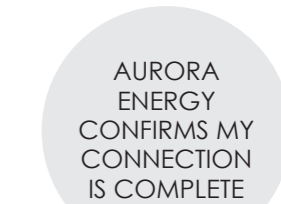


AN APPROVED LIVENING AGENT IS ORGANISED TO CHECK CONNECTION



PROCESS IMPROVEMENT

RECORDS UPDATED & FEEDBACK



UPDATE RECORDS



NOT A STANDARD CONNECTION?
 If your connection is over 150KVA, and is an asset build of significance, this will be processed as a 'Strategic Connection'. These types of connections require more involvement with the team at Aurora Energy, who will outline what's required to get your connection sorted. You can find out more by contacting the team at getconnected@auroraenergy.nz

I FIND OUT WHAT'S REQUIRED ► I APPLY FOR A NEW CONNECTION ► I GET CONNECTED ► I HELP IMPROVE THE PROCESS

? Why has the process been changed?

To improve the overall process for customers and developers seeking a new connection, by simplifying it, streamlining it, centralising it and creating visibility.

? Will this make it easier for my power to be connected to my new house?

Yes, you can choose from a list of Approved Contractors and liaise directly with them to meet your individual needs.

? I've already lodged my request with Aurora Energy - what will happen to my request now?

There will be no change to the processing of this. Your Approved Contractor will submit documentation for commissioning approval when your connection is ready for livening.

? I lodged my request with Aurora Energy two months ago and I'm still waiting for my connection, will new CIW requests go ahead of me?

Not necessarily. The timeline for each new connection is dependent on the specific details of that connection, and timing can be determined by lead time for equipment. Please contact your Approved Contractor for an update.

? How long will the approval process take?

The timeline is dependent on the complexity of the connection. A simple connection requiring no network extension can be approved within 5 working days of a valid and approved submission.

? What is an ICP Number?

ICP stands for Installation Control Point. An ICP number is a unique number that is assigned to identify an individual consumer connection point. You may need to quote the ICP Number(s) of your meter(s) to an electricity retailer if you change retailers.

? I don't know which contractor is best, can you recommend one?

A list of all our Approved Contractors, and the range of services they can provide, is available at www.auroraenergy.co.nz/get-connected/approved-aurora-energy-contractors/

? Where can I find out more about Aurora Energy's lines charges and pricing disclosures?

Aurora Energy's line charge prices recover the direct costs of distributing electricity to you across our network, and other indirect costs

including incentives, rates, regulatory levies and transmission of electricity across Transpower's national grid (together, pass-through prices). The Commerce Commission regulates to constrain the revenues of distribution businesses like Aurora Energy, to protect the interests of consumers, and sets stringent standards for service performance.

For information regarding how lines charges and prices are determined, the methodologies used, and to view our pricing disclosures, please go to www.auroraenergy.co.nz/disclosures/pricing/

? How do I organise a permanent disconnection?

If your property is to be moved or demolished and will be permanently disconnected you will need to contact your electricity retailer. There may also be some costs involved with the disconnection.

? I have a problem with my electricity meter, do you deal with these?

No, Aurora Energy does not own any electricity meters. If you have a problem with your electricity meter, please contact your electricity retailer (the company you pay your power account to).

? I am moving to a new house, what do I do?

If you need your power disconnected or reconnected when moving out of or into a property please contact your electricity retailer.



This is a quick reference guide to help you understand the technical requirements from Aurora Energy's Network Connection Standard.

For the full Standard, go to www.auroraenergy.co.nz/get-connected/

GETTING STARTED

You'll need to apply to connect to the Aurora Energy network if you want:

- A new permanent connection to the network;
- A temporary connection to the network;
- To install any notifiable loads;
- To replace all or part of the mains on your property.

Types of Connection

The type of network connection you'll need will be dependent on the capacity required, the position of your main switchboard, and the location and nature of your property. Your preferred contractor will help you determine the type of connection you need. You can find Aurora Energy's list of Approved Contractors at www.auroraenergy.co.nz/get-connected/approved-aurora-energy-contractors/

INSTALLATION CONTROL POINT

The Installation Control Point (or ICP) is the unique identifier of your property's connection to the Aurora Energy network and is what will identify your new connection once it is live. The need for, and location of, the ICP is determined by Aurora Energy.

POINTS OF SUPPLY

Generally, new connections fall into two categories:

A Point of Supply (PoS) is available – this means a connection may be made. Select your Approved Contractor and follow the process for 'Simple' connections on our website at www.auroraenergy.co.nz/get-connected/how-to-get-connected/

A Point of Supply (PoS) is not available - this means network additions or modifications will need to be constructed before the connection can be made. Liaise with your Approved Contractor and, depending on your requirements, provide the additional information requested by Aurora Energy through our online process. Information about 'Standard' and 'Strategic' connections can be found on our website at www.auroraenergy.co.nz/get-connected

CAPACITY

Aurora Energy's line charges are based on the capacity of the connection. The standard capacities for connections up to 276kVA are generally determined by the size of service fuse used to protect your mains supply.

Urban Properties

Low voltage connections are generally made by connecting your mains to Aurora Energy's low voltage distribution system, or by connection to the low voltage side of a transformer located near your property, if there's one available. If you require larger capacity than what is required from the Aurora Energy

network, you may need to contribute to the cost of a larger installation.

Rural Properties

In many rural areas, the high voltage distribution is 2-wire, and only single-phase supply is available. In these areas, the largest connection capacity available, without upgrading the high voltage distribution to 3-phase, is 50kVA single phase. If you require a new supply located further than 150 metres from an existing transformer, a new, closer, transformer may be required. If additional assets are required for your connection, you may need to contribute to the cost.

Multiple Properties on a Single Site

If you have multiple connections on one property, there will be more than one Installation Control Point (ICP) associated with the property. In this instance, you are not able to parallel these connections, or provide any facilities to parallel the connections. This is to avoid the possibility of back feeds creating hazards on the Aurora Energy network. In all cases, each ICP must be able to be separately de-energised from the network without affecting the electricity supply to any other ICP's on the same property.

EASEMENTS

Aurora Energy requires an easement over private property that is occupied by assets that form part of the Network. Easements provide Aurora Energy with access rights for the purpose of maintenance or replacement of the asset. For further information on easements contact getconnected@auroraenergy.nz. If an Easement is required as part of your connection, your Approved Contractor should follow the process for a 'Standard' connection.

CONTRIBUTION TO COSTS

Customers may be required to make a capital contribution toward the cost of establishing a new



Point of Supply (PoS) or for additional assets required as part of your connection. Further details are available in Aurora Energy's published Capital Contributions standard, available from www.auroraenergy.co.nz.

TYPES OF SUPPLY

Service Box Supply

Connection can be made to the low voltage network via a service box, normally located on the street side of your property boundary. In residential areas, service boxes are generally placed on the street frontage at the junction of two property boundaries, allowing the box to serve two customers.

Pole Top Supply

In areas where the low voltage distribution is overhead, your mains can be connected directly to pole-top fuses provided that the connection capacity is less than 150-amps, and a suitable pole is available on the same side of the street. All mains cables must be copper neutral screened, and the total cable length shall allow for nine metres of cable up the pole.

Distributed Generation Supply

If you're wanting a Distributed Generation connection, you must seek the prior approval of Aurora Energy and your Approved Contractor must follow the process for exporting electricity to the Aurora Energy network. An Import/Export meter will also need to be installed. Go to "Solar & Other Distributed Generation" on Aurora Energy's website (www.auroraenergy.co.nz/get-connected/solar-and-other-distributed-generation/) for more information.

Temporary Supply

A Temporary Supply must be located on property owned by the customer, and must not be fixed to Aurora Energy's assets. The cables must be properly connected to the service box by an Approved Contractor. Temporary supplies need to be allocated an ICP and may be metered or unmetered according to the requirements of your retailer.

LIVENING A NEW CONNECTION

Before any new connection is livened, the mains and metering need to have been inspected by an Aurora Energy Livening Agent, and verified as complying with the Electricity (Safety) Regulations 2010 and Aurora Energy's requirements.

ADDITIONAL INFORMATION

Metering

Electricity retailers are responsible for metering, and will make the final decision whether an installation is to be metered or not. If you're seeking an unmetered supply, you will need to have confirmed acceptance from your electricity retailer before submitting a connection application to Aurora Energy.

Motor Starting Requirements

The starting of electric motors can cause severe voltage dips on the Network, resulting in irritation to other customers. In addition to complying with starting requirements, running motors with fluctuating loads shall not cause excessive voltage fluctuation. For motor starting requirements, please refer to the full Network Connection Standard.

Load Power Factor & Voltage

The true power factor of your installation, measured at the metering point, shall not be less than 0.95 lagging. The Aurora Energy Network is designed and operated to maintain the voltage within the limits prescribed by the Electricity (Safety) Regulations 2010. The limit for low voltage is 230 volts \pm 6% when measured at the Point of Supply (PoS).

Load Control

Switching off certain loads at peak times allows Aurora Energy to better manage peak loads. Customers with controlled loads pay lower annual line charges, via retailer tariffs, to reflect the controlled load being switched off during peak times. Talk to your Approved Contractor about anything on your property that could be managed through Load Control.

Harmonics

Your fittings and appliances shall comply with Regulation 31 of the Electricity (Safety) Regulations 2010 and, specifically, shall not inject any harmonic distortions into the Aurora Energy network that exceed the levels specified in NZECP36:1993 - New Zealand Electrical Code of Practice for Harmonic Levels.

Ensuring Electrical Safety

You are responsible for ensuring that your structures (houses, sheds, building extensions, decks, etc.) maintain a safe distance for electricity network infrastructure. Safe distances are specific in the New Zealand Electrical Code of Practice 34 (NZECP34): Electrical Safety Distances, available for download free of charge from WorkSafe's website (www.worksafe.govt.nz). Aurora Energy will not liven the connection to any new installation that does not comply with the Code.





auroraenergy.co.nz

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