



# Major customer works process

Your guide to large-scale connections



## Ngā Ihirangi

# Contents

Whakatakinga Introduction	3
Tiro Whānui Overview	4
Tō pakirehua tuatahi Your initial enquiry	6
Te tūhura i ngā ō whiringa hiko Exploring your electricity supply options	8
Te whakaū i te urupare me ngā utu Confirming the solution and costs	16
E waihanga ana i tō whakaratonga hiko Building your electricity supply	18
Ngā pārongo tautoko Supporting information	22

## Whakatakinga

# Introduction

This guide provides a high-level overview so you can familiarise yourself with the major customer works process and understand the steps, agreements, costs and capital contribution considerations you'll encounter as design and construction progresses.

## Working with you to meet your needs

Each project is different based on factors ranging from scale, location, and complexity of your requirements, to available capacity and other network development in the area.

Our project sponsors and stakeholders will work with you to understand those requirements and design, price and build network development that best meets your needs.

Depending on your situation, we may also recommend alternative options to meet your load requirements – such as demand management or non-network solutions. Our team will take you through these options if we think they're right for you.

## Other connection considerations

If you're intending to connect or alter existing distributed generation (solar, wind) as all or part of your electricity supply solution you'll also engage in our distributed generation connection process. For further information about this visit [powerco.co.nz/get-connected/distributed-generation](https://powerco.co.nz/get-connected/distributed-generation)

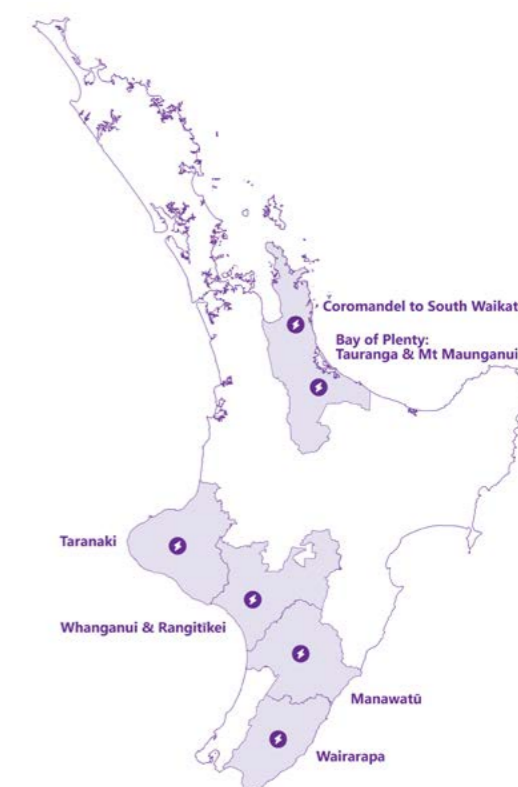
All non-Powerco network electrical works within your site or operations, including metering to measure electricity consumption, and your service connection to our network, are carried out separately to development on our network to supply you. You'll organise your on-site works including your service connection to our network, and retail metering.

## Timeframes for enabling your connection

Designing and building large-scale load takes time, particularly if significant development is required on our network, or the national grid to supply you. Starting your electricity connection planning early by contacting us as soon as possible in your planning process is essential. Refer to page 21 of this document for more information about network development timeframes.

## About Powerco

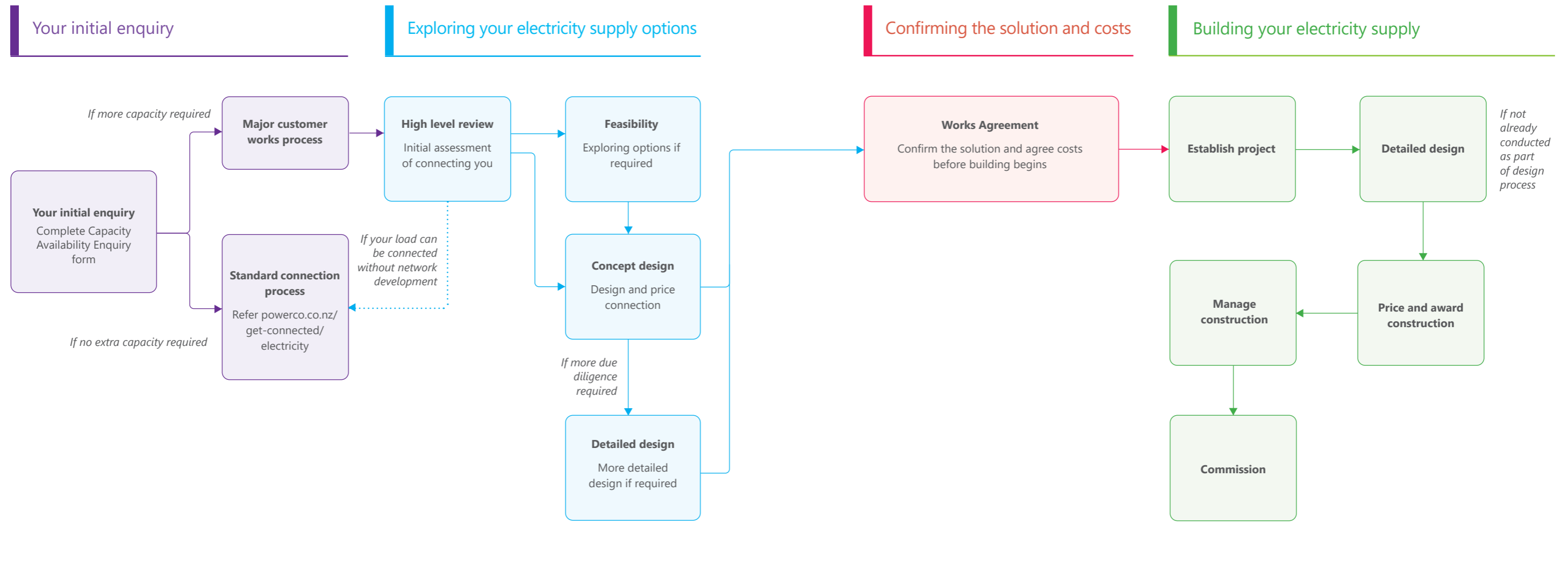
Powerco is a dual electricity and gas distribution owner and operator, serving customers across the North Island. On its electricity network, Powerco manages 28,441kms of overhead lines, underground cables and associated equipment, supplying 345,000 individual customer connections and approximately 736,000 customers.



# Tiro Whānui

## Overview

This section provides an overview process you'll follow to connect your site to our electricity network.



### Your initial enquiry

The first step is to determine whether there's sufficient existing capacity on the network in your location to connect you, or whether network development will be required to meet your needs.

We'll then confirm whether you will proceed with our standard connection process, or with the major customer works process outlined in this document.

### Exploring your electricity supply options

If you're proceeding with the major customer work process, you'll go through a design phase either with us, or with a Powerco-approved electrical design contractor supported by our team.

As part of the design process we'll consider all options to optimise our existing infrastructure, reduce costs, and/or enable us to connect you more quickly. The risks and trade-offs associated with these options will also be considered.

Cost estimation, capital contribution (if any), land access and easement requirements, distribution supply pricing and risks form part of the design process, giving you a full picture of your project before you commit to proceeding.

Depending on the size and complexity of your project there may be preference, either from us or from you, to conduct detailed design work to mitigate risk by completing more due diligence before committing to build work of network development required, and your supply requirements.

### Confirming the solution and costs

Before we start network development we'll agree the scope of work and your capital contribution to our costs in the form of a Works Agreement with you.

### Building your electricity supply

Once the Works Agreement is signed, the project is handed over to a Powerco project manager to oversee the build work.

The construction contract will go out to market to our Powerco-approved contractors, and your Powerco project manager will oversee the construction phase/s with them.

Work may be conducted in stages, and/or broken down into a series of smaller projects depending on the level of network development required, and your supply requirements.

We'll keep you informed on how this work is proceeding, as you progress with your own on-site electrical works, including the design and installation of your service connection to our network.

When network development work is complete, your Powerco project manager in collaboration with the construction contractor will liaise with you to commission the supply and liven your site.





Tō pakirehua tuatahi  
**Your initial enquiry**

Your first step is to tell us your site location and the load your operations will require. We'll do an initial capacity availability assessment and if our network doesn't already have the capacity to support your site, we'll let you know the upgrade work that will be required to accommodate your load.

Network development involves either ensuring capacity to supply the load you require (while keeping other customers dependent on that load also reliably supplied) or building high voltage (HV) electricity assets to provide the necessary capacity to your site.

### Network development explained

- Building new 11kV overhead line or underground cable to reach your site.
- Increasing capacity on our network if your load will exceed what's currently available. Depending on capacity required, development can involve new transformer or substation equipment, or working with Transpower to provide more power from the national grid.

### Standard connection or major customer works

If network development is not required you'll proceed with our standard connection process, and work with a Powerco-approved contractor to design and build the connection between your site and our network.

If network development is required, you'll engage with the major customer works process outlined in this document and proceed to a high-level review.

#### What to do:

- Complete the Capacity Availability Enquiry Form on our website: [powerco.co.nz/get-connected/electricity/large-commercial-industrial-and-residential](https://powerco.co.nz/get-connected/electricity/large-commercial-industrial-and-residential)

#### What we need to know:






- Location of your site
- Load required in kW and if possible, demand profiles (information on what your peak consumption would be over a 24-hour period and/or any information on seasonal use of your equipment. This helps us understand your peak load requirements).
- Whether you require a back-up supply option
- Your build timeframes including information on your build stages if relevant

If you don't have all details available at this stage in your planning, complete the form with as much detail as you have available, this helps us provide a more accurate assessment to you.

#### What you'll receive back from us:

An email response with an initial assessment of network availability to support your load requirements and confirmation of whether to proceed with the standard connection or major customer works process.

#### Key information:

-  Complete the Capacity Availability Enquiry Form
-  No cost to you
-  You'll receive a response in two business days
-  If you're connecting or altering distributed generation (solar, wind) as all, or part, of your electricity supply solution, you'll need to engage in our distributed generation connection process
- 
  - Capacity Availability Enquiry Form: [powerco.co.nz/get-connected/electricity/large-commercial-industrial-and-residential](https://powerco.co.nz/get-connected/electricity/large-commercial-industrial-and-residential)
  - Information on our standard connection process: [powerco.co.nz/get-connected/electricity](https://powerco.co.nz/get-connected/electricity)
  - Information on our distributed generation connection process: [powerco.co.nz/get-connected/distributed-generation](https://powerco.co.nz/get-connected/distributed-generation)





Te tūhura i ngā ō whiringa hiko

## Exploring your electricity supply options

### Introduction

Exploring your electricity supply options will begin with a high-level review before proceeding to concept design.

Depending on the size and complexity of your requirements, and the level of development required on our network to meet them, we may also undertake initial feasibility and pricing activities to give you more assurance before you commit to concept design.

A detailed design may also be carried out to further investigate costs and mitigate the risks associated with the build.

You'll have a dedicated project sponsor to guide you through the high level, feasibility (if required) and concept design phases, before handing over to a project manager for the detailed design (if required), construction and commissioning phases.

### High-level review

Once we've confirmed that you'll be engaging in the major customer works process, you'll complete a Significant Customer Information Form to provide more detailed information about your load requirements.

This enables us to look more closely at options to supply your site, for instance by assessing the diversity of your load to ensure your supply is designed for peak load requirements.

### Diversity of load

The diversity of your load is impacted by factors such as;

- operating hours - your load will be minimal at times when you are closed.
- any periods of time when equipment is shut off and not drawing supply.

The information provided in the Significant Customer Information Form enables us to complete a high-level review for you. You'll find some of the information requested is the same as the Capability Availability Enquiry Form.

### The high-level review will include:

- Confirmation of whether there's available capacity to support your load.
- An estimate of the network development required to supply you – including whether there any dependencies to work with Transpower to access more supply from the national grid.
- A network development cost estimate (+/-50%).
- An indication of timeframe for when construction work could commence based on our network development programme and current timelines for projects of your scale.
- Any land access or easement requirements or dependencies
- Potential trade-offs

Your high-level review is a preliminary look at potential network development solutions, providing indicative information based on what you've provided in the Significant Customer Information Form. It's used to further discussions with you about designing the best supply solution to suit your needs.

### Phasing the build of your supply

At this stage we may also recommend that work is broken down into phases, particularly if the work is complex.

Phasing may allow us to enable a connection more quickly to meet your initial load requirements, with further network development taking place later to improve security or provide more capacity as more phases of your operations come onstream.

Depending on the outcome of the high-level review, we may require a feasibility assessment to further investigate all or parts of your project, or we'll recommend you proceed to commissioning a concept design with an electrical engineer.

Your project sponsor will support you to understand your high-level review report, and discuss options for your next step, as well as the information you'll need to provide to initiate it.

Occasionally, the high-level review will conclude that there's enough capacity available without the need for network development, in which case you'll be able to use our standard connection process and work with a Powerco-approved contractor to design and build your connection.



### What to do:

- We'll provide a Significant Customer Information Form to complete and email back. Also available on our website: [powerco.co.nz/our-partners/for-electricians](http://powerco.co.nz/our-partners/for-electricians)

### What we need from you:






- Location of your site
- Load required in kW
- Build timeframes, and any information on build stages if relevant
- Operating hours

Provide as much information as you have available at this stage to enable us to provide an accurate assessment back to you.

### What you'll receive back from us:

Your high-level review assessing network development options to enable your connection. Your project sponsor will then advise on next steps; proceeding to a feasibility assessment or a concept design.

#### Key information:

-  Complete the Significant Customer Information Form
-  No cost to you
-  4 – 6 weeks to receive your high-level review.
-  If you're connecting distributed generation (solar, wind) as all, or part, of your electricity supply solution, you'll need to engage in our distributed generation connection process separately.
- 
  - Significant Customer Information Form: [powerco.co.nz/get-connected/commercial-and-industrial-electricity](http://powerco.co.nz/get-connected/commercial-and-industrial-electricity)
  - Easements: [powerco.co.nz/get-connected/electricity/easements](http://powerco.co.nz/get-connected/electricity/easements)
  - Motor Start Form: [powerco.co.nz/get-connected/commercial-and-industrial-electricity](http://powerco.co.nz/get-connected/commercial-and-industrial-electricity)

## Feasibility assessment

A feasibility assessment may be required for all or part of your project if the outcome of the high-level review has identified several network configuration options, or if it's a significant, complex project.

The feasibility assessment will evaluate those configuration options and make final recommendations.

The feasibility assessment may include:

- All assessed options and recommended option(s)
- High-level cost estimate (+30/-15%)
- Property access and easements that would be required.
- Any other stakeholders who would need to be engaged are identified
- Network operations considerations (for instance, protection equipment that will need to be designed and built to protect our network and other customers relying on the same supply you'll be connected to, or auto-changeover schemes if you will have a secondary supply from a different electricity feeder to supply you with n-1 security)
- Project staging
- Identification of long-lead time items/equipment that will be required in the build
- Critical path for construction to deliver the project in the required timeframe
- Identified risks

### Motor Start Form

As part of preparing a feasibility assessment, or a concept design we may ask you to complete our Motor Start Form to provide detailed information on your plant and equipment. This helps us to understand your peak load requirements by collecting information on factors like whether your equipment is variable speed drive or soft starter and when it will be turned on and off.

Provide as much information as you have available at this stage.

### Trade offs

The feasibility assessment process will highlight trade-off options available to you. For instance, building contingency into the network to provide uninterrupted supply (known as n-1 security) can be very costly and may not be necessary for your operations. Alternatively, initial network development can be conducted to get you connected faster, and a second phase of work can supply n-1 security for your operations at a later date.

Risks and trade-offs are explained on page 24 of this document.





## Advance Works Agreement

You'll be responsible for the costs of conducting a feasibility assessment. That cost will vary depending on the complexity of your connection.

You'll sign an Advance Works Agreement before we conduct (or engage a consultant to conduct) design work for you. In it, you'll agree to meet the costs of conducting the feasibility assessment for you, or for placement of long-lead item orders.

The Agreement describes the scope of the work we'll conduct and your agreement to pay for the associated costs. You may sign a number of Advance Works Agreements with us at various stages of the design phase.

### What to do:

- Sign the Advance Works Agreement with us agreeing to meet the cost of carrying out your feasibility assessment.
- Complete the Motor Start Form if requested

### What we need from you:

- Your project sponsor will advise.

### What you'll receive back from us:

- Your peer-reviewed feasibility assessment of the network development options, and a preferred option recommendation.

### Key information:



Complete Motor Start Form if requested:  
[powerco.co.nz/get-connected/commercial-and-industrial-electricity](https://powerco.co.nz/get-connected/commercial-and-industrial-electricity)



Advance Works Agreement



Varies, depending on complexity. You are responsible for cost.



Approximately six weeks to receive your feasibility assessment

## Concept design

The network development to enable your connection is now designed.

The concept design will include:

- The conceptual design of works required to supply you
- A list of all the equipment that will be procured and used in the build
- Construction price estimate (+/-20%)
- Stakeholder engagement and land access requirements

Separately, your project sponsor will also provide information about:

- Your capital contribution, if any (see below)
- Indication of distribution supply pricing once your site is connected
- Whether land access/easements will need to be obtained by Powerco or you

### Carrying out the concept design

We'll let you know whether the concept design will be conducted by us, or if you should engage a Powerco-approved electrical consultant to carry it out.

Either way, you'll be responsible for the associated costs of carrying out the design work.

- If we're carrying out the concept design, you'll sign an Advance Work Agreement with us agreeing to meet the costs of having the concept design done prior to any design work being started.
- If a Powerco-approved electrical consultant is engaged to undertake your concept design work we'll support them by providing information they'll need to carry it out. We'll also review their design once it's complete and request changes if needed.

## Your capital contribution

When increasing capacity on our HV network to meet your load requirements, we may attribute some of the capital investment costs to you, applying our capital investment policy.

While every project is different, in general there will be an allocation of cost if your operations will be using >10% of the increased capacity (based on your anticipated load vs. new capacity).

This is to ensure the increased costs associated with your customer-initiated work are paid for by you - the customer who will use it - and that existing customers on the same supply, who require no additional investment are not unduly subsidising that work.

Knowing what your capital contribution would be also helps you fully assess whether a network connection (or load increase) is your most cost-effective electricity solution. Alternative non-network solutions could then be considered such as increasing energy efficiency of existing operations to offset your load increase, your own on-site generation or battery storage.

Once the concept design is completed you can opt to have a detailed design conducted. This will provide a more accurate assessment of cost to build, look more closely at risks and mitigation, and any land access or easement negotiations will be conducted. We may also recommend that parts of your project go into detailed design.

If you proceed to the build phase based on your concept design the detailed design work will be conducted as part of the build project.





#### What to do:

- Work with us or your Powerco-approved electrical consultant to develop your concept design.




#### What we need from you:

- Your project sponsor will advise. If you're using an electrical consultant we'll support them with the information they require to carry out the concept design for you.

#### What you'll receive back:

- Your concept design report.
- A recommendation on whether to proceed with a more detailed design for all or part of your project, or to move to the build phase.

#### Key information:

-  Advance Works Agreement if designing with us.
-  varies, depending on complexity of the design work. You are responsible for cost.
-  6 – 18 months depending on the complexity and dependencies of carrying out your concept design.



## Detailed design

A detailed design will give you more assurance of the costs to construct your network supply, and how it will be carried out. You may opt for a detailed design to minimise identified risks associated with the build.

As with the concept design we'll advise whether we'll conduct your detailed design, or whether you'll need to engage a Powerco-approved electrical consultant. If you're working with us, an Advance Works Agreement will need to be in place.

The detailed design will include:

- Scope of works and accompanying designs to build
- Cost estimate (+/- 5%)
- Detailed risk register
- Land access requirements are identified and any required easements are negotiated
- Indication of your distribution pricing once you are connected
- Indication of your capital contribution (if any)

If you opt not to conduct a detailed design, this work will be carried out as part of the build phase.

#### What to do:

- Work with us or your Powerco-approved electrical consultant to develop your concept design.




#### What we need from you:

- Your project sponsor will advise. If using an electrical consultant we'll support them with the information they require to carry out the detailed design for you.

#### What you'll receive back:

- Your detailed design report.

#### Key information:

-  Advance Works Agreement
-  varies, depending on complexity of the design work. You are responsible for cost.
-  6 – 14 months depending on the complexity and dependencies of carrying out your detailed design.





If you're ready to proceed, you'll sign a Works Agreement with us before we start delivery.

The Works Agreement will detail the scope of work we'll undertake on our network in order to supply your site and document your agreement to underwrite the build costs in the form of your capital contribution.

The signed Works Agreement will give us the go ahead to proceed and your project/s will be fully handed over to our project management team for delivery.

Terms of the Works Agreement include (not are not limited to):

- Scope, demarcation and ownership of the works
- Delivery commitments
- Costs and treatment of cost variation
- Capital contribution and payment terms
- Treatment of scope variation
- Warranties
- Powerco investment recovery

**What to do:**

- Sign the Works Agreement

**What we need from you:**

- Your project sponsor will advise.

**What you'll receive back:**

- A copy of your signed Works Agreement

**Key information:**



Works Agreement



Each party bears their own project costs as outlined in the Works Agreement.



2-4 weeks

Te whakaū i te urupare me ngā utu

## Confirming the solution and costs





Once the design work is complete and your Works Agreement is in place (along with a land purchase agreement if necessary, refer to Page 25) your project enters the construction phase.

In this phase, a Powerco project manager will be assigned (if not already) to your project to oversee building works and liaise with the contractors carrying out the work.

Detailed design work will be conducted, if not already done as part of the design phase.

Powerco will opt either to nominate a contractor to carry out the work, or to use a tender process before awarding the construction contract.

The work may be divided into a number of smaller projects and carried out in a phased way.

**Building timeframes**

Depending on the level of network development required to supply you, build work can take several years. Here's an indication of what you can expect:



There are also currently long lead times for equipment to arrive in the country, which may also impact the timeline of your connection project.

**Establish project**

Once the Works Agreement is in place, your project sponsor will hand over to the project team for delivery.

A project manager will be assigned and they will establish the project internally to monitor time, cost and scope of the project throughout the construction phase.

**Detailed design**

If not already conducted as part of the design process, the project manager will facilitate a detailed design using the concept design as the starting point.

If there will be Powerco-specific easements or resource consent required to carry out the work, the property and consents team will be engaged to start this work.

The draft detailed design will then be reviewed by all relevant teams within Powerco before being finalised.

**Price and award construction**

The project manager will either engage with our major contractors to price the construction work, or, where a major contractor is not available the work will be tendered out.

The project manager will evaluate the price proposal/s including scope, methodology, and price. Once the price has been agreed, the project budget is approved and raised with the Asset, Strategy and Investment team and a work order is issued to the contractor to carry out construction.

Typically it takes between six weeks and three months to price and award a contract.

E waihanga ana i tō whakaratonga hiko  
**Building your electricity supply**



### Manage construction

The construction company will now start preparation for construction.

They will assign a project manager to liaise with Powerco's project manager throughout the construction phase.

The project managers will work together to ensure that the property and consents team have all necessary consents and easement agreements in place, arrange any planned outages required to conduct work safely, and to manage and mitigate risks.

The Powerco project manager will conduct regular site visits to ensure milestones are being met, and that completed work and materials used are as agreed in the scope of work.

The construction company will arrange access with landowners to build equipment per the easement agreements as required. This may include liaising with you to build assets on your site.

### Your service connection

While the network development is carried out, you'll need to arrange your service connection, which will connect your site to our network.

You'll need to engage a Powerco-approved contractor to price, design and carry out this work for you and you'll be responsible for all costs.

Even if your Powerco-approved contractor is the same company carrying out the network development work, you'll need to have a separate design and contract in place with them to carry out the connection work.

Our project manager will be able to liaise with you, or directly with your Powerco-approved contractor to provide the connection requirements.

You'll also need to work with a retailer to have metering installed to track your electricity consumption.

Depending on the size of your load we may also require a Power Quality Monitor to be installed. Power Quality Monitors collect data for us for required reporting to our regulator, the Commerce Commission. If a Power Quality Monitor is required the cost of installation will be documented in the Works Agreement, and we'll advise on how to install it.

#### Key information:



Powerco-approved contractors:

[powerco.co.nz/get-connected/electricity/powerco-approved-contractors](https://powerco.co.nz/get-connected/electricity/powerco-approved-contractors)

### Commission

Once the construction work is complete the construction company will meet with our project manager to ensure the build has met the detailed design requirements.

Testing will also be conducted prior to livening the new assets.

The livened assets are then handed over to our Network Operations and Asset Information teams for ongoing monitoring, support and maintenance.

If required, your Powerco-approved contractor will receive confirmation that the assets have been livened so that your service connection line or cable to connect you to our network can be livened.

You'll now have electricity supplying your site.







## Ngā pārongo tautoko

# Supporting information

## Trade-offs and risks explained

We advise customers to consider what level of supply risk is acceptable which informs supply security choices for their operations.

While back-up supply options can be built into our network for you, the cost of building an alternate supply to provide uninterrupted power in the event of an outage on your primary supply may outweigh the benefits.

Depending on your needs, your considerations could include:

- **Does back-up capacity need to be the same as your primary supply?**  
A network back-up solution that provides enough power for only the critical parts of your operations for the duration of an outage may be sufficient, and more cost-effective to build.
- **Can security of supply be improved over time?**  
Factoring in the build of a back-up solution can extend the timeframe of your project. You could consider prioritising the build of your primary supply, and accept the risk of an outage for a period until your alternate supply is built.
- **Is it more economic to have your own back-up supply?**  
It may be more economical to have your own back-up supply (in the form of generation or battery storage) to use during the occasional outage than it is to underwrite the cost of having a back-up supply built on our network.
- **Can you accept the risk of occasional supply interruptions?**  
The cost of mitigating supply interruptions using either of the options above may mean it's preferable to accept the risk of occasional power outages.

## Assessing your risk of an outage

To understand the risk of unplanned outages affecting you, you can talk to us about the probability of an unplanned outage occurring, typical length of time of outages, and the chance of an outage occurring during your peak load times.

### Example scenario one: increasing load

A coolstore customer using a peak load of 2MVA want to expand their operations and double their peak load to 4MVA in the process.

Security of supply is important to them, so they already have an alternate supply in place for their existing operations in the event of an outage on their primary supply.

While their primary supply can support their increased load with minor network development, reinforcing the alternate supply to support the additional 2MVA requires substantial work that will take two years to complete. This customer could consider:

- Deferring the expansion until the alternate supply upgrade is completed.
- Proceeding with the alternate supply upgrade and with the expansion at the same time, accepting the risk of having only partial back-up until the alternate supply upgrade is completed.
- Accepting that in the event of an outage, their alternate supply will only provide them with half their total load needs.
- Further to the above, having outage mitigation plans in place, such as on-site back-up generation or keeping coolstore doors closed.

### Example scenario two: Switching from non-renewables to electricity

A manufacturer who relies on continual power supply is considering moving from non-renewable coal to electricity to run their operations.

With coal, the manufacturer has enough supply on-site to work as a buffer in the event that coal deliveries are temporarily interrupted – ensuring operations are unaffected.

The manufacturer needs to consider the increased risk of an interruption to supply when switching to electricity.

The customer should think about their risk tolerance, the mitigation they want to have in place and the costs associated with those measures as part of their switching decision.



## Our agreements explained

### Advance Works Agreement

Prior to signing a Works Agreement, you may enter into one or more Advance Works Agreements with us. An Advance Works Agreement sets out the terms on which we agree to undertake, and you agree to pay for, any 'advance work' to be undertaken prior to a Works Agreement being signed. Examples of 'advance work' that require an Advance Works Agreement include:

- Concept design review
- Ordering long lead items (e.g. transformers)
- Carrying out your detailed design of the works
- Obtaining investigations or reports (e.g. geotechnical) that may be necessary in respect of the work
- Preparation of resource consent applications for the works.

### Works Agreement

Before we start network development, we'll agree the scope of work and your capital contribution to our costs and this will be recorded in a Works Agreement. Once the Works Agreement is signed, Powerco will engage a Powerco approved contractor to design and carry out the works.

### Land Purchase Agreement

In certain circumstances we may need to purchase land from you, for example if your project requires a substation to be built on your land. We use the template Auckland District Law Society (ADLS) Agreement for Sale and Purchase, which sets out details about the land being sold and all the of the terms and conditions of the sale.

### Connection Agreement

Sometimes we enter into a Connection Agreement directly with our large customers. These agreements detail the terms and conditions on which we allow you to connect to and receive lines services from our network. If we have a Connection Agreement with you, you will be billed directly for our lines charges rather than having them appear on your power bill from your retailer. You'll have a separate agreement with your retailer to pay for the electricity you use.

### Easement Agreement

Sometimes to connect you to our network, electrical equipment needs to go on your land. Examples of equipment that may need to be installed are overhead poles and lines, underground cables, transformers and switchgear. An Easement Agreement gives us the right to put our equipment on your land. The equipment remains our property and we're responsible for maintaining it. An Easement Agreement also gives us the right to access your property when we need to inspect or maintain the equipment. An easement is registered on the land title, so it stays in place even if the land is sold.



## Glossary

### Capacity

The amount of electricity available for customers to use.

### Distributed generation

When customers who generate their own power (solar, wind, liquid fuel) connect to a distribution network.

### Easement

A legal right to use another person's land. We use easements when we're putting equipment (such as poles, overhead lines or transformers) on a customer's land (or their neighbour's land).

### kW

Kilowatt. 1,000 watts.

### Load

The amount of electricity you draw from the network to run your operations.

### Peak load

The highest amount of electricity you use to run your operations – for instance, when all machinery is in use during peak production periods.

### MVA

Megavolt-ampere.

### MW

Megawatt. 1,000 kilowatts.

### N-1 security

N-1 security is uninterrupted electricity supply. N-1 security involves building contingency into an electricity supply solution so that in the event that the primary source of supply is interrupted, supply will come from a second source.

### Powerco-approved contractor

An electrical or gas contractor approved to carry out work on our networks.

### Transpower

The state-owned enterprise that owns and maintains the national grid.

## Contact us

To get in touch about the major customers works process, email [Energy.Solutions@powerco.co.nz](mailto:Energy.Solutions@powerco.co.nz)

