
Network Code

Kaupapahere Whakahaere Tūhononga Hiko

Distribution Standard 30

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Version 1.1



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1. Overview

1.1. Introduction

This Network Code outlines the technical requirements for connection of equipment to The Lines Company’s Distribution Network. It describes how we manage customers’ electrical load on our network and our approach to construction, operation and maintenance of the network.

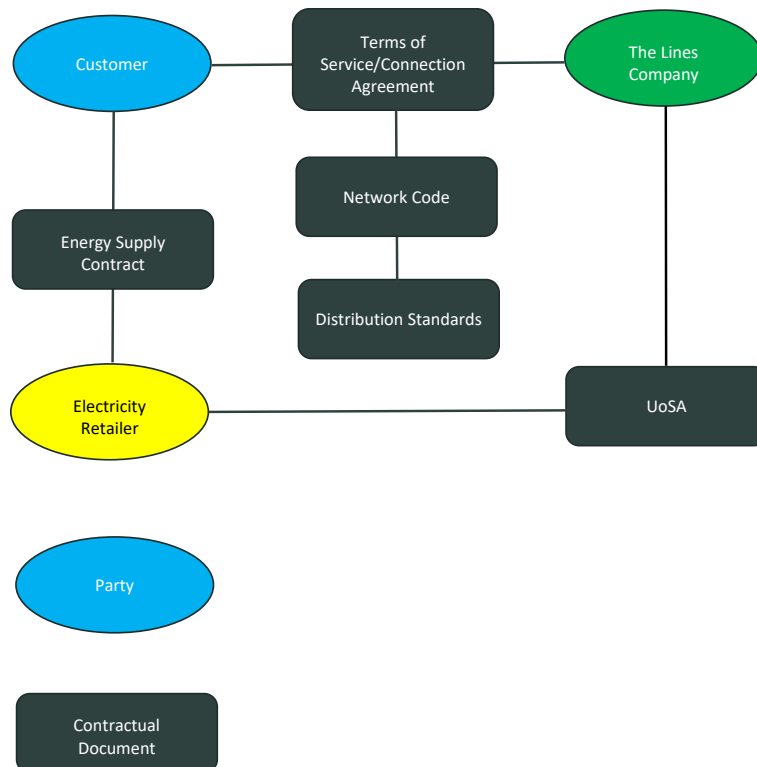
1.2. Scope and status

This Code applies to all stakeholders that wish to connect to, or offer services using our Network. This includes connected customers, developers, contractors, consultants and Electricity Retailers.

This code documents our current requirements and procedures and may be amended from time to time, at our discretion. Where changes are made, these changes will apply from the date of issue unless otherwise stated.

1.3. Relationship to other documents

A high level view of the Network Code’s relationship with other documents is shown below. The code is cited in our Standard Terms (ST), Use of System Agreements (UoSA) and Connection Agreements (CA) and as such compliance with its requirements is part of a customer’s (or other party’s) contract with TLC. It also refers to our Distribution Standards (DS) and Network Operating Procedures (NOP) which ensure the safe and efficient operation of our network through providing detailed technical and operating standards.



2. General Requirements

2.1. Introduction

This section outlines the requirements that apply to all equipment connected to our Network. These requirements are in place to ensure minimum safety and legislative standards are met and we can access our Network to ensure its continued safe and efficient operation.

2.2. Safety

Our primary focus to ensure the network and our customers' connected equipment is operated in a manner that is safe for our team, our customers, and our community.

Where we reasonably believe equipment connected to our network presents a safety risk, we may disconnect this without prior notice. If we disconnect your equipment for safety reasons, we will notify you of the safety standard required to enable reconnection.

As required by the Electricity (Safety) Regulations 2010, we operate a Public Safety Management System (PSMS) that is audited annually to NZS 7901. The PSMS provides the framework through which we ensure the safety of our customers and community around our assets.

Members of the public or customers who discover any hazards or dangerous situations on or around our network, should contact us immediately on 0800 367 328.

2.3. Legislation

In operating our Network, we are required to comply with all relevant legislation and mandated standards. In some cases, the legislation and standards cover requirements for customer owned equipment connected to the Network also.

Key elements of legislation and associated standards that apply include (but are not limited to):

- Health and Safety at Work Act 2015
- Electricity Act 1992
- Electricity (Safety) Regulations 2010 and Amendments
- Electricity Industry Act 2010
- Electricity Industry Participation Code
- AS/NZS 3000 Wiring Rules for Installations
- NZS 7901 Electricity and Gas Industries - Safety Management Systems for Public Safety
- Electricity (Hazards from Trees) Regulations 2003
- NZ Safety Manual for the Electricity Industry (SM-EI)
- New Zealand Electrical Codes of Practice

Where there is a conflict between this Code and any legislative requirement, the legislative requirement shall prevail.

2.4. Medically Dependant Customers

If you rely on electricity to ensure your wellbeing due to a medical condition, you must notify your Electricity Retailer of your requirements.

We work closely with Electricity Retailers to minimise the impact of outages on our medically dependant customers

2.5. Access to Network Assets

A significant portion of our network is located on private property. From time to time we need access to our equipment for fault finding, inspection, repair, or replacement.

We are mindful of the range of farming activity and animal wellbeing requirements across our Network area and wherever possible we will contact the property owner in advance of entering the property. For planned work this notification will aim to notify landowners in writing at least twenty working days in advance of the work commencing, however in the case of a short notice planned outage, we will give as much notice as possible in the circumstances. In an emergency or fault situation we may require access without prior notification.

Where our Network assets were installed on private property prior to 1 January 1993, sections 22 & 23 of the Electricity Act 1992 make provision for us to access these assets for the purpose of inspection, repair, or replacement.

Assets installed after 1 January 1993 are required to have access agreements in place with the property owner. In most cases this will be via an easement in gross, granted in favour of TLC. Where we are constructing new TLC owned assets, we will work with a property owner to negotiate access terms and agree ongoing access requirements for inspection, operation, maintenance, and replacement of those assets.

2.6. Ownership of Existing Assets

Several changes in legislation have resulted in complexity related to line ownership. We own lines that are part of our 33kV or 11kV distribution network (including lines over private property), that supply multiple customers, regardless of their location or supply voltage.

Poles on private property that carry 11kV and/or low voltage supplies dedicated to one property owner are generally the responsibility of the property owner.

Other utility providers (e.g. Chorus) may own poles used to convey electricity. Generally, where there are poles on both sides of an urban road, we own the pole that carries the main electricity network with Chorus owning the poles on the opposite side of the road. We have agreements in place with Chorus outlining the safety and technical requirements for accessing their poles.

In all cases the owner of a pole (and line) is responsible for its ongoing safety and maintenance in accordance with the Electrical (Safety) Regulations 2010.

2.7. Substations

We own and operate substations across our Network to enable the supply of electricity to our customers. Where our substations are in buildings owned by a Customer, the Customer is responsible for maintaining the building to a standard suitable for the safe and efficient operation of the substation.

2.8. Trees

Trees near power lines can create safety hazards, interrupt supply to Customers and cause damage to our Network. We require owners of trees to ensure their trees and other vegetation maintain the clearances defined in the Electricity (Hazards from Trees) Regulations 2003.

If we identify trees or vegetation that presents a risk to our Network, we may request (via a cut notice) that the tree owner trims or removes the tree in accordance with the Electricity (Hazards from Trees) Regulations 2003. If the work is not completed within the time specified on the cut notice, we may complete this work at the cost of the tree owner.

Tree owners may be liable to us for any damage caused to our Network by their trees.

Where there is a risk the tree being trimmed or felled may contact power lines must be carried out by suitably qualified personnel. We can recommend vegetation contractors that are approved to work on or around our Network. A list of our approved vegetation contractors is available on request.

2.9. Compliance with the requirements of Network Code

Where we reasonably believe the requirements of this Code have not been complied with, we may disconnect your installation. Where we believe that non-compliance creates a safety, legal compliance, or commercial risk, we may disconnect your installation, without notice.

We may also disconnect your installation for other reasons as detailed in Section 5.13

3. Network Design and Construction

3.1. Introduction

This section details the requirements for design and construction of equipment that will be connected to our Network.

3.2. Network Extensions

Where work is required to extend or upgrade our Network, this work may only be completed by our staff, or our authorised contractors. This is to ensure the work is carried out safely and in accordance with our design requirements.

3.3. Subdivisions

An initial application may be made using the [New Connection Application Form](#). We will contact the applicant directly to discuss their requirements.

If an upgrade to the Network is required, the Customer may be required to contribute some, or all the cost associated with this in line with our Capital Contribution Policy. Once available capacity is confirmed, reticulation around the subdivision may be completed by us or an approved independent contractor. The work must be completed in accordance with our Distribution Standards.

Where the subdivision reticulation work is being completed by a third party the construction programme must be provided to us in advance of construction commencing. This is to enable our representatives to carry out progress inspections to ensure compliance with our standards.

Prior to connection we will need to be satisfied all requirements of our Distribution Standards have been met including the provision of as-built drawings. Once connected, ownership of the reticulation used to supply the subdivision shall be vested in TLC unless the subdivision is being operated as an embedded network by a third party.

Where we assume ownership, we will also assume all future maintenance and replacement responsibilities for the equipment.

3.4. Design Standards

We maintain a comprehensive suite of design standards to ensure our Network is constructed to rigorous safety and technical standards. These standards are available to authorised contractors to enable them to comply with these requirements.

Contractors installing new sections of network are required to provide as-built records in accordance with our drafting standards

We may also require that a complete set of as-built drawings are submitted before work is commissioned or connected to the Network.

Where contractors find an error in any of our existing as-built documentation they must notify us to enable us to correct and update our drawings.

3.5. Use of our Assets

Our Assets (poles, pillar boxes etc) may not be used for mounting customer equipment (e.g. meter boxes).

4. New Connections

4.1. Introduction

This section provides an overview of the requirements to connect equipment to our Network.

4.2. Arranging a New Connection

New connections progress through three stages. An overview of these stages is provided below.

Application

Requests for a new connection (permanent or temporary) to our Network must be made on the [New Connection Application Form](#). For complex applications, you may be required to pay a non-refundable fee to evaluate your application. We will contact you to discuss this (if required) prior to commencing work on your application. We recommend a New Connection Application is completed prior to commencement of any construction to ensure all costs for an electricity connection are understood at the outset.

A temporary supply may be installed to provide power for construction of new premises. A separate New Connection Application must be completed for temporary supplies. All temporary supplies must comply with the requirements of AS/NZS 3000.

The following information must be supplied to assist us in assessing whether there is network capacity available to supply the new load.

- Name and contact details of the property owner
- Location of the new connection (Lot number, Street number or GPS coordinates)
- Type of installation (e.g. residential, holiday home, dairy farm)
- Nominated energy retailer
- Number of phases
- Capacity required (per phase)
- Pillar box or pole number closest to preferred connection point
- Detail of any generation to be connected (e.g. solar)

Sketches or drawings of the planned connection can assist in the processing of your application and should be provided if possible.

Customers should consider designing their installation to take advantage of ripple control (e.g. hot water cylinders). This can result in savings through reduced tariffs. See section 5.10 for further detail.

For connection requests greater than 150kVA, we will contact the applicant directly to discuss their application prior to commencement of assessment.

Approval and construction

Once we have all required information, we will assess the impact the proposed connection will have on the network and advise whether any upgrade to the network or installation of additional network equipment is required to allow connection.

If additional equipment or a network upgrade is required, the person requesting the connection may need to contribute either some or all the cost associated with this work. Further detail is provided in our Capital Contribution Policy. We will provide indicative pricing as part of the approval of the application, with a quotation provided if the customer indicates they wish to proceed with the connection.

Once a new connection is approved and the customer has signed a connection contract, any construction and connection work will take place.

Livening

Upon request from the customer or their electrician we will arrange livening of the new connection. Prior to livening we need the following

- Payment made for all connection/construction works to date
- A copy of the Certificate of Compliance
- A copy of the Record of Inspection (if the inspection was completed by someone other than us)
- For domestic installations an external meter box must be fitted

We will provide the customer an Electrical Safety Certificate where required under the Regulations.

4.3. Changes in load

A [Load Alteration Application](#) must be made if your load requirements increase by 20%. This allows us to assess whether there is sufficient capacity at your POS to supply your increased load requirements. Like a new connection you may be required to contribute to the cost of upgrades to the Network if they are required.

Decreases in load of greater than 20% should also be notified. This allows us to minimise cost through using this capacity for other customers. In some cases, a reduction in capacity may result in a reduction of your connection charges.

4.4. Embedded Networks

Applications for the establishment of an Embedded Network should initially be made using the New Connection Application. We will contact the applicant directly to discuss technical, operational, and commercial requirements.

4.5. Streetlights

All streetlights circuits must comply with our design standards, and have their design approved by us prior to construction commencing. Where the installation work is being completed by a third party, the construction

programme must be provided to us in advance of construction commencing. This enables our representatives to carry out progress inspections to ensure compliance with our standards.

All contractors working on existing streetlights must complete a Network Induction and be approved by us for work on our Network.

4.6. Distributed Generation

Distributed Generation (DG) includes solar, small hydro, wind generation and any other source of generation that is connected to our Network via your Installation. If you are connecting DG to your Installation (regardless of whether it will export energy or not), you must apply to TLC and receive written approval prior to connecting to the network. You will need to involve us in the process as early as possible to ensure TLC can assess your DG connection application and the safety and operational impacts.

Connection of DG requires assessment of safety, technical, Network quality and service requirements, in line with the requirements of the EIPC, prior to work commencing. We will assess the design of the DG system to ensure it meets safety, technical and legal requirements. A non-refundable fee as indicated in Distributed Generation Policy will apply to the assessment. Where an upgrade or change to Network configuration is required to support the installation of DG, this will be subject to our Capital Contribution Policy.

Distributed generation above 1000kW may be subject to additional requirements under the EIPC including meeting Transpower requirements.

Applications forms for DG may be found on our website under '[Generate your own power](#)', with more detail on the application and technical requirements found at in the [forms](#) section of our website.

5. Installations

5.1. Introduction

This section outlines the technical requirements for new Installations that will be connected to our Network.

5.2. Connecting to our network

Prior to connection of any equipment to our Network, TLC must be satisfied the connection can be made safely, in compliance with relevant legislation and in a manner that does not affect the delivery of electricity to other Customers.

5.3. Ownership and Responsibility for New Equipment

Point of Supply

The Point of Supply (POS) is the point where ownership of equipment changes from TLC to the property owner. The Customer is responsible for supply, operation, and maintenance of all equipment on the installation side of the POS.

A Customer may be required to pay for new or upgraded Assets upstream of their Point of Supply to enable initial connection of their Installation. This is in accordance with our [Capital Contribution Policy](#).

For installations connected after 1 January 2020, the following applies, unless there is a written agreement otherwise:

Where the property is supplied at Low Voltage:

- The POS is the point or points on the boundary of the property at which exclusive fittings enter that property
- If there are non-exclusive fittings on the property, the POS is the point at which those fittings become exclusive fittings

Where the Installation is supplied at voltages greater than Low Voltage, or where the Installation Owner or Customer wishes to own equipment that operates at greater Low Voltage, the Point of Supply will be by agreement between the property owner, and us. The requirements of Section 5.4 will need to be met.

For equipment installed prior to 1 January 2020, please contact us to assist in determining where your POS is. Determining factors will include property boundaries, supply voltages, current and previous legislation.

Point of Connection

The Point of Connection (POC) is the point where electrical connection is made between your Installation and our Network. You are responsible for the cost of all equipment up to the POC for any new Installations.

Following livening of the assets, TLC will assume responsibility for the ownership, maintenance, and replacement of assets between the Point of Connection and the Point of Supply.

Transformers

In certain circumstances, we may provide transformers free of charge under our Capital Contribution Policy. These must be connected to lines owned by us. If the Customer wishes to own the high voltage lines supplying their Installation, they must also pay for (and will own) the transformer.

5.4. High Voltage Installations

Where a customer wishes to own equipment that operates at voltages in excess of Low Voltage, they must meet the requirements of the Regulations. For new installations, a Certificate of Compliance (COC) and Record of Inspection (ROI) and if appropriate an Electrical Safety Certificate (ESC) must be sighted, prior to connection.

Owners and operators of high voltage installations must comply with the requirements of our Network Operating Procedures 1-9 for permit applications and switching etc that will be carried out by us to enable isolation of a customer's installation.

Where there is no formal agreement in place between us and a customer for the operation of a high voltage installation, our operational requirements will apply.

5.5. Protection

Safeguarding of our network

Maximum clearance times must meet our requirements and will be determined by us based on equipment short circuit ratings and associated protection settings.

Safeguarding a customer's installation

We are required under the Electricity (Safety) Regulations 2010 to provide short circuit and fault protection for Mains supplying an Installation. This is usually provided by means of a fuse at the POC. Customers are responsible for providing overload protection for their Mains.

We may interrupt supply to a Customer's Installation as a result of planned or unplanned outages. In some cases, these interruptions may be of short duration due to operation of automatic reclosers. We will, on

request, provide details of auto reclosing or automatic switching facilities, including protection arrangements, so the Customer can take this into account during the design of their installation.

Protection against damage

In some cases, our protection may operate in a manner that sees the loss of one phase of a three-phase supply. Customers should ensure equipment that relies on three phase supplies such as three phase motors are adequately protected as required by AS/NZS 3000 to prevent damage.

Discrimination in operating times

Adequate discrimination must be maintained between the operating times of a Customer’s protection equipment and our equipment. We may request evidence of satisfactory discrimination.

Protecting sensitive equipment

Modern electronically controlled appliances are much less tolerant of electrical spikes and surges than older appliances. To reduce the impact of fluctuations on sensitive equipment we recommend that customers install appropriate surge protection devices as recommended by the equipment suppliers.

Fault Levels

Equipment installed as part of a Customer’s Installation must be capable of withstanding the design fault level of the Network. Design fault levels at a given POS are available on request. It is the responsibility of the Customer’s electrician to ensure the installation is designed to accommodate fault levels.

5.6. Interfering with the Operation of Our Network or Other Installations

You must not use equipment or take any action that adversely affects the supply of electricity to other Customers. in accordance with Regulation 31 (1) of the Electricity (Safety) Regulations 2010. Where we believe your equipment or actions are causing such interference, we may request you to correct this, or disconnect supply to your Installation.

In most cases we are able to provide a separate supply at your cost to mitigate the effect of interference caused by your Installation.

5.7. Motor Starting

Direct on line (DOL) starting of AC motors causes many supply quality issues. Hence AC motors must be fitted with suitable devices (e.g. soft starter/VSD) to limit the starting currents except as follows

Type of Motor	Location and Rating		
	Rural	Urban	
		Residential	Non-Residential
Single Phase	not exceeding 0.75 kW	not exceeding 1.5 kW	not exceeding 2.2 kW
Three Phase (400V)	not exceeding 4.0 kW	not exceeding 4.0 kW	not exceeding 7.5 kW

5.8. Welding Sets

Welding equipment can interfere with the voltage to other customers. To minimise this effect the following applies to welding sets:

- Welders exceeding 5kVA input and up to 10kVA should have a power factor of not less than 0.8pf with a secondary voltage of 30V while operating at full load
- Welders exceeding 10kVA input should have a power factor of not less than 0.8pf with a secondary voltage of 30V while operating at half full load.

If these basic requirements prove to be insufficient and still cause power quality issues, we may request you take further measures to prevent interference with other customers' supplies.

5.9. Harmonics

Distortion of the system voltage waveform caused harmonics generated in a customer's installation may impact the quality of supply to other customers.

The harmonic content of any load shall be maintained within the limits of the New Zealand Electrical Code of Practice for Harmonic Levels (ECP36:1993) and any subsequent amendments.

5.10. Power Factor

Power factor as measured at the POS shall be between unity and 0.95 lagging. Where necessary, Customers must install and maintain equipment suitable to achieve this.

Where capacitors are used for power factor correction they may interfere with load (ripple) management signals and/or cause harmonic resonance problems. Customers must operate capacitors so that they do not interfere with the Network or the operation of our ripple control system.

5.11. Load Management (Ripple Control)

We make extensive use of a ripple control to assist in optimising the load on our Network and manage charges from Transpower. Where customers provide us with controllable load, we offer a reduced or separate tariff.

Where you provide us with load connected to our load management system, it must be provided exclusively to us. You may not connect any other load control or other system (e.g. an electricity retailer's load control system or a time switch) into the circuit.

To take advantage of load management, customers may connect any equipment or plant greater than 1kW. The equipment must be permanently wired. Typically for residential installations, hot water cylinders should be connected to load management.

We may operate our load management system at any time, and without notice, for the following reasons:

- to manage the stability and resilience of our network system
- to reduce transmission charges
- to optimise our network investment
- to help the national grid operator with system stability.

We will provide equipment suitable for receiving load management signals. You are responsible for installing and maintaining wiring to enable the use of load management at your Installation.

Wiring diagrams are shown in Appendix A In some cases, a contactor in a sealable enclosure may be required for load connected to our load management system.

5.12. Superimposed Signalling

You must not superimpose signals on our Network without our prior written agreement, which may be withheld at our discretion.

Any equipment that uses the mains for communication must comply with IEC61000-3-8.

5.13. Metering

You are responsible for providing enclosures and space for installation of meters. External metering enclosures must be weatherproof.

All energy delivered to an installation must be metered unless otherwise agreed by us. In all cases the requirements of the EIPC must be met. All new and upgraded connections are required to have meters that are capable of measuring electricity consumption in half hour increments.

We use meters to assist in the management of our network and as such all installations are required to have a TLC meter installed. This meter may also be used by your Electricity Retailer to measure the consumption of electricity. In some cases, your Electricity Retailer may elect to install their own meter in addition to the TLC meter.

You must not interfere with any TLC metering equipment, or the connections to the metering equipment without prior written consent, except to the extent that emergency action has to be taken to prevent injury to personnel or damage to property proximate to the metering equipment. Should this happen, you must inform, us, and your Electricity Retailer in writing as soon after as is practicable.

Please note the requirements of Section 3.5. This means meter boxes may not be mounted on poles or pillar boxes owned by us.

Residential installations

Meter enclosures shall be installed so that the top viewing window is between 1.4 and 1.8 metres above finished ground level.

All new and upgraded residential connections shall have meters mounted externally. This is to allow access for:

- Meter maintenance and upgrades
- Annual meter inspections (an EIPC requirement)
- Meter reading
- Testing following repairs or upgrades on the Network

Supply will not be connected to new residential installations if meters are not externally mounted.

Meter Box Size

The following meter box sizes are required before the connection can proceed.

Residential

- For a single-phase installation - minimum 400x600x225mm deep
- For a three-phase installation - minimum 500x650x225mm deep

The dimensions above are for the meter compartment area only and do not include the areas for any sub-circuit fusing. If there is no sub-circuit fusing, then the above may be regarded as the overall meter box sizes. If sub-circuit fusing will be installed, then a larger meter box shall be used to accommodate the extra space required by the sub-circuit fusing.

Meter boxes must be able to be secured shut using screws, bolts or similar, but must not be locked

The requirements of AS/NZS 3000 must be met where the meter box is being used as a switchboard rather than just a meter box.

Non-residential

Actual meter box sizes may vary, thus the following spare space within the meter box shall be made available

- Category 1 (whole current) metering - A minimum spare space of 250x180x225 deep, for each meter used by the ICP that is installed in this meter box.
- Category 2 and above metering – A minimum spare space of 250x180x225 deep, space to allow for the installation of a separate set of metering CTs (and where required VTs), for each meter used by the ICP that is installed this meter box.
- Where high voltage CTs and VTs are required and these are owned by us, a separate agreement may be needed with us to enable this.

We strongly recommend contacting us to discuss metering requirements at the planning stage of any project where Category 2 or above metering is needed.

5.14. Disconnection and Reconnection

Disconnection and reconnection activity falls into three categories. In all cases the authorisation for reconnection may only be given by the party that requested the disconnection.

- **Customer initiated** - Safety related reasons (e.g. cleaning or painting around lines) or to allow an electrician to complete work on their installation
- **Electricity Retailer Initiated** - Due to a vacant property or for credit management purposes
- **TLC initiated** - For safety, or compliance reasons.

Depending on the type of disconnection requested this maybe actioned remotely (via the meter) or by attendance at site by a person authorised by us to work on our Network.

Where an installation has been disconnected from our network for more than six months, we must sight documentation that complies with ESR Regulation 74 prior to reconnecting supply to the installation. It is the responsibility of the person requesting the reconnection to obtain this documentation.

Charges apply for disconnections and reconnections, and our current rates are available in the [Pricing Disclosures](#) section on our website. Where the disconnection or reconnection request is made by an Electricity Retailer, they may charge you, and this charge may be different to our published prices.

5.15. Decommissioning an Installation

If you no longer require a connection to our Network, you may request decommissioning of your Installation's connection. This request should be made via your Electricity Retailer. Once decommissioned, any future reconnection to our Network will require a New Connection Application and will be subject to available capacity at the POC. A Capital Contribution may also be required.

Decommissioning may only be requested by the Installation Owner and will only proceed if they are the Customer of record with the Retailer, or the Installation is currently disconnected from the Network.

Charges may apply if we need to visit your property to complete the decommissioning process.

5.16. Audit and Modelling

We undertake analysis of customer load profiles and other information available through our meters, on a routine basis to assist with ensuring safety of the customer's installation, managing the safety and performance our network and ensuring compliance with this Network Code and our Standard Terms.

6. Network Operation

6.1. Introduction

This section outlines our approach to operating our Network and provides information on requirements of Customers where they request we operate our Network or elements of their Installation on their behalf.

6.2. Customer Service

Information on services provided to our customers is available on our website, www.thelinescompany.co.nz or through our Customer and Community Engagement Team, available on 0800 367 546.

6.3. Planned outages

From time to time we may need to interrupt or the reduce the supply of electricity to your installation to carry out maintenance, alteration or upgrade to our network.

In most cases, we will provide at least five working days' notice of a planned outage, however in the case of urgent planned outages for safety or network reliability purposes this may be reduced to one day.

Outage notifications will normally be provided by your Retailer. In some cases we may directly notify you by email, standard mail, letter box drop, phone, newspaper advertising or radio announcements.

Key Customers whose installations are billed directly from TLC will receive notifications directly from us.

We will use reasonable endeavours to minimise the duration of the outage.

Further detail on planned outages may be found in our [Planned Outage Policy](#).

6.4. Unplanned Outages

Events outside of our control may cause a partial or total interruption of electricity supply to your installation. We aim to re-connect supply as quickly as possible. We use the following restoration priorities, which may be varied at our discretion dependent on circumstances at the time

- Removal of any situations that may threaten life or cause injury
- Removal of situations that may cause damage to animals, livestock, or property
- Restoration of supply to essential services, including but not limited to
 - Hospitals
 - Emergency Services
 - Water supply
 - Sewerage

Up to date information on unplanned outages and estimated restoration times may be found at www.thelinescompany.co.nz, or by calling our Outages Team on 0800 367 328.

6.5. Emergency Interruption to Supply

If we believe there is immediate danger to people, animals, property, or our Network, we may, without notice, completely or partially interrupt or restrict the supply of electricity to your installation to allow us to remove the danger.

6.6. Civil Defence Emergencies

During locally or nationally declared states of Civil Defence Emergency we are required to carry out our operations and restoration activity, as directed by the Civil Defence Controller, and in accordance with the Civil Defence and Emergency Management Act 2002. In these circumstances, the Civil Defence Controller will determine restoration priorities, and in some cases may also request disconnection of supply.

6.7. Emergency Load Shedding

To protect the integrity of our network and Transpower's National Grid, parts of our network may need to be disconnected by automatically or on request from Transpower.

Automatic Under Frequency Load Shedding (AUFLS)

If the frequency of the National Grid drops below required levels, pre-determined sections of our network may be disconnected automatically. This disconnection is carried out at a feeder level and it is not possible to prevent individual installations from being disconnected. Information on which feeders are configured for automatic disconnection is available on request via info@thelines.co.nz.

Load Shedding on Request from Transpower

When requested by Transpower as the System Operator, we are required to reduce load on our Network to maintain the integrity of the National Grid. This may be because of acute or longer-term electricity supply shortages or a major event on the National Grid. Our [Participant Rolling Outage Plan](#) defines how we will prioritise our load shedding activities.

6.8. Network Switching for Customers

Where we carry out switching for customers on assets owned by us or the customer, we will follow our Network Operating Procedures and switching requirements unless we have formal agreement in place with the customer regarding Operational Control that outline additional requirements.

Requests for switching from customers must be completed using the relevant application form which can be found on our website.

6.9. Provision of Information

Records

We retain engineering information about our network. This is made available to authorised parties on request but cannot be disclosed to third parties without written consent from us. Details about the availability of information can be obtained by calling us on 0800 367 546

Plant Location

We use beforeudig (www.beforeudig.co.nz) to manage requests for information on the location of our underground services. Persons working where there may be underground services should request information from beforeudig in the first instance.

We offer a service to physically locate underground assets. There may be a charge associated with this.

In some cases, we may oversee work being completed around our underground assets to ensure the safety of personnel and maintain the integrity of our Network. There may also be a charge associated with this.

7. Service Levels

7.1. Introduction

This section provides information on the service levels we aim to operate our Network to. Minimum service levels are defined in regulations, and the levels defined in this section may be higher than the minimum levels.

7.2. Outage Performance

Our targeted service levels for planned and unplanned outages are outlined in our Asset Management Plan, with the results published in our Information disclosure schedule.

Both documents are available in the [Regulatory Disclosures](#) section of our website.

7.3. Quality of Supply

We are required to operate our Network in accordance with the Electricity (Safety) Regulations 2010. We will endeavour to ensure that flicker, voltage sags, voltage surges, spikes and electrical noise, harmonics, inter-harmonics, and other disturbances are controlled within the network to avoid disturbance to connected users' equipment.

Other than momentary fluctuations we design and operate our network to ensure

- Voltage at a Customer's point of supply is +/- 6% of the nominal supply voltage
- Frequency remains within 1.5% of 50Hz

8. Queries and Feedback

Queries and feedback related to this document should be addressed to the Manager, Assets & Engineering by email info@thelines.co.nz

9. Definitions

AS/NZS3000: The version of AS/NZS3000 cited in the Regulations

Assets: Fittings, that in combination make up our Network;

Capital Contribution Policy: Our policy, as published on our website, that defines the contribution a Customer must make to fund their connection to our Network;

Certificate of Compliance: A certificate, issued under [Regulation 65](#) of the Regulations, regarding the lawfulness and safety of prescribed electrical work done on an installation or part installation;

Connection Agreement: A contract between us and a Customer that supersedes our Standard Terms and defines both parties' obligations;

Customer: A purchaser of electricity (from an Electricity Retailer) that is connected to our Network;

Distributed Generation: Generating plant that is connected, or is proposed to be connected connect, our Network;

Distribution Network or Network: Our system for the conveyance of electricity including all fittings comprising that system and which terminates at the Customer's POS;

Distribution Standards or DS: Our technical standards and requirements for design, construction, and operation of our Network;

EIPC: The Electricity Industry Participation Code;

Electricity Safety Certificate: A certificate, issued under [Regulation 74A](#) of the Regulations, regarding the electrical safety of an installation or part installation that is connected to a power supply;

Electricity Retailer: The party selling or intending to sell electricity to the Customer;

Embedded Network: A network not owned by us, that is connected to our Network and used primarily for the conveyance of electricity;

Fittings: Everything used or designed or intended for use, in or in connection with the conversion, transformation, conveyance or use of electricity;

High Voltage or HV - A voltage above 1,000 volts;

Installation: (a) means

- i) in relation to a property with a point of supply, all fittings beyond the point of supply that form part of a system that is used to convey electricity to a point of consumption, or used to generate or store electricity; and
- ii) in relation to a property without a point of supply, all fittings that form part of a system that is used to convey electricity to a point of consumption, or used to generate or store electricity; but

(b) does not include any of the following:

- i) an electrical appliance;
- ii) any fittings that are owned or operated by an electricity generator and that are used, designed, or intended for use in or in association with the generation of electricity, or used to convey electricity from a source of generation to distribution or transmission lines;
- iii) any fittings that are used, designed, or intended for use in or in association with the conversion, transformation, or conveyance of electricity by distribution or transmission lines;

Installation Control Point or ICP: A point of connection at which a Customer's Installation is connected to our Network and is nominated as the point at which the Electricity Retailer will be deemed to have supplied electricity to a Customer, and having the attributes defined in the EIPC;

Installation Owner: The owner of an Installation. This may be the Customer, or in the case where a property is rented or lease, the landlord;

Key Customer; A customer who has an assigned TLC Key Account Manager;

Low Voltage or LV: A voltage not exceeding 1,000 volts;

Mains: means those fittings forming part of an installation that are used for the supply of electricity to the MEN switchboard of the installation that is closest to the point of supply.

Network Code or Code: This document DS 30 Network Code;

Network Induction: An induction completed by individuals to ensure they understand the safety and technical requirements for working on our Network;

Network Operating Procedures or NOP: Our procedures for operating our Network;

Nominal Voltage: The target voltage supplied at a Customer's Point of Connection (dependant on the electrical configuration supplying an Installation). Our standard Nominal Voltages are:

- 230 Volts
- 400 Volts
- 460 Volts
- 11,000 Volts;

Public Safety Management System or PSMS: Our Public Safety Management System that complies with the requirements of the version of NZS 7901 cited in the Regulations;

Record of Inspection: A document issued in accordance with [Regulation 72](#) of the Regulations;

Regulations: The Electricity (Safety) Regulations 2010;

Schedule of Prices: Our Schedule of Prices as published on our website;

Standard Terms: Our Standard Terms as published on our website;

Use of System Agreement or UoSA: A contract between us and an Electricity Retailer defining the requirements for retailing Electricity on our Network;

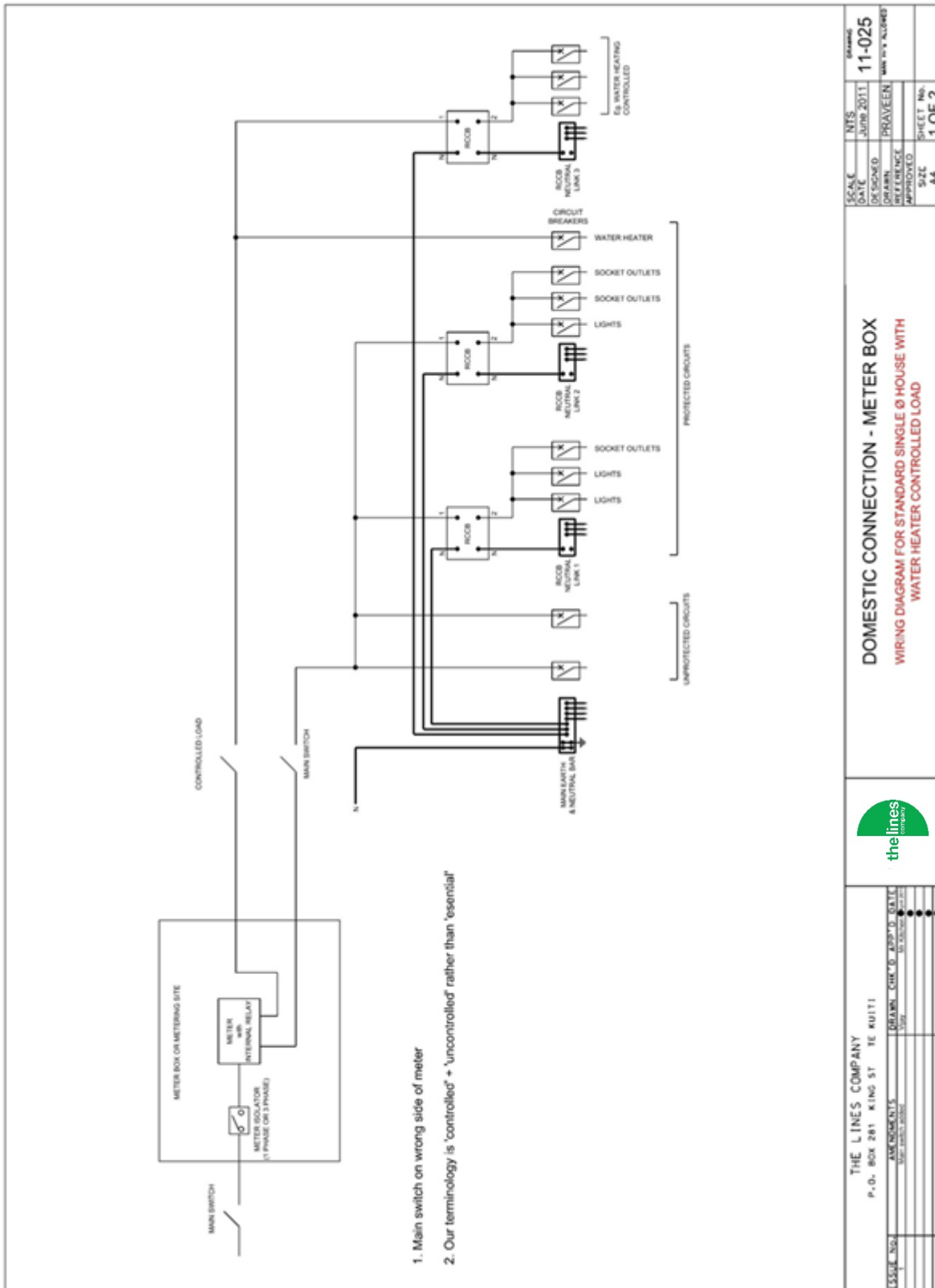
10. Controlled Document Review Details

Person Responsible for Document:	Manager, Assets and Engineering
Document Approved by:	General Manager Network
Approval Date:	1 October 2021
Review Cycle:	Two Yearly
Version Number	1.1

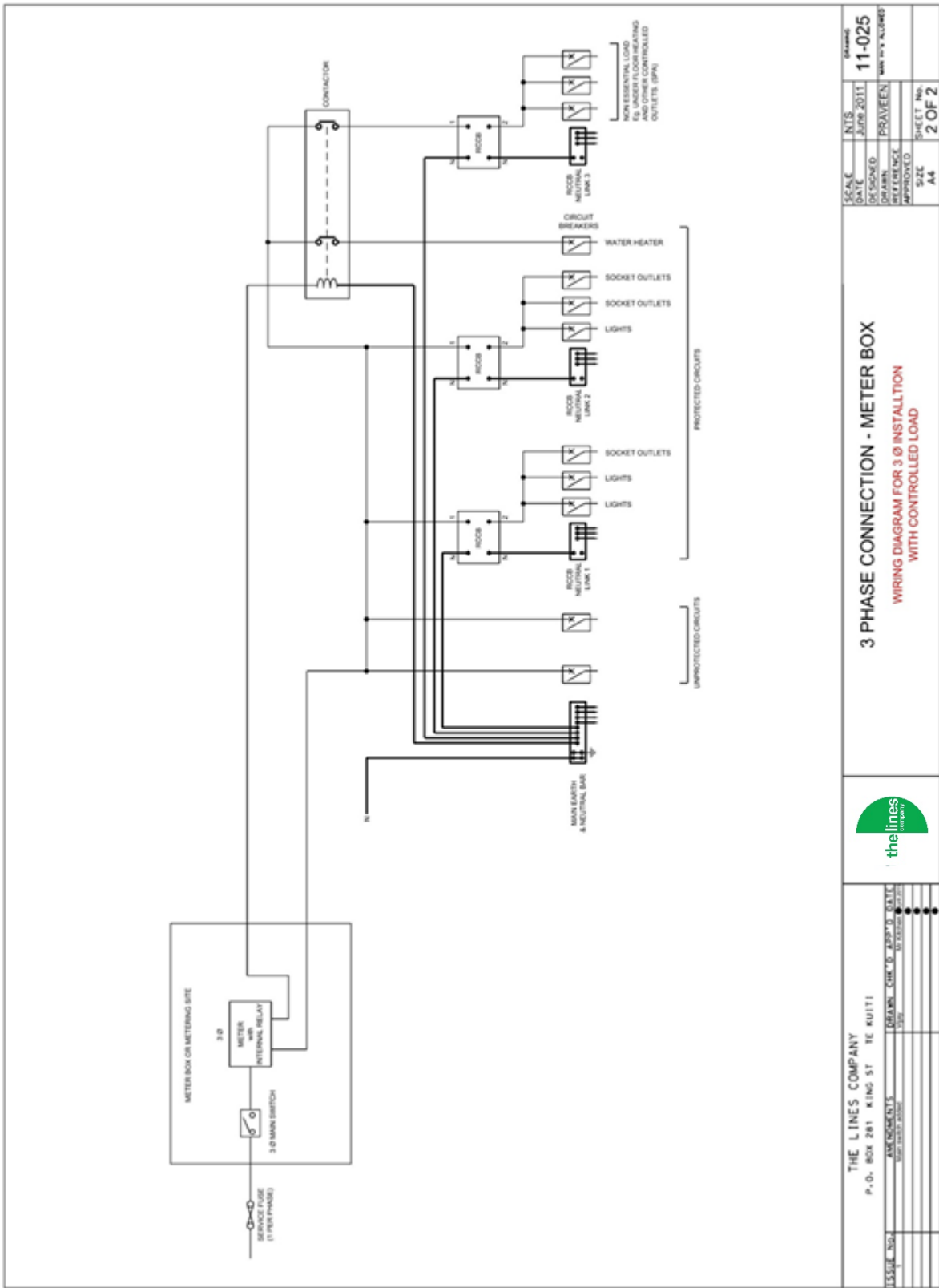
11. Appendix A

Metering Configuration

- Domestic Connection - Meterbox
- 3 Phase Connection – Meterbox



THE LINES COMPANY P.O. BOX 281 KING ST TE KUITI		SCALE DATE DESIGNED DRAWN REFERENCE APPROVED	NFS DATE DESIGNED DRAWN REFERENCE APPROVED	11-025 MAY 2011 PRAVEEN MAY 2011	SHEET No. 1 OF 2
AMENDMENTS		DOMESTIC CONNECTION - METER BOX WIRING DIAGRAM FOR STANDARD SINGLE Ø HOUSE WITH WATER HEATER CONTROLLED LOAD			
ISSUE No.	DESCRIPTION	the lines company			
1	DRAWN, CHK'D, DESIGNED, REFERENCE				



SCALE	NTS	DATE	JUNE 2011	ISSUED	11-025
DESIGNED	PRAVEEN	APPROVED			
REFERENCE					
SIZE	A4	SHEET No.	2 OF 2		

THE LINES COMPANY P.O., BOX 281 KING ST TE KUITI	the lines company
ISSUE No.	
AMENDMENTS	
DATE	
BY	
REASON	

SCALE	NTS	DATE	JUNE 2011	ISSUED	11-025
DESIGNED	PRAVEEN	APPROVED			
REFERENCE					
SIZE	A4	SHEET No.	2 OF 2		