

Glossary for the electricity sector

The electricity sector uses a huge number of acronyms and technical terms. This glossary explains many of the key terms related to electricity connections and pricing.

Request a change

If you would like to see something changed or added to this glossary, get in touch with us at Electricity Networks Aotearoa by emailing info@electricity.org.nz.

Glossary order

The glossary starts with acronyms and then terms. Both are in alphabetical order.

Acronym / term	Definition
ADMD	After Diversity Maximum Demand. This is a measure of the highest demand averaged across all customers at peak time and informs network design and capacity available for connections.
ADMS	Advanced Distribution Management Systems. A system used by some networks to automate outage restoration and optimise the performance of the distribution grid.
AMI	Advanced Metering Infrastructure that supports Smart Meters (e.g. meters that are digital and connected).
AMP	Asset Management Plan (see glossary).
AMS	Asset Management System.
AUC	Assets Under Construction.
AVR	Automatic Voltage Regulator. An electronic device that regulates voltage to a constant level to deliver constant, reliable power supply.
BBAR	Building Blocks Allowed Returns. Part of the Commerce Commission methodology to calculate EDB allowable returns.
BBC	Benefit Based Charges. A type of transmission charge charged to Transpower customers who benefit from increased power supply.

Acronym / term	Definition
BBI	Benefit Based Investments. A type of transmission investment with customer benefit allocations that form the basis of customer Benefit Based Charges.
BESS	Battery Energy Storage Systems.
BEV	Battery Electric Vehicle.
c/kWh	Cents per kilowatt hour (see kWh).
CAB	Contracted Asset Base.
CAIDI	Customer Average Interruption Duration Index. A quality measure for network performance giving the average length of an outage any given customer would experience in the reported period (normally 1 year).
Cap cons	Capital Contributions are payments you make toward the costs of new connections and upgrades. They are advised during the connection application process by us (the network company).
CB	Circuit Breaker, an electrical safety device that trips or shuts off circuits to protect them from a fault.
CC or Com Com	The Commerce Commission/ Te Komihana Tauhokohoko is the competition regulator for electricity networks.
CCC	Climate Change Commission/ He Pou A Rangi provides advice to guide climate change action for Aotearoa New Zealand that will be considered in network company planning.
CCS	Customer Compensation Scheme is operated by retailers and requires them to pay qualifying customers when asked to conserve electricity.
CCS	Carbon Capture and Storage.
CER	Consumer Energy Resources are resources/ equipment owned by you, the consumer, that can generate, store or change when you use energy.
CGA	Consumer Guarantees Act guarantees you as a consumer an acceptable quality of electricity (safe, reliable and such that it can be used consistently for things that a reasonable consumer would expect).
CIMS	Co-ordinated Incident Management System.
COC	Certificate Of Compliance provided by electricians or electrical inspectors when work is completed.

Acronym / term	Definition
COV	Certificate of Verification provided by electricians or electrical inspectors to confirm that a property is safe to be connected to our network.
CPI	Consumer Price Index.
CPO	Charge Point Operator is an operator of electric vehicle charging points.
CPP	Customised Price Path (CPP) is a price path (increase or decrease) the regulator approves for an EDB that specifically makes a CPP application as it has assessed that a Default Price Path (DPP) is not appropriate for its business needs.
CRM	Customer Relationship Management.
CT	Current Transformer is a device used to measure currents.
DC	Direct Current.
DCF	Discounted Cash Flow is a financial analysis that accounts for a dollar earned or spent in the future having less value than today.
DDA	Default Distributor Agreement is the standard form of agreement between EDBs and retailers or others that connect a secondary network (e.g. an embedded network). This agreement may affect terms in the agreement that you have with your retailer.
DER	Distributed Energy Resources - Any resource on the distribution system that produces or stores electricity or load that can be controlled to use electricity at other times. This can include distributed generation, storage, heat pumps and electric vehicles, as well as other technologies.
DG	Distributed Generation is generation connected to the distribution network rather than the transmission network.
DNO	Distribution Network Operators is another name for a Lines Company or EDB.
DNP	Distributed Network Protocol is a set of communications protocols used between components in automated systems such as the systems that monitor and remotely control electricity networks.
DNSP	Used in Australia meaning Distributed Network Service Provider. In New Zealand we say EDB (Electricity distribution business) or lines company.
DPP	Default Price Path is the price path (increase or decrease) the regulator approves for EDBs that do not make a Customised Price Path (CPP) application.

Acronym / term	Definition
DR	Demand Response is customer demand that changes in response to signals from the electricity system to balance supply Government Investment in Decarbonising Industry Fund.
DSM	Demand-Side Management is the process by which we (networks), retailers, you or service providers may manage your demand through their services and offerings which may include automated control, information, pricing, rewards or other incentives.
DSO	Distribution System Operator operates an active distribution system to optimise outcomes for our network, demand, generation and other DERs.
DT	Distribution Transformer is a transformer on our network.
EA	Electricity Authority regulates the electricity industry (including with the Code), set the market rules, and conduct operational activities to ensure the electricity system and markets run effectively.
EAAG	Electricity Authority Advisory Group is an industry and consumer advisory group that assists the Authority.
EDB	Electrical Distribution Business (also known as a lines company).
EEA	Electricity Engineers' Association is the industry professional association.
EECA	Energy Efficiency and Conservation Authority is a Crown-owned entity that encourages the use of sustainable energy in New Zealand.
EIEP	Electricity Information Exchange Protocols are the protocols for the digitised exchange of information between participants in the electricity industry.
ENA	Electricity Networks Aotearoa is the industry association for electricity distribution businesses.
ERGANZ	Electricity Retailers' and Generators' Association of New Zealand is the industry association for retailers.
ERP	Emissions Reduction Plan signed off by the Minister of Climate Change and it sets out policies and strategies to decarbonise every sector of the economy.
ETS	Emissions Trading Scheme is a tool in which all sectors of New Zealand's economy, apart from agriculture, pay for their emissions thus encouraging emissions reductions.
EV	Electric Vehicle.

Acronym / term	Definition
FIR	Fast Instantaneous Reserves is a form of demand-side management that drops load to maintain system frequency.
FMD	First Mover Disadvantage describes how when a customer invests in new network capacity the appropriate sizing of that upgrade may create spare capacity. Another customer may later benefit from that spare capacity and not need to contribute to the network upgrade.
FN	Future Network is another term for how networks are expected to change with DERs and digitisation.
FSR	Future Security and Resilience describes industry work to ensure the electricity system remains secure and resilient in the coming decades.
GIDI fund	Government Investment in Decarbonising Industry Fund.
GIP	A point of connection where electricity flows into the national grid from generating stations.
GW	Gigawatt is a measure of power and can describe the amount of power supplied at that instant or the capacity of a generator/ device. 1GW is 1,000MW or 1 billion watts.
GWAP	Generation Weighted Average Price (of electricity).
GWh	Gigawatt Hours is a measure of energy e.g. the amount of power generated or supplied in hour.
GXP	Grid Exit Point is the point where the national grid supplies local networks (e.g. lines company).
HHR	Half Hour (referring to meters).
HV	High Voltage which is used to generally refer to transmission power lines.
HVDC	High Voltage Direct Current.
HZ	Hertz. A measure of frequency.
ICP	Installation Control Point is the point at which a retailer is deemed to supply electricity to you. Each ICP is assigned a unique number. ICP numbers are shown on all electricity accounts.
ID	Information Disclosures are the regulated information we are required to publish.

Acronym / term	Definition
IM	Input Methodologies are the regulated steps set by the Commerce Commission for determining our price and quality paths.
IPP	Individual Price Path specifies the maximum revenues that may be recovered by a regulated lines company.
IRIS	Incremental Rolling Incentive Scheme is part of the regulatory price and quality path setting to appropriately reward us for cost savings.
kV	Kilovolt being 1,000 volts. Voltage is a unit of measure that describes the pressure that pushes electricity and is a function of the electric potential between two points.
kVA and kVAR	Kilo Volt Amperes is a measure of the apparent power in an electrical circuit and is the product of the circuits maximum current and voltage rating. Kilo Volt Amperes Reactive is a measure of the reactive power e.g. the unused power generated by reactive components in a generator.
kW	Kilowatt. 1,000 Watts. This is a measure of the amount of power flowing and may also be used to indicate the maximum capacity of a device.
kWh	A kilowatt-hour is also known as a unit of electricity and is the basis of retail sales (billing) of electricity. Your electricity meter records the amount of electricity you use in kWh (kilowatt-hours). A kWh is one kilowatt (kW) of electricity used for one-hour (h). A kWh is equal to 1000 watts used over a one-hour period. For example, 1 kWh = 10 x 100 watt light bulbs burning for one hour.
Kt	Kilotonne.
LCOE	Levelised Cost of Energy.
LFC / LFCT	Residential or domestic tariff options include a Low User Fixed Charge Tariff for low users and is generally the best option if you use less than 8000kWh per year. This has a lower fixed daily charge than our general tariff options and a higher variable charge for the electricity used. The regulations for this tariff are changing and it will be phased out.
LRMC	Long Run Marginal Cost refers to the costs of building more network averaged over time and influences network pricing.
LTI	Lost Time Injury is something that results in a fatality, permanent disability, or time lost from work.
LV	Low Voltage refers to the street-level network that delivers power to homes and small businesses.

Acronym / term	Definition
MAR	Maximum Allowable Revenue refers to a maximum cap on the revenue a regulated network can earn and is set by the Commerce Commission. This impacts how networks set prices.
MD	Material Damage refers to damage or accidental loss to physical assets, including buildings, contents, plant and equipment.
MEP	Metering Equipment Provider is a business that supplies meters.
MEUG	Major Energy Users Group is the organisation that represents large electricity consumers.
MMD	Monthly Maximum Demand refers to the highest level of demand in a month, and may be used by EDBs in pricing.
MOSP	Market Operations Service Provider is a business contracted by the Electricity Authority to provide services for the electricity market.
Mt	Mega tonne.
MV	Medium Voltage is generally used to refer to the lines that connect to Transpower's network and deliver power to the transformers that connect to the low voltage network.
MVA and MVAR	Mega Volt Amperes is a measure of the apparent power in an electrical circuit and is the product of the circuits maximum current and voltage rating. Mega Volt Amperes Reactive is a measure of the reactive power e.g. the unused power generated by reactive components in a generator.
MW	Megawatt. One million watts. This is a measure of the amount of power flowing.
MWh	Megawatt Hours is a measure of energy e.g. the amount of power generated or supplied in hour.
NHH	Non Half Hour (referring to meters that do not support half hour data collection of energy use).
NOC	Network Operations Control. The operations centre for a network that controls operational conditions, network configuration, contractor access and outages.
NCP	Network Connection Point. A point at which the local network connects to a customer's electrical installation.
NTR	Network Transformation Roadmap is the roadmap from the ENA setting out how networks expect to adapt to Future Networks.

Acronym / term	Definition
NZEM	New Zealand Wholesale Electricity Market is the official regulated market where electricity is sold by generators and bought by retailers who then sell the power to consumers. Very large energy users and other traders also participate in the market.
OMS	Outage Management System is a platform used by us to manage outages.
PHEV	Plug-in Hybrid Electric Vehicles.
PJ	Petajoule.
POC	Point of Connection being the point at which the electricity network connects to your electrical system.
POS	Point of Supply generally means the point or points on the boundary of the property at which exclusive fittings (e.g. power lines or circuits) enter that property.
PPA	Power Purchase Agreement is a direct contract between an energy user and energy generator for the sale of electricity at an agreed rate. PPAs are generally used by large energy consumers to ensure their power comes from renewable sources in combination with a Renewable Energy Certificate (REC), and for the consumer to access lower energy pricing compared to market rates.
PPE	Personal Protective Equipment.
PV	Photovoltaic(s) and often referred to as solar PV. PV cells convert sunlight into electricity by an energy conversion process.
RAB	Regulated Asset Base. The value of the assets used in delivering our network services that are regulated services. The Commerce Commission uses the RAB to determine our network's price path.
RESI	Refers to Residential generally describing a customer's home connection to the local network.
REZ	Renewable Energy Zones are zones where multiple customers agree to connect and share a single connection to upgrade to the grid.
RM	Reconciliation Manager reconciles the collected meter data nationally to all the quantities of electricity delivered to purchasers and supplied by generators. This enables electricity industry participants to be paid correctly.
RMU	Ring Main Unit which refers to network equipment (distribution switchgear).

Acronym / term	Definition
RoI	A Record of Inspection is issued after high-risk prescribed electrical work (such as high voltage installations, photovoltaic systems or mains work) has been checked by an authorised inspector and confirmed to be safe.
RPT	Related-party Transactions occur when a regulated lines company transacts with an entity which is related to it by a common shareholding or other common control. Specific rules apply to the nature and disclosure of these transactions.
SAIDI	System Average Interruption Duration Index. An important quality measure for network performance.
SAIFI	System Average Interruption Frequency Index. An important quality measure for network performance measuring the frequency of outages.
SCADA	Supervisory Control and Data Acquisition is a platform used by us to manage our network.
SEANZ	Sustainable Energy Association of New Zealand is the industry association for the Solar and Battery Energy Storage (BESS) industry
SIR	Sustained Instantaneous Reserve is a form of demand-side management that drops load to maintain system frequency.
SO	System Operator (run by Transpower).
SWER	Single Wire Earth Return is a type of network configuration.
THD	Total Harmonic Distortion is a measurement of the harmonic distortion present in the electricity waveform. Harmonic distortion needs to be kept within acceptable limits within our network to maintain power quality.
TOU	Time of Use is a term used for tariffs that apply to the time electricity is used rather than a flat rate tariff that applies at any time of the day or night.
TPM	Transmission Pricing Methodology is the approach used to set Transpower's pricing.
TSO	Transmission System Operator. Refers to Transpower who operate the high voltage National Grid.
TWh	Terawatt Hours.
TX	Transformer is a piece of network equipment that transforms high voltage electricity to lower voltages as it gets closer to where it is needed.

Acronym / term	Definition
UoSA	Use of System Agreement is an agreement between EDBs and retailers that operate on that network. Most EDBs have a Default Distributor Agreement (DDA) which is a more common term.
V	Voltage is a unit of measure that describes the pressure that pushes electricity and is a function of the electric potential between two points.
VoLL	Value of Lost Load is a measure of the cost of outages experienced by customers i.e. trading loss during business hours.
VPP	Virtual Power Plant is a concept of multiple Distributed Energy Resources (e.g. batteries) being used to provide electricity in a coordinated and managed way as if they were a single power plant.
VRE	Variable Renewable Electricity refers to generation that is intermittent e.g. solar PV, wind.
VT	Voltage Transformer is a device used to measure voltage.
ZS	Zone Substation refers to one or more large transformers that transform sub transmission high voltage to distribution voltages.
All-inclusive tariff	In houses with newer meters, we can separately measure the time of use, controlled and uncontrolled supply and invoice customers accordingly. However, for households where the meters are older, and we can't measure these separately, we apply an 'all-inclusive' tariff. This simply means that the tariff is an estimated blend of the controlled and uncontrolled rates based on historic use patterns across our network.
Approved or authorised contractor	An electrical or gas contractor approved by us to carry out work on our network(s).
Architect	In the context of new connections or upgrades to existing connections, an architect designs the building for which the new connection or upgrade is required. An architect does not usually design the electrical reticulation associated with the building, but can act as a consultant to you.
Asset	Equipment or plant that is part of the electricity distribution network.
Asset management plan	Managing network assets wisely and sustainably is an important part of optimising our networks' lifecycle management strategy. The multi-year asset management plan provides a medium-term outline of asset management requirements and specific work programmes. Parties may want to consult the asset management plan to identify opportunities for Non Wire Alternatives.

Acronym / term	Definition
Brownfield land	Disused or under-utilised industrial or commercial land and facilities that may be contaminated by low concentrations of hazardous waste and/or pollution and have the potential to be reused once cleaned up (remediated).
Cable	Underground electricity conductor.
Capital contributions	Capital contributions are payments you make toward the costs of new connections and upgrades. They are advised during the connection application process.
Certificate of compliance (COC)	Registered electrical workers must audit their own work and fill out a certificate of compliance as proof that they have complied with electrical safety standards and codes. You should request the COC from your electrical contractor when work is completed. We will need to see the COC before we can connect the electrical installation to our network.
Certificate of verification	A Certificate of Verification (CoV) is provided by electricians or electrical inspectors to confirm that a property is safe to be connected to our network. You'll need to be issued with a CoV when: Your service line or internal wiring has had work done on it. If your property has been disconnected for six months or more. You'll need to organise an electrician or an electrical inspector to check your wiring before you can be reconnected.
Circuit	A circuit connects two pieces of electrical equipment.
Close approach	Tree trimming work in the 'Close Working Zone' and requires our network to be isolated and issuance of a Close Work permit.
Code (the Code)	Electricity Industry Participation Code 2010 is the set of rules that governs nearly every aspect of the electricity industry and may be the basis of rules, practices and requirements our network or retailers have e.g. for connections or metering.
Conductor	Overhead lines which can be covered (insulated) or bare (not insulated), and underground cables which are insulated. Both are used to convey electricity.
Connection	A point at which the electricity network connects to your electrical system.
Consultant	In the context of new connections or upgrades to existing connections, a consultant is any person or organisation who you engage to advise on the design and/or construction of a new connection or an upgrade to an existing connection. A consultant may also facilitate the design, application or upgrade of the connection.
Consumer	An electricity user.

Acronym / term	Definition
Consumer energy resource	These are resources/ equipment owned by you that can generate, store or change when they use energy (e.g. solar PV, batteries, EVs) and thus help the energy system operate more efficiently.
Consumption	Use of electricity measured as the electrical energy consumed by a 1,000 watt (1 kilowatt) appliance in an hour is one kilowatt-hour (kWh). A kilowatt hour is also known as a 'unit of electricity' and is the unit in which retail sales of electricity are measured.
Controllable load or controlled supply	The electrical water heating load which we are able to switch off for short periods when the electrical loading on our network is high, or when faults or emergencies happen on our network and which may have a lower tariff for supply. The remaining supply to the household can't be turned off by us and is known as uncontrolled supply – the uncontrolled supply is charged at a higher rate.
Control period	A period of time when our network is at a peak pricing period for major customer connections and a ripple signal is sent through our network to receiving devices.
Control period demand charge	A charge incurred by a major customer based on the customer's average electricity loading during control periods. Charged as \$/kVA/day. Average electrical load during our signalled network peaks. Measured as the average demand during signalled control periods between 1 May and 31 August, then applied from 1 April the following year. Much of the upstream network is sized to meet the brief periods of highest loading, and this component reflects each customer's contribution to those peaks.
Customer	A person whose premises, equipment or generation are connected to our network and who receives or exports electricity through our network.
Customer network	The part of the electricity system that is owned or managed by the customer, typically including wiring, switchboards, or private poles located beyond the point where the electricity distributor's network ends (the point of supply).
Dedicated equipment charges	\$/item/day. Items of dedicated equipment including transformers, metering equipment or dedicated cabling. The cost of specific or additional items of equipment that we provide.
Default Price-Quality Path Compliance / DPP	The Electricity Distribution Services Default Price-Quality Path Determination is set every 5 years by the Commerce Commission and sets prices and performance requirements.
Delivery	Electricity conveyed over both our network and also Transpower's transmission grid (i.e. both 'transmission' and 'distribution').

Acronym / term	Definition
Demand response	This is where your demand changes in response to instructions or price signals from the electricity system to balance supply. The word demand response is normally applied to your changes in demand following a specific signal or request rather than regular changes arising from time of use or other recurring tariffs.
Demand side management	This describes the process by which we, retailers, you or service providers may manage your demand through information or price signals or direct control of your devices.
Designer	In the context of new connections to our network or upgrades to existing connections, a designer designs the connection or upgrade. Design proposals for a typical simple urban residential connection may be sketched in freehand by any applicant. More complex designs must be drawn and dimensioned with either manual draughting instruments or preferably with CAD technology. All designs must meet our published design standards and any statutory requirements. The designer is responsible for ensuring the final plans meet all design requirements.
Distributed energy resources	Distributed Energy Resources - Any resource on the distribution system that produces or stores electricity or load that can be controlled to use electricity at other times. This can include distributed generation, storage, heat pumps and electric vehicles, as well as other technologies.
Distributed generation	When you generate your own power (solar, wind, liquid fuel) and connect to our network. We're set up to enable you to connect your distributed generation to our network.
Distribution system operator	The Distribution System Operator securely operates and develops an active distribution system comprising networks, demand, generation and other flexible distributed energy resources (DER).
Distribution	Electricity conveyed over our network from bulk points of supply (grid exit points) to individual homes and businesses.
Distribution service charges (also referred to as lines charges)	The line charges on your electricity account include the costs we pass on from Transpower, for transmitting electricity from generation points around New Zealand across the National Grid to 'grid exit points' (GXPs) in your area. The remainder of the charge covers the cost of distributing electricity from these GXPs, across our network assets to your home or business. The cost of the electricity you use is billed by your electricity retailer.
Distribution substation	A major building substation and/or switchyard where voltage is transformed from 66 or 33 kilovolts (kV) to 11kV, two or more incoming 11kV feeders from a grid exit point are redistributed or a ripple injection plant is installed.

Acronym / term	Definition
Distribution transformer	A device that changes voltage to a higher voltage or a lower voltage.
Distributor	Also called lines companies, network companies or distribution companies, distributors own and operate the lower voltage power lines and distribution networks in local areas. These connect to the national grid to deliver electricity to homes and businesses.
Earth peg	Ensures electrical faults inside a building go into the ground, keeping people safe from electric shocks. Earth pegs are usually near electricity meters and should not be touched.
Easement	A legal right to use another person's land. We use easements when putting equipment (such as poles or transformers) on your land (or your neighbour's land).
Electric and magnetic fields (EMFs)	Electric and magnetic fields are produced by all wiring and appliances that carry or use electricity. We follow international guidelines for exposure to EMFs. EMFs are different from electromagnetic radiation which is produced by things like radios and microwaves.
Electrical contractor	In the context of new connections or upgrades to existing connections, an electrical contractor is a person or organisation contracted by either you, or your consultant, to install part or all of the works required to achieve the new or upgraded electricity supply. This work generally involves low voltage construction on your property.
Electricity Act 1992	The Act, as amended by later Acts, that regulates the New Zealand electricity industry.
Electricity Authority (formerly Electricity Commission)	The Electricity Authority is established under the Electricity Act 1992 to oversee the governance, operation and development of the New Zealand electricity industry.
Electricity Governance Regulations and Rules	The Electricity Governance Regulations and Rules (EGRs) govern how the electricity market has operated since 1 March 2004.
Electrical inspector	An electrical inspector holds an electrical inspector's licence and inspects mains installations prior to livening to see whether the installations comply with relevant regulations and codes of practice. Some inspectors are authorised by various electricity retailers to install meters and ripple signalling equipment on their behalf. Some inspectors are authorised by us to connect and liven complying installations on our network.

Acronym / term	Definition
Electricity distribution business	Often shortened to EDB and also known as a lines company.
Electricity distribution network	The system of lower voltage power lines, cables and other equipment in a local area that is used to carry electricity from the national grid to homes and businesses.
Electricity retailer	An electricity retailer (sometimes referred to as a 'power company') purchases electricity from the wholesale market to sell to residential and business users.. Also referred to as Trader or Participant.
Embedded generator	An embedded generator, also known as a 'distributed generator', is a generator located at a home or business which is capable of generating electricity for that home or business's own use. It may also be capable of putting surplus generation back into our network.
Embedded network	A network reticulation owned by a third party within a distributor's traditional network. The Consumer has a choice of Trader.
Export	Electricity flowing from your electrical system into our network, usually as a result of distributed generation.
Fault	When your power is out. Also known as an outage or a power cut.
Feeder	A feeder is a physical grouping of conductors that originates at a district substation and supplies a number of consumers.
Fibre optic cable	Fibre optic cables are strands of glass that transmit data with light instead of electricity. By using light, they are able to transmit at much faster speeds.
Fixed charges	Fixed charges are the same for all customers regardless of how much electricity they use and are typically shown as \$/connection/day, applying to each connection.
Fuse	A safety device that melts when too much electricity goes through it. It cuts off electricity supply quickly to ensure there is no damage to appliances or internal wiring of a building or appliances.
Future energy scenarios	Scenarios that describe how the energy system may look in the future with the trends in decarbonisation, renewables and other Distributed Energy Resources and digitisation.
General connection	Most business and residential connections on our network are classified as 'general connections'. Other categories of connection include major customer connections and some irrigator connections.

Acronym / term	Definition
Generator	Equipment/machinery which produces electricity. 'Generator' is also a name sometimes given to generation companies.
Generation company	A generation company, also known as a 'generator', produces electricity which can be sold into the wholesale electricity market for supply to electricity retailers. Several private and Government owned companies are generators - they include Contact Energy, Genesis Energy, Meridian Energy, Mighty River Power and Todd Energy. Most generators are also electricity retailers.
Generation period	In the context of load management, this is a ripple-signalled period during which we have pre-arranged to pay the owners/ operators of some embedded generators for running their generators during that period. This signal is operated at our discretion and is not directly linked to other load management activities.
Greenfield land	Greenfield land is undeveloped land in a city or rural area either used for agriculture, landscape design, or left to evolve naturally. These areas of land are usually agricultural or amenity properties being considered for urban development.
Gentailers	Generators who are also retailers.
Grid	Transpower's transmission network of high voltage power lines and tall towers that connects to the power stations to send electricity around the country. It is also referred to as the 'national grid'.
Grid exit point (GXP)	A point where the local network is connected to Transpower's transmission network and where electricity flows out of the national grid to our network.
Grid injection point (GIP)	A point of connection where electricity flows into the national grid from generating stations.
Huntly	Referring to the Huntly Power Station
Hybrid inverter	An inverter that can manage both solar PV generation and battery storage, allowing energy to be used, stored, or exported to the grid depending on what's needed.
Inverter	A device that converts direct current (DC) electricity — typically from solar panels or batteries — into alternating current (AC) electricity, which is used by homes and businesses or exported to the grid.
Islanding	A condition where part of the electricity network continues to operate independently while disconnected from the main grid, often used to maintain power supply during outages or faults — intentional or unintentional.

Acronym / term	Definition
Kilowatt-hour (kWh)	A kilowatt-hour is also known as a unit of electricity and is the basis of retail sales (billing) of electricity. Your electricity meter records the amount of electricity you use in kWh (kilowatt-hour). A kWh is one kilowatt (kW) of electricity used for one-hour (h). A kWh is equal to 1000 watts used over a one-hour period. For example, 1 kWh = 10 x 100 watt light bulbs burning for one hour.
Lake Onslow	Refers to the Lake Onslow pumped hydro project. It was a large-scale energy storage scheme in New Zealand that was cancelled by the government in December 2023.
Line	Overhead electricity conductor.
Lines charges	The line charges on your electricity account include the costs we pass on from Transpower, for transmitting electricity from generation points around New Zealand across the National Grid to 'grid exit points' (GXPs) in your area. The remainder of the charge covers the cost of distributing electricity from these GXPs, across our network assets to your home or business. The cost of the electricity you use is billed by your electricity retailer.
Lines company	Also called network companies, distribution companies or distributors, lines companies own and operate the lower voltage power lines and distribution networks in local areas. These connect to the national grid to deliver electricity to homes and businesses.
Liven/livened	When a connection is 'livened', electricity can flow from the electricity distribution network to the connection.
Livening agent	An electrical or network construction contractor who is authorised by us, based on competence, to connect either the customer's service main, or the network extension, the existing network and liven the installation.
Load limit	In the context of load management, the load limit is the total network load that our load management system attempts to achieve by shedding and restoring controllable loads.
Load management or control	We may manage load on our network by switching some load off (usually electric hot water heaters) during times of high or 'peak' electrical demand and then turning that load back on when load levels drop. Retailers may also offer services that manage hot water load to reduce peak time energy costs.
Local network	The lines, cables and substations used by our network to transport electricity from grid exit points (GXPs) to consumers such as homes and businesses. Also known as a distribution network or electricity distribution network.

Acronym / term	Definition
Longest daily shed duration	In the context of 'load management', longest daily shed duration is provided as a measure against our network's service level targets for residential water heating. Under load management, we aim to switch hot water cylinders off for no longer than a target maximum.
Losses and loss factors	As electricity travels through the national grid and our network, a portion of energy is lost as heat due to the resistance in the lines and transformers. The greater the distance the electricity travels and the lower the voltage on the line, the higher the losses are. The Electricity Authority (EA) requires that we calculate and publish Reconciliation Loss Factor for each loss factor code in the registry each year. Loss factors also include losses energy used by equipment, metering errors and unmetered use.
Low Fixed Charge Tariff	Our residential or domestic tariff options include a low fixed charge for low users and is generally the best option if you use less than 8000kWh per year. This has a lower fixed daily charge than our General Tariff options and a higher variable charge for the electricity used. To qualify for a low user plan, your home must: • be used or intended for occupation as a place of residence • be your principal place of residence, and • not be covered by an exemption to the Electricity (Low Fixed Charge Tariff Option for Domestic Consumers) Regulations 2004.
Mains installation	The cable or line between our electricity distribution network and your premises.
Major customer	Networks generally classify businesses with maximum electrical demands above a set level e.g. 300kVA for some networks, as major customer connections. You (or your retailer) may elect to be classified as a major customer connection where the loading level is between set levels e.g. 250kVA and 300kVA in some networks. This compares to the maximum demand of a typical house of about 10kVA. For major customer connections we apply a specific set of prices that more closely reflects each customer's load and loading patterns.
Maximum demand	The maximum demand for electricity on our network over a year.
Megawatt-hour (MWh)	One megawatt-hour is equal to 1,000 kilowatt-hours. Megawatt-hours are the standard metering unit for the wholesale market.
Meter	The equipment that monitors your electricity or gas use. This is usually in kilowatt-hours for electricity.

Acronym / term	Definition
Metered maximum demand charges (MMD)	\$/kVA/day Highest load in the previous year (and subject to a minimum of 300 kVA). Measured as the average of the 12 highest half hour demands Monday to Friday, 7am to 9pm, 1 January to 31 December, then applied from 1 April the following year. We have a range of costs that are not dependent on peak loading levels, to the extent that these are not covered in the charges above, this component provides a basis for allocating the balance of these costs between connections in proportion to their changing demands.
Microgrid	A small, self-contained electricity network that can operate independently or alongside the main grid, often using local generation (like solar or batteries) to supply power to a specific area or community.
Monitoring technology	Technologies deployed on the electrical grid to monitor and control supply.
National grid	Aotearoa's high voltage transmission network. The National Grid (or 'grid' takes electricity from where it is generated at power stations to distributors like us. Transpower operates the national grid.
Network	A network (also called an electricity distribution network) is the lower voltage power lines and other assets that used to carry electricity from the national grid to you.
Network connection point (NCP)	A point at which the local network connects to your electrical installation. This is usually at your property boundary. It is sometimes on the exterior of a building. You are responsible for the electrical installation on the premises side of the NCP. We are responsible for equipment on the other side of the NCP.
Network construction contractor	A network construction contractor is usually contracted by you to construct a network extension. This may include both high and low voltage construction on your property and in the road reserve. The contractor may not be authorised to connect either the network extension, or your service main, to our existing local network.
Network control system	To manage the complex distribution of power and isolate faults we use a computer-based control and outage management system, overseen by Network Controllers, who help to direct repairers to the source of faults, keep the field crew safe, and manage the flow of electricity through the system.
Network companies	Network companies (distribution or lines companies), own the power lines and networks in local areas that connect to the national grid and deliver power to businesses and homes. See also lines company.
Network extension	An addition to or enhancement of the existing local network, for example, a new line or cable.

Acronym / term	Definition
Network services	This is the term a retailer may use for your line charges. These are our costs for distributing electricity from Transpower's national grid to a property, including poles, wires and transformers.
Network substation	A building substation which is part of the 11kV network and which protects cables and overhead lines.
Nominated maximum demand charges	\$/kVA/day Highest electrical load ever reached (and subject to a minimum of 300 kVA). Measured as the average of the 12 highest half hour demands in the previous 12 months, and increased if this is higher than the current quantity. Closer to each connection, our network is sized to meet the highest load of each connection, and this component reflects this anytime maximum loading level.
Outage	An interruption to your electricity supply. Also referred to as a power cut.
Peak period	A peak period is the ripple-signalled high pricing period for general connections, when our network is heavily loaded.
Part 6	The section of the Electricity Industry Participation Code (the rules set by the regulator and referred to as "the Code") that governs new connections.
Peak delivery charge	A charge to retailers based on the total of their consumers' average loading during the full real-time half-hours that occur within all signalled peak periods during our winter season (May to August).
Pillar (also known as gyro, pod or service box)	Pillars connect your service main to our network if you have an underground service cable, rather than an overhead service line. Pillars are usually plastic boxes on the boundary of your property.
Point of supply	In relation to a property this generally means the point or points on the boundary of the property at which exclusive fittings enter that property. Some networks may define this in other ways e.g. the isolating fuse located either on the boundary of your property or on the pole nearest to your property.
Pre-application	The engagement that occurs between us and you before a new connection (Part 6) application is made.
Pre-application meeting	A meeting that you may request before submitting an application to us to help with that application.
Pricing area	Some networks have different pricing areas, which have different line charges so customers in one pricing area are not cross-subsidising the costs to provide electricity in another part of our network.

Acronym / term	Definition
Project manager	In the context of a new connection, a person or organisation who you contract to manage the connection process. A project manager may also be an individual who works for an organisation, who manages only the organisation's portion of the connection process.
Rankines / rankine units	A type of steam turbine currently in use at Huntly power station.
Reconciliation	The process of matching the electricity supplied to customers by individual retailers with actual demand at a grid exit point (GXP).
Record of Inspection	A Record of Inspection (RoI) is issued after high-risk prescribed electrical work (such as high voltage installations, photovoltaic systems or mains work) has been checked by an authorised inspector and confirmed to be safe. The person providing the RoI must not be the same person who carried out the work.
Registry	Electricity Registry which is the national database of ICPs (electricity connections).
Residual load	The amount of electricity that cannot be met by intermittent renewable capacity (e.g., wind and solar).
Restorable load	In the context of load management, the estimated load that would be added if all controlled load currently switched off was switched back on.
Retailer	A company that sells electricity or gas to you. Your retailer monitors how much energy you use through the meter and you pay them for your electricity and/or gas use. See also electricity retailer.
Ripple control system	A system used to control the electrical load on our network by, for example, switching load such as domestic water heaters off during peak load, or signalling to large users that they are in a high price period (thereby encouraging them to use as little power as possible during that time).
Ripple signal	A signal injected into our network which a receiver can pick up and which does not affect your other appliances.
SEANZ approved installer	A solar or BESS installer who meets the minimum requirements set by SEANZ to install rooftop solar or household BESS to industry standard best practice. (as per acronyms in list above, SEANZ is the Sustainable Energy Association of New Zealand)
Service main	The line or cable that connects your property to our network. Your service main is owned and maintained by you and is not part of our network.
Sheddable load	In the context of load management, the estimated controllable load available to be switched off.

Acronym / term	Definition
Shedding	In the context of load management, the proportion of controllable load that is currently switched off.
Smart or future network aka smartgrid	A modern electricity network that uses information and communications technology in an automated way to improve the efficiency, reliability and sustainability of electricity distribution.
Smart meters	Electricity meters that are digital (able to collect time of use and power quality data) and connected (so that they can automatically report data, be connected or disconnected and in some cases perform Load Control).
Solar PV	Electricity generation through solar photovoltaics (PV). PV cells convert sunlight into electricity by an energy conversion process. Solar PV is different from solar hot water as it generates electricity that can be fed back in to our network requiring an installation to meet required standards.
Substation	Electrical installations that are enclosed in a building or structure and that are used to transform, distribute or transmit electricity.
Tiwai / Tiwai Point	Refers To Tiwai Point Aluminium Smelter.
Transformers	Power is transported at high voltage for efficiency and transformed to lower voltages as it gets closer to where it is needed.
Transmission	Electricity conveyed over Transpower's transmission grid from generators to points of connection with local distribution networks (grid exit points). Transmission charges are included in your lines charges.
Transpower	The State-owned enterprise (SOE) that owns and maintains the electricity national grid.
Uncontrolled load	In the context of load management, uncontrolled load is the estimate of the loading level that would have occurred if our network had not controlled any load.
Utilities Disputes Ltd	Utilities Disputes Ltd provides a free and independent service which can review and further investigate issues. They are able to make rulings that are binding to settle complaints.
Variable charges	Variable charges are calculated based on the amount of electricity you use.
Wholesale market	A term used to refer principally to the spot market through which all electricity flowing on the grid is traded. Spot market participants offer to generate and bid to take demand on a half-hourly basis for every half hour. The market rules specify how generation is to be dispatched and how spot prices are to be calculated.