

## Who is

### The Power Company Ltd?

If you live or work in the wider Southland or West Otago regions, then it's likely you are one of The Power Company's 34,000-plus consumers.

The Power Company Limited (TPCL) was formed in 1991 and owns the electricity network assets (such as power lines, poles and substations) in the Southland/West Otago area, excluding most of Invercargill City and Bluff.

TPCL is the biggest network in the lower South Island, with over 8,700km of lines and equipment to maintain. We deliver about 738 gigawatt hours (GWh) of energy every year to our consumers.

Approximately 73% of TPCL consumers are residential, with the other 27% industrial and commercial users.

The Company is owned by its consumers through the Southland Electric Power Supply Consumer Trust (Southland Power Trust). Five elected Trustees represent consumers.

Every year TPCL returns a discount to those connected to our network. Over the last 14 years, the Company has returned \$68 million to consumers.

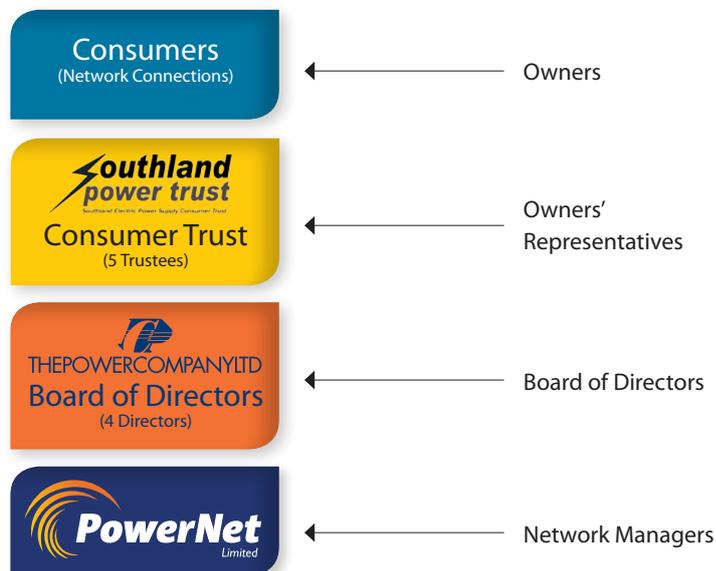
## The Board

The TPCL Board is made up of four Directors appointed by the Southland Power Trust.

Directors' responsibilities are mainly governed by the Company's Constitution and the Companies Act 1993. Their role includes determining policies, preparing a Statement of Intent, a Business Plan, an Asset Management Plan, monitoring PowerNet's performance, reporting to the shareholder, the Southland Power Trust, and publishing an Annual Report.

TPCL contracts PowerNet Limited to manage, construct and maintain its network and metering assets. PowerNet's costs are recovered via a mark-up on capital and maintenance work and an agency fee for management services.

PowerNet is the main point of contact for consumers.



Alan Harper (Chairman)



Duncan Fea



Doug Fraser



Maryann Macpherson

## Distribution Automation

A clever idea utilising remote switching technology will help reduce The Power Company's System Average Interruption Frequency Index (SAIFI) and System Average Interruption Duration Index (SAIDI) indices - industry measures of electricity network reliability.

"We are implementing a distribution automation system on TPCL's network that means instead of having to dispatch a field crew to fix the problem, a remote controlled switch can reduce the time without power," PowerNet network assets engineer Bevan Cooper says.

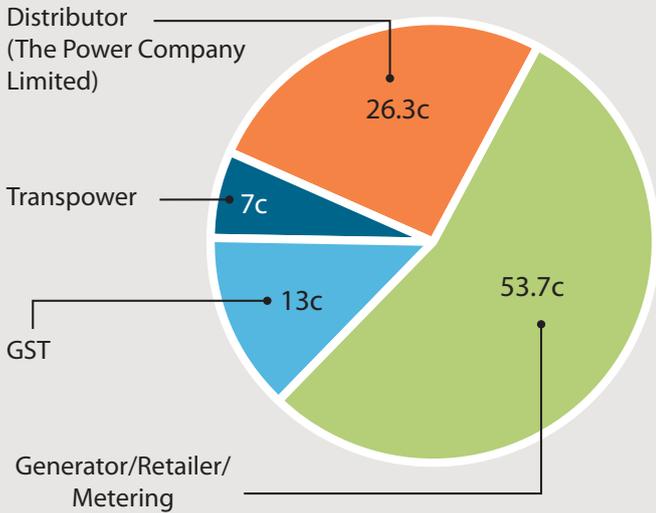
"For example, in particular situations a fault will open a breaker. However, a remote controlled switching scheme will open a second breaker and close the automated tie point very quickly, meaning that customers on the end of the feeder incur negligible interruption of supply," he says.

In that situation only the customers between the first and second breakers will lose their supply.

"Using this distribution automation helps us reduce the amount of time consumers are without electricity in the event of unplanned outages," Bevan says. "It will be a great benefit in the event of storms and accidents such as when a vehicle takes out a pole or vegetation causes an outage."

The distribution automation system has been approved by the TPCL Board and will be rolled out across parts of the network in 2015.

## Breakdown of Your Electricity Dollar



### TPCL Network Statistics – at 31 March 2014

Consumers Connected	34,974
Residential Consumers	25,649
Industrial Consumers	167
Commercial Consumers	9,158
Network Length	8,708km
Consumer Density	4.0 consumers/km
Number of Distribution Transformers	10,935
Maximum Demand	135.1MW
Total Energy Conveyed	738GWh
Regulatory Value	\$300 million

## Waikiwi Substation Upgrade

The upgrade of the Waikiwi Substation is planned to start in May 2015.

“We have completed the electrical design and the civil design contracts are about to be awarded,” PowerNet project manager Roger Scott says.

The substation, which is being upgraded to handle increased load growth, will see two indoor 33/11kV 11.5/23MVA transformers installed.

“We will take the rear transformer out, build the new building for the transformers and then have the whole substation enclosed,” Roger says.

The building will be architecturally designed and landscaped to fit in with the surrounding environment.

The existing building on the Waikiwi site will stay in place to house the 33kV and 11kV switchgear.

The substation services a large area, including Lorneville and Otatara areas, and the rapid growth in Waikiwi itself over recent years means this will future-proof the electricity requirements of the TPCL customers.

The enclosing of the transformers will also ensure the site meets the requirements of the Invercargill City Council District Plan by reducing ambient noise.



The existing Waikiwi Substation

## TPCL donates defibrillators to Gore

The TPCL directors formally presented defibrillators to the Gore Volunteer Fire Brigade at a client function in Gore on 24 September.

TPCL had actually donated these in February this year and they have saved lives already. This was the first opportunity to formally present them to the brigade, who do a great job at saving lives in Eastern Southland.



(L/R) TPCL Chairman Alan Harper, PowerNet CEO Jason Franklin, Gore Chief Fire Officer Steve Lee, Deputy Chief Fire Officer Don McGuigan, Senior Station Officer Richard Tremaine

# Mossburn – Athol project

brings increased capacity and reliability to region

“The \$5 million Mossburn to Athol line and substation project completes a two-year construction that will bring supply security and reliability to Northern Southland,” TPCL chairman Alan Harper says.

The third and final 15km stage of the Mossburn to Athol project, which included commissioning the new Athol Substation adjacent to State Highway 6 and living in the new 66kV line, was completed in late April.

“The Mossburn to Athol works add increased capacity and reliability to the Northern Southland area, which has seen an increase in dairying and irrigation,” Mr Harper says.

The project involved a number of different engineering solutions, including live line work, installing the new substation and putting in new poles and lines along the route for the 66kV line.

Stage one of the project, a five kilometre upgrade from the Mossburn zone substation through Mossburn and over the Oreti River, was completed in 2012. The 14km second stage from the Oreti River to Irthing Road at Five Rivers was completed in 2013.

“TPCL is committed to ensuring our customers have capacity and security of supply and our capital works programme – which was over \$19 million last year – contributes towards our company being one of the better performing, predominantly rural networks in New Zealand,” Mr Harper says.



(L/R) PowerNet CEO Jason Franklin, TPCL Directors Doug Fraser and Duncan Fea, Southland Power Trust Trustee David Rose, Chairman Jim Hargest and Trustee Carl Findlater

## Colyer Road Substation

An imposing 3.8m deep basement for the new Colyer Road Substation control room has been dug and works are beginning on one of TPCL’s most significant projects for the year.

“We have dug out the basement where the cabling will be installed and the flooring of the substation control room will be level with the ground,” PowerNet project manager Roger Scott says.

The works are being carried out by Donaldson Construction under sub-contract to DECOM who are doing the electrical construction.

The substation will supply Open Country Dairy which has recently doubled the size of their milk plant at Awarua. At present, TPCL is supplying the dairy factory with a temporary transformer which will be moved to Colyer Road Substation once the 11.5/23MVA transformer has been installed and commissioned to complete the Colyer Road Substation.

Roger says the Colyer Road Substation will also supply future development on the industrial land owned by the Invercargill City Council southeast of the substation.

The new site is being developed to incorporate indoor 33kV and 11kV switchgear and space for up to three 11.5/23MVA transformers.

“The control room panels are being built now and we’re planning for the building to be completed by January,” Roger says.

The existing substation at Awarua had limited opportunity for expansion, which brought about the need for a new substation. The existing substation will be retained to supply industrial consumers it currently services.



Groundwork on the Colyer Road Substation control room

## Isla Bank to Fairfax Line Upgrade to support New Substation

TPCL has a number of development projects underway. The Isla Bank to Fairfax 66/11kV line is part of the \$20 million of capital investment on the network this financial year.

Construction of a new 66/11kV line is almost complete and once commissioned will deliver a secure and reliable electricity supply for future load growth in the Western Southland region.

PowerNet's Winton depot supervisor Murray Hamilton says the building of the Isla Bank to Fairfax 66/11kV line project commenced in July and was expected to be completed by late 2014.

"This is an in-house PowerNet job, we are constructing the overhead 11kV and 66kV line and 11kV underground cable that comes out of the new Isla Bank Substation," Murray says.

Beginning at Isla Bank, the line will run nearly nine kilometres and when completed will connect to the 66kV Riverton/Otautau line at Fairfax.

The existing Isla Bank 11kV line provides electricity to the local school and surrounding farms. The new upgraded line is required for the new Isla Bank Substation and would ultimately boost supply capacity into the area to support further growth in the dairy industry.

"There is a lot of dairying in the area and it looks like it might be increasing; we need to keep supply and voltage up in the area," Murray says.

There had been three organised shutdowns since work commenced and customers had been switched to alternative feeders, where possible, to ensure minimal disruption of electricity supply.

"Shutdowns are timed to happen between 9am and 4pm and we try and achieve as much as we can to minimise the shutdowns we need," he says.

The new Isla Bank Substation is currently under construction by PowerNet contractors DECOM and is expected to be completed in May 2015.



The new Isla Bank to Fairfax 66/11kV line

## Winton Upgrade continues

The 2014 upgrade of the Winton Zone Substation switchboard is complete, but work to reconfigure the lines running out of Winton continues.

"The switchboard upgrade was completed in the middle of the year," PowerNet project manager Roger Scott says, "and now that it is completed we can reconnect the section of the 66kV line that was used for the 11kV bypass."

The 66kV line running between Centre Bush and Winton will be reconfigured at the Winton Substation to have the Centre Bush line on the top of the poles and Hedgehope line moved to underneath the Centre Bush line, with the two lines separating on the corner of Gerrard and Winton Substation Roads.

This is part of the Oreti Valley project which is planned for completion in late December or early January.

## We're just a phone call away

Increased reliability across the TPCL electricity network means far fewer power outages – but on occasion they still occur.

Help is literally just a phone call away on 0800 808 587. PowerNet system control operates a 24 hours a day, 7 days a week service.

The 0800 number puts residents directly in touch with system control which has immediate access to the line staff out in the community.

System control is happy to talk directly to network customers when a power outage occurs so there is no need to contact the electricity retailer. The quicker system control receives accurate information from those affected means the quicker the power can be restored.

# Power Issues?

Call **PowerNet** on

# 0800 808 587

THEPOWERCOMPANYLTD

## Safety Messages

### Trim That Vegetation – Carefully

It is vital that you keep an eye on trees around your property if you have overhead lines. To ensure your security of electricity supply and that you, your family and your friends remain safe, vegetation management is essential.

Tree owners are legally required to ensure their tree(s) are kept at a safe distance from electricity lines to ensure public safety and to protect the electricity network because:

- in very dry conditions trees close to lines may cause electrical sparking resulting in fire
- children that climb trees close to power lines are at risk of serious injury or death
- in severe weather conditions, vegetation can become electrically 'live' and may electrocute anyone coming into contact with it
- in bad weather, trees can topple or branches break away, causing damage to power lines resulting in a power outage. In snow or icy conditions the additional weight on the tree can cause a similar scenario
- tree roots can grow around underground electricity cables rupturing the insulation and causing power supply failure

"Protecting the safety of the public and ensuring a secure supply of electricity to consumers is important to us," says Graeme Webby, PowerNet's health, safety, environment and quality manager.

He says while tree trimming is important near high voltage lines, it is important to be aware of your surroundings when chopping back the hedge or trees.

"High voltage electricity can jump across gaps – so you should not be any closer than four metres to the wires without our approval. It can also be easy to forget about overhead lines if you are operating equipment to trim trees – it's vital that anyone working near lines knows where the lines are at all times to avoid injury or worse."



### Look Up for Overhead Cables

What is above can make a difference to your safety.

The Electricity (Safety) Regulations 2010 and Electrical Code of Practice 34 set standards for safety in the construction sector.

"One size does not fit all when it comes to building or excavation works," PowerNet's health, safety, environment and quality manager Graeme Webby says. "There are different specifications in the Code of Practice for different kinds of work."

"There are different minimum safe distances and so it is best to become aware of what the Code says before you get started on the job if there are overhead lines nearby."

The Electrical Code of Practice outlines the requirements for building or excavation near overhead lines, towers, poles and stay wires. The minimum safe distances are designed to limit the chance of damage or hazards being created by the building or excavation. The minimum distances also ensure that the support structures can be accessed for inspection and maintenance.

Some excavations and other works near overhead electric line supports can compromise the structural integrity of the overhead electric line and metallic or conducting paths near overhead electric line supports can transfer voltage that could create a dangerous situation.

Mr Webby says the Code also covers material under overhead lines and the operation of mobile equipment.

"In the end, the law makes it the responsibility of the employer to provide safe working conditions and Code of Practice 34 helps employers achieve that goal," he says.

The Code of Practice can be found on the Energy Safety website at [www.med.govt.nz/energysafety](http://www.med.govt.nz/energysafety)



## Before U Dig

Knowing what is underground can help you avoid any nasty surprises before you start digging around your home, farm or business.

TPCL is part of a "one stop shop" which helps you and contractors identify underground services before starting to dig.

Before U Dig ([www.beforeudig.co.nz](http://www.beforeudig.co.nz) or 0800 248 344) is a service that allows you to provide details of planned works on a particular site.

The Before U Dig team contacts any member suppliers (such as Councils, telecommunication providers and electricity network companies) in the area who then supply information about the location of underground infrastructure to you or contractors before starting work.



## Seismic Strengthening at Mataura Substation

Bringing our substations up to scratch in the event of an earthquake is an ongoing project at TPCL.

PowerNet's technical services manager Trevor Simmonds says the latest seismic strengthening has taken place at the Mataura Substation, and brings the switchroom building up to 100% of New Building Standard (NBS).

"At Mataura, we are using internal steel framing to keep the building up in the event of an earthquake," he says.

"This came about after the building was assessed at 8% of NBS. Our target is to achieve 100% NBS provided this is economic. The works, carried out by Calder Stewart, with PowerNet handling site supervision and safety, have not affected consumers on the network," Trevor says.

Heavy steel channels run up and down the walls as part of the works, but none of the major equipment in the control room needed to be moved.

The works, completed at the end of November, are part of a seismic strengthening programme being carried out at Mataura, Waikiwi and Seaward Bush Substations. North and South Gore Substations have already had seismic strengthening works carried out.



## Xmas Message from Alan Harper

It has been another busy year for The Power Company Limited (TPCL). As well as carrying out tens of millions of dollars worth of capital works and renewals, we have taken a majority share in the former OtagoNet network which makes TPCL the predominant rural electricity network provider in the South Island.

PowerNet's offices will be closed from Wednesday 24 December until Monday 5 January 2015. If you have an issue with your power supply over the Xmas break, ring our faults number on 0800 808 587. It is often better for you to call us rather than your electricity retailer as you can talk to the people who run the TPCL network 24 hours, 7 days a week.

On behalf of The Power Company's board, I would like to thank all the PowerNet staff, contractors and my fellow directors for their work this year and we wish all our consumers a Merry Christmas and a very Happy New Year. We look forward to serving you again in 2015.

**Alan Harper**  
Chairman  
The Power Company Limited



PowerNet Trainee Line Mechanic (Winton Depot) - Robert Allen

If you have any concerns about our service please call us on 03 211 1899 and we will be please to help – we have a free internal complaints process. If we are unable to resolve your concern you can contact the free and independent Electricity and Gas Complaints Commissioner on 0800 22 33 40, ([www.egcomplaints.co.nz](http://www.egcomplaints.co.nz)).