OtagoNet Joint Venture Newsletter December 2013

OtagoNet CONNECTIONS

Who is OtagoNet?

OtagoNet is the major electricity network services provider for most of Otago.

The OtagoNet Joint Venture (OJV) was formed in July 2002 following the purchase of the electricity network assets from the shareholders of the consumer co-operative company Otago Power Limited.

Marlborough Lines Limited, The Power Company Limited and Electricity Invercargill Limited came together in 2002 to provide electricity network services across the province.

OJV owns, maintains and manages the electricity network assets including power poles, power lines, underground power cables, transformers and substations.

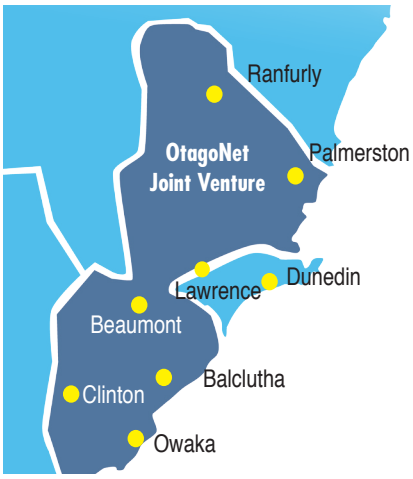
It is our job to keep the OtagoNet infrastructure in excellent shape, and every year we reduce the average age of the network through our proactive capital investments.

Annually, we spend $10 million on capital projects. The projects are largely replacing lines and rebuilding 11kV and 33kV lines, but also include substation upgrades and work on transformers, amongst other planned works.

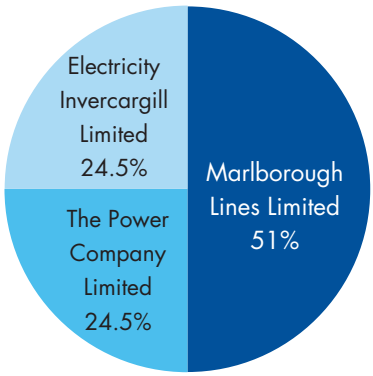
OtagoNet covers a huge land area from near St Bathans in the north to the Chaslands in the south and inland from the Blue Mountains in the west to Shag Point on the north east coast. Our community-based local crews and contractors replace over 100 kilometres of overhead line every year worth about $7 million.

Our asset management strategy to reduce the average age of our network ensures our customers get the safety, security and reliability of supply they need for their homes and businesses.

This newsletter will tell you a bit more about our commitment to providing a reliable, efficient, secure supply of electricity which meets your needs and promotes growth in the region.



OJV Ownership



Xmas message

OtagoNet would like to wish all our customers a Merry Christmas and Happy New Year. Our office will be closed from Friday 20 December until Monday 6 January.

If you do have an issue with your power supply during this time, ring our faults number on 0800 753 951. It is often better for you to call us rather than your electricity retailer as you can talk to the people who run the network 24 hours, 7 days a week.

Thanks for your support this year. We have been busy upgrading your electricity network in 2013 so that you enjoy a safe, secure and more reliable electricity supply and we look forward to doing more of the same in 2014.

Season's Greetings to you all.

The OtagoNet Team

Andrew Holt, Chris Walker, Lloyd Williamson and Terry Jones

Lovells Flat gets a makeover

A 60 year old line between Milton and Balclutha got a makeover to increase reliability thanks to OtagoNet and our contractors, Otago Power Services.

Coe Road, off State Highway 1 at Lovells Flat, has had 7/16 galvanised steel conductor since it was built in the 1950s.

As part of our asset management plan, and to bring the average life of the network down, we re-conductored 3.5 kilometres of line with new aluminum conductor.

The investment in this maintenance project was $70,000.

There was good support from the landowners, who let OtagoNet contractors drive through their paddocks to complete the work and we thank them for their understanding.

The Otago Power Services Balclutha-based work crew also replaced crossarms and other equipment that was at the end of its life.

The opportunity was also taken to remove some of the older type concrete poles and replace them with new 11 and 12.5 metre Busck poles.

Working with the QEII Trust

An area of marshland donated to the QEII Trust, on the existing single-wire line route at Slopedown, didn't hinder the replacement of this line, which was required to provide a more reliable electricity supply.

OtagoNet altered the plans to avoid the area of marshland on the existing line route that had been donated to the Trust.

The galvanised single-wire earth return line at Dodds Road was old (dating from 1953) and changing to two wires has made the supply much more reliable and efficient.

The new lines in Dodds and Slopedown Roads and across country continues to reduce the average age of OtagoNet's network assets and will provide much improved security of supply to the farmers who rely on electricity in the region.

Otago Power Services live line training

A rigorous seven-week training course will see seven new live line mechanics added to the Otago Power Services crews in Balclutha and Gore.

OtagoNet tries to do as much live line work as possible to avoid outages to customers. This intensive training gives the line mechanics a new qualification.

The training course has involved weeks of skill based learning including working on energised equipment using long insulated tools from a distance, referred to as "hot–stick" along with "glove and barrier" techniques which involves covering up all the live equipment ,except the wire to be worked on, then physically handling the live equipment using gloves and working from an insulated bucket truck.

It is important to keep training new live line mechanics as often the best qualified are promoted to supervisor or foreman positions.

Otago Power Services line mechanics undertaking live line training

After completion of the course and subject to meeting all the New Zealand Qualifications Authority unit standard requirements, the Trainees will receive a National Certificate in Electricity Supply.

There will be ten live line mechanics in Gore and nine in Balclutha after this training has finished.

In addition, Otago Power Services has two live line mechanics in Palmerston and another four in Ranfurly.

Live line work is vital to ensure our customers get the security and reliability of supply they expect.

New software programme to assist our Asset Management

OtagoNet is always looking at ways to do things more efficiently and effectively at all times.

We have recently adopted the CATAN software programme which streamlines the overhead line design process.

CATAN integrates with Trimble GeoXH Handheld GPS devices (to efficiently collect survey data and also locate pole positions for pegging) before the designer completes a line design project.

We gain efficiencies, but we also get more consistency across design. CATAN allows us to drop different poles and construction types in and move things around if we need to.

Once the design has been approved the software can be used in conjunction with the standard construction material schedules to automate material orders. The designer can then directly liaise with the construction foreman leading up to and during construction, minimising the support required from the project manager.

OtagoNet is the first to start using CATAN and other New Zealand utility companies are following. We're leading the way in creating best practice in this area. The software standardises everything so we can design easily and also ensure we are meeting the AS/NZS 7000 design standard for overhead lines.

Waikouaiti customer function

OtagoNet Joint Venture's governing committee and senior staff met our customers at a client function in Waikouaiti in late August.

OtagoNet's northern subtransmission network is an important part of our operations. It encompasses some large customers and a lot of farming, forestry and residential clients. We talked to clients about how we plan to further improve that part of our network.

OtagoNet, which covers an area from the Catlins in the south to St Bathans in the north, has capital expenditure of nearly $60 million planned for the next five years over the entire network, and over $17 million of operational expenditure during the same period.

The average life of the network is being reduced through the ongoing asset replacement programme. The meeting gave the committee members a chance to explain to customers how these works will improve reliability and security of supply.

The governing committee took the opportunity to visit the Zeagold poultry farm's modern facility near Waikouaiti.

Zeagold is a privately owned company and New Zealand's leading producer of eggs and egg products.

The visit gave the governing committee an insight into the operations of a major commercial customer on our network.

OtagoNet took the opportunity of the customer function to donate a Resusci Anne CPR manikin, which will be used by a wide range of community groups.

The donation was made to the Waikouaiti fire brigade during the customer function at the Waikouaiti Events Centre. The Resusci Anne is a full bodied adult CPR training manikin, which can also be used in training for first aid.

We find these meetings very useful and the conversations we have with the people who rely on our network give us excellent feedback on network performance and their expectations.

Before U Dig

When electrical cables are underground, it is vital to be aware of what's down below when you start digging.

OtagoNet is part of a "one stop shop" which helps people and contractors identify underground services before they start excavating.

Before U Dig (www.beforeudig.co.nz or 0800 248 344) is a free service that allows you to provide details of planned works on a particular site. The Before U Dig team contacts any member utilities in the area who then provide information about the location of underground infrastructure to the contractors before they start work.

Safety is paramount and if you are going to dig below 300mm you should be contacting this service because contact with live cables or lines carries immense risk.

It also impacts upon us, as damage and unplanned outages caused by contractors and others not locating underground services before digging becomes an issue for us and other infrastructure providers.

If you aren't sure if a cable is live or not, don't try and find out yourself. Assume it is live and contact us first.

You should also keep an eye to the sky as well – overhead lines are just as dangerous.

We encourage people to be aware of their surroundings. Irrigation pipes being accidentally moved into contact with live lines is just one example. Farmers with round bales on a loader which obscures their vision, people trimming vegetation too close to high voltage lines – all can be potentially fatal accidents.

OtagoNet CONNECTIONS

Not just beautification

Most of the time you wouldn't notice a substation unless you were looking for one.

Nonetheless, OtagoNet has embarked on a project to improve the aesthetics and safety of substations with some fencing work.

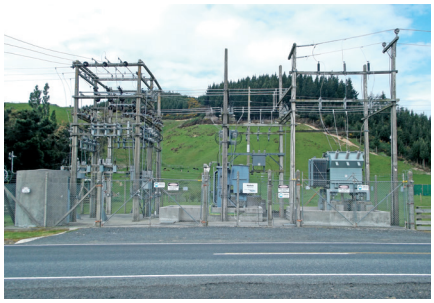
Improved fencing around some of the substations will make them more secure and less obtrusive at the same time.

The recently completed Waihola substation has a new wooden fence built one to two metres out from the original fence.

OtagoNet is currently planning on extending or tidying up fences and some internal equipment at 13 substations across the network.

The fencing has been dependent on working with the local landowners and has required the purchase of some additional land required for the projects. The safety aspect is the most crucial, but the fences also tidy up the surrounding area as well.

It is important people do not enter substations. The fences add another safety layer to ensure the public are kept safe.



Waihola substation before the fencing.....

... and after the replacement fencing

Vegetation Control and Tree Trimming

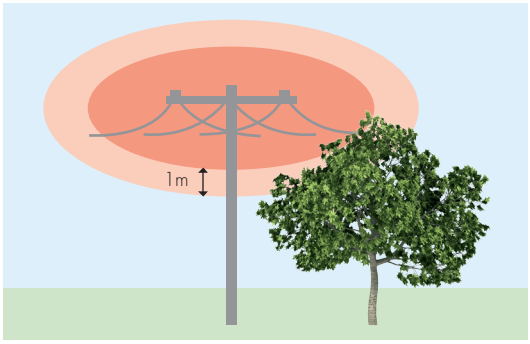
It is vital that you keep an eye on trees around your property if you have overhead lines. To ensure your security of electricity supply and that you, your family and others remain safe, vegetation management is essential.

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 who climb trees close to power lines are at risk of serious injury or death.
- in bad weather conditions, vegetation can become electrically 'live' and may electrocute anyone coming into contact with it.
- in severe 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.

While tree trimming near high voltage lines, it is vitally important to be aware of your surroundings and know where the lines are at all times when cutting 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 approval from OtagoNet. It can also be easy to overlook 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.



Growth Limit Zone

Notice Zone

The tree in this illustration will need to be cut or trimmed because it is inside the growth limit zone.

Overhead line	Growth limit zone
66,000kV (high voltage)	4.0 metres
33,000kV (high voltage)	2.5 metres
11,000kV (high voltage)	1.6 metres
400V/230V (low voltage)	0.5 metres

Note:

1) These distances are from the power line, not the power pole
2) These distances are a minimum and apply in all conditions including high wind or snow
3) In most instances the power lines that go to a house or building are low voltage power lines
   If you are unsure of your line voltage please phone Otago Power Services on 03 419 0111
4) Power lines that go down a street may be low or high voltage

If you have any concerns about our service please call us on 03 418 4950 and we will be pleased 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

OtagoNet faults/power interruptions, free phone 24/7 - 0800 753 951