

Connections

About Electricity Invercargill Limited

Electricity Invercargill Limited (EIL) is consistently ranked as one of the best performing network owners in New Zealand on key measures of reliability and efficiency.

Formed in 1991, the company is 100% owned by the Invercargill City Council through subsidiary company, Invercargill City Holdings Limited.

Since 1905 however, EIL has provided power to Invercargill City under different names, most notably as the Invercargill Municipal Electricity Department.

EIL has electricity network assets in Invercargill City and the Bluff area, and its 17,368 customers are mostly residential. The company contracts network manager, PowerNet, to manage, construct and maintain its network and metering assets.

The Regulatory Value of EIL's network assets is \$72 million, comprising over 662km of predominantly underground cables and some overhead lines, and 449 distribution transformers with a capacity of 151MVA.

The vision of the company's management and directors to undertake an innovative programme from the late 1960s to install network assets underground, has contributed to EIL's performance as one of the safest and most dependable networks in New Zealand.

Recent projects such as the commissioning of the Spey Street Substation and the 33kV cabling work in the inner city, continue to demonstrate EIL's commitment to provide a safe, efficient and reliable electricity supply to Invercargill City and Bluff.



Our Directors are:



Neil Boniface (Chair)

Neil is a Director of PowerNet Limited, a member of the OtagoNet Joint Venture Governing Committee, an Invercargill City Councillor and Chairman of Council's Finance and Policy Committee. He is also Chairman of Invercargill Venue and Events Management Limited and the Southland Warm Homes Trust.

He operates a driving school business in Southland and also serves on several charitable trusts. Neil is a Chartered Fellow of the Institute of Directors.



Ross Smith

Ross joined the board of Electricity Invercargill Limited in November 2003 and is currently Deputy Chair of Electricity Invercargill Limited. He is also Chair of PowerNet Limited and of Peak Power Services Limited.

In July 2014, after 22 years in the role, he stepped down from the position of Chief Executive of SBS Bank to concentrate on his Director roles.

Ross is a Member of the Institute of Directors.



Sarah Brown

Sarah joined the Board of Electricity Invercargill Limited in November 2013. Sarah is also a Director of PowerNet Limited. She has been the Council Chair of the Southern Institute of Technology since 2011.

Sarah is a Member of the Institute of Directors.



Thomas Campbell

Tom is a former Managing Director of Comalco and General Manager of the Tiwai Smelter who now works as an independent company director.

His directorships include Todd Corporation, PowerNet Limited and Venture Southland. He is also Chair of the Energy Efficiency Conservation Authority (EECA) and Southland Regional Development Strategy Governance Group.

Tom is a Chartered Fellow of the Institute of Directors.



Darren Ludlow

Darren has been a Director of Electricity Invercargill Limited since November 2010.

He is a fifth-term Invercargill City Councillor and has been the City's Deputy Mayor for two terms. Darren is a Director of PowerNet Limited, a Trustee and Chair of the Southland Museum and Art Gallery Trust Board and a Trustee of both the Southland Art Foundation and Invercargill City Charitable Trust.

Darren is the Manager of Southland's community access radio station, Radio Southland.

Who is PowerNet Limited?

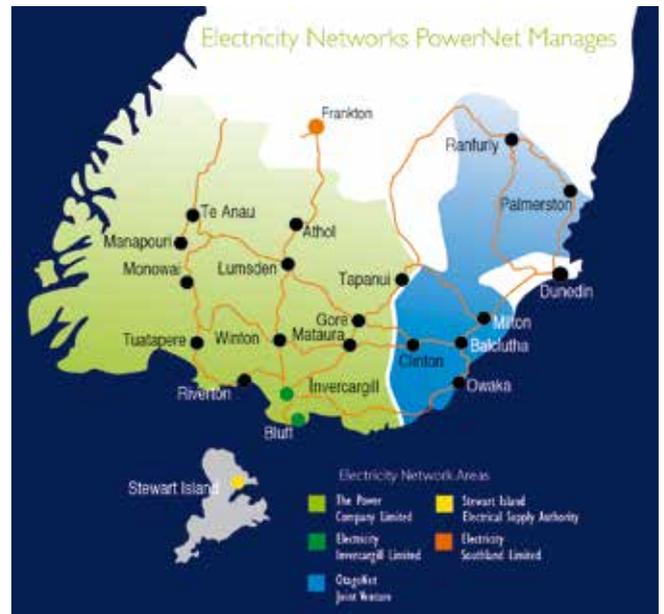
Since 1994, PowerNet has led the way in electricity network management. The company builds, maintains and manages networks on behalf of network owners in Southland, most of rural Otago, the Frankton region and Stewart Island.

The total Regulatory Value of the networks managed is \$546 million with 14,123km of lines and cables, 78 Zone Substations and 15,776 transformers. The combined networks deliver electricity to over 68,000 customers. The managed networks represent diverse topography, climate zones, customer density, technical design and equipment.

The total energy conveyed through the PowerNet's managed networks is 1465GWh, with a maximum demand of 259MW.

PowerNet employs 172 staff and 97 contractors. Staff work from offices and depots in Invercargill, Winton, Lumsden, Frankton, Te Anau, Gore, Palmerston, Ranfurly, Balclutha and Stewart Island.

PowerNet also has an on-site 24/7 System Control room based in Invercargill to manage all faults and activity on the networks they manage.



Local Renewable Wind Generation Reaps Benefits

Electricity Invercargill Limited continues to expand their horizons with strategic opportunities that complement its core business, such its planned investment in Bluff's Flat Hill Wind Farm.

The eight 850kWh turbine wind farm was officially opened in August this year and will be operated by Southern Generation Limited Partnership (SGLP) – a joint venture between Pioneer Generation Limited, EIL and The Power Company Limited (TPCL).

"EIL and TPCL's involvement in the SGLP reflects the importance of strong regional and strategic alignments. The partnership provides EIL and TPCL with fantastic opportunities to strengthen their businesses through the collective power of joint expertise and experience, enabling benefits to be passed on to our regional economy and local communities," says PowerNet CE, Jason Franklin.

"A key benefit of the Flat Hill Wind Farm project is the efficiency of using a local, renewable resource which reduces transmission costs. These kinds of projects support our communities through the supply of green electricity."

Located on 460 hectares of private land around 3km from Bluff township, Flat Hill Wind Farm is the world's most southerly wind farm, generating electricity to supply approximately 3,000 homes. The electricity generated is fed into the local network via the Bluff Substation.

The wind farm was constructed by Pioneer Generation Limited. PowerNet's technical team was contracted to lay 11kV cables, including installation into the Bluff Substation as well as testing and commissioning work. The team also installed the switchgear ring main units and the turbine transformers, located around six meters above the ground. Team members completed additional safety training for height work before commencing the job.

The Flat Hill Wind Farm project will be SGLP's second wind farm investment – it also owns the nine-turbine Mt Stuart Wind Farm southwest of Milton. The partnership was formed in April this year, with EIL and TPCL jointly holding a 50% stake, and Central Otago-based Pioneer Generation Limited holding the balance. PowerNet manages this investment for its shareholders, EIL and TPCL.



Attendees at the Flat Hill Wind Farm opening

EIL's Major Electricity Upgrade Benefits City

Spey Street Substation commissioned

Some 6,300 Invercargill residents and businesses will benefit from a more secure and reliable electricity supply after the most significant upgrade of the city's electricity infrastructure in decades.

The new \$7.9 million Spey Street Substation, commissioned in March, is the centrepiece for EIL's massive \$12.2 million dollar project. The upgrade has also included installing 4.2km of underground 33kV cabling as well as new 11kV cabling.

The Spey Street Substation is a main distribution point for electricity in the city. It replaces the Doon Street Substation due to age, capacity restraints and seismic risk due to the nearby water tower.

The modern, indoor Spey Street Substation houses two 33/11kV transformers, 11kV switchboards and other associated electrical equipment. Built to today's standards, switchgear and equipment can be remotely monitored. The substation's compact, urban site meant factors such as noise and visual appeal needed close consideration, says PowerNet Project Manager, Mark Zwies.

"All equipment is fully enclosed to minimise noise and the design means the substation blends in with surrounding buildings," Mark says.

Prior to opening, around 50 nearby residents and businesses were treated to a tour of the substation to view its workings first-hand and to learn about its construction and operation.

New 33kV cabling installed

Running in conjunction with the construction of the Spey St Substation has been a significant project to install new underground electricity cabling to supply the substation.

In six 700-metre stages, three 33kV cables have been installed along a route stretching from Invercargill's Transpower Substation in Tuai Street to Spey Street. The work was carried out by Delta and Bond Contracts Limited.

"Earthworks were a big part of the project. Cables were placed in a single trench running through the centre of streets to minimise disruption. In the Central Business District (CBD), ducts were used to reduce the length of open trench needed and limit the impact on people travelling through the area," says Mark.

The 33kV cabling network was livened in April this year.

Extension of existing cables from Doon Street to Spey Street

The existing 33kV cables from Invercargill's Transpower Substation to the Doon Street Substation are being reconfigured so that there are dual 33kV circuits into the new substation at Spey Street. A new 33kV cable will be installed from Doon Street Substation to Spey Street Substation to provide options for shifting power loads from one circuit to the other which will provide reliability of supply, says Mark.

11kV cable transition from Doon Street to Spey Street

"The 11kV cabling will facilitate a smooth transition of customers to the new substation and also ensure that customers' future power supply is safe and reliable," says Mark.

Phase one of this work has been completed over the past three months, installing 11kV cabling in Tay, Jed, Esk, Don and Spey Streets and transferring six circuits from the Doon Street Substation to the Spey Street Substation. Now a further seven 11kV cables are being installed around Spey, Jed, Yarrow, Leet, Deveron, Gala and Doon Streets and the Invercargill Museum area.

"We thank the public for their patience as we complete this work," Mark says.

This final piece of work in the multimillion dollar project is on target to be completed by mid-February 2016.

"The work to build the substation and install cabling has been huge with challenging timeframes - it's a real credit to the hard work of our contractors, sub-contractors and staff that we're close to the finish line," Mark says.

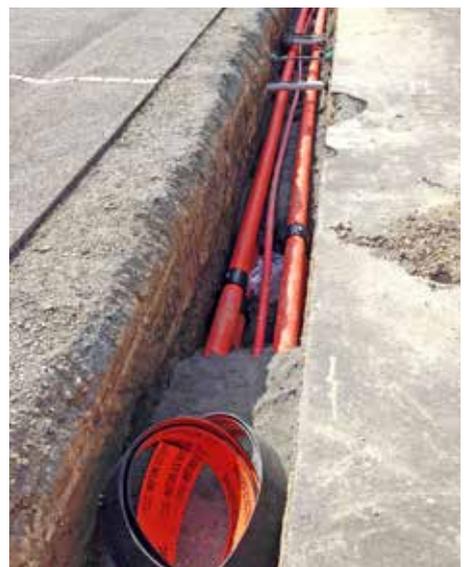
"Once the project is completed Invercargill residents and businesses will have an even more robust and future-proofed power supply. This comprehensive upgrade means that the CBD's power supply is now safer, more efficient and more reliable, and the city's capacity to absorb future growth is also enhanced," he says.



Upper Spey Street residents viewing the Spey Street Substation



Staff from Electrix, Bond Contracts and Delta installing the 33kV cable to the Transpower grid exit point in Invercargill



Ducting laid in Jed Street



Donation to Bluff Community Provides Critical Assistance

In October this year the Bluff community benefited from EIL's annual donation of an automated external defibrillator (AED).

AED donations are part of a three-year partnership programme between EIL's network manager PowerNet and St John. The partnership was established last year and aimed to improve public safety and first-aid education in the southern region.

AEDs are a life-saving tool which can increase a person's chance of survival after a cardiac arrest.

Along with EIL's donation, a second AED was also donated to the Bluff community by St John. Installed in lock boxes, the AEDs are publicly available 24/7 outside the Challenge Bluff service station and the Bluff Service Centre.

"Safety education and training provide an important community benefit. With our combined resources, PowerNet and St John can join forces to build safety and education promotion for our southern customers," PowerNet CE, Jason Franklin says.

Over time, the PowerNet and St John partnership will expand to provide additional programmes that support community safety.



EIL Director, Darren Ludlow, with the Challenge Bluff service station AED

EIL Asset Management Plan

As network manager, PowerNet is responsible for preparing an update to EIL's Asset Management Plan (AMP).

The AMP outlines planned projects to maintain and grow the EIL network over the next 10 years. It is updated annually.

The EIL AMP can be found at www.powernet.co.nz under the Line Owners tab.

We invite submissions from all stakeholders, prior to the next review. This process starts in August each year and the new plan is published by 31 March the following year.

Southland Warm Homes Trust

The work of the Southland Warm Homes Trust (SWHT) is continuing for another year after funding from the Energy Efficiency and Conservation Authority (EECA) was approved recently for the Healthy Homes Programme.

The SWHT, in conjunction with EECA, has carried out more than 6,000 insulation and heating retrofits in Southland and West Otago homes since 2008.

Funding under EECA's Healthy Homes Programme is targeted at those who stand to benefit most from having their homes insulated; those being low income households with high health needs, including families with children and the elderly. Landlords with eligible tenants are also included but will be required to make a contribution.

To be eligible, homes must have been built prior to 1 January 2000. Occupants must have a Community Services Card (CSC) and those with high health needs must be referred through an approved referral service.

In addition to the continued EECA/SWHT programme, SWHT and Awarua Synergy are also offering a summertime subsidy of up to \$2,000 for middle income families to undertake insulation.

The SWHT is very pleased to be able to carry on the work begun in 2008 and assist the more vulnerable members of our community.

For more details, contact the SWHT on 0800 WARM SOUTH or 0800 927 676.



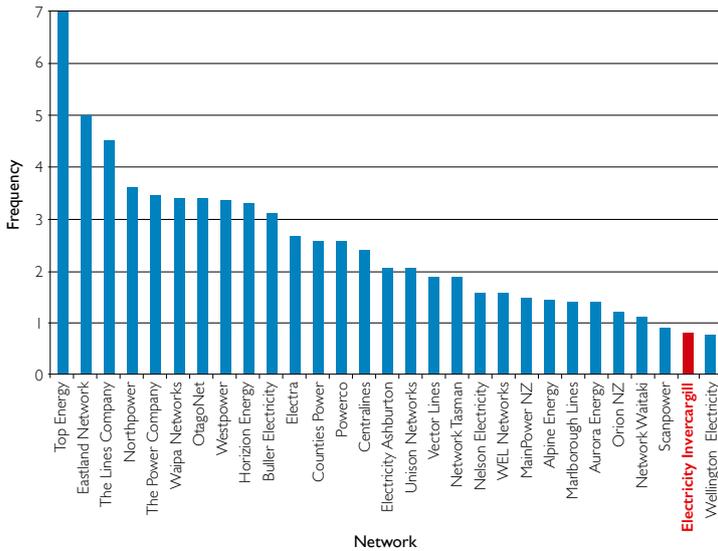
Funding for:	Insulation Contribution		
	EECA	SWHT	Home Owner
Residential dwelling built prior to 1 January 2000, and			
CSC holders with one or more occupants under 17 years or over 65 years and who meet the health criteria	50%	50%	*Free*
Landlords with CSC holding tenants with one or more occupants under 17 years or over 65 years and who meet the health criteria	50%	10%	40%
		SWHT	Awarua Synergy
Qualifying middle income families (Summertime subsidy)		\$800	\$1,200



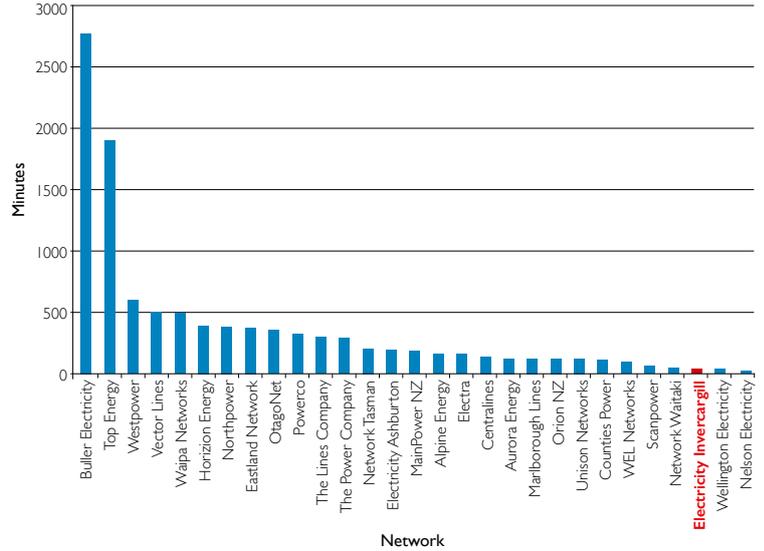
Network Reliability

The graphs below are known as reliability graphs. These show EIL's performance against other network companies in New Zealand. The graphs highlight how reliable the EIL network is and how infrequently customers are affected by power outages compared to other network customers in New Zealand.

Number of times each year a customer can expect to have a power cut
Industry SAIFI as at 31 March 2015

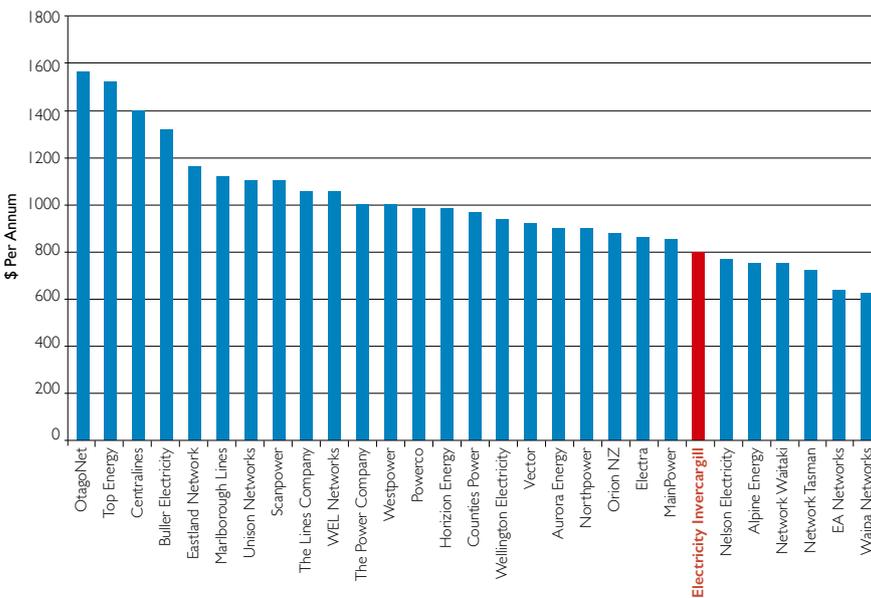


Duration in minutes a customer can expect to be without power each year
Industry SAIDI as at 31 March 2015



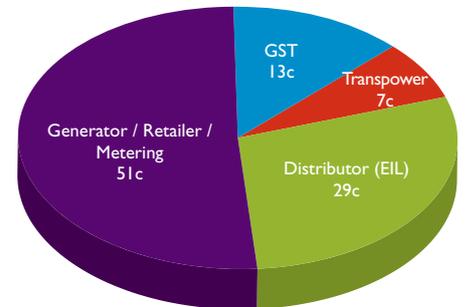
New Zealand Domestic Electricity Prices as at 31 August 2015

This graph shows the average cost of consumers electricity network line charges in comparison to other networks in New Zealand.



Source: Ministry of Economic Development - Quarterly survey of domestic energy prices August 2015

Breakdown of your electricity dollar



Network Statistics - at 31 March 2015

Consumers Connected	17,368
Residential Consumers	15,214
Industrial Consumers	126
Commercial Consumers	2,028
Network Length	662km
Consumer Density	26.2 consumers/km
Number of Distribution Transformers	449
Maximum Demand	60.7MW
Total Energy Conveyed	273GWh
Regulatory Value	\$72 million

Faults (Freephone)

EIL has a 24 hour, seven day a week call centre you can contact on 0800 808 587.

At home or at work, if your lights are flickering or dimming, it could be indicative of a potential problem that could turn into a major cost.

"Dim or flickering lights are a warning something is wrong with your electricity connection," says PowerNet's Health, Safety, Environment and Quality Manager, Graeme Webby.

"The first thing you should do is turn off or unplug as many appliances as possible and then call our faults number on 0800 808 587."

Mr Webby says if there is a problem with the electricity connection, the chance that electronic equipment could be "fried" is high. "There have been cases where a faulty connection has ruined all manner of appliances – TV's, washing machines and so on – so it is important to ensure you have surge protection on your expensive appliances."

Sometimes the fault will be in the house itself which will then require an electrician, but if homeowners call the faults number a faults person will check your network connection.

"At home or at work, you should always take the maximum care around electricity," says Graeme.

"Never go near fallen power lines or anything that could potentially be live after an accident."

If you see:

- Broken or leaning power lines
- Power lines clashing or arcing
- Power lines touching a vehicle
- Trees close to or touching power lines
- Anything that appears unusual on our electricity network

Contact the System Control room on 0800 808 587

Power Issues?
Call **PowerNet** on
0800 808 587
EIL
Electricity Invercargill Ltd

Safety Message – Before U Dig

With the majority of EIL's network underground, knowing what is down below can help you avoid any nasty surprises when you start digging around your home or business.



EIL 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 provides contractors, or others with details of planned works on a particular site. The Before U Dig team contacts the relevant member utilities (such as Councils, telecommunication providers and electricity network companies) in the area who provide information about the location of underground infrastructure before work starts.

Safety is paramount. If you're planning to dig below 300mm you need to get in touch with our service first, because contact with live cables or lines carries immense risk. Damage and unplanned outages become an issue for us and other infrastructure providers. If you aren't sure if a cable is live or not, don't try to find out yourself. Assume it is live and contact us first.

Christmas Message

2015 has been a significant year for EIL as we've forged ahead with important projects that support Invercargill's businesses and residents, and the city's future growth.

The construction and commissioning of the Spey Street Substation and the associated installation of 33kV underground cabling is the most substantial project EIL has undertaken in decades.

The substation is a critical lynchpin for the local network. Its modern infrastructure brings an increased robustness to reliability and security of supply, and future-proofs our capacity to support local development and growth.

Alongside this major project, our programme to decommission Central Business District underground substations and link boxes and move these above ground, significantly enhances the network's reliability and safety.

Diversification beyond our core electricity lines' businesses is an important part of our investment strategy going forward. With an eye to the future, in April EIL formed a wind generation investment partnership with The Power Company Limited and Pioneer Generation Limited to create Southern Generation Limited Partnership (SGLP). The partnership will own and operate the Flat Hill Wind Farm, officially opened in August (see story) and owns the Mt Stuart Wind Farm near Milton. SGLP provides EIL with a strategic and diversified investment option, representing a low-risk entry into the electricity generation market.

We're proud to be able to say that EIL is again in the top bunch of New Zealand's most reliable networks according to a Ministry of Economic Development survey. Indeed, at 31 March, EIL was measured as New Zealand's most reliable network. This is a credit to the foresight and good governance of EIL directors.

On behalf of our board and PowerNet staff, we wish you all the very best for a safe and happy holiday season. We look forward to continuing to supply your home or business with a safe and reliable electricity supply over the coming year.

Neil Boniface
Chairman



If you have any concerns about our service call us on 03 211 1899 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)