



# Powering Our Community

2014 Annual Review

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Full Financial Statements available at [www.mainpower.co.nz](http://www.mainpower.co.nz) or on request.

Front Cover: MainPower's new premises at Southbrook Business Park.

## A safe, secure and reliable power supply

MainPower New Zealand Limited, based in Rangiora, distributes electricity to the fast-growing communities of North Canterbury and Kaikoura. The ownership of MainPower is held in trust by the MainPower Trust on behalf of the community and customers of the region.

MainPower has been distributing electricity to the region for nearly 100 years. We deliver electricity to close to 37,000 homes and businesses via 4,873 kilometers of overhead lines and underground cables, across a geographical area of 11,180 square kilometers.

We continually strive to make available a safe, secure and reliable electricity distribution network and provide a level of service and safety that meets the expectations of our customers.

MainPower is one of 29 electricity distribution companies in New Zealand. These companies own and manage the regional and urban electricity distribution networks and are responsible for managing, on behalf of electricity retailers, the supply of electricity for customers and ensuring the safety, reliability and security of these networks.

Unprecedented growth throughout MainPower's region presents significant challenges. Priority continues to be given to both expanding and upgrading our distribution network to meet demand for electricity supply, and ongoing maintenance of the existing network.

Our company values reflect how we interact with our community and our customers – safety first, teamwork, loyalty, pride, fairness and integrity.

  
THE POWER TO MAKE IT HAPPEN



**Powering  
our community  
every hour,  
every day,  
every year.**



**Kaikoura based Network Field Operator Michael Ward.**

# MainPower Directors

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# 2014

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**left to right, top to bottom:**

Gill Cox (Chairman)

Allan Berge (Managing Director)

Trevor Burt

Stephen Lewis

Judith Hoban

Peter Cox



**“We are delighted to comment on what has been a period of stellar achievement by the company. Without doubt the highlight has been the relocation of MainPower’s entire Rangiora operation to a purpose-built facility at Southbrook.”**

**The achievements of the company during this past period were evidenced in a number of areas; viz –**

### **Financial Performance**

The company’s operating profit before Qualifying Customer Rebates and tax totalled \$17,716 million; cash generated from operations totalled \$20.252 million.

Qualifying Customer rebates credited during the year totalled \$8.447 million – a record level ‘payout’ by the company back to its customers.

### **Network Performance and Investment**

A record 560 million units of electricity were distributed across MainPower’s electricity distribution network during the year ended 31 March 2014.

MainPower completed a further \$14.652 million of new network investment during the year in order to support the unprecedented growth occurring in both urban and rural activity in the region.

### **Community Support**

The level of community support provided by the company in the past year totalled \$313,500. It compares to \$304,000 in the previous year. Our community support focussed on youth programmes - \$141,100 and on the promotion of energy efficiency for homes and businesses - \$81,200. Further details of these initiatives and others are provided on page 18 and 19.

### **Health and Safety**

MainPower continues to invest heavily in health and safety management and performance for both our staff and our community. It is pleasing to note that the improvements achieved in recent years have continued. Continual improvement in health and safety is however challenging – and is in fact a journey without end. While current performance in the area of health and safety is the best it has been for several decades, management and the Board are committed to further gains in this area, as we strive toward the goal of ‘zero harm’.

## **Relocation to Southbrook**

While not occurring strictly in the 2013-2014 reporting period covered by this Annual Review, in June 2014 MainPower relocated its entire Rangiora operations to new purpose-built facilities at Southbrook Business Park. This follows three years of operating out of temporary accommodation following the 2011 Canterbury earthquakes when we became aware that the High Street, Rangiora head office building met only 10% of the required building code.

As a result of the decision to relocate, both the Rangiora High Street and Keir Street sites have been sold – proceeds being used to partly fund the new facilities at Southbrook. The total cost of the new facilities, net of the sale proceeds of High Street and Keir Street, is \$13.807 million. This has been funded by way of borrowings, thereby spreading the impact over current and future generations of customers and shareholders. As further explained on page 16 and 17, the relocation provides for future proofing of MainPower's operations as well as providing a valuable resource for our North Canterbury community in the inevitable emergency events that will confront us in the future.

## **VirCom EMS**

While considerable variability continues in VirCom's business of electricity meter installation and management throughout New Zealand, it is pleasing to report that VirCom has again performed beyond expectations – a reflection of the management skill and effort that has been directed to this area of the MainPower Group operations.

## **Rural Development**

A significant driver of the rural economic development critical to the continued prosperity of our region is water and water management. MainPower, as the second largest shareholder, remains actively involved in the governance of Hurunui Water Project Limited. This company is in the process of developing an irrigation scheme in the Hurunui district which has the potential to irrigate up to 50,000 hectares of land.

## **Renewable Generation**

MainPower continues to pursue renewable generation where it can demonstrate an economic benefit to the company's core electricity network business. A small number of exciting projects are currently being investigated.

The proposed Mt Cass wind farm site continues to be monitored as required under the resource consent conditions, pending decisions regarding the further progression of this project.

MainPower, in its capacity of providing the transmission line, is also playing a major role with regard to the landfill gas to electricity project currently being progressed at the Kate Valley landfill.

With the changing landscape for both electricity demand and supply, MainPower is adopting an active but cautious stance in relation to generation investment, and will carefully evaluate opportunities to ensure that there is a high level of confidence that opportunities pursued will provide an appropriate level of benefit for the company, its shareholders and the community.

## **Acknowledgements**

The company appreciates the active and continuing support of its ordinary shareholder – the MainPower Trust, and its preference shareholders and consumers. It is the confidence in this support that allows the company to continue to fulfil such an active and important role in the economic and social development of our region.

The Board of MainPower also appreciates and congratulates all of the staff in the MainPower Group for their efforts and skill that have, in aggregate, delivered the stellar year that this Review comments upon.



**Gill Cox**  
Chairman



**Allan Berge**  
Managing Director

# Safety First

**“MainPower has an absolute commitment to health and safety. We don’t just talk about safety; we actively foster a strong safety culture, ensuring the wellbeing of our staff and our community.”**

**Dayle Parris**  
Safety, Health, Environment & Quality Manager



Above: MainPower’s wise owl character was created to communicate the company’s ‘Safety First’ message.

## Supporting Safety Delivery

In 2013, MainPower carried out an independent review of our approach to health and safety delivery. As a result of this review, the company has increased resourcing and developed a strategic health and safety business improvement plan. A dedicated team of safety, health, environmental and quality professionals has been established to deliver continuous improvement through increased staff engagement, process and procedural reviews, new technology, along with a greater emphasis on staff training and development.

Improving our quality standards is also a high priority. The ISO re-certification and accreditation of our safety, health, environment and quality standards continues to confirm that our systems and approaches are consistent with national and international best practice.

## Supporting Safety Education in the Community

North Canterbury has experienced a number of significant weather events in recent years. The 2013 September windstorm was a timely reminder of the need for both the company and customers to better manage trees within close proximity to power lines.

MainPower commits a significant annual investment to the management of trees near power lines. We continue to reinforce the message to customers that neglecting tree maintenance has flow on effects for everyone in the community, in terms of electricity supply and cost.

To support this work we initiated a public safety campaign to educate customers on how to keep safe around the electricity network. This includes information on landowners’ roles and responsibilities in regard to tree management around power lines as well as the promotion of general electrical safety messages using our wise owl character.



MainPower Utility Arborists at work



## Performance Highlights 2013 – 2014

**\$17.7m**

**NET PROFIT  
BEFORE TAX  
AND REBATES**

**\$14.6m**

**NETWORK  
CAPITAL  
INVESTMENT**

**\$8.4m**

**CREDITED  
IN REBATES  
TO QUALIFYING  
CUSTOMERS**

**1,440**

**NEW  
CONNECTIONS**

## MainPower's Executive Team



From left to right: **Warren Wright** (Group Finance Manager), **Wayne Lapslie** (Corporate Services Manager), **Sandra O'Donohue** (Human Resources Manager), **Allan Berge** (Managing Director), **Andrew Hurley** (Generation Manager), **Dayle Parris** (Safety, Health, Environment and Quality Manager), **Peter Hurford** (Engineering Manager).

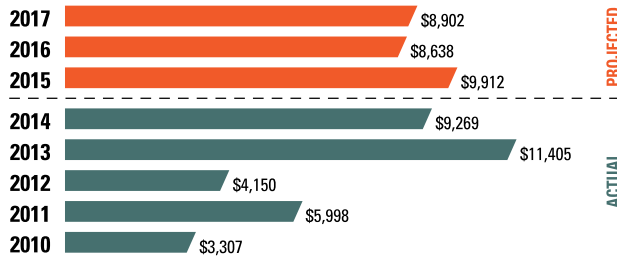


# Financial Snapshot

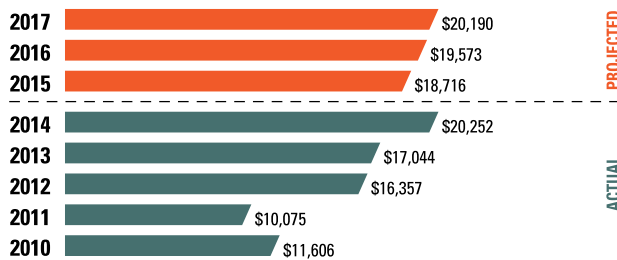
“Growth continues unabated within the region as MainPower continues to invest heavily in infrastructure development with \$33m being reinvested in 2014. Given the continued demand for capital investment, MainPower in partnership with Westpac have entered into a sustainable funding arrangement to provide security of cashflow as MainPower meets customer’s development expectations. Even with a heavy focus on infrastructure investment, MainPower’s balance sheet remains very strong with \$294m of assets and only \$29m of term debt.”

**Warren Wright**  
Group Finance Manager

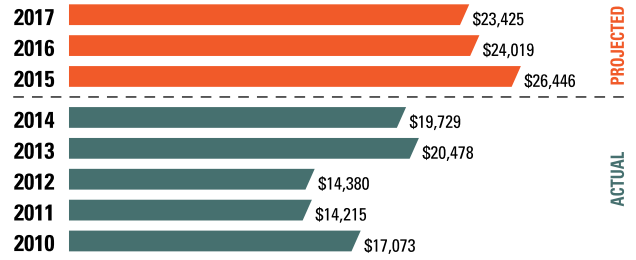
## Operating Profit Before Taxation (from continuing operations) \$000



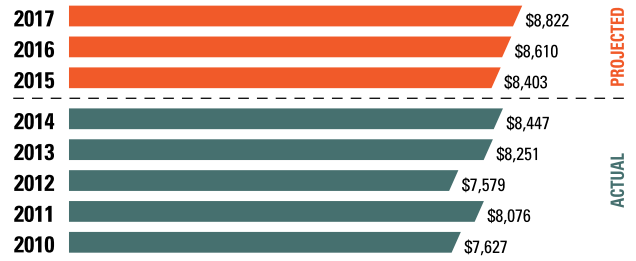
## Cash From Operating Activities \$000



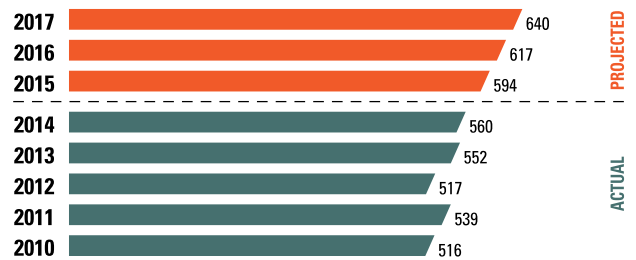
## Investment in the Distribution Network (Capital and Maintenance) \$000



## Rebates Credited to Qualifying Customers \$000



## Gigawatt Hours Sold across MainPower’s Network (GWhs)



# Our People

“The region has continued to experience significant growth over the past year. Our challenge continues to be the resourcing of current demand whilst also preparing ourselves for the skill requirements of an intelligent network future. We are achieving this through a combination of recruitment and the development of our existing people.”

**Sandra O'Donohue**  
Human Resources Manager

FIELD SERVICES/TRADES  
**59.5%**

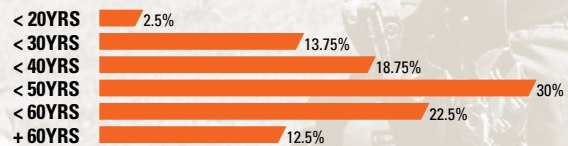
ENGINEERING  
**20%**

GENERATION  
**2%**

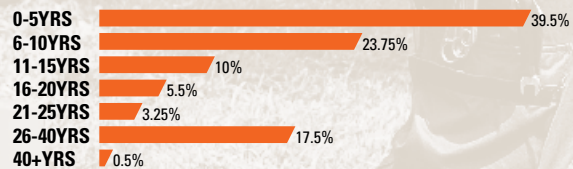
MANAGEMENT  
& OFFICE STAFF  
**18.5%**



## EMPLOYEES BY AGE



## EMPLOYEES BY LENGTH OF SERVICE



## Showcasing our skills

MainPower field staff competed against the best of the best at the 2013 Line Mechanic Competition, an annual three day event organised by the Electricity Supply Industry Training Organisation. Teams from all over New Zealand competed in technical events, testing the core skills of their trade, under the watchful eye of an experienced judging panel of industry experts. MainPower's team included Linemen Andrew Robinson, Daryl Smith, Johnny Wilson and Sam Palmer with Warren Palmer the team's reserve and Trevor Shadbolt, team manager. The team had success, taking out the Overhead Line Hardware Installation section of the competition.

**"It's a valuable learning experience for all involved and a great example of industry best practice. The level of competition is intense with top teams from the North Island competing. If you want to win, you need a lot of training. The September windstorms reduced the amount of training we had, with our guys working hard out on restoring power to the region, so we were pretty happy with our section win."**

**Andrew Robinson**  
MainPower Line Mechanic Foreman

## Improving our skills

To assist our Foremen, Team Leaders and Leading Hands to enhance their leadership skills, MainPower has been working with BR Training, providers of leadership training to the electricity supply industry. Training in effective leadership has been completed by 25 staff with the programme to be continued this year. Improving leadership practices, skills and techniques is helping MainPower build a stronger team and develop more effective workplace relationships.

**"I started out as a Trainee with the company over ten years ago and am now Foreman of a team of five. As you progress through the ranks towards becoming a Line Mechanic it requires a lot of formal training both skills based as well as learning from others. Leadership training provided me with the opportunity to learn skills that I can apply out in the field and also in everyday life. Learning how to delegate and motivate others has helped make me better at my job."**

**Stephen Shadbolt**  
MainPower Line Mechanic Foreman


**171**  
EMPLOYEE  
NUMBERS

**86%**  
MALE

**14%**  
FEMALE

**44**  
YEARS  
AVERAGE AGE



A photograph showing three utility workers in orange safety gear and yellow hard hats working on a large wooden log in a wooded area. The workers are focused on their task, with one worker in the foreground using a tool on the log. The background is filled with dense, green foliage and tree branches.

**The 2013 September windstorm that swept across North Canterbury resulted in significant damage to the electricity network, cutting power to almost 14,000 or 40% of MainPower's customers.**





The combined effort of our dedicated team, meant that the vast majority of our customers had their power restored within 24 hours.



“I was extremely impressed by MainPower’s response to the recent outages caused by the windstorm. The people on the phones were, without fail, very cheerful, helpful and patient in what must have been a thoroughly repetitive conversation. From the information available I felt that there was every effort being made to correctly prioritise the recovery work and that everything was being done as quickly as possible.”

**Ben Baldwin**

MainPower customer from West Eyreton.

# A Snapshot of History

## 1888

New Zealand's first electricity lit township was Reefton on the West Coast with a hydro scheme powered by the Inangahua River.

## 1914 – 1921

In **1914** Lake Coleridge, the country's first government built hydro power station, officially opened in November.

**1916** saw the first public supply of electricity north of the Waimakariri River. The then hydro electric branch of the Public Works Department supplied Richard Evans' Flourmill at Wilson's Siding and the North Canterbury Sheepfarmers' Freezing Works near Kaiapoi.

Kaiapoi Borough Council commenced electricity supply within the borough boundaries in **1917**, followed by Rangiora in **1919** and Kaikoura in **1921**.

## 1927 – 1933

Discussions commenced between the North Canterbury Counties and the Public Works Department regarding coordination of electricity supply under power board control. The North Canterbury Electric Power Board (NCEPB), predecessor to MainPower, was subsequently constituted on 26 February **1927**.

The NCEPB commenced operations as an electrical supply authority on 1 July **1928**. Hurunui joined to form an enlarged North Canterbury Electric Power Board in **1933**.

## 1950s – 1960s

Hydro power comes to the fore of New Zealand's energy generation. The earliest of the large hydro electric projects in the South Island was the Roxburgh Dam, commissioned in **1956**. The Waitaki Hydro Scheme has eight power stations; Tekapo A was commissioned in **1951**, Benmore and Aviemore were constructed in the **1950s** and **1960s**.

## 1964

The North Canterbury Electric Power Board relocates to a new building on High Street in Rangiora; the first time the company had its own building since its formation. The new building was the first in Rangiora to be constructed mainly of pre-stressed, pre-cast concrete.



Rangiora, North Canterbury.  
Credit – Fairfax Media New Zealand/The Press.

Lake Coleridge Power Station.  
Credit – Selwyn Library.

Aviemore Power Station.  
Credit – Meridian Energy.

NCEPB Head Office,  
High Street.



## 1972 – 1977

Rangiora Borough electricity supply to 2,000 consumers was merged into the North Canterbury Electric Power Board in **1972**. Colour television was introduced in **1973** in anticipation of the British Commonwealth Games which was held in Christchurch in **1974**. The great north-westerly storm of August **1975** with peak recorded winds of 130 km/h and gusts of 172 km/h caused significant damage to the region. Kaikoura Borough Council electricity supply merged into the North Canterbury Electric Power Board in **1977**.

The country's largest hydro electric station is Manapouri Power Station, completed in the **1970s** and generating power mainly for the Tiwai Point Aluminium Smelter.

## 1982 – 1988

A new substation at Kaikoura came into service in March **1982**, supplying the area north of the Kahutara River to the Kaikoura County.

In **1986** the newly elected fourth Labour Government reforms the Electricity Division of the Ministry of Energy into the Electricity Corporation.

MainPower's current Managing Director, Allan Berge, was appointed Chief Executive of the NCEPB in **1986**. The North Canterbury Electric Power Board celebrates 60 years of service in **1988**.

## 1992 – 2003

The North Canterbury Electric Power Board rebranded to MainPower in **1992** due in part to changes taking place in the industry and the requirements of the Energy Companies Act.

The first MainPower Trust was established in **1993** and was resettled in **1995**. The Trust Fund is held on behalf of the Trust's beneficiaries; MainPower's Qualifying Customers and the North Canterbury and Kaikoura communities.

In **2003** MainPower purchases Kaiapoi Electricity from Waimakariri District Council.

## 2010 – 2013

Canterbury experiences a 7.1 magnitude earthquake in September **2010** and a 6.3 magnitude earthquake in February **2011** with the loss of 185 lives. Significant damage was caused to MainPower's network at Kaiapoi and neighbouring beach settlements.

MainPower donates \$100,000 to the Waimakariri Mayoral Relief Fund to support families facing immediate hardship. In June **2011**, MainPower's High Street head office building is determined unsafe and vacated.

In September **2013** North Canterbury experienced a 1 in 50 year windstorm which caused significant damage to the electricity network.

## 2014

MainPower relocates to a purpose-built head office and workshop facility at Southbrook Business Park, the company's second move since its establishment in 1927.

Manapouri Power Station.  
Credit – Meridian Energy.

NCEPB Showroom, Kaikoura.

We had a very good reason to change our name.  
The future.  
**MainPower**

Credit – Fairfax Media New Zealand/The Press.

MainPower's new premises.



## Planning for Our Future

**The Canterbury earthquakes and last year's windstorms taught us all a valuable lesson about emergency response procedures and planning for the unexpected. MainPower has further developed its comprehensive business continuity plan, which we test annually, to make sure we continue to operate and provide critical services in the event of adverse conditions.**



With unprecedented population growth in the region and the increase in building activity, MainPower has experienced growth of its own with a threefold increase in new connections. For MainPower, the prospect of outgrowing its existing High Street site was becoming a reality. Not to mention public safety considerations with an ever increasing number of large trucks and operating plant having to access two different sites in the centre of Rangiora. With the company's head office building in

High Street not meeting current building code post-earthquakes and the prospect of costly remediation, the decision was made to relocate the High Street and Keir Street sites to a purpose-built facility at Southbrook Business Park.

Planning for business continuity has been a paramount consideration for MainPower. An Importance Level 4 (IL4) rated corporate building, a structure with special post-disaster functions, MainPower's new head office is designed to be robust enough to minimise

operational disruption following a major earthquake or other disaster. The site also has 1 in 500 year flood protection and an uninterruptible power supply and backup generator for improved control and contact centre capabilities, as well as other resilience features necessary for an essential service provider.

Relocating to a new site was a significant milestone for MainPower, its staff and the community. It is only the company's second move since MainPower was established.



# Our Community

The communities of North Canterbury and Kaikoura, which encompass the districts of Waimakariri, Hurunui and Kaikoura, are very important to MainPower. MainPower is an enthusiastic supporter of the community in which we work. Our sponsorship strategy supports the social, environmental and economic future of the region.

## ► WaiSwim Programme

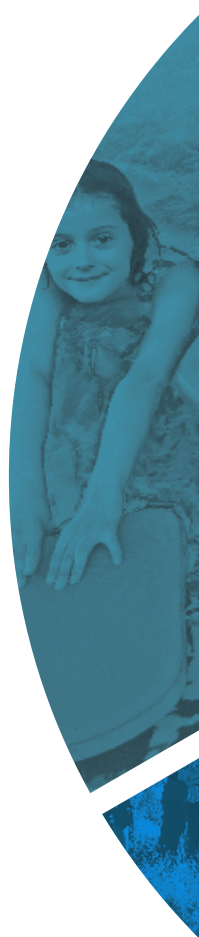
MainPower seeks to ensure that all primary school children in the region have the opportunity to learn to swim and achieve water safety skills that will equip them with the knowledge of how to survive in the water. Through a partnership with the North Canterbury Sport and Recreation Trust, Kiwi Sport, Southern Trust and the Waimakariri District Council, the MainPower WaiSwim Programme has delivered over **44,000 swimming lessons** to **3,758 children** from **33 schools** in 2013.

## ► Coaching Programme

MainPower provides funding support to enable sport coaching sessions in **42 primary schools** throughout North Canterbury and Kaikoura, in conjunction with its partner the North Canterbury Sport and Recreation Trust. Over **6,000 students** are benefiting from the structured, skills based programme which teaches fundamental skills through to more sport specific skills, depending on the needs and interest of the school and their students. The programme ignites interest and links to local sports clubs and organisations and provides an opportunity for relationship building, teamwork and personal development in a physical setting.

## ► Youth Sports Scholarships

Each year MainPower promotes sporting success and excellence through the MainPower Youth Sports Scholarships which are awarded to talented young sportspeople of our region at the MainPower Sports Awards. In 2013, **ten finalists** were selected with Rangiora's very own world champion rower Alex Kennedy named the top sports scholar. MainPower, in association with the North Canterbury Sport and Recreation Trust, has increased their sponsorship support with all finalists now receiving a cash prize to enable them to pursue their sporting careers.







## Youth

MAINPOWER PRIMARY  
SCHOOL WAISWIM PROGRAMME

MAINPOWER PRIMARY SCHOOL  
COACHING PROGRAMME

MAINPOWER YOUTH SPORTS  
SCHOLARSHIPS

MAINPOWER SPORTS AWARDS

MAINPOWER UNIVERSITY SCHOLARSHIP

THE 5Es OF ENERGY  
TEACHING RESOURCE

SECONDARY SCHOOL PRIZES  
FOR EXCELLENCE

## Energy Efficiency

WARM UP NEW ZEALAND:  
HEALTHY HOMES  
INSULATION

ENERGY ADVICE SERVICE

HOME ENERGY  
CHECKS

## Economic Development

ENTERPRISE NORTH  
CANTERBURY

NORTH CANTERBURY  
RADIO TRUST

## Environmental Sustainability

MAINPOWER HURUNUI NATURAL  
ENVIRONMENT FUND

## Event Support

MAINPOWER OVAL

NORTH CANTERBURY  
FEDERATED FARMERS FIELD DAY

NINA VALLEY ECOBLITZ

### ▶ Energy Efficiency

With funding support from MainPower, Community Energy Action Charitable Trust has installed insulation in **75 low income households** this past year in North Canterbury and Kaikoura, at no cost to homeowners.

A warm, dry home is a healthy home and good insulation and efficient heating are key to achieving this. MainPower also supports the Trust's Energy Advice Service. Available for all incomes, homeowners and tenants, the no cost, independent service gives practical information over the phone, on making your home more energy efficient. A Home Energy Check (home visit) by one of their energy advisers is also available free of charge to North Canterbury residents with tips to make homes warmer, drier and more energy efficient.

### ▶ Economic Development

MainPower is a corporate sponsor of Enterprise North Canterbury and principal sponsor of the biennial North Canterbury Business Awards, supporting growth and diversity of the local economy.

MainPower's ongoing support of North Canterbury Radio Trust ensures that community radio station Compass FM can continue to broadcast to its listeners in the region.

### ▶ Environmental Sustainability

Established in partnership with the Hurunui District Council, the MainPower Hurunui Natural Environment Fund supports community initiatives to improve the district's biodiversity. In 2013 a record 19 applications were received with funds distributed to **eight worthwhile projects** including regeneration of land to encourage wildlife, information signage to raise awareness and protective fencing around native bush.

# Our Network

“The need for resources to cope with growth from customer demand whilst keeping up with system maintenance has never been greater.”

**Peter Hurford**  
Engineering Manager

## Major Network Projects

### Waimakariri West District

This project commenced two years ago to double the available capacity into the western area of the Waimakariri district between Swannanoa and Oxford, arising from increasing demand for power caused by growth in the dairy sector. This year sees the continuation of the five year project, budgeted to cost \$22m for network upgrades and a further \$4m for Transpower upgrades at Southbrook. This year's work will focus on completing the upgrade of the Swannanoa substation, continuing construction of the new Burnt Hill substation and completion of the 66kV (Kilovolts) line upgrade to Burnt Hill.

### Woodend District

There is rapid growth occurring in the Woodend and Pegasus area, including the Ravenswood development and further growth from Pegasus Town. MainPower is currently managing this growth through recently upgraded feeders from the Kaiapoi substation. The planned upgrade of the Ashley substation coupled with local Woodend feeder upgrades will assist in managing growth at Woodend for the immediate future. Eventually, a new Woodend substation will be required to meet additional growth. This project is expected to cost \$6m for network upgrades and \$5m for Transpower upgrades over the next five years.

### Ashley District

This new project will cost \$5.8m over the next four years and provides additional capacity at the Ashley substation to take over some of the growing load in the Rangiora northern and eastern areas, providing increased security of supply to the Loburn, Ashley and Sefton areas as well as strengthening links to Amberley. The project involves the replacement of two transformer banks at Ashley to create 40 MVA (Megavolt ampere) of firm capacity and the creation of several new high capacity 11kV feeders into the surrounding area.

### Culverden District

This new project will increase the available capacity at the Culverden substation from 30 MVA at 33kV to 80 MVA at 66kV and will include a major rebuild of MainPower's local Mousepoint substation and 22kV feeders into the Culverden District. The project is budgeted to cost \$8.6m for network upgrades and a further \$9m for Transpower upgrades at Culverden over the next four years. The upgrades have been caused by very rapid load growth from dairying and irrigation, particularly from the Balmoral area. The focus of work this year is on the design phase for the Transpower component and MainPower's substation, along with the start of some feeder upgrades.



# Customer Service

The 2013 September windstorm in North Canterbury caused widespread power interruptions for many MainPower customers and tested our customer service to the limits. The vast majority of the power faults were caused by trees making contact with power lines in the strong winds. As a result, MainPower will be taking a stronger stance going forward on trimming and removing trees that could be a hazard to power lines in the region.

In the last year, MainPower completed over 1,400 new connections; the majority of these were in the Waimakariri

District, New Zealand's fastest growing district in 2013. This truly tested MainPower's resources, but with an expanding workforce and contracting in additional resources, we managed to meet customers' expectations on delivery.

MainPower has installed a new telephone system in our premises at Southbrook Business Park, which will improve our service to customers by being able to manage a greater number of calls during major power outage events and the ability to update customers sooner with information on power system faults via the telephone.





# Renewable Generation

Cleardale Hydro Power Station.

**“MainPower’s commitment to locally produced generation has led to investigations into a number of renewable energy opportunities which offer long term strategic, economic and operational benefits to our network. Covering such a large, predominately rural and remote area, there are considerable renewable resources available including hydro, wind and solar.”**

Andrew Hurley  
Generation Manager

## Supporting regional resilience

MainPower's focus for generation projects is on areas where we can provide direct support to our network. One area of increasing importance is Hanmer. Although only a small town, Hanmer's importance as a tourist destination means that a backup source of electricity is desirable. The objective is to achieve 'N-1' reliability, meaning that if any one component of the supply system is down, the town can still function without the need for power cuts. It's all about providing locally generated backup electricity, should the main supply line from Culverden to Hanmer be disrupted. As an example, the Kakapo Brook hydro project is an important first step as it has the potential to provide a reliable supply of power covering almost half of Hanmer's load, particularly in winter months when the demand is high. MainPower is also considering other options for small hydro development and distributed generation in the area and is supporting a proposal for a micro-hydro scheme at Boyle Lodge Outdoor Education Centre, a leading provider of outdoor education to schools and community groups.

### Kakapo Brook Hydro Scheme

In conjunction with the landowner, MainPower has applied for resource consent for a combined irrigation and hydro scheme taking water from Kakapo Brook and returning it to the Hope River near the Highway Bridge.



Proposed location of Kakapo Brook Hydro Scheme.

### Browns Rock Hydro Scheme

MainPower is working alongside Waimakariri Irrigation Limited (WIL) to develop an opportunity to combine hydro generation with the WIL irrigation scheme. Water for the proposed scheme will be taken from the Waimakariri River through the existing WIL intake at Browns Rock. Potential generation captured outside of the irrigation season is a good match for MainPower's peak winter loading in the Rangiora-Oxford area. The proposed hydro scheme has the potential to produce up to 5.5 MW (Megawatts) and 30 million kWhs (Kilowatt Hours), around 6% of annual demand in the MainPower network.

### Mt Cass Wind Farm Update

MainPower has resource consent to develop a wind farm at Mt Cass, east of Waipara. Over the past year, environmental monitoring has continued at the proposed site. The project will provide significant benefits for the region's ongoing energy needs and supports MainPower's focus on developing renewable generation opportunities in the region. As part of our three year monitoring programme we have completed our detailed study of bird populations and are on our second year of baseline gecko monitoring. Investigations into groundwater quality have progressed with target samples being collected. In the coming year we intend to investigate our options for ongoing development of the site.



Browns Rock River Intake.



# Then & Now

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## MainPower Controller **Adam Slater**



MainPower's Control Room circa 1970s.

The technology may have changed but the job remains the same. MainPower's Controllers are the main communication line between staff and customers and the region's power system.

**“We are basically like air traffic controllers for power. We communicate with workers out in the field, coordinating planned power interruptions. We always try to minimise the effect on customers but the work is essential and at the end of the day it means that the power supply will be more stable. We also monitor the network load and manage unplanned outages. A call to MainPower's 0508 fault line comes direct to the Control Room. It is our job to isolate the problem and send out a crew to fix it. We rely on customers letting us know when their power is out, it helps in our investigation and means we can get the power back on as soon as possible. Being a Controller requires a lot of commitment; outages don't just happen during normal working hours. Controllers also need to have the ability to work under pressure and keep calm.”**

## MainPower AutoCAD/GIS Technician **Henry Palmer**



The early days of CAD draughting at MainPower.

AutoCAD/GIS Technician Henry Palmer joined MainPower straight out of polytechnic and has been with the company for close to three years. Part of the network assets group, MainPower's four AutoCAD/GIS Technicians are some of the company's youngest employees.

**“We work with computer aided design (CAD) and documentation software which allows us to design, draft and model MainPower's electricity network assets. This runs alongside a geographic information system (GIS) which is constantly being updated as new infrastructure is added to the network. What that means for the customer is that when there is a power outage, the Control Room can access our systems to quickly isolate the problem, using the most up to date information. We also work with customers to provide underground cable location advice which is essential for any digging or excavation work.”**

1977



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MainPower employees Trevor Shadbolt, Russell Harris, Ron Archer and Stephen Batchelor competing at the 1977 Linemen's Competition in Timaru. Reunited some 40 years later, the crew have a combined 176 years of service to MainPower. Overhead Supervisor Trevor Shadbolt recently retired after 51 years with the company. Over that time, Trevor has worked his way up through the ranks; Trainee Lineman, Charge Hand/Foreman, Live Line Foreman, Planning Officer and in 2009 Overhead Supervisor. Trevor has seen significant change throughout the years.

2014



**"The company has changed for the better, both in terms of personnel and equipment and more importantly, safety."**

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**At MainPower, we believe our people are our most valuable asset. We have talented and committed employees, from field staff to office staff, who provide the highest standard of service to the community.**



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