

December 2020

ACROSS *the* LINES

What a Year to Reflect On



Jason Franklin

As we fast approach the end of 2020, we can all agree this has been the most extraordinary of years, and we should be proud of all we have achieved in the most challenging of circumstances.

Our teams have shown remarkable resilience in weathering floods, storms and the Covid-19 pandemic while continuing to deliver safe, efficient and reliable power supply across all the networks PowerNet manages.

We have talented and dedicated people across our business who have worked together to meet the significant challenges that have been thrown at us during the course of 2020.

PowerNet has continued to embrace and drive business improvements through the use of new technology and our critical success factor of continuous improvement - and when a personal touch is required we've led the way with the likes of face-to-face safety training. A huge thanks to all the PowerNet team for your dedication to your work during the year.

While it seems like a long time ago now, PowerNet was well represented at the Southern Field Days in February, where we talked to many people about public safety around rural environments.

I am personally very proud of initiatives such as the Psychological First Aid Programme (PFA) set up in 2019, which has been embraced by staff as a valuable wellbeing programme. It's gratifying to see how much people value talking to someone internally who they trust when looking to seek assistance from trained professionals who can make a difference.

While we've had many challenges to meet, we have continued to consolidate and future-proof our networks, and take advantage of the business growth opportunities identified.

Major project work in 2020 has seen the design and construction of a new 33kV and 11kV supply from the Colyer Rd Zone substation to a new substation at Open Country Dairy completed. As part of the \$4.6 million project to supply electricity to the Open Country Dairy nutrition plant and boiler, power was connected to the site in July.

We designed and are now operating the Rowallan Microgrid in Western Southland, on the edge of the Fiordland National Park - comprising solar generation, battery storage and a backup generator. This is PowerNet's first such off grid power supply system. In areas with low numbers of customers and at the edge of the remote parts of our networks, where investment is required to replace aged poles, new energy technologies may enable a more robust and economic solution to deliver supply to these customers rather than reinvesting in traditional poles and wires.

The Gorge Road transformer upgrade and switchgear replacement project was also completed during 2020. While we had effective operational controls in place, removing an historical workplace safety exposure means we now have equipment that is more suitable at this substation.

Our long-term presence in South Otago has been bolstered with the new PowerNet Balclutha depot and office build completed. We are currently building the new truck shed and warehouse along with a retail store for Corys Electrical, these buildings are scheduled for completion by the end of this year. The whole Balclutha site is now fit-for-purpose for a 21st century operation. The new building provides an improved work environment with modern office spaces, and better vehicle, workshop, storage and workplace safety for our Balclutha team.

Continuing the theme of improved facilities, the Lumsden team moved into their new depot early this year. The new depot includes a workshop, vehicle storage space, and cafeteria. It fits well with the significant network investment in the region, with new and upgraded substations and lines across the Oreti Valley region.

Our project to integrate PowerNet Central with PowerNet was completed in April. PowerNet's team in Queenstown has worked closely with the wider Southland and Otago PowerNet teams during recent years. The team provides network design services, capital construction works, and a maintenance and faults service for the Electricity Southland Ltd network in Queenstown - Lakes and Wanaka.

Opportunities continue to grow in the region with subdivision growth and growth of amenities to cater for increasing population. Our network in the Queenstown - Lakes and Wanaka regions has now extended to include Cromwell.

The Southland Power Trust (SEPSCT), The Power Company Ltd (TPCL) and the Energy Efficiency and Conservation Authority (EECA) teamed up in November to help make Southland and West Otago homes more energy efficient through the LED Bulbs giveaway. The initiative offered four free LED lightbulbs to every customer on The Power Company network. PowerNet managed this initiative on behalf of the SEPSCT and TPCL.

Energy efficiency was also a key topic during a panel discussion I took part in discussing the different initiatives and tools available to help Southland transition to a low-emission future and mitigate the effects of climate change.



L/R: PowerNet chief executive Jason Franklin and St John regional general manager South Island Craig Stockdale, St John's Girls' school deputy principal Nathan Hughes and St John Southern Region, 'Weaving Wellbeing' programme tutor Felicia McCrone, with Year 8 students, Kaitlyn, Lucy, and Laura.

Our people are our greatest asset and there are numerous examples this year of people going above and beyond, whether it be helping members of the public out at the scene of a road accident, creating training videos that lead the way, delivering through the most challenging projects or putting their hand up to help out for a good cause. We continue to do a great job delivering day in, day out for the people of our region.

Since 2014, St John and PowerNet have worked towards a shared goal to have one first aid trained responder in every household in the Southern region and that work continued this year.

In August, we renewed our sponsorship with St John for a further three years, with a new focus on safeguarding mental health and wellbeing for our Southern communities.

We are now principal sponsor of two new initiatives; the St John 'Weaving Well-being' programme designed to support Year 7 & 8 students to feel good about themselves and to provide them with a number of resilient ways of thinking, which will support them in times of challenge. The second initiative; the St John 'Mental Health First Aid' course gives attendees skills on how to learn to support work colleagues, friends and family members experiencing mental distress as well as learning how to identify, understand and respond to signs of mental health issues.

Supporting another very worthwhile cause, the Southland Charity Hospital, saw staff raise enough funds to buy four sponsored bricks - a fantastic effort.

If I don't catch up with you before the end of 2020 - please have a happy, safe and relaxed Christmas holiday season and best wishes for 2021. Enjoy your well-deserved break with friends and family after such a challenging but rewarding year.

Jason Franklin
Chief Executive



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Challenging Year Brings out Best in PowerNet Staff

Keeping PowerNet's managed networks on track during an extremely challenging year is testament to the quality of its staff, chief operating officer Justin Peterson says.

The year started with broken 66kV poles, flooding and storms before the Covid-19 pandemic ramped up in New Zealand during March.

"Overall we did really well considering the challenges," he said.

Justin said the safety of staff was the highest priority during these testing times but as an essential service, they also needed to maintain the safe, efficient and reliable power supply to the networks.

During the Covid-19 lockdown, operational bubbles were created to make sure network disruptions were kept to a minimum, and that a "bow-wave" of maintenance did not build up, he said.

"Everyone that needed to come to work did come to work and that's testament to the commitment from people in the organisation."

PowerNet has also been working hard to meet new Commerce Commission default price-quality paths, Justin said.

The price-quality paths set out the maximum revenue lines companies are allowed to earn from their customers and the minimum quality standards they must meet, measured in terms of power outages on their networks.



Pole replacement undertaken at night-time in Riverton.

Another key project in 2020 has been putting together an over-arching health and safety strategy developed by field teams for field teams.

"It's about giving them ownership. They've worked out the key points to work on."

This bottom-up approach was paying dividends, with field teams feeling empowered to drive improvements in their own workplaces, he said.

Justin also wanted to recognise the great work undertaken on rebuilding the Riverton feeder - where a phenomenal amount of poles and other network equipment had been replaced during the year.

Bringing Health and Safety Closer to the Field



Brett Coradine

Making health and safety more practical for staff in the field is the focus of a new PowerNet initiative.

In July, PowerNet welcomed health and safety business partner Brett Coradine to the team - based in Invercargill.

PowerNet distribution manager Danny Leonard said the company has an excellent health and safety team, and training team, but wanted to bridge an identified gap between policy and "making it real" on-site.

"We wanted to bring health and safety closer to the field."

They needed something that suited practical people - and it needed to be delivered by someone who had been there and done that in the field, but was also a health and safety professional, Danny said.

This is where Brett fitted the bill perfectly, he said.

"We can already see he's having an impact."

Brett was working with field staff on health and safety strategy development for operational division workshops, with input from depot leaders, team leaders, health and safety representatives and union representatives, Danny said.

"Each depot does an analysis of their health and safety and comes up with an improvement strategy. They're setting their own improvement pathways."

Brett was rolling out the critical control framework in the field during the next six months, which will be aided by the strategy work being done, Danny said.

"The feedback has been great; some depots are just jumping on this and owning it."

Safety standards have always been a high priority - and a continuous improvement mentality was helping to set new safety benchmarks, Danny said.

PowerNet plugged into Queenstown - Lakes and Central Otago Growth

PowerNet is making a mark in the Wanaka area with work to install power supply at the 117-lot Clearview Subdivision well underway, PowerNet network engineer Phil Chittock says.

The Clearview Subdivision is not quite on the scale of the nearby 1600-lot Northlake Subdivision, which PowerNet is also working on, but was important as it would be tied into the bigger subdivision reticulation to ensure security of supply for both, he said.

"It's quite a critical subdivision to get going for us, geographically it was a good decision for us," Phil said.

Clearview Subdivision construction work got underway in August with cable and pillar box installations. The subdivision is being built in three stages, with the first stage of 50 lots to be completed before Christmas.

"We have a planned network extension that will eventually stretch over the Sticky Forest hill that will give an alternate connection to Northlake."

The Clearview Subdivision is scheduled to be completed at the end of 2021.

PowerNet is also installing power supply at the Wooing Tree Subdivision at Cromwell, which comprises 270 lots, during the next four years.

Development in the Queenstown - Lakes and Central Otago area had not slowed down, and PowerNet was joint venturing to install supply at four more subdivisions in these areas.

"It's pretty exciting stuff the amount of new building going on."

The Queenstown - Lakes and Central Otago area was providing the most new network connections of any of the four networks managed by PowerNet, Phil said.



Installing the power supply to Clearview Subdivision.

Remote Troubleshooting Improved After Substation Equipment Upgrade

Control equipment upgrades to the network at Edendale are allowing PowerNet system controllers to more quickly identify any potential supply issues in the area, PowerNet technical manager Nic Hill says.

The new substation equipment provides improved control/system status information for system control and engineering staff.

"There's more visibility on what's happening on that part of the network for our system controllers."

Troubleshooting is aided by having data and control at their fingertips, rather than having to send crews out for the initial response.

"We can monitor a lot more remotely with these upgrades."

The work at Edendale has also included switchboard safety improvements - with arc flash protection installations, Nic says.

Earlier detection of an arc sends a signal to equipment upstream, tripping the energy source earlier, he says.

"This is a safety improvement for our staff."

Nic says his team are continuing to take advantage of zone network substations that have been made "mobile substation ready."



PowerNet apprentice substation maintainer Aaron McCallum working on replacing a protection relay at Edendale Zone substation.

The major projects team identify and modify substations that need to be made ready so the mobile substation can be connected more easily.

"We're using the mobile substation more now which was always the intent. It means our customers experience less power disruption when performing maintenance work."

Sites made "mobile substation ready" over the past year or so have included Kelso, Ohai, Otatau and Gorge Road.

Nic says it's no small undertaking getting the mobile substation to site - it requires a special tractor unit truck, and then a crew spend about a day connecting it to a substation.

Risk Assessment Changes Benefiting Live-line Work

PowerNet crews are set to re-implement high voltage live-line work after adopting a more robust risk assessment procedure, GM health, safety and environment Rangi Solomon says.

About five years ago, members of the electricity distribution industry, including PowerNet, took a pause from doing live-line work because of an increased focus around the processes and procedures involved in planning and carrying out such work.

Live-line work can significantly reduce the time taken to carry out planned line maintenance but safety is PowerNet's highest priority - and the company recognised change was needed.

Rangi said the Electricity Engineers' Association set out new criteria around live-line work.

A thorough and robust risk approval process to determine whether live-line work was safe to undertake was developed, and has been embraced by crews and management, he said.

"It empowers our live-line crews around the decision-making and they are supported by management."

Right up to the point of physically starting a job, a crew or a manager could pull the plug on the job if the requirements to safely carry out the work had not been strictly adhered to, Rangi said.

The PowerNet Board needed to approve the re-implementation plan, and the plan was externally peer reviewed as part of achieving this approval, he said.

"We had to be thorough in our programme and make sure staff would be safe."

PowerNet was fortunate to have Phil Johnson on staff who is a nationally recognised live-line trainer, Rangi said.

"For us it's empowering our teams to make the right decisions."

Rangi said PowerNet has live-line crews in Balclutha and Invercargill, and was also undertaking refresher training for the live-line crew in Gore.

"Live-line work on PowerNet networks will recommence when refresher training has been completed," he said.



PowerNet teams working live-line, installing in-line isolators in the Balclutha township.

New Energy Initiatives Bring Benefits to Network Customers

Microgrids, smart energy home research and a bright idea for Southland homes and businesses are among the new energy initiatives PowerNet has promoted during 2020, GM new energy development and strategy Kavi Singh says.



Rowallan Microgrid

Clean Energy Microgrids

PowerNet has designed and is now operating the Rowallan Microgrid - comprising solar generation, battery storage and a backup generator.

In areas with low numbers of connections, new energy technologies may enable a more robust and economic solution to supply remote customers rather than maintaining or replacing aging power lines.

The Rowallan Microgrid, in Western Southland, is PowerNet's first such power supply system. In addition to being a reliable system, the primary source of generation is renewable, thus producing clean energy.

Kavi said the Rowallan Microgrid has been operating steadily since March when it was commissioned with pleasing results.

"We wanted to see it operating for six months - it surprises some people that a solar powered system can work well in Southland."

"The viability of microgrid depends on a number of factors including the customer load profile, costs and the location, it was ideal at Rowallan," he said.

PowerNet will continue to explore other opportunities for microgrid development across its managed networks, he said.

Smart Energy Home

PowerNet's Smart Energy Home welcomed its third set of tenants in 2020 - albeit slightly delayed by Covid-19 - with friends Will Thomas and Corey Beams moving in.

The pair are literally being left to their own devices as part of the goal of gathering data around the energy use patterns of different configurations of tenants, ranging from a family, to a mother and son, and now two friends flatting together.

"We want to see if the average customer takes advantage of off-peak power price or not."



Smart Energy Home tenants Will Thomas and Corey Beams with GM new energy development and strategy Kavi Singh



L/R: Doug Fraser, Chair -TPCL and Carl Findlater, Chair - SPT

LED Promotion

Southland and West Otago residents saw further benefit from their community-owned network The Power Company (TPCL) with the offer of receiving four free LED bulbs during November.

TPCL teamed up with The Southland Power Trust (SPT), and the Energy Efficiency and Conservation Authority (EECA) to help make Southland Homes more energy efficient.

"The initiative was an example of TPCL promoting energy efficiency as a means for reducing network demand, investments and customer energy costs through the offer of four free energy-saving LEDs to customers," he said.

This LED bulb giveaway also complemented the annual discount TPCL customers received off their power bills in September/October.

Infrastructure Development and Innovation Drive Business Growth

Positioning PowerNet as a significant infrastructure investor in the Queenstown - Lakes area and marketing innovative products are two key focus areas during 2020, GM business and customer growth Kewal Bagal says.

PowerNet has been building electricity network infrastructure and capability in Queenstown - Lakes for several years, and is positioning itself as a long-term, co-developer of its networks in this area, with a commitment to supporting the areas ongoing growth, he says.



Kewal Bagal

"We are spending big money for the long-term benefit of the region."

PowerNet has invested about \$25m in the area and is projecting to invest \$4-5m each year in the near future.

PowerNet is fully committed to providing safe, efficient and reliable power supply for communities in Queenstown - Lakes and parts of Central Otago, he says.

"We have been expanding our footprint from Queenstown to several subdivisions in Wanaka, and we are now in Cromwell."

The second big focus was commercialising opportunities around technology PowerNet has developed, Kewal says.

Covid-19 has not impacted on business growth opportunities but has caused minor delays in some project areas, he says.

Pole Grab

PowerNet has signed a deal with partner Southern Equipment Centre to market the pole grab innovation to the New Zealand market.

The pole grab is a piece of equipment that safely supports, secures and directs power poles in challenging locations.

"It improves the safety of staff and contractors working on our networks and in that regard is very helpful in this line of work."

Currently, several New Zealand lines networks are being upgraded, including poles and wires, Kewal says.

PowerNet Connect

PowerNet Connect is a software billing programme developed by PowerNet that has value to the wider energy distribution market in New Zealand - and potentially overseas, he says.

"It's a very significant piece of software that enables us to work with complex changes to the way billing is done."

Marketing the software to the wider market helps showcase PowerNet's innovative approach to challenges and problem-solving, which was a real benefit, Kewal says.

Continuing to position PowerNet as a network services leader in New Zealand, open to further network opportunities is an ongoing focus, he says.

Stewart Island Electrical Supply Authority

Another area of focus for PowerNet was the improvement in the power supply contract signed for The Stewart Island Electrical Supply Authority (SIESA) network which is managed by the Southland District Council.

Health and Wellbeing Focus Crucial in 2020

During a difficult year PowerNet staff have shown resilience, and care with each other, HR partner and wellbeing champion Faye McLeod says.

The popular PowerNet health and wellbeing calendar of events had experienced a few delays due to Covid-19 in 2020, but it was amazing to see how video conferencing tools like Skype and Zoom helped people stay connected, she said.

"It was great being able to see people and see how they were doing."

The health and wellbeing team worked around the situation introducing a couple of friendly at-home competitions around pets, DIY and an art competition for the children drawing their family bubble, Faye said.

"We should all be really proud of making it through such a challenging time."

The team were now back into organising health and wellbeing events and challenges, such as a 'Spud in a Bag' competition and the 'Best Dressed Christmas Tree' competition.

The 'Spud in a Bag' competition is particularly popular with about 70 people testing their green fingers.

"It's really a lot of fun."

The 'Buy-a-Brick' fundraiser for the Southland Charity Hospital was another highlight during the year, with PowerNet staff raising enough funds to buy four bricks. These bricks will pave the pathway into the Southland Charity Hospital.

Choice and variety are key aspects of the events calendar, and it's up to staff what they take part in, she said.

We're always on the lookout of great ideas and challenges, so receiving feedback on the health and wellbeing programme is very welcome," Faye said. Staff can send their feedback to wellbeing@powernet.co.nz.



One of the 70 'Spud in a Bag' entries.



Don Nicolson

Chairman's Christmas Message

No one could deny 2020 has been a most extraordinary year. Standard fare like, floods or gale force winds took a backseat in comparison to the late March, Government directive of a nationwide lockdown to stem a potential widespread health risk in the population, something none of us had ever experienced.

COVID-19 went from an unknown to an all-consuming topic, with daily Beehive briefings important viewing. Those fortunate made contact with others with digital video links or by phone but for some without those options a new state of loneliness became reality.

Imagine the extra havoc business or households would have faced during that lockdown without electricity?

PowerNet as an "Essential Service" stood tall. You all stood tall. Chief executive Jason, his leadership team and throughout the company, well, everyone can be rightfully proud.

So on behalf of the Board we are grateful for everyone's effort, everyone's patience, everyone's commitment to getting PowerNet through and back on track.

I acknowledge those on call over the festive season. We know our work is never finished, but for most, it's soon time to enjoy a safe, happy and restful Christmas and New Year with family and friends.

Don Nicolson
Chairman