

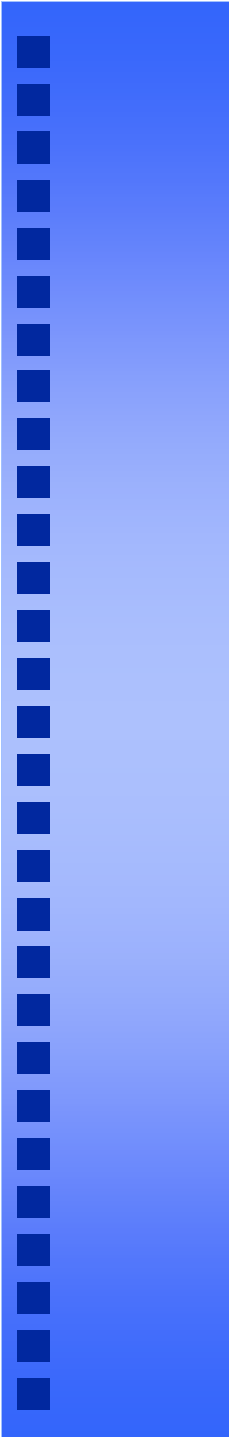


Electricity Ashburton
YOUR POWER PARTNER





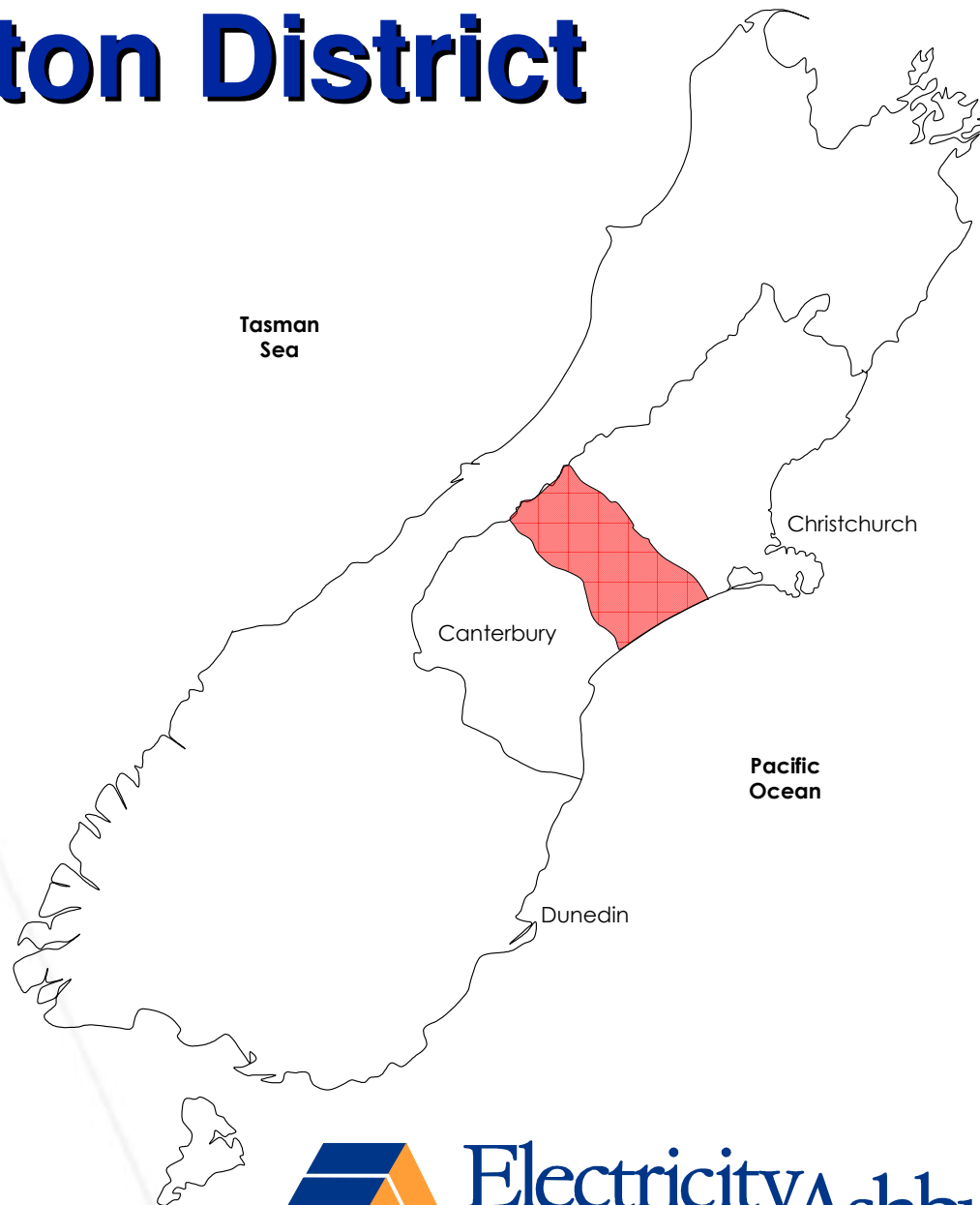
Ultra Fast Rural Broadband. A Reality. Today!



**“Some men see things as they are
and say why.
I dream things that never were and
say why not?”**

**Eulogy to Robert Kennedy by Senator Edward
Kennedy**

Ashburton District



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Ashburton District



Ashburton District

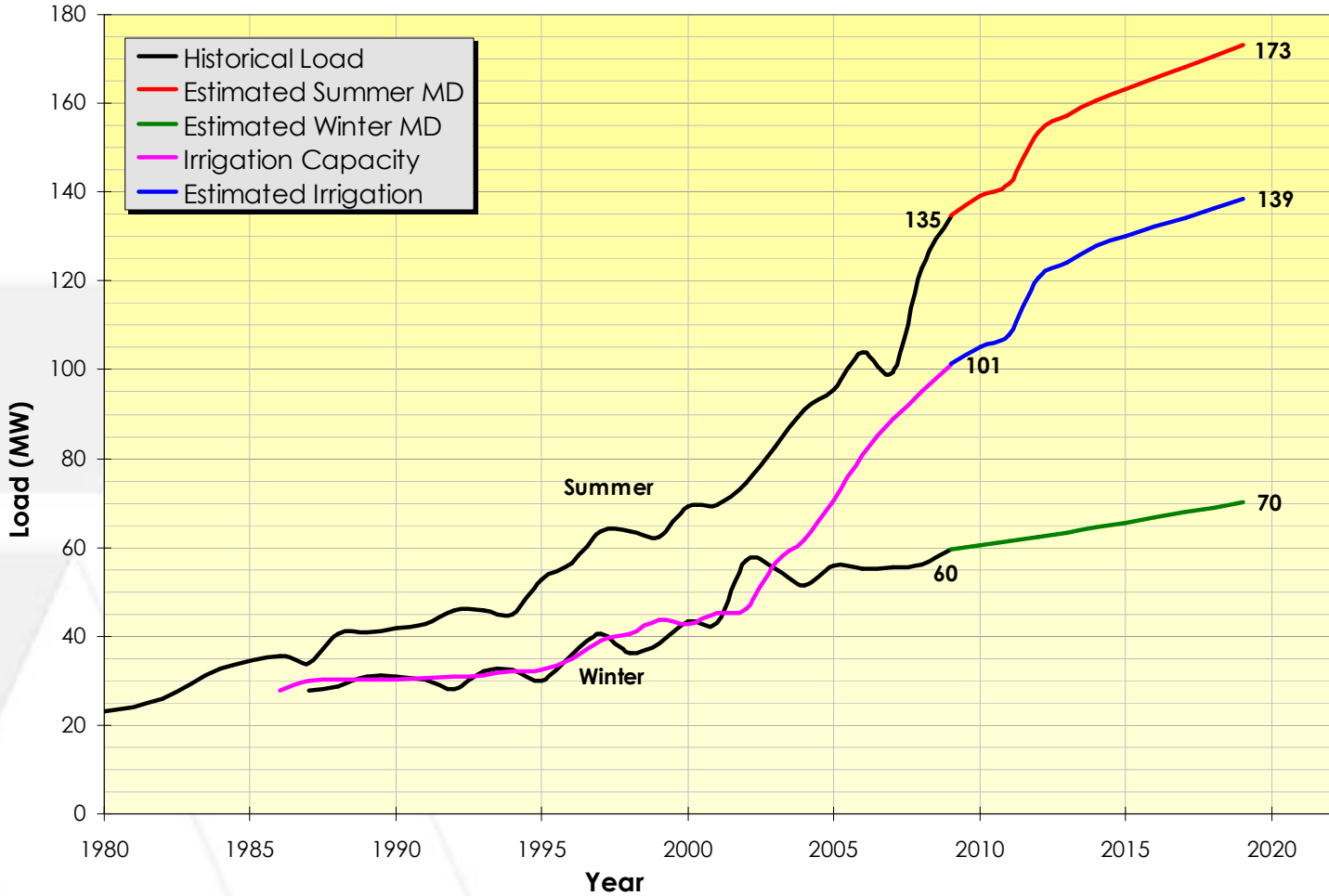
- n District covers area from Rakaia to Rangitata Rivers, Pacific Ocean to Southern Alps
- n 25,000 people, 3 major towns – Ashburton, Methven, Rakaia
- n \$ GDP
- n Major farming activity Dairy, Cropping and Vegetables
- n 75% worlds carrot seeds come from Mid Canterbury

Electricity Ashburton

- n **New Zealand's only Co-operatively owned Electricity Lines Company**
- n **Unprecedented growth over last 15 years owing to irrigation and dairy**

Electricity Ashburton

Actual and Estimated Electricity Ashburton Summer / Winter Maximum Demand



Electricity Ashburton

- n **New Zealand's only Co-operatively owned Electricity Lines Company**
- n **Unprecedented growth over last 15 years owing to irrigation and dairy**
- n **Highest energy use by far per ICP in the country**
- n **Second lowest Line charges in the country (2008)**
- n **80 staff in Network Management, Construction & Maintenance and support activities**

Why Fibre at all?

- n **Modern differential protection requires fast reliable communications**
- n **Development of the “Smart Grid” also requires fast reliable communication**
- n **Huge synergy between building and operating a electric power network and a broadband communications network**

Vision

- n **Rural area very poorly served.**
- n **We see a need for fast data access**
- n **Business case made to Board August 08**
- n **\$5m committed for pilot rollout by March 2010**
- n **Pilot to include 13 major substations and approx 1,000 potential rural customers**
- n **Extension beyond this is easy**
- n **Has potential to service every premise in Mid-Canterbury**
- n **Special attention given to schools**

Rural Fibre Network

- n **Dark Fibre possible but not generally practical in rural areas**
 - u Length of fibre required
 - u Cost of light sources to light fibre over long distances
 - u Can't differentiate service offering
- n **Most economic solution is a Layer 2 network**
- n **Generally cabinets located at Zone substations and supply around 400 customers**
- n **Cabinets capable of supplying 640 customers**

Rural Fibre Network

- n **Open Access at either Layer 1 or Layer 2**
- n **All service providers able to access network on equal terms and conditions**
- n **Similar concept to Power Network – Retailers sell energy and deliver through Electricity Ashburton infrastructure**
- n **Customers offered standard connections of 10Mbit/sec, 100Mbit/sec, 1Gbit/sec or dark fibre**
- n **Other speeds available on request**

Rural Fibre Network

- n **10 Gbit/sec backhaul between cabinets with self healing rings**
- n **Network deployed with air-blown fibre ducting technology**
- n **Fully buried system for reliability**
- n **Designed for Voice and Data**
- n **Supports Multicast and Unicast Video and IPTV**

Schools Network

- n **Being a Co-operative company Electricity Ashburton also has a community focus**
- n **Electricity Ashburton is helping to ensure our students are not disadvantaged with the development of the “connected world”. The company is providing the infrastructure to enable all Mid-Canterbury Schools to have their own private network**
- n **Electricity Ashburton has working with all 25 Schools in the district**
- n **School network links all schools at 100MBit (1 Gbit for the two secondary schools)**

Schools Network

- n Schools can share, collaborate, bulk buy
- n Hoping to enable connection to KAREN
- n Electricity Ashburton offering schools free access for at least 5 years.
- n Company not involved in operating the network, services or content apart from at the infrastructure level – schools setting up a trust

Schools Network

- n **Joint proposal to MOE for Electricity Ashburton to fund the 20% of cost of getting from school gate to the school not funded by the Ministry**
- n **To date no official response from the Ministry**

Demand

- n **There is a demand for fast data services in the rural area**
- n **Rural customers are prepared to pay for the service**
- n **Chicken and Egg**
 - u No high bandwidth services/applications available because no infrastructure to support them
 - u No infrastructure because there is no demand for high bandwidth services
- n **Someone has to break the impasse**

Rural Broadband Incentive

- n **Electricity Ashburton very disappointed in discussion paper**
- n **Consigns rural people to second class service**
- n **5Mbits/sec may have been OK 5 years ago, bearable now, woefully inadequate in 5 years time**
- n **According to Government Rural people don't warrant an open access system**
- n **Appears to be built around Telecom's copper capability**

Rural Broadband Incentive

- n Rural Broadband can be economic in medium term
- n Electricity Ashburton supports grants for rural rollout
- n Incentive should include payment for premises passed and premises connected

Progress to date

- n **100km of ducting laid south of Ashburton**
- n **120km of ducting north of Ashburton being laid at the moment**

Main Duct Laying



Progress to date

- n **100km of ducting laid south of Ashburton**
- n **120km of ducting north of Ashburton being laid at the moment**
- n **Some ducting being installed in urban areas as well**
- n **Three cabinets now installed and operating**

Aggregation Cabinets



Progress to date

- n **100km of ducting laid south of Ashburton**
- n **120km of ducting north of Ashburton being laid at the moment**
- n **Some ducting being installed in urban areas as well**
- n **Three cabinets now installed and operating**
- n **Pilot being trialled with 20 customers**
- n **First customers connected this week**

Future

- n **Complete our pilot programme**
- n **Offer services to 1,000 customers on current route**
- n **Deployment on schools network dependent upon MOE and MED decisions**
- n **Future expansion of network likely to be dependent on Government decisions**

Summary

- n **There is a demand for High Speed Rural Broadband**
- n **Rural customers are prepared to pay a reasonable price for the service**
- n **The rural area is close to being economic**
- n **A relatively small incentive would make it viable**
- n **It is possible - NOW**

