

**Media release – for immediate release
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Upper South Island cuts peak power demand

Eight Upper South Island electricity distribution networks are collaborating to reduce peak demand on their networks, which is lessening the load on the New Zealand transmission system and putting downward pressure on transmission costs and wholesale electricity prices.

New Zealand's first regional load management controller began as a two-year trial project at the start of the 2009 winter and is estimated to have reduced load at peak times by about 30MW during the winter period – the equivalent of removing about 10,000 homes from the national grid, or all households in Ashburton.

The controller, based in the Orion network control room in Christchurch, has been developed to monitor the load on upper South Island networks in real time. During periods of high electricity demand, the controller uses “ripple” signals to cooperatively control household hot water cylinders throughout the region – working to service level targets to ensure an adequate and consistent supply of hot water to customers.

This control reduces congestion on the national grid and avoids bringing forward costly new grid investment just to meet periods of peak demand. Also, when the transmission system is constrained due to a grid emergency, the controller can remove load from the grid in a managed and coordinated manner – avoiding power outages which might otherwise have been necessary.

The electricity distribution networks participating in the upper South Island controller project are Network Tasman, Marlborough Lines, MainPower, Orion, Buller Electricity, Westpower, Electricity Ashburton and Alpine Energy.

Orion CEO Roger Sutton says his central Canterbury network has been successfully using ripple control to actively manage its electrical load for a number of decades. By reducing demand during peak loading times, distribution networks are able to delay the costly investment needed to increase their network capacity – and avoid passing on these costs to retailers and in turn the public.

“It makes a great deal of sense for electricity networks to work together to reduce peak load on a regional basis,” Mr Sutton says. “We’ve had encouraging early results from the trial controller – our collaborative efforts over just one winter could delay transmission investment in our region by one to two years. This puts downward pressure on transmission and wholesale prices, and also electricity prices for customers,” he adds.

On the coldest days in winter when electricity load is high, the upper South Island transmission grid operates close to full capacity. To meet load growth in the short term, Transpower plans to continue to implement relatively small and low cost upgrades to the grid. In the long term, in the absence of new generation in the upper South Island, more transmission capacity into this region will be required.

Transpower's General Manager System Operations, Kieran Devine, says industry cooperation in load management enhances Transpower's ability to manage the grid when operating at full capacity.

"By managing peak demand well, electricity networks can provide some insurance against the risks of transmission build delays and high demand growth, and in some cases may allow deferral of transmission investment. We funded the upper South Island load controller project to see if such an innovative approach can realise such benefits, and whether such an approach could be extended to other regions. We're pleased with the progress of the initiative to date," Mr Devine says.

The upper South Island load controller trial is scheduled to end in April 2011, however the early success of the trial indicates that the controller is likely to operate beyond this period. Further benefits are likely from ongoing load control coordination by the distribution networks.

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About Orion New Zealand Ltd

Orion New Zealand Ltd owns and operates the electricity network in central Canterbury between the Waimakariri and Rakaia rivers, and from the Canterbury coast to Arthur's Pass. The network covers 8,000 square kilometres of diverse geography, including Christchurch city, Banks Peninsula, farming communities and high country.

The Orion network transports electricity from 10 Transpower grid exit points to about 190,000 homes and businesses, and is one of New Zealand's largest and most reliable electricity networks. Orion's charges typically amount to about one third of a household's electricity bill.

Orion is owned by the Christchurch City Council (89.3%) and the Selwyn District Council (10.7%). The company also owns the electrical contracting business, Connetics Limited.