

23 April 2008

The West Coast Regional Council
P O Box 66
Greymouth

By email: kg@wrc.govt.nz
Copied to Meridian Energy Limited

SUBMISSION IN SUPPORT OF THE MOKIHINUI HYDRO PROPOSAL

- 1 This submission is made jointly on behalf of Alpine Energy Limited, Electricity Ashburton Limited, MainPower New Zealand Limited, Orion New Zealand Limited and the Canterbury Employers' Chamber of Commerce.
- 2 Alpine Energy, Electricity Ashburton, MainPower New Zealand and Orion New Zealand are all network lines companies; they do not operate in the energy market as such. Their role is purely to deliver energy from Transpower grid exit points to customers using their networks. However each of these four network companies takes an active interest in ensuring that their customers' lights stay on and that there is sufficient investment in the energy industry and the transmission sector to ensure their customers enjoy reliable supply at the lowest possible prices.
- 3 This submission is in respect of all the consents applied for by Meridian Energy Limited to both the West Coast Regional and Buller District Councils.

Alpine Energy Limited

- 4 Alpine Energy owns and operates the electricity distribution system in the South Canterbury region between the Rangitata and Waitaki rivers and from the east coast up into the southern divide, including the Mt Cook area. Alpine Energy supplies electricity to 30,000 customers.
- 5 Alpine Energy is 40% owned by a consumer trust which distributes a dividend return to its customers either through promotion of or subsidies for energy efficiency schemes. The remaining 60% is owned by the three District Councils in the Timaru, Mackenzie and Waimate areas.
- 6 Substantial growth in the rural economy, spurred by development of both dairy and arable farming from the distribution of water from irrigation, has

occurred in Alpine Energy's network area in recent years. This has resulted in a strong demand for electricity, which in turn has meant investment in infrastructure by Alpine Energy to ensure this growing demand is met and economic benefits flow onto its community.

Electricity Ashburton Limited

- 7 Electricity Ashburton owns and operates the electricity distribution system in the Ashburton District between the Rangitata and Rakaia Rivers and from the main divide to the sea. Electricity Ashburton supplies electricity to over 15,000 customers.
- 8 Electricity Ashburton is a registered co-operative company where all the end users of the electricity it distributes are equal shareholders of the company.
- 9 The increased use of irrigation pumping has driven continued growth in demand for electricity in the Electricity Ashburton network area. Electricity Ashburton's network capacity has doubled in the last ten years with its summer peak demand increasing by 20% this year alone.

MainPower New Zealand Limited

- 10 MainPower New Zealand (MainPower) owns and operates the electricity distribution system throughout the North Canterbury and Kaikoura regions. MainPower supplies electricity to approximately 32,000 customers. MainPower's network covers over 11,000 square kilometres of diverse geography and encompasses the large townships of Kaiapoi, Rangiora and Kaikoura.
- 11 MainPower is a community owned company with ownership through the MainPower Trust.

Orion New Zealand Limited

- 12 Orion New Zealand (Orion) owns and operates the electricity distribution network in central Canterbury between the Waimakariri and Rakaia rivers, and from the Canterbury coast to Arthur's Pass. Orion's network covers 8,000 square kilometres of diverse geography including Christchurch city, Banks Peninsula, farming communities and high country. Orion delivers energy to over 185,000 customers.
- 13 Orion is owned 89% by the Christchurch City Council and 11% by the Selwyn District Council. Each year Orion delivers over 3,000 GWh of electricity to its customers and its customers account for 40% of the South

Island's electrical demand excluding the electricity supplied to the Tiwai Point aluminium smelter.

Canterbury Employers' Chamber of Commerce

- 14 The Canterbury Employers' Chamber of Commerce (Employers' Chamber) is a not-for-profit business service organisation with approximately 3,000 members. The South Canterbury Chamber of Commerce and the Marlborough Chamber of Commerce are associate members of the Employers' Chamber, which give their members access to Employers' Chamber services and enables the Employers' Chamber to advocate on behalf of 3,800 enterprises in total.
- 15 The Employers' Chamber is the largest business support agency in the South Island. Its primary role is to assist members' enterprises to be as successful as possible.

The Employers' Chamber recognises the interrelationship between a healthy community and healthy business sector and therefore deliberately extends its interface into regional community affairs.

Our submission

- 16 We jointly support Meridian's proposed new power station on the Mokihinui River because it will help ensure a secure supply of electricity to our region and will help our communities' economic and social well being.
- 17 We are aware of adverse comment about the potential environmental impacts of this proposal. This submission does not wish to comment on the significance of those impacts, as we believe this is best left to the relevant experts to form an appropriate judgment. This submission does however wish to comment on the submitters' area of expertise and interest – electricity.
- 18 We support the Mokihinui proposal for a number of reasons, including those outlined below.

Transmission alternatives and reliability of electricity supply

- 19 The energy flow to the upper South Island (including the West Coast) is almost entirely from south to north. Energy flows up transmission circuits from the Waitaki basin into Christchurch, and from there into other upper South Island areas; either over the Alps to the West Coast region, or north to the Nelson/Marlborough region and across to the Buller region.

- 20 Energy demand continues to grow in the upper South Island, and as a result, in time, Transpower will need to make significant investment in transmission infrastructure, including perhaps new transmission lines to ensure our lights remain on as reliably as they do now.
- 21 Any reduction of load in the upper South Island or any new generation in our region defers the need for the transmission investment required to meet the increasing load. This is because generation in the upper South Island reduces the need for electricity to be “exported” from the southern lakes region to the upper South Island via the transmission lines.
- 22 Mokihinui’s peak output of 85MW is considerable, given it is equivalent to three or four years of electricity load growth in the upper South Island. **Mokihinui is the most significant single generation project that we know of that will enhance transmission security into our region.** While Mokihinui is a generation project, it brings significant benefits in terms of transmission, and therefore reliability of supply.
- 23 However, the benefits Mokihinui provides in relation to reliability of electricity supply do not just come through delaying transmission investment.
- 24 Mokihinui will also help maintain a reliable transmission supply into the upper South Island if any necessary planned transmission investment is delayed for any reason (for example, through resource consenting or technical issues) or becomes difficult to undertake due to peak electricity demands at the time.
- 25 For instance, over the last few years on numerous occasions Transpower has requested that upper South Island electricity networks shed water-heating load and take other actions to reduce demand while Transpower maintains and enhances its transmission systems. A significant power scheme on the Mokihinui would relieve the need to undertake this load control for a period of time, as the Mokihinui scheme will effectively displace load off the Transpower network and allow maintenance and enhancements to occur more easily.
- 26 We consider that a power scheme at Mokihinui would significantly positively impact on reliability of power supply into the upper South Island in relation to both transmission security, as described above, and the more obvious area of additional generation capacity.
- 27 Based on the analysis undertaken by Energy Link for Meridian Energy, we understand that the average output of the hydro scheme will be around 372GWh. This represents approximately 7% of the upper South Island

annual energy load; a significant increase in generation that will help avoid the potential for future electricity shortages across the upper South Island.

Cost of energy

- 28 The combined annual electricity bill of customers in the upper South Island is approximately \$800m. Any new power station built in the South Island, and in particular built north of Christchurch, will have an effect on reducing electricity prices on the wholesale market.
- 29 From the analysis undertaken by Energy Link for Meridian Energy, it is estimated that Mokihinui will reduce wholesale energy prices in the upper South Island by around 5%, and reduce wholesale energy costs by around \$35m per annum.
- 30 This is a significant sum which will bring real, tangible, benefits to the community.

Dry year security

- 31 Any new generation in a growing energy market is positive. However Mokihinui has a significant benefit over many other proposed generation projects.
- 32 Specifically, rainfall in the Mokihinui region is not strongly correlated to that of other South Island hydro lakes. In other words, when it is raining in the main South Island hydro lakes, it is often not raining at Mokihinui, and vice versa.
- 33 This means that in a year when the lakes in the lower South Island are running dry, as they are this year, the proposed lake that would feed the Mokihinui hydro station would not necessarily also be dry.
- 34 This diversity in rainfall increases electricity system security to a greater extent than a new hydro generation scheme in the southern lakes area would.
- 35 Also, hydro schemes will generally increase in importance as more wind generation enters the New Zealand electricity system. Wind generation is more intermittent than hydro generation, as wind speed varies from minute-to-minute. Therefore hydro generation's fast stop-start capacity is the ideal complement to additional wind generation.

- 36 As more variable wind energy is introduced into our electricity system, we need reliable hydro generation to cover the times when the wind isn't blowing. A new hydro scheme, such as Mokihinui, which has different rainfall inflow patterns to other hydro lakes, is doubly beneficial to New Zealand's electricity security.

Role of energy efficiency

- 37 The five joint submitters of this submission are all strong supporters of investment in energy efficiency. Between us, we have made significant contributions to improved energy efficiency through such schemes as retrofitting insulation into homes, promotion of energy efficient appliances and light bulbs and home and business energy audits.
- 38 Often in resource consent debates like this we see discussions around whether we need more generation or more energy efficiency. We don't see this as an 'either/or' type of discussion – both energy efficiency and generation are needed.
- 39 We think it would be extremely difficult for energy efficiency to deliver the same amount of energy as Mokihinui will in the timeframe proposed. Over time energy efficiency initiatives may be able to save the same amount of energy that Mokihinui will produce, but we see this as complimentary to the Mokihinui scheme.
- 40 Energy efficiency should be keenly encouraged. But so should renewable, reliable generation schemes.
- 41 We strongly support the proposed scheme and **would like to be heard at any hearing.**

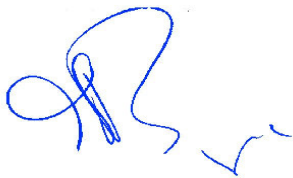
Signed by:



Greg Shelton
Chief Executive – Alpine Energy Limited



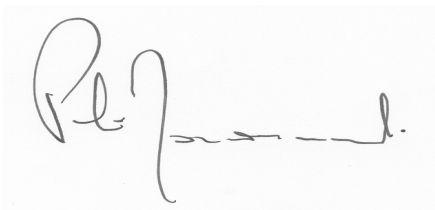
Gordon Guthrie
General Manager – Electricity Ashburton Limited



Alan Berge
Group Managing Director – MainPower New Zealand Limited



Roger Sutton
Chief Executive Officer – Orion New Zealand Limited



Peter Townsend
Chief Executive – Canterbury Employers' Chamber of Commerce

Address for Service:

Alpine Energy Limited
PO Box 530
Timaru
Attn: Greg Skelton

Electricity Ashburton Limited
Private Bag 802
Ashburton
Attn: Gordon Guthrie

MainPower New Zealand Limited
PO Box 346
Rangiora
Attn: Alan Berge

Orion New Zealand Limited
PO Box 13896
Christchurch
Attn: Roger Sutton

Canterbury Employers' Chamber of Commerce
PO Box 359
Christchurch
Attn: Peter Townsend