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Bryan Leyland: Mokihinui an environmental winner

By Bryan Leyland
4:00 AM Tuesday May 25, 2010


Meridian, which controls the Waitaki power scheme, will transfer valuable land into the conservation estate if Mokihinui goes ahead. Photo / Simon Baker

The debate on the Mokihinui hydro scheme on the West Coast has wide- ranging implications. The arguments against the scheme centre on the fact that it will change the environment.

Which, for sure, it will do. But we must remember that the objective of the Resource Management Act is "a reasonable balance between development and the environment".

In principle, few people would argue against that. Hydropower development underpinned the rise in our standard of living and economic growth between the 1920s and the 1970s and also changed the environment.

Did these developments represent a "reasonable balance"? I think so.

For example, 100 years ago, the Waikato River was largely confined in narrow gorges in volcanic debris from the many eruptions of Lake Taupo. Now we have a series of lakes that provide us with 900 MW of renewable energy, recreation and fishing. Karapiro (and Ruataniwha) hydro lakes were a major factor in New Zealand's success in international rowing.

How many people in New Zealand would now advocate that we destroy all the dams, return the Waikato to its original state and replace the lost power by building coal-fired or nuclear power stations?

Similarly, would anyone seriously argue that we should abandon all our farms and replant (if that is possible) with native forests or tussock?

There is no doubt that hydro development – and virtually every development – changes the environment. But is a lake full of fish and other aquatic life "worse" than a gorge? Our environment is always changing. Our natural world exists only because it has evolved to cope with change. Mankind likewise.

If in the 1920s our forefathers had decided that hydropower development was environmentally unacceptable, coal-fired power generation would have been the only large-scale alternative. They would have finished up building many inefficient, polluting power stations like the old Kings Wharf power station in Auckland.

These would have supplied expensive power to communities in and near the larger cities. Rural electrification would have come much later.

Fortunately for us, they built hydro schemes all over New Zealand that supplied surrounding areas and, over time, were connected into the grid.

Their bold initiatives brought the benefits of electricity to our rural areas.

Only people who (like me) have lived in a remote area without a supply of electricity can fully appreciate the enormous benefits of electric lights, electric hot water, electric cooking and electric motors.

Compared with what we did in the past, Mokihinui is an environmentalist's dream come true. In exchange for 14 km of narrow river, there will be a lake and, most importantly, Meridian will transfer a much larger area of environmentally valuable land into the conservation estate.

The environment will be changed but the end result will be an increase in the conservation estate. The scheme will provide a recreation lake for canoeing, waterskiing and the like.

Trampers will enjoy walking along a track beside the lake and through historical gold mining areas to Lyell.

The power generated by the scheme will be unusually valuable. Power prices on the West Coast are among the highest in New Zealand because of the high losses in transmitting power all the way to Nelson and then along the Buller Valley to Westport.

Any surplus power exported from the West Coast will mitigate the high cost and technical problems of supplying power to the growing load in the north of the South Island.

The catchment will be in a different hydrological regime from the Southern Hydro lakes so there is a good chance of rainfall in the Mokihinui catchment when the Southern Lakes are suffering from a drought.

There is no doubt that the power is needed. We need new generation to meet steadily increasing load growth and to replace old thermal stations such as Huntly.

Computers, fibre optic broadband, large-screen television sets, heat pumps and electric cars are things we all want. They all use electricity.

The Electricity Commission's 2009 security assessment report stated that there could be serious shortages in the near future because no significant new generation is under construction - or even committed - beyond 2012. The real situation is even worse because key assumptions in this report are seriously optimistic.

A drive for increased energy efficiency will reduce overall energy consumption and increase electricity consumption. As one example, energy-efficient heat pumps produce more than 3 kW of heat for 1 kW of electricity. The 100,000 heat pumps installed last year increased both energy efficiency and electricity consumption.

The modern world is totally dependent on a reliable supply of electricity at a reasonable price. Lose it for only a week, and we would be in a disastrous situation.

In a country that has been a world leader in hydropower development, where renewable energy is highly valued and there is a need for hydro storage to balance the fluctuations in windpower, continuing with hydro (and geothermal) development is something that future generations will thank us for.

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