Energy strategy to speed up geothermal development in Bay of Plenty

Edward White on Wednesday, 29 September 2010 - 13:59

A strategy aimed at boosting energy development in the Bay of Plenty is being formulated by economic development agencies and business representatives.

The Bay of Connections group is putting together an advisory team to devise a strategy for harnessing the region's energy resources to drive economic development. The strategy will influence policy and decision-making at local and central government level, Environment Bay of Plenty senior advisor Cheryl MacGregor says.

"It is all around commercial outcomes," she says. "It is literally a strategy for the region to make money in a sustainable way. It's looking at ‘where are the areas that we can use our resources more efficiently and increase the GDP of the region?'," she says.

"When we have a focus on specific sectors and say what needs to be done, then more notice is taken and it does help influence decisions especially around consents and that kind of thing. It does make a difference."

Great potential

The strategy, which has funding from New Zealand Trade and Enterprise, will look at a range of opportunities including solar, wood pellets and biofuels. But a key focus will be geothermal development. With a well-known resource throughout the bay, there is a lot of potential for greater exploitation, Geothermal Association of New Zealand executive officer Brian White says.

The project will advance a wider use of geothermal energy than solely electricity generation. From around Rotorua through to beyond Tauranga there is scope for further use in domestic and glasshouse heating, wood-drying kilns and for powering the pulp and paper industry. All this should be achievable without extracting fluid and affecting geysers, White says.

"This programme is not just about electricity generation. It's thinking about geothermal as an energy source, and energy is much wider than electricity," he says.

Some geothermal fields in the region are located near industrial processing hubs and as such there is potential for greater uptake by the forestry sector, White says. The renewable resource can be used by industrials looking to mitigate rising energy costs and its direct-use in processing can help make further efficiency gains.

"You could argue that any of the high-temperature fields in the Bay of Plenty are useful, because you've got a whole lot of processing in the area. You've got the Kaiangaroa forest just to the south, you've got processing already at Kawerau, and exporting going on at Tauranga," he says.

"So for any of those places you can say ‘well, can we add value somewhere along the way? Near the wharf, near the forest, wherever.'"

Local supply cost-effective

While companies may be motivated because "it's nice to be renewable" using the local energy supply is usually the most cost-effective option, White says. Processors feeling the pain of rising fossil fuel costs should be interested.

"In the end that is the thing that drives investment. Is it going to pay off or not? And the sums generally look good."

Many of the region's larger, more accessible or unprotected geothermal fields have already been developed for electricity production or are being investigated by generators and landowners.

Mighty River Power operates the 100 MW Kawerau plant while Todd Energy and Eastland Network both run binary plants from the steam field. Contact Energy has a drilling campaign underway at the Taheke field north-east of Rotorua. A 35 MW plant at the Rotoma field - which is believed to have the potential to be developed up to 100 MW - is being looked at by Rotoma No.1 Corporation but is currently delayed in the consenting process.

Still, deeper fields could begin to be to accessed within 10 years if technology develops as expected, GNS geothermal business manager Colin Harvey said at the Energy Roundtable conference in Wellington earlier this month

White says there is "definitely interest" in even slightly deeper development of fields that have previously been written off.