



## Farming the wind

by Neil Keating

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Power generation on farm can help ease the country's supply problems and potentially be a windfall for landowners. Until recently many wind-powered generators touted at farm field days have been 2kW output, but one established supplier is now offering 500kW.

Alternative power generation is heading for mainstream acceptance say energy consultants and equipment suppliers eager to lead farmers into the maze of regulation, design/build and contracts for buying and selling of electricity.

Until recently many wind-powered generators

Why, in a world awash with power-generation alternatives, has this taken so long?

Charmaine Watts, chief executive of SEANZ (Sustainable Electricity Association of New Zealand), says regulation favours centralised power generation by the 'big five' state-owned generators and the Government isn't willing to change this and lose the dividends.

'This can't last. Sending power from South to North Island via the Cook Strait cable makes less and less sense. What we need is distributed (i.e. local) generation, all the way out to small generators on farms.'

Watts estimates 100-150 companies now offer design/supply/build of generation plants. Some are dabblers, some have good equipment and track records.

Simply Energy co-director Murray Dyer says dairy farms and properties with large irrigators are prime prospects for wind power and may get to export power into the national grid via their local lines company.

'It presents farmers an opportunity to diversify their land investment. \$1 million to \$1.5m spent on power generation may be recouped in three to four years,' he says.

Three criteria apply: wind supply (reliability and speed), the distance of the farm's electricity terminal from the local retailer's lines (three-phase), and quality of road access.

Simply Energy offers reconditioned 500kW generators from Europe.

'A farm may have the generating capacity for two or three generators – 1.0-1.5mW,' Dyer says. 'We set up the system with an import-export meter that tells the farmer in real time, every half hour, whether the system has imported or exported power.'

'Power companies publish half-hourly price schedules and according to these rates the farmer will be paid wholesale spot prices.'

Dyer says on-farm generation saves both the cost of power and the lines charge. 'The cost of the generator is for 'pure' energy.'

Energy market commentator Molly Melhuish says understanding the 'wind regime' is crucial to the number crunching for sales of power on the spot market.

'Farmers must ensure reasonably consistent wind, how strong it blows and when it blows, because spot prices are high mornings and evenings, low at midnight and medium about midday.'

Independent energy analyst James Capper does not favour farmers generating power for export.

'The simple message for farmers considering wind power and hoping to export their surplus is: 'efficiency will win over generation' or putting it another way 'saving kWh is cheaper than generating them'.'