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Warming up for climate fight

Southland rest home cuts greenhouse gas emissions with new wood-burning energy system.

A group of rest home residents will be basking in warm temperatures this winter as part of an initiative helping to tackle climate change.

The Parata Rest Home in Gore, about 60km north of Invercargill in Southland, will reduce its carbon emissions by nearly 6000 tonnes over the next 25 years - equivalent to taking 100 cars off the road each year.

It comes after a decision to replace an old coal-fired boiler previously used for heating with a new wood-burning boiler.

The boiler was installed last year as part of the Wood Energy South Project, an Energy Efficiency and Conservation Authority (EECA) initiative launched in 2014 in partnership with Venture Southland which aimed at cutting greenhouse gas emissions in the Southland district by up to 200,000 tonnes.

EECA says wood is a clean-burning fuel option for many commercial and industrial boilers and offers improved air quality over coal-burning.

The 26 Parata residents will now enjoy more efficient and constant heating - a crucial factor in the deep south of New Zealand where temperatures can plummet in the depths of winter (Invercargill's coldest temperature was minus 9 degrees centigrade recorded in July, 1996).

The decision to go with a renewable energy option came when the home's old boiler broke down, says a member of Parata's board of trustees, Julie Tattershaw.

"We had to do something; we had to stop burning coal," she says. "Changing

to wood-firing seemed the best from an environmental point of view.

"We were looking at having to spend \$30,000 to repair the old one and then would likely have only got another 10 years of life out of it, so it made economic sense as well," she says. "An option of running diesel carried a relatively high cost, so we decided to bite the bullet and go with a wood pellet burner which has a minimum 25-year life; in the end it was a no-brainer."

The new Austrian-made boiler was installed with a third of the cost covered by EECA as part of the Wood Energy South project which ended last year.

As well as reducing carbon emissions, the new boiler is producing fuel savings: Measured over a three-month period it uses around 50 per cent less wood energy than the old boiler would have used in coal - not only because it is highly efficient in combusting the wood but because its modern control system finely matches output with heating demand.

Tattershaw says there are many other benefits: "It is quieter, easier to control and cleaner. With the old boiler we had to empty the ashes twice a day, now we only need do it about every four months - a huge saving - and then we spread them over our gardens."

John Faul, managing director of the Invercargill-based company that installed the boiler, CH Faul Ltd, says the boiler burns wood pellets made from processed wood and sawdust waste (sourced from Nelson).

"It self-cleans, loads its own ash bin and creates very little dust in the boiler-

room," he says. "It is smart as well; it self-regulates and by being able to sense the outside temperature it can adjust the temperature of water supplied to the radiators inside the building."

Faul says his company has also installed an identical boiler at Mossburn Primary School located between Invercargill and Queenstown and is soon to put in a more advanced boiler (which can operate using freshly cut wood) at the Ascot Community School in Invercargill.

Other Southland businesses and organisations using wood energy systems include a further nine schools as well as Invercargill businesses McCallum Drycleaning (two sites), Splash Palace and Slinkskins Ltd, a tannery based in Thornbury.

EECA's contestable funds manager Dinesh Chand says fossil fuels like coal create a large proportion of New Zealand's energy-related greenhouse gas emissions when used in boilers for heating or processing - and reducing emissions continues to be a priority for EECA.

"The project showed that in many cases it is economic to switch to renewable energy, even in the heart of 'coal country'," he says. "Obviously it makes perfect sense when the coal boiler needs replacing, but we are seeing businesses contemplating the switch for health and environmental reasons as well."

Chand says businesses looking at using wood boilers used to be concerned about fuel supply but "with more new suppliers in the market and existing suppliers upping their game, this is no longer an issue."

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