

## MBIE's GHG figures define clean energy

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Azwood Energy, October 2018

### An Azwood Energy media release

MBIE has released figures which illustrate wood fuel is the cleanest energy consumed for process heat in New Zealand, by a huge margin. The data indicates that replacing fossil fuels with wood energy could drastically reduce greenhouse gas emissions, while it lists electricity as the third largest emitter of GHGs. So why is the government incentivising electricity through capital funding for projects, while wood fuel is not being robustly promoted?

MBIE and the Energy Efficiency and Conservation Authority have released figures that show wood energy is responsible for just 1% of total process heat emissions whilst producing 23% of the energy consumed. Electricity, however, contributes just 18% energy and still emits 13% of process heat's total emissions.

MBIE and EECA are working on a [process heat action plan](#) to improve the energy efficiency of using process heat and increase the amount of renewable energy used to supply it.

As part of its review process, MBIE has released a [Current State Fact Sheet](#), an overview of how process heat is being used in New Zealand, including energy demands and related greenhouse gas emissions.

Figure 2 of this document shows energy consumption and GHG emissions from process heat in 2016, by fuel type. It provides a graphic representation that wood energy is the cleanest fuel in use for process heat in New Zealand.

As an overview of the sector, in 2016, supplying process heat accounted for around 8.3 million tonnes of carbon dioxide equivalent emissions. That is 28% of all energy-related GHG emissions and the second largest source of energy-related emissions behind transport. The process heat energy demand was 199 petajoules or around 35% of total energy used in New Zealand in 2016. Data provided was sourced from 2016 EECA Energy Use Database, released in 2018.

[Energy in New Zealand 2018](#), also released by MBIE, shows that whilst 80% of the electricity generated in 2017 was from renewable sources, down from 85% in 2016, we still consumed 13 petajoules of coal and gas to generate electricity. Coal-fired generation was up by 16% and gas-fired generation increased 22% to its highest level in five years.

The process heat overview shows the dairy manufacturing sector accounted for around 68% of energy use in food manufacturing. It was the largest user of coal for process heat. Coal accounted for just 11% of fuel consumption, yet produced 26% of total GHG emissions. This ratio is due to coal holding the highest carbon content of any fossil fuel and being more emissions-intensive per unit of industrial output than any other source.

## Bioenergy in the news

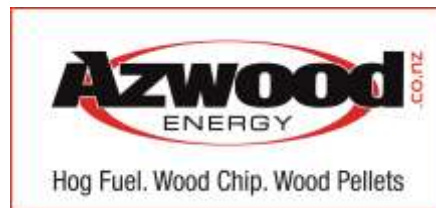
Yet the dairy industry appears to be the sector most serious about fuel switching with Fonterra co-firing with wood chip at its Brightwater site, and a strong case for biomass to be used in combination with electricity at a range of other sites and with other high-value milk producers across the country.

Despite being the sector, which consumes the most energy, wood, pulp and paper manufacturing has relatively very low emissions due to most of its fuel coming from bioenergy sources, such as woody biomass and processing by-products. The sector still used fossil fuels for co-firing boilers, supplementary heating of pulp flash dryers, and heating up drying kilns.

With the data showing that around 55% of process heat demand is still being supplied by burning fossil fuels, it's time the Government promoted a radical change across industry. Enacting the Productivity Commission's recommendations and providing incentivisation for reducing emissions in capital projects, no matter the fuel source, is a good place to start.

In an environment where electrification technology is attracting funding from central government, capital projects for proven biomass technology should also be incentivised.

Azwood Energy



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