



Media backgrounder

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Summary of Coal Action Network Evidence against Fonterra's case to build two coal-fired boilers at Studholme, South Canterbury

Coal Action Network Aotearoa is a major opponent to Fonterra's proposal to build two massive, coal-fired boilers at Studholme, just outside Waimate, in South Canterbury.

Submissions from CANA will be heard on Wednesday after lunch, (1.30pm) from Jeanette Fitzsimons, and two expert witnesses: Economist Peter Fraser and woodburner industry expert Christian Jirkowsky.

Key points from Jeanette Fitzsimons' oral evidence:

- **Fonterra plans to dry at least 9 million litres/day of milk in this new plant, during the season.** At 9 million litres, the factory would only be operating at half its capacity. That milk is not there now, and Fonterra has offered no evidence that it ever will be. The project relies on new cows, new land conversions and new irrigation systems to supply it. **It relies on the milk price increasing by more than 50%** (deduced from Fraser evidence) before it will be economic to establish these new farms. The applicant has failed to provide evidence to support this expectation.
- **There is further evidence that dairy farming will become more difficult in future as the effects of climate change increase the frequency and severity of droughts in South Canterbury and North Otago.** These are areas where water is already a limiting factor. Increased drought will force a greater water take from rivers and aquifers, which they may not be able to support.
- Fonterra has not offered any evidence for its contention that the price of milk solids will increase sufficiently to incentivise a 4-5% annual growth in milk supply in future. Therefore no need for the plant has been demonstrated.

- If the plant were built the number of extra cows required in Canterbury to supply it could approach one million, and these would have huge environmental impacts, as shown by Peter Fraser's evidence.
- If the plant is built and run on coal the emission of greenhouse gases will be very significant – approximately 175,000 tonnes of carbon dioxide a year from the coal boilers themselves, and considerable methane and nitrous oxide from the additional cows that will supply them.
- Fonterra has failed to adequately consider alternative methods, as required under the Act, in that Fonterra has not sufficiently investigated the supply of waste wood that could be available in the region and has not demonstrated the validity of its assertion that there is not enough biomass fuel for this plant, or even for one of the two planned boilers.
- If Fonterra intends to build this plant despite sound economic arguments against doing so, it should be fueled 100% by biomass, principally waste wood. Mr Jirkowsky has testified to the efficiency and availability of suitable boilers.
- Finally, Fonterra has refused to release any relevant data to support its contention that using wood to replace coal is uneconomic.
- These issues are not just commercial decisions for Fonterra. Consent for such a plant is required by the RMA because there are major impacts on the whole community and on the global climate of Fonterra's business decisions. Therefore the community has a right to the information on which Fonterra bases its assertions.

Key Points from [Peter Fraser's evidence](#)

- It is noted neither a commercial nor a societal cost-benefit analysis (CBA) of the proposed project has been completed. From an economic perspective, this is a major omission as CBA is considered a robust methodology to determine the economic merits of a project (or otherwise).
- Without substantial land use change in favour of dairy farming in the Southern Canterbury/Northern Otago region this project cannot proceed as there is no milk 'feedstock' to process.
- Using Fonterra's figures for milk supply (numbers that Fonterra has not contested), the Studholme expansion requires an additional **556,000 cows** (incl. replacements). Based on an environmental multiplier of 15, this is the equivalent of adding **8.3 million people** to the regional population. However, using these figures implies that the plant will run at little more than half capacity. It is therefore possible that in the future they would choose to run it at full capacity, requiring nearly a million new cows.

- If the two Studholme driers were operated at the same capacity factor as Fonterra's Darfield plant an additional **988,000 cows** (inc. replacements) will be required and, once again, based on an environmental multiplier of 15, this is the equivalent of increasing the regional population by **14.8 million people**.
- **Averaging out between the two, building these plants would put pressure on the Canterbury environment equivalent to increasing the population by a city the size of Jakarta (Jakarta: 9.6 million) but the cows of course would have no sewage system.**
- Additional **nitrogen leaching** to local waterways would be between 1,388 tonnes per year to 2,083 tpa depending on the scenarios, and these are very conservative numbers.
- A key economic argument is that Fonterra's planned coal-fired factory - and the land use change to provide the milk the factory needs - are mutually dependent, as one cannot exist without the other. It therefore seems reasonable that the Commissioners, when considering the effects of the plant, also consider the effects of the on-farm land use changes as well.

Summary [Christian Jirkowsky evidence](#)

- Large wood-burning plants are standard in Europe. Just in Austria, a country smaller than New Zealand's North Island almost 800,000 households are getting their energy via wood fuelled energy plants. In Germany over 250 wood fuelled power plants (most are combined heat and power) produce about 1.5 GWh of electricity.
- Availability and reliability of wood energy plants nowadays is so high that whole towns in Europe get their energy solely from wood energy plants with no backup.
- Only a special study could establish how much, in what quality and at what price wood residues would be available. Fonterra investigated the fuel available for a converted coal boiler in 2014. However it is important to understand that purpose built wood fired boiler plants can handle a wider range of wood fuels (and more economically) hence the residues available should be much more.