

Process Heat in New Zealand – Submission

Dr Mark D Smith BHB MBChB MMedSci FRACS

9(2)(a)

Email 9(2)(a)

Dear MBIE,

I wish to make a general submission on the discussion document “Process Heat in New Zealand: Opportunities and barriers to lowering emissions”.

Although Climate Change is often framed as an environmental problem, the main problem that climate change presents to us as humans is the threat to our health and wellbeing. These effects are mediated through the direct harmful effects of excess heat, increased frequency of extreme weather events, food crop failures, contamination of drinking water through sea level rise and droughts, and changing infectious disease patterns through spread of vector borne diseases. These effects are also disproportionately borne by more disadvantaged members of society both globally and in Aotearoa/New Zealand. Climate change has been called the leading health threat of this millennium by a consortium of global health experts (Costello A, Abbas M, Allen A, et al. Managing the health effects of climate change: Lancet and University College London Institute for Global Health Commission. Lancet 2009; 373: 1693–733.).

In response to this, it is essential that wealthy countries like Aotearoa/New Zealand act to cut our greenhouse gas emissions as soon as possible. As the discussion paper states process heat accounts for 9% of our gross emissions and 60% of this heat is provided by burning fossil fuels. As with our other sources of emissions, we need to address these rapidly and in an equitable manner.

Given the lifetime of fossil fueled burners, it is critical that we stop any new capital investment in these. This should include natural gas fired plants, as only legislative and financial incentives favoring renewable energy will lead to the development of zero emission process heat plants. Existing fossil fueled burners need to be decommissioned or switched to renewable wood fuel at the end of their economic lifetime, and financial and legislative incentives need to encourage switching fuel sources earlier when possible. A key component of this is a mandatory carbon price of \$50/tonne, rising to \$100/tonne within two years.

Given my health interest I would specifically like to highlight one aspect of process heat use that harms human health directly as well as through contributing to global warming, and that is our dairy farming sector through Fonterra. We are frequently told through the media that Aotearoa/New Zealand has the most efficient farmers in the world and through supporting them we will feed the world and ensure local economic prosperity.

In reality, excessive consumption of meat and dairy products is killing us directly through excess cancer, heart disease and obesity. Obesity, according to the Ministry of Health, is now the number one modifiable cause of premature death and disability in Aotearoa/New Zealand (<https://www.health.govt.nz/publication/understanding-excess-body-weight-new-zealand-health-survey>). Production of these excess unhealthy calories also brings about overstocking of cows on our land leading to nearly half our greenhouse gas emissions in the form of methane, as well as degradation of our waterways. All this is facilitated by Fonterra's use of coal fired milk drying plants which by burning the dirtiest fossil fuel, directly increase our carbon emissions as well as harming human health through the direct effects of coal mining and particulate emissions from burning.


Flipping this over, decommissioning Fonterra's coal fired milk drying plants would:

1. Reduce the harm to human health from mining and burning coal
2. Reduce the carbon emissions from burning coal and consequent health effects of climate change
3. Make it uneconomic to undertake conversion to intensive dairy farming
4. Reduce the pollution of our land and waterways from industrial dairying
5. Improve human health from reducing the consumption of dairy products

For completeness, an international consortium of experts has identified that more intensive meat and dairy farming cannot feed the planet in a healthy way, but these goals can be achieved through diets with greatly reduced meat and dairy contents (<http://thelancet.com/commissions/EAT>).

Thank you for considering this submission in support of reducing the use of process heat in Aotearoa/New Zealand that is directly harmful to human health, and enacting financial and legislative measures to rapidly decarbonize process heat used for other purposes.

Your sincerely,

A handwritten signature in black ink, appearing to read 'Mark D Smith', with a long horizontal flourish extending to the right.

Dr Mark D Smith