Energy Markets Ministry of Business, Innovation, and Employment PO Box 1473 Wellington 6140 New Zealand

Please find as follows, written submission on Process Heat in New Zealand: Opportunities and barriers to lowering emissions.

I am an Environmental Advisor with over 10 years experience in the Energy and Utilities Industry. I have a double degree in Environmental Management (Climate) and Energy Studies with a Graduate Diploma in Law. I also have operational experience of working on plant using coal-fired heating for creating milk powder and washdown water. I have worked internationally on alternative heating technologies including district heat networks, solar, geothermal, CHP and ground sourced heat pump technology.

- 1. New Zealand overall, must reduce its reliance on non-renewable energy generation in order to sustainably provide for future generations, whilst meet obligations under various international treaties. Existing plants that use coal are technologically dated and rely heavily on imported fuel sources that are better left in the ground.
- 2. Government should put legislative and regulatory changes in place to ensure that, as existing heat plant reaches the end of its economic life, it is replaced by heat plant that is not fuelled by fossil fuels, but is powered from renewable energy sources.
- 3. Local scale air pollution, including greenhouse gas emissions also remains an issue.
- 4. A moratorium on any new thermal plant that uses coal should be implemented. Natural gas alternatives shall be weighed not as a transition fuel, but as possible only if electric supply does not exist.
- 5. Fossil fuel powered heat plant at the end of its economic asset life shall be replaced by renewable sources only.
- 6. Renewable alternatives are not only viable, but cost effective taking a long-term perspective. I have worked in the UK applying for Renewable Heat Incentive (RHI) subsidies. These were effective in incentivising such technology for heat provision even when natural advantages in geothermal and solar in the UK were not apparent. New Zealand has significant natural resource in geothermal and latitude for solar, not to mention largely renewable electricity generation to provide for these technologies.

I wish to be heard in support of my submission.

Yours sincerely,

Mitch Collins 9(2)(a)