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Submitting as an individual

Submission The Transition to a low emissions economy improving energy productivity and increasing the use of renewable energy in industry

From reading the PDF on Process Heat in New Zealand

The document stated the Biggest opportunities for reduction of energy related emissions in New Zealand to transition to Net Zero Carbon emissions lie in two areas transport and process heat. Process heat refers to thermal energy (heat) used in industry and it is this area that the current submission is addressing.

The energy sector, including transport, account for 40% of New Zealand gross greenhouse gas (GHG) emissions. Of this process heat accounted for 27% of all energy related GHG emissions. More than ½ of the process heat demand is met by burning natural gas or coal. Natural gas is the primary fuel used for process heat and accounts for 37% of energy consumption and 50% of emissions. Coal accounts for 13% of consumption and 26% of emissions. Wood derived fuels account for 26% of consumption and 13% of emissions.

It is clear that to transition to a net zero Carbon economy and achieve our climate change goals and obligations the most important thing is to stop any new investment in fossil fuel plants. Replacing one form of fossil fuel energy source with another (eg coal to natural gas) is not acceptable. Fossil fuel burning is the primary cause of climate change. These fuels should be replaced by renewables. The Government must legislate and put regulatory changes in place to ensure that heat plants must be replaced with renewable energy sources and existing fossil fuelled plants economic life does not exceed 2030. A mandatory carbon price needs to be put in place to drive the urgent and significant emissions reductions that must be made. It has been suggested \$100/tonne CO₂ would provide the incentive to change to more sustainable emissions target. This means that companies pay the true cost of their greenhouse gas emissions and not hid behind emissions trading scheme or government allocation allowances. Lower prices have led to industry to ignore their part in climate change CO₂ emissions and carry on with business as usual.

Most process heat emissions are produced by a relatively small number of super large heat plants fuelled by coal and gas. Over 90% of emissions come from less than

5% of heat plants. The PDF stated that high temperature heat users have very few viable short term economic abatement opportunities which accounts to 29% of industry . However low to med heat plants can with replacement technologies (42%) effect real change with efficient and renewable replacement technologies. Lets do It. Government need to direct the change.

Part of the barriers to changing to renewables is not only economic but business mind set. Chia Nelson business installed solar panel in their processing plant their directors come for an environmental and sustainable background. Unfortunately most business are solely driven by profit