SUBMISSION ON 'PROCESS HEAT IN NEW ZEALAND'

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SUMMARY

We must do everything in our power to lower emissions so that we can avoid catastrophic climate change. This includes transitioning the 60% of process heat generated from fossil fuels.

I recommend:

1. Stop any new investment in fossil fuel plant. All new plant must be renewably fuelled. Any compromise threatens our existence and is unacceptable.
2. Put in place the necessary legislative and regulatory changes to ensure that as existing heat plant reaches the end of its economic life, it is replaced by heat plant powered from renewable energy sources and not fossil fuels. As part of this, ensure that existing fossil fuel powered heat plant is not run beyond the end of its economic life in order to avoid its replacement with renewables.
3. Implement legislative and economic measures to ensure that where existing fossil fuel powered heat plant has an economic life that extends past 2030, this plant is replaced by heat plant that is powered by renewable energy sources. We simply cannot afford to continue burning fossil fuels beyond 2030.

ENERGY SOURCES

If hydrogen is to be used as an energy source for process heat, it must be generated by renewable means, and not derived from fossil fuels.

All fossil fuels, including natural gas, need to be replaced with renewables, not other fossil fuels. Natural gas is not an acceptable "transition fuel".

ANSWERS TO SPECIFIC QUESTIONS

Q4: DOES THE NZ ETS PROVIDE AN INCENTIVE TO SIGNIFICANTLY REDUCE EMISSIONS BEYOND CURRENT LEVELS FOR BUSINESS WHO RECEIVE INDUSTRIAL ALLOCATION?

No. I urge you to implement a mandatory carbon price of at least $50/tonne, to be raised at regular and pre-announced intervals to reach $100 within a few years. This is necessary to drive reductions in emissions, as the current ETS model is not working.

Q17: WHAT DOES YOUR ORGANISATION CONSIDER ARE THE LARGEST BARRIERS TO THE ELECTRIFICATION OF ITS PRODUCTION?

It is evident from the discussion document that companies' and institutions' lack of familiarity with electricity as a source of process heat is a substantial barrier to its adoption. The Government should partner with both public and private sector users of process heat to ensure the early uptake of electricity for process heat at a range of scales.

Electrification should not proceed beyond the point where all new capacity can be provided from renewable sources.

Q21: WHAT DOES YOUR ORGANISATION CONSIDER TO BE THE LARGEST BARRIER(S) TO THE USE OF BIOMASS FOR SUPPLYING HEAT?

The largest barrier to the use of biomass for process heat is one that is not listed in this section of the discussion paper: the lack of a carbon price that means that companies pay the true cost of their greenhouse gas emissions. With such a price in place, companies that currently emphasise the barriers listed in this section may well find that these barriers were less substantial than they currently claim.

However, it will also be important to ensure that other sources of emissions related to biomass (e.g. transport emissions) are minimised, and that the sources of biomass are environmentally sustainable (e.g. using wood waste rather than crops grown for biomass).

Another major barrier is consultants who are familiar with coal and gas and just use their existing templates to design plant. EECA should compile a list of consultants who are familiar with the use of wood waste and other waste biomass and will recommend quality boilers to use these fuels.

Q27: HAS YOUR ORGANISATION IDENTIFIED ANY OTHER BARRIERS TO, OR CO-BENEFITS FROM, THE DIRECT USE OF GEOTHERMAL HEAT THAT WE HAVE NOT INCLUDED ABOVE?

Although geothermal energy is not a fossil energy source, exploiting geothermal energy sources does result in CO_2 production. While these are substantially less than from the burning of fossil fuels, this means that renewable energy sources should still be preferred to geothermal energy.