

Process Heat In New Zealand.
Submission.

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Q4: Does the NZ ETS provide an incentive to significantly reduce emissions beyond current levels for business who receive industrial allocation?

No. A carbon price of at least \$50/tonne, raised at regular and pre-announced intervals to reach \$100 within a few years, is needed to drive such significant emissions reductions.

To reduce the issue of emissions “leakage”, a proportion of revenue from the carbon price should flow into tax rebates for all businesses that are running renewable process heat systems. The tax rebates would be signalled as gradually decreasing as nation-wide carbon emissions decrease, thus further incentivising conversion to renewables in the near future. The remainder of revenue should flow back into tax rebates for low income earners.

A Pollution tax should also be considered, ie taxing emissions of airborne sulphur and nitrogen oxides, to further encourage the production of process heat in ways that do less damage to our planet.

Q17: What does your organisation consider are the largest barriers to the electrification of its production?

It’s clear from the discussion in this section that companies and institutions’ unfamiliarity with electricity as a source of process heat is a substantial barrier to its adoption. Here, 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.

There also needs to be more proactive work done to reduce the cost of distributed electricity. One way would be to reduce demand pressure by incentivising widespread installation of PV panels in the residential, commercial and industrial sectors.

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).

A 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 CO₂ 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.