

Submission to the Productivity Commission's Draft Inquiry Report into a Low-emissions Economy

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Statement:

- 1.) I am a life-long conservationist and environmentalist.
- 2.) I am a retired DOC trapper.
- 3.) I hold a B.Sc. (1970) Aberdeen.
- 4.) I have lived in Haast since 2001.

Submission

1.) In broad terms, I support the recommendations and rationales in the draft report, and regard them as well thought-out, realistic and progressive. The need for a timeline and target to reduce emissions, ideally to net zero, must be immune from political tampering for short-term electoral advantage.

There can be no scope for the politicisation of climate change policy. Changes to be made only on the advice of the Climate Commission.

2.) Human population.

Every country in the world needs to have a well-informed, democratic and open conversation about population levels, greenhouse gas (GHG) emissions, and sustainability, and develop strategies to control and cap them according to the circumstances peculiar to each country, but within a global framework. Population management is integral to the goal of controlling GHG emissions.

If population management is not integral to the objectives, policies, practices, incentives and penalties to limit and intimately reduce gross GHG emissions, those efforts are likely to fall well short of their intentions.

In New Zealand, this means we need to have a nation-wide discussion on where we want to be in 2050 with our population, develop recommendations along the lines of other science-based emission-reduction recommendations in the report, and legislate to adopt them in practice, subject to evolving scientific, technological, cultural and social advances.

For example, New Zealand has a comparable land area to the UK, yet the UK has a population of around 60 million. We need to ask ourselves if this is a suitable figure for NZ, and if not, what would be a suitable population, and how we will set about establishing and maintaining it.

No matter how much we individually and collectively reduce our emissions, or mitigate against them, there will come a point when population growth will cancel out our attempts to reduce gross and net emissions.

3.) New Zealand is geographically remote and isolated.

We have a trading economy with the world and are also heavily reliant on international tourism. Therefore our emissions from international shipping and aviation are undoubtedly more significant than for other developed countries, and have been quantified by MBIE as 25% of our transport emissions which themselves make up about 20% of our gross emissions and rapidly growing.

In my view, it is particularly misleading not to include emissions from international shipping and aviation in our emissions budgets. Failure to include them amounts to a subsidy to our economy from the international community, and gives us an unfair trading advantage.

For global emissions to be fairly and effectively limited, shipping and aviation need to be included in all emissions-limiting schemes, and NZ should, along with other OECD countries, be pushing for a global compact to standardise accounting of those emissions within a short to medium-term timeframe.

4.) In the tone of the above, at the minimum, OECD countries should urgently establish a harmonised price on CO₂ and CO₂e emissions, and incentivise all other trading nations to adopt the same price.

This would potentially eliminate or reduce “emissions leakage” opportunities, and establish a globally equitable environment for the trading of goods.

Additionally, a common emissions price can put a brake on attempts to game the system.

NZ can be a nation seeking such an international agreement.

5.) The proposal to electrify New Zealand transport needs to clarify where the increase in electricity supply will come from.

Distributed Energy Resources (DER) may cover some of the demand, but centralised large-scale generation plants may be a more efficient and cheaper way to supply power to society, if that generation is from renewable resources.

Domestic generation systems of all kinds require considerable skill, expense and resources to maintain in top condition, so I’m sceptical about whether their universal uptake would be a good thing.

Likewise, micro- and community schemes are vulnerable to the same weaknesses.

The *caveat* is that all large-scale generation facilities will have environmental, ecological, cultural and social impacts which may be unacceptable, especially in the case of hydro generation and the threat of damming more wild rivers or flooding more agricultural land.

Rather than seeking ways to continue New Zealand’s norm of predominantly private vehicle ownership by switching to EVs, a concerted effort to make travel by public transport the rule rather than the exception, is much needed. This can be done by offering free and/or cheap, fast, clean, safe and convenient public transport, and a rewards system to encourage its uptake. A record of a person’s public transport use will be easy enough to maintain with IT, much as airpoints are recorded at a supermarket checkout.

Accumulation of points could be rewarded until the concept of high public transport use is socially and culturally embedded and becomes the new norm.

Active encouragement of public transport use should also ease urban congestion and the need to waste vast land areas for parking when they could be used for housing or ‘greening’ urban settings.

6.) I support the feebate idea for new and second-hand imported vehicles as it will encourage the use of, and capture all types of low-emission vehicles, though as pointed out above, weaning NZers away from the private motor vehicle should remain a priority.

Removal of GST from EV imports for a 5-year period could accelerate EV uptake, but I don’t support a total ban on the import of fossil-fuel vehicles because there will always be a need for them, especially in isolated rural areas.

A cap on the price of electricity at public fast-charge stations, and a roll-out of those stations along the main tourist routes throughout the country would also help, and could move the 5 million plus international tourists we receive annually into electric campervans and rental cars, resulting in substantially fewer emissions from tourism.

The time to recharge an EV battery needs to be comparable to the time taken to fill the fuel tank of a fossil-fuel car, otherwise long lines of cars will form at charging stations, which will have a big negative impact on EV uptake.

7.) NLTF funding does need to be available to inter-regional, rail and coastal shipping projects using comprehensive assessment criteria, including social and environmental benefits, so that developing paths to a low emissions economy are holistic, and encompass social wellbeing.

8.) The enthusiasm for renewables should be tempered by the awareness that the lifecycle of some elements of renewables power generation systems, especially photovoltaic (PV) panels and lithium-ion (Li-ion) batteries may produce highly toxic emissions such as sulphur hexafluoride (SF₆) and other fluorine-based gases in the case of PV panel manufacture, which are in the order of tens of thousands of times more potent as GHGs than CO₂.

That these emissions may take place outside NZ indicates that we are shifting those emissions overseas. This brings up the complex question of how or whether we should account for those emissions, and whether international standards are needed to deal with them through a feebate system.

Our quest to reduce domestic emissions should always take place in the context of a global awareness.

A potential issue with large-scale uptake of PV is their effect on global warming through their absorption of solar heat. Because they are black they do not reflect solar radiation, whereas the lighter coloured surfaces which cover most of the planet, do.

Combined with GHG emissions this could exacerbate global temperature rise.

9.) The feebate concept for vehicles could be applied to land uses including agricultural activities. A feebate system could encourage and accelerate the adoption of low-emission practices in agriculture sooner than 2030, as the pace of change proposed in the report (60% free allocation of NZUs to agriculture by 2030) is too slow.

The technology and farming practices to make a significant start on reducing emissions from pastoralism already exist in the form of pasture and herd management. It is surely defeatist to wait for a 'magic bullet' technological breakthrough when we can already apply what we know and what we've got.

Farms with low or negative emissions would receive a rebate derived from a fee paid into a dedicated fund by landowners whose emissions exceed a periodically reviewed baseline.

Satellite imagery is now capable of identifying land use patterns and could be used to measure associated emissions even from so-called lifestyle blocks.

10.) Government needs to be clear that growing incomes is not necessarily part of increasing wellbeing. There is a thread running throughout the report which conflates the two, and is seemingly wedded to the idea of everlasting economic growth. This is a fallacy on a finite planet unless we are very careful about what we mean by economic growth, and is a mind-set which has contributed to humanity being in the environmental bind of climate change which faces us.

Economic growth can mean doing more with less, but that may lead to the 'Jevons paradox', and more material consumption.

The focus, therefore, needs to be on wellbeing and not on economic growth *per se*, though equitable economic wellbeing will be part of the overall picture.

11.) Methane (CH₄) from ruminants, breaks down in the atmosphere to carbon dioxide (CO₂) and water (H₂O), so surely methane contributes to atmospheric CO₂ levels. This link is not made clear in the report. This will change the profile of dairy, sheep and cattle farms, and alter how they reduce their emissions.

12.) It is unclear how planting forests will mitigate against nitrous oxide (N₂O) emissions.

N₂O should not be fungible with CO₂ because of their differing atmospheric characteristics, and a sectoral approach to managing emissions is less likely to lead to intersectoral contention and free-riding.

13.) Only *in extremis* should purchase of high quality international emissions credits be considered. NZ should manage its contribution to global reductions targets without looking elsewhere for help, as this is likely to slow the process in reaching our emissions targets.

14.) In my view the entire electricity generation, transmission, distribution and retail system should be nationalised, and electricity sold on a cost-plus basis to cover the cost of maintenance, replacement, expansion, R&D and upgrading.

The fractured system we now have is a legacy of the ideological fixations of the 1980s and 1990s, and fails to deliver affordable power to New Zealanders. That failure has implications for the electrification of our economy, as only if power is affordable will widespread electrification of our economy proceed in a timely manner.

The mantra of private efficient and public inefficient is now obsolete, disproven and worn out, and the need to attract investors, who are in practice institutions, corporations and wealthy individuals, to purchase the electricity system which is the common property of all citizens, should be discontinued.

The profit motive must be removed from what is an essential public good.

End of submission.

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