

# Climate Change Contribution Consultation

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Submission

## The Target

There are a number of issues that complicate the setting of an emissions target:

- Is it a gross or net emissions target?
- What's our population growth going to be?
- Is the weighting given to methane in setting an overall emissions target appropriate?
- How should the harvesting of trees be treated? If we have to assume that all the wood harvested is consumed immediately then it is difficult for forestry to contribute to lowering our net emissions unless we continually increase our forest cover.
- Do we focus on reductions from a specific year (1990); or do we set milestones to achieve net zero emissions; or do we make the target more personal by setting a per capita emissions target?
- Others are raised by the MfE discussion document and discussed below

While we should put our case on the above points, the target should be based on existing interpretations, and if we win any of the arguments we should advance our target accordingly.

*New Zealand's target should be to reduce our net annual emissions to 20 million tonnes of CO<sub>2</sub> by 2050 (60-65% reduction on 1990 emissions by 2050), and to zero by 2075. These targets would be consistent with us making our fair contribution to keeping the rise in global temperature to around 2 degrees this century.*

This is a more ambitious target than the Government set in 2009 of halving our 1990 net emissions by 2050. To achieve the more ambitious target will require a much greater commitment from the Government, industry and individuals to reducing *gross* emissions than has been evident over the past decade. Over the next decade or so a static, or contracting, forestry industry will tend to add to, rather than reduce net emissions.

It would also be sensible to convert the net emissions target above into an emissions-per-capita target, or possibly a net-CO<sub>2</sub>-emissions-per-capita target. That would make it easier and more compelling for individuals to take some responsibility for reaching the targets rather than leaving it all to central government. People will change their behaviour given good information, clear

price signals (maybe with the help of taxes), and some public education, and often the costs of change are far outweighed by the benefits. Inhalations and emissions from cigarettes have declined substantially over the past three or four decades thanks to a combination of the above, saving many lives.

## **From The MfE Discussion Document**

### **Objectives for setting our contribution**

Q1.

*(a) Do you agree with the above objectives for our contribution?*

*(b) What is most important to you?*

*Is it fair?*

The implication of this objective is that we should do no more than we perceive is fair given our handicaps.

The risk this objective poses is that the consumers of our food products and tourism services may have a very different perception of what New Zealand should be doing – the point picked up in objective 3.

Our handicaps (dependence on agriculture and distance from markets) are disadvantages that should drive innovation, which ultimately enhances our reputation and long-term competitiveness.

*Avoid imposing unreasonably high costs on New Zealanders*

It's not obvious that imposing a tax on greenhouse-emitting activities will drive down economic activity over the medium to long-term. See below for comments on Q3 and Q4. Furthermore, taxing undesirable activities provides revenue that the government can use to alleviate the impact of such taxes on the most vulnerable, or to subsidise more desirable alternatives (eg public transport or cycle lanes).

*Guide us over the long-term*

I agree most strongly with this objective. This is a long-term problem requiring long-term planning and commitments.

It is in our long-term interests as both New Zealanders and citizens of the world that we become a low emission economy. Rather than see that commitment as a threat to our future incomes and economic well being, we need to look at it as an opportunity to develop a more resilient and sophisticated economy that better secures our future standard of living.

Q2

*A fair contribution - what do you think the nature of New Zealand's emissions and economy means for the level of target that we set?*

What we think is fair or not fair maybe less relevant to our future economic well being than how foreigners perceive our performance when it comes to greenhouse gas emissions. New Zealand's per capita emissions at 17 tonnes

per annum are very high – double the global average. That is a dangerous statistic to be tagged with no matter how valid the explanation for it is.

We should not focus on the nature of New Zealand's emissions and economy in setting our target, but rather in how we meet a target that will impress rather than disappoint our customers. Every country will have "excuses" for setting a cautious target.

New Zealand can and should be aspirational in setting its emissions target. That will require political courage and energy to convince industry and individuals to change their behaviour (possibly encouraged by taxes) and invest in new technology (possibly with incentives).

Q3

*What level of cost is appropriate for New Zealand to reduce its greenhouse gas emissions? For example, what would be a reasonable reduction in annual household consumption?*

Q3, and the modelling behind it, assume that there will be no significant change in the way the economy operates. That may be an accurate, albeit depressing, assumption and delivers an unsurprising conclusion: reducing our greenhouse gas emissions, ceteris paribus, results in lower income and spending than would otherwise be the case.

But as Q4 suggests New Zealanders' economic well-being need not necessarily be cramped by committing to cleaner, greener economic activity. Indeed the opportunities that technology, changes in the way we live and work, and a greater focus on value rather than volumes in agriculture could lead to a higher standard of living and lower emissions.

While transport is by no means the biggest contributor to our total greenhouse gas emissions it is an area we could make the biggest short-term gains in and not just in terms of reduced emissions.

- Set an ambitious target to electrify our transport fleet – cars, buses, trains and bikes (say, 25% of all new cars sold to be electric by 2025, 30% by 2030, etc).
- This may require a decade-long lift in fuel taxes, or a significant differential in registration fees in favour of electric cars, again for a specific period, or both.
- Promote New Zealand to vehicle manufacturers as a market to test and develop electric vehicles – it's a small, remote but relatively sophisticated market with a high proportion of renewable electricity. This could involve providing explicit incentives to carry out R&D work in New Zealand on electric vehicles in combination with the above incentives for people to switch to electric vehicles.
- The University of Auckland is recognised as a world leader in induction power technology, which is likely to be a core element in developing all-electric vehicles especially buses. Given New Zealand cities' high dependence on buses for their public transport networks (80% of all public transport journeys are by bus in New Zealand) we could

leverage the University of Auckland's expertise into making New Zealand an important centre for electric bus technology globally.

- A major contributor to our rising emissions has been population growth. That population growth has been concentrated in Auckland and with it has come a marked increase in traffic volumes, congestion and distance travelled. The share of Aucklanders' incomes being devoted to private transport is likely to be high by modern city standards, and it's rising as people are forced to live further from their workplaces. A combination of better public transport (more of it electric), more and safer (dedicated) cycling routes, driverless cars possibly, and a substantial increase in population density would contribute to lowering our emissions and making Auckland a better place to live.

*Transport* should be the focus of efforts to meet our emissions target.

*Agriculture* is a large emitter of methane. Science will be helpful in reducing these emissions over time but the simplest and quickest way to reduce methane emissions is to reduce stock numbers. Sounds like a dumb idea until you consider what the sheep industry has done over the last 25 years. Since 1990 the sheep flock has almost halved in size (27m fewer sheep producing methane) and yet the volume of sheepmeat exports has increased slightly.

Another more specific example of how farmers have reduced stock numbers but increased profits in response to a regulatory constraint emphasises that there are alternatives to chasing volume.

Farmers on the shores of Lake Taupo were required to substantially lower their nutrient loading to help preserve the health of Lake Taupo. They agreed to reduce stock numbers permanently thus removing an important option for maintaining their profitability let alone increasing it. With an emphatic cap on the number of stock they could run (production), one farmer wisely looked at making that production more valuable. He created a brand that emphasised the commitment to low nutrient farming (lower stocking rates) and preserving the health of the lake. That brand has helped him establish a 30% price premium for his production.

In the dairy industry low intensity operations are generating higher profits than much more intensive dairy businesses. The increased profits are achieved with lower emissions and lower nutrient loadings, but also lower output. The lower output worries those who think that more output is all that matters. It doesn't.

Moreover, by comparison to US and European dairy farmers, our cows are inefficient in terms of milk and milksolids yield per cow. That means for the same output we run more cows. Contrast that with what sheep farmers here have achieved.

New Zealand may have a large agricultural sector relative to our population but in absolute terms we produce a tiny fraction of the world's milk and meat – around 2% or less – not enough to supply all the hotels in the world, or the

millionaire households. We are generally perceived as a producer of high quality, safe and environmentally friendly food products.

We have traded on these credentials, but have not always worked to preserve their integrity, nor fully exploited them. Setting an ambitious emissions target would help underpin our reputation as a producer of natural and safe food, and for providing tourists with the purest of experiences.

*Q5. How should New Zealand take into account the future uncertainties of technologies and costs when setting its target?*

Science and technology are focused on solving problems. In this sense future uncertainties are strongly biased toward positive outcomes for reducing emissions, especially if that goal is clear and compelling.

The risk in setting an overly cautious emissions target is that the incentive to pursue relevant technology will be weak thus accentuating future uncertainties – a vicious circle.

It appears that the “costs” in Q5 relate to the economic analysis referred to above and in the MfE’s discussion document (Q3). If that’s so, there are two concerns.

The first is the costs of inaction. The costs to the economy of climate change will dwarf the costs of reducing our emissions no matter how aggressive our emissions target is. The costs of climate change will be borne largely by future generations. At the very least the current generation should aim to drive our net emissions to zero by 2050, or match the most ambitious targets adopted by other countries.

The second is that the future costs of reducing our emissions could be more than offset by gains from investing in green technologies. New Zealand already has a reputation for technological competence in geothermal power generation and has generated export earnings from that expertise. The University of Auckland’s world leading research in induction power is also creating export opportunities. Our investment in trying to reduce methane emissions from our livestock has enormous potential internationally.

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