

Submission to MFE: **New Zealand's Climate Change Contribution Consultation**

Name: Ian M Turnbull

Address [REDACTED]

Telephone [REDACTED]

Email: [REDACTED]

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Introductory Statement:

I follow the debate on climate change and its associated politics closely: I am also a passenger on this planet, and am increasingly concerned that the human race is busy destroying the life support system of Spaceship Earth. I am particularly worried by the fact that Governments around the world are deliberately postponing actions to mitigate climate change, in favour of "the economy" and not upsetting big business. They seem to believe that "business as usual" is OK, that "the market" will solve the problem, and that it is all someone else's fault.

Whatever actions Governments may implement in Paris are likely to be too little, too late. The opportunity to take action on climate change has been there for years. New Zealand was to reduce CO₂ emissions by 5% below 1990 levels under the Kyoto Protocol: all we have achieved so far is an increase of 21%. A great contribution, indeed: are we really "on track" to meet the 2020 target?

People who care about New Zealand, and the planet, are becoming angry at this lack of progress.

Any fool, and any government, can set an emissions target. The emphasis in this process of tackling climate change must be on actually DOING something, not just on planning it.

My partner and I decided long ago that if we want to see action on mitigating climate change, we must do it ourselves. For many years, our actions and lifestyle have been aimed at reducing our carbon footprint: we despair of any international agreement or New Zealand Government action ever addressing the issue. We built a house which was entirely off-grid and lived there for ten years. Although now retired and on a limited income, we have been able to convert our current house by retro-fitting it with double glazing and solar hot water heating, and have installed a grid-tied electricity generation system using photo-voltaic (PV) panels. We feed ourselves for six months of the year from a vegetable garden, have a hybrid car, and have renounced air travel. It can be done; it isn't hard.

Discussion Document: some comments.

Your document outlines numerous scenarios, and suggests a range of policies that can be implemented. However, the underlying sense is of "business as usual", strongly flavoured by "the economy". There are the usual economic scare tactics – it will cost you a lot of money if we do this, or even more if we do that. There is an assumption that for New Zealand to change to a low-emission state is all too hard: the word "difficult" is frequently used. There is an implication that we shouldn't do more than our "fair share".

Nowhere is the concept of Peak Oil mentioned. One cannot talk about climate change without understanding the implications of Peak Oil: the global consequences of reducing hydrocarbon usage are coming, ready or not.

The mindset implicit in the Discussion Document is wrong. Tackling climate change is not a cost, but a benefit. A simple household example demonstrates this. We have installed PV panels, each year we are paid for the power we generate by our electricity company, and we are in credit. The cost of the panels was the equivalent of a few overseas holidays. What is so hard about that?

Question 1: Do you agree with the above objectives?

Not entirely, no.

1: It is seen as fair.....

As a relatively affluent country, which is "...well regarded as an effective contributor..." (really?) New Zealand can – and should - be doing MORE than our share. We can afford it (especially if we don't spend Government money on yachting, rugby and flags), and someone has to set an example. Being a world leader in "going green" will have incalculable international benefits, both tangible and intangible.

2: Costs are managed...

The economic analysis of the price of reducing emissions needs to not only take account of the costs and benefits of "going green" (e.g. no power bills), but it also needs to take into account the alternative cost of doing nothing or too little. What about the cost of compensating (or relocating) entire communities, and associated port/city infrastructure, following a 1-metre rise in sea level? What will be the cost of successive droughts in regions now thought to be well watered? What will be the cost of combatting the new exotic pests and diseases which can survive in a warmer environment? All these can be quantified. What will be the cost of keeping Coronet Peak Skifield operating when the snowline is higher than the peak?

3: New Zealand is sensitive to impacts from higher fuel prices...

These are coming, whether we like it or not, when the reality of Peak Oil strikes home. The current reduction in price is driven largely by oil released by fracking in the US. A good analogy here is that the pub has run out of beer, so we are wringing out the old carpet to get the last of it. Using the output of an entire gas field to melt tar sands in Canada to fuel SUV's in Nevada is not only unsustainable, it is insane. The sooner New Zealand reduces its demand for hydrocarbons, the less vulnerable we will be; and the less CO₂ we will emit.

What is most important to me?

Get on with it! There is no need to wait for emissions targets: there is no need to wait for new technology. We KNOW what needs to be done: we HAVE the technology to reduce our emissions. By all means sign up for international agreements: they seem to be necessary to show the

passengers and crew on Spaceship Earth how urgent mitigating climate change is. But we can start, and carry on, doing things ourselves. NOW.

Question 2: what do I think New Zealand's emissions profile and economy mean for the target?

Much is made in the Discussion Document on how our emissions profile makes it difficult to achieve further reductions. This seems to be based on several assumptions: that our agricultural sector cannot or will not change its profile; that we will continue to shift everything by big trucks and drive to watch the motor racing; and that we are already good guys because 80% of our power is from renewable resources.

New Zealand agriculture has recently undergone a radical change, with a nation-wide conversion to dairying at the expense of more traditional farming, and (in some places) of forestry. As well as incurring a vast amount of debt, this has meant an over-dependence on a single market; reduction of water quality and quantity; aquifer pollution; and an increase in greenhouse gas emissions. Most of the world's population is vegetarian. If New Zealand agriculture were to halt this mad rush to milk, and focus instead on producing vegetable-based rather than animal-based food, the agricultural emissions profile would benefit, as would the global food supply.

We currently have a focus on "Roads of National Significance". If we are serious about reducing transport emissions, this should be "Railways of National Importance". History shows us that it is actually possible to live in a world where trains work. The change back to using the rail network for both passenger and freight transport could be achieved if Governments concentrated on tackling climate change, rather than playing bridge in marginal electorates.

Renewable energy in New Zealand CAN be increased to 100%. However, our rivers are not a renewable resource: try picking apricots in the Cromwell Gorge. The best option for changing our power generation profile lies in Southland. There is an ageing aluminium smelter at Tiwai Point, using cheap hydro-electric power. Instead of subsidising a multi-national company by millions of dollars to keep this open, we should convert it a silicon smelter when it is sold or closed (see below, under Q. 4).

New Zealand therefore already has the ability, the technology, and the raw materials to reduce fossil fuel use, and to change our emissions profile by significant amounts, with potential economic benefits much greater than the associated costs.

Question 3: what's it going to cost me? Is this all that really matters? Are we that greedy, selfish, materialistic and short-sighted?

I refer back to my earlier remarks. The Discussion Document focusses on what it will cost if we do certain things. I suggest that in finalising a policy on tackling climate change, you change this to frighten people the other way: what it will cost them if we **don't** do these things?

When sea level rises a metre, a lot of people in coastal regions will have to move, or pay vast sums for coastal defences. Who will pay? If severe weather events such as floods and landslides increase, insurance costs rise; many flood plains and alluvial fans become uninhabitable. Roads of National Significance will need much more maintenance: who pays? We all will.

A “cost per household per % emission reduction” figure should therefore be balanced against a “cost per household under business as usual” figure, before people can judge if it is worth spending the money. I refer back to my example of our PV panels. Even when the capital costs are included, by adjusting to a lower carbon lifestyle, our household running costs have *decreased*.

Question 4: New opportunities (refer also to “Domestic Policies”, P. 16)

In terms of renewable energy production, the answer, for New Zealand, may lie in Southland.

Southland has a major deposit of some of the world’s purest quartz (silica) gravel, far purer than any other silica deposit in New Zealand, with very low levels of boron and phosphorus (critical in PV panel manufacture). The deposit lies under a production pine forest, so mining would have minimal impact. It is close to the Tiwai Point site, where Manapouri power is already available and there is a highly skilled workforce specialising in metallurgical smelter operation. The purity of the raw material is such that it may be possible to utilise smelting technology developed in the US to make PV panels in a single smelting operation, rather than the two (making silicon metal, then re-refining the silicon) currently used overseas. This has the potential to halve the production costs of PV panels. If every New Zealand house had 3 kw of PV panels on the roof – distributed generation – the investment required for transmission lines is reduced; fossil fuel use for power generation could cease; and even more power would be available for converting the sacred car to an electric future.

If Government were serious about mitigating climate change, it would be supporting this smelter conversion, both in terms of establishing the smelter (Venture Southland has done the homework) and in terms of creating the environment which would enable New Zealanders to take up the technology. The latter could include, for example, legislating to require all electricity companies to buy power generated by households at a reasonable price (as is done overseas); and amending Building Codes to make PV and solar hot water panels mandatory, with subsidies as has been done for insulation and double glazing.

Fuel and energy efficiencies (such as we have adopted in our own household) are easy, and bring immediate economic returns. These measures are the most likely to be adopted in the near (ten year) future. However, they need to be encouraged by Government policy, as New Zealanders seem to think that only the Government has any responsibility for climate change mitigation. Given New Zealand’s track record since Kyoto, I fear this encouragement will not happen in the face of short-sightedness, an obsession with money, and political reluctance to face reality.

Simple ways to encourage fuel efficiency in the transport fleet, for example, would be to remove or reduce road user charges for electric vehicles (as indicated, P. 16) *and* for hybrid vehicles, *and* for any vehicles with fuel consumption under 6 l/100km. A surtax on all engines over 2l capacity would also send a clear signal. Are we really so enslaved by our cars?

Planting forests is an easy way to make some progress, but trees take time to grow, and efforts to adopt forestry as a mitigation tool have become bogged down in short-sighted wrangling over the money and the perks. Unless society, and foresters, and Governments both local and national, accept that something needs to be done NOW and that wrangling isn’t helpful, I fear for forests in this country. I have planted many hundreds of native and exotic trees over the past 40 years, but they will have made little impact on my cumulative CO₂ emissions. I need to plant more. We all do.

Question 5: how do we take into account the uncertainties?

Answer: change our mindset. Don't look for the problems: see the solutions. Don't look at "impacts and costs on the economy", see "impacts and *benefits* for the economy".

Predicting what we can achieve is not hard, once we accept that we must do something. The uncertainties regarding technology are a side issue. We already HAVE the technology to convert our homes and our vehicles to a low-carbon world. We KNOW that planting trees will make a difference. We KNOW that if we don't do something, our descendants face a dire future. We KNOW that a green economy will create benefits and opportunities. The problems lie in our willingness to apply the solutions, and in our unwillingness to accept that we need to go out and DO SOMETHING!

Thank you for your time and patience in reading this submission, and for the opportunity to make it.

I am off to plant some more trees.

