

Send to climate.contribution@mfe.govt.nz by 5pm, 3rd June 2015

Questions to guide your feedback

Your submission may address any aspect of the discussion document, but we would appreciate you paying particular attention to the questions posed throughout and listed in this form. You may answer some or all of the questions. To ensure your point of view is clearly understood, you should explain your rationale and provide supporting evidence where appropriate.

Contact information

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Objectives for the contribution

1a. We have set the following three objectives for our contribution:

- **it is seen as a fair and ambitious contribution – both by international and domestic audiences**
- **costs and impacts on society are managed appropriately**
- **it must guide New Zealand over the long term in the global transition to a low emissions world.**

Do you agree with these objectives for our contribution?

We agree that NZ's contribution should be fair and ambitious. However, we are very concerned that, if the past is anything to go by, our intended contribution will not be ambitious enough and will be predicated on our economy being based on the same or similar things, to the same or similar extent, as it is today. We want our contribution to be ambitious. We do not believe our commitments should assume any technological breakthroughs as they may not happen or may not happen in time to be useful. There are existing technologies and ways of doing things that if implemented on a wide scale would enable us to dramatically decrease our collective CO₂ emissions.

What is considered fair depends on the basis on which one assesses fairness. We think that we need to be looking at what is fair to the generations of humans that will follow us and have to deal with the consequences of the behaviours of preceding generations including ours. We assert that it is not fair for future generations to be left a world in which the climate has been changed to such an extent that their well-being is seriously threatened by it. Furthermore, we believe it even less fair to those other species with which we share Earth given that many of them have dramatically less ability to adapt than humans do, partly as a result of human-imposed constraints on their movement.

Of course we agree that the costs and impacts on society should be managed appropriately. The difference of opinions is likely to arise over what is appropriate. The question that should have been asked was about the principles that should guide the management of costs and impacts.

We believe people must have good choices that enable them to

- a) play their part in helping NZ meet its commitments, and
- b) reduce the personal impacts of any contribution NZ commits to making.

For example, there needs to be excellent provision for walking, public transport and cycling. Also, the design of our cities and towns must enable these modes to be used by the vast majority of people so that using private motor vehicles is not their only practical option. Not only should facilities and services for active and public transport be high quality but also employment opportunities and commonly-used facilities and services should be located close to where people live. Urban areas should be used more intensively than they currently are rather than continuing to spread further and further out.

In addition, there should be strong financial incentives to use non-motorised and public modes of transport. The most effective means seems to be through increasing the cost of petrol and diesel but parking charges are also a powerful tool (perhaps a carbon levy should be added to parking charges that would help fund emissions-reduction research, businesses transitioning to lower emissions operations, reforestation of marginal land etc).

We agree that the first commitment should guide our longer term approach. However, we are concerned with the use of the words long-term. It has already taken far too long for nations to act in ways sufficient to address the issue.

Figure 1 of the discussion document, as well as the IPCC reports on the subject, show that we are very close to exceeding the total GHG emissions that will enable any rise in global temperature to be kept below the critical 2° C threshold. Failure to act adequately, quickly enough, will make future efforts futile. We need to focus on measures being effective rather than delaying action while we determine which measures would be the most efficient.

So we need to be thinking much more about the short and medium terms, acting to implement things that will start decreasing our emissions immediately and that will continue on into the future. Also, in terms of revegetation of marginal lands, it takes a number of years before this sequesters appreciable quantities of carbon so the sooner it is embarked upon the sooner its effect becomes significant.

1b. What is most important to you?

Of the 3 objectives, ensuring they contribute effectively and adequately to avert the problem is what is most important.

We do not want to see squabbling over just how much each country will do (first objective) resulting in further delays to effective action. We need to be willing to make fundamental changes to the way we do things and what we do to solve this problem. Given the length of time CO₂ (especially) stays in the atmosphere, and the situation shown in Figure 1 of the discussion document, it is clear that we need to be rapidly moving towards a net zero GHG-emissions society.

Also, the sharing of costs and benefits within society is something for us to work out internally. First and foremost, we must make the commitments needed to help solve the problem and then deal

with how the costs will fall and the benefits will be shared.

What would be a fair contribution for New Zealand?

Reaching zero net emissions by 2050 or by whatever date the remaining carbon budget of approximately 900Mt (to keep temperature rise below 2° C) is emitted.

2. What do you think the nature of New Zealand's emissions and economy means for the level of target that we set?

We recognise that NZ's GHG emissions profile is uncommon among OECD countries. That must not be used as an excuse for not reducing our total emissions adequately (taking into account the different duration of effects of the different GHGs).

It is unreasonable for us not to decrease our emissions as much as possible.

This is relatively easy in the energy sector. Simply phase out the use of the thermal power stations such as Huntly and Otahuhu and replace them firstly with energy conservation measures (e.g. continued insulation programmes, LED street and building lighting) and secondly with widely-distributed electricity generation (e.g. PV panels on all new buildings and suitable older ones, widely-dispersed small scale wind-powered electricity generation). Only if those measures prove inadequate, which they may if there is also a widespread shift to electricity-powered vehicles, should any additional larger scale, centralised generation (by renewables) be considered. This approach would have strong resilience co-benefits and long-term cost reduction for end users.

In the transport sector a substantial decrease in emissions is possible through making walking, cycling and public transport more viable and more enjoyable forms of transport. Given the high proportion of trips, made in private motor vehicles, that are less than 5 km, public and active transport modes have substantial ability to decrease NZ's emissions. Furthermore they have well-recognised economic, health and other social benefits associated with them. Of course, a near total shift to electricity-powered transport would greatly address the GHG emissions issue but it wouldn't result in the various co-benefits that a shift to less travel and greater use of more active and public modes would yield.

On the waste front, there is some virtually unavoidable future emissions, especially of methane, from landfills because of the organic matter that has been buried in them in the past. However, there should be no further burying of organic matter. All paper and cardboard should be recovered and recycled or used in composting or other beneficial way. Garden and parks organic waste should be composted or used beneficially in some other way (e.g. pyrolysis, biochar production) and kitchen waste should also be diverted to beneficial uses (e.g. gas or biogas production and/or composting). Sewage sludge should also be diverted from landfill and used as beneficially as possible. This may require the tightening of trade waste rules to further reduce the contamination of sludge with harmful substances.

Agriculture at first seems a difficult one but the discussion document mentions some promising avenues for research and development which may help to decrease the sector's emissions. However, we must not assume these will do any more than make minor changes at the margins while our main agricultural activities are based on ruminants. We must be willing to change the very nature of our agricultural activities if necessary. We should set firm timeframes for reduction of emissions from the sector. If they are not met, then the number of ruminants should be decreased to the extent necessary. This need not result in any drop in profitability if we do more to add more value to our

agricultural production and move away from being a bulk commodity supplier.

On this point, we believe it is disingenuous to make the argument that the world needs more food to be produced and, by implication, that NZ has an important role to play in doing so and that that justifies our agricultural sector not being subject to the same requirement to decrease its emissions. Firstly, the need in the world for food is largely one of calories not of protein, the latter being what NZ specialises in producing. Secondly, even if the need (rather than want) for protein was actually high, NZ only supplies it to those who can afford it yet where the need actually is greatest is generally among populations who cannot afford to pay what we expect. Thirdly, any current food shortage is one of distribution and wastage rather than production.

So in summary on this question, we do not think the uncommon profile of GHG emissions that NZ has should be used as an excuse for not reducing our total emissions on a par with other countries. We need to step up and do what it takes to decrease our emissions to help solve the problem just as every other country does.

How will our contribution affect New Zealanders?

3. What level of cost is appropriate for New Zealand to reduce its greenhouse gas emissions? For example, what do you think would be a reasonable impact on annual household consumption?

Climate change is the most significant issue facing the human species so just about any cost is reasonable. However, having said that, the costs need to be distributed in ways that take account of people's disposable income. Adding further costs to the many households which currently struggle or fail to meet their current basic requirements is inappropriate. However, decreasing the disposable income of many others will have relatively little impact on their well-being.

This question seems to be assuming that there are net costs of acting to decrease GHG emissions. This seems to ignore the reports, such as that of Stern (2006, The Economics of Climate Change) and the US Council of Economic Advisers (2014, The cost of delaying action to stem climate change) that state that the costs of doing insufficient are very high because of the dampening effect climate change will have on economic activity. So spending sufficient on climate change mitigation may actually result in higher economic activity than if we do not spend enough.

4. Of the opportunities for New Zealand to reduce its emissions (as outlined on page 15 of the discussion document), which do you think are the most likely to occur, or be most important for New Zealand?

We have more or less answered this above under Q2. Most important, because of the relative ease and relative impact, are

1. to decrease electricity sector emissions by phasing out thermal generation plants and replacing them with energy conservation, distributed electricity generation, and if still necessary large scale, centralised renewable generation

2. to decrease transport emissions, foremost by decreasing the need for travel through city design, getting a higher proportion of trips taken by active and public modes, and only finally by shifting to energy sources such as electricity.

3. decreasing the number of ruminants in the country (while adding more value to the products obtained from them so that profitability and income is maintained or improved). This would have additional co-benefits such as enhanced water quality.
4. putting GHG emissions from waste on a downward path by banning burial of organic matter.
5. revegetating marginal land to act as a permanent carbon sink (with a co-benefit of reducing sedimentation of rivers with the associated water quality adverse effects and flooding effects).

Summary

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

It should not assume any technological breakthrough will occur. If one or more breakthroughs do occur, it will make the task we set ourselves that much easier. Nothing is lost then. However, if we assume such unknown breakthroughs will occur and they don't then we may well fail to achieve the objective of decreasing GHG emissions sufficiently to stabilise and reduce atmospheric GHG to levels which will prevent temperature rises in excess of 2° C.

The consequences of failure are too great to act assuming that technology will be able to be developed with sufficient impact quickly enough. We must base our commitments on what we know we can do on the basis of proven technology. Although humans have made enormous technological advances there are numerous examples of technology failures, under-performance and yet-to-be-resolved obstacles. Take the nitrification inhibitor DCD as an example of under-performance and the development of nuclear fusion technology as one that has remained largely unresolved despite 50-60 years of research.

Other comments

6. **Is there any further information you wish the Government to consider? Please explain.**

To be specific about numbers, the only sensible approach is to aim for the world not exceeding the carbon budget shown in Figure 1 of the MfE discussion document. Even if we decrease the rate of global emissions by, say, 30% by 2035, that only pushes out the date at which the budget will be exceeded. So eventually we will have to add no more carbon to the atmosphere than we remove from it. So, we need to be aiming for a zero net emissions position. Given the timeframes involved (2035 at current emission rates) we suspect we will need to reach this zero net emissions position by about 2050. Clearly that can't be done in one jump so we should set targets for annual decreases in emissions from now until then such as a 30% reduction on current emissions levels every decade, i.e. 30% less by 2025, 60% less by 2035, 90% less by 2045, 100% less by 2050.

When your submission is complete

Email your completed submission to climate.contribution@mfe.govt.nz or post to Climate Change Contribution Consultation, Ministry for the Environment, PO Box 10362, Wellington 6143.

Submissions close at 5.00pm on Wednesday 3 June 2015.