

SUBMISSION TO PRODUCTIVITY COMMISSION

There are three high level questions that would benefit from clarification and greater acknowledgement in the paper

1 The unqualified statement early in the paper that New Zealand has committed to “reduce *its* emissions 30% below 2005 levels by 2030” [my emphasis] is misleading. As is the reference to the target of a 50% reduction from 1990 levels by 2050. As is stated later in the paper, the 2030 target is conditional on “full recourse to a broad and efficient carbon market.” Treasury modelling prior to the Paris Agreement suggested that only a fifth of the 2030 target would be met from reducing domestic emissions.

2 Use of international markets and offsets. The paper covers this question but omits two important points

- the use of markets and offsets is only a temporary, transitional solution towards a net zero carbon emissions economy [net zero would apply to long-lifetime or cumulative gases, notably CO₂]. To put it simply, every dollar spent on international markets is a dollar not spent on the New Zealand transition.
- the scale of the required purchasing modelled by Treasury would be a severe imposition on the economy, with costs over the period 2020-2030 of the order of 14- 20 billion dollars, potentially even more depending on carbon prices. The prospect of spending three times Vote: Environment every year for ten years on purchasing units or offsets (or two and a half times New Zealand’s annual aid budget) risks being politically and economically unsustainable. New Zealand is alone in the proportion of its target that it would contemplate achieving offshore.

3 There are important but unacknowledged questions about the measurement of short-lived gases in relation to the goals of the Paris Agreement . The current metric used severely overrates methane’s long-term contribution to global warming, which is what matters most. This has major implications for agriculture. Some current research in the scientific community is shedding light on this question.

The following ‘policy brief’ produced for the Small States and the New Security Environment project (and available on the University of Canterbury website) provides further detail together with recommendations on New Zealand policy over the next two years.

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Website http://www.arts.canterbury.ac.nz/political/ssanse_programme2017.shtml

POLICY BRIEF

Climate change: putting our house in order

Over the next two to three years, New Zealand has an opportunity to rethink climate change policies at home and abroad. This can secure long-term benefits to the economy and enhance our international reputation.

Key findings

- New Zealand's international climate change stance is poorly aligned to the longer-term implications of both climate science and the Paris Agreement
- This creates risks for New Zealand abroad and at home
- A strategy is needed to align domestic and international policies with New Zealand's transition to a low carbon society.

Executive Summary

What is the problem? Unlike virtually every other country, New Zealand has committed itself internationally to climate change targets that it has no hope of meeting domestically. This mattered much less under the Kyoto Protocol, where targets were short-term, concerned only developed countries, and carbon markets were readily available to make up the difference. But with the Paris Agreement all that has changed. The focus is now on a long term global transition to net zero emissions before the end of the century, involving all countries. Carbon markets are not a permanent solution, and their future is in any case uncertain. New Zealand is highly exposed to risks, most obviously the prospect of a large amount of money - several billion dollars to 2030 - being spent offshore with no benefit to New Zealand's own transition.

What should be done? New Zealand should seek to reposition itself towards an international stance where its 'fair share' of the global effort relative to those of other countries is based first on its domestic transition to net zero emissions, with other forms of international contribution additional. This needs to start at home through a combination of domestic research, analysis and engagement to determine New Zealand's transition pathway(s) past 2050. Abroad, it will need a strategic focus on science-based policy, aiming to demonstrate the environmental integrity of New

Zealand's position. This can be supported by international diplomacy, drawing on New Zealand's expertise and credibility in the international climate change negotiations.

Analysis

The Kyoto Protocol was the first step to quantify reductions in emissions. While the expectation was that the bulk of the effort to reduce emission would take place through domestic reductions, market mechanisms were also put in place, and no quantitative limit on use of international carbon markets was specified. The logic of the use of markets was sound, and reflected a principle of the UNFCCC (the UN Framework Convention on Climate Change) that least cost emissions reductions (getting the most tonnes of CO₂ for the dollar) made sense from a global perspective. *Where* emissions are reduced makes no difference to the atmosphere. It was thus logical that wealthy countries were allowed to meet part of their commitments through paying for emissions reductions in developing countries, with the added benefits to the latter of technology transfer. The Kyoto Protocol introduced carbon budgets for developed country parties only, and for a relatively brief period, 2008-2012. A second commitment period to 2020, and surely the last, has only a handful of participants, European countries and Australia.

Since the Paris Agreement in 2015, the global objective has been redefined. With the need to limit global warming to 2 degrees above pre-industrial levels, it is clear that what is needed is a transition, before the end of the century, to net zero emissions (or at least net zero emissions of long-lived gases, principally CO₂ from fossil fuels.). This means that ultimately all countries will have a transition to make. Thus long term transition pathways are more important than short term targets and timetables. This does not obviate the need for early action to reduce emissions, and the Paris Agreement contains 2030 targets for developed countries similar to Kyoto. But over the longer term it is the former that will dominate. There is already an expectation in the Paris Agreement that countries will come forward with long term transition plans. Another difference is the built-in flexibility that countries have to determine their own contributions reflecting their own national circumstances. This gives scope to tailor international contributions to a country's economy and its emissions profile.

New Zealand has not yet adjusted its stance to reflect Paris. It has continued with a narrative and core assumptions inherited from the Kyoto era. Commonly-aired assumptions are:

- We can't be credible in terms of burden-sharing if we adopt anything less ambitious than our current targets (the 2030 target is 30% below 2005 or 11% below 1990, compared with the 2020 target of 5% below 1990, and the 2012 target of 1990 levels).
- We are at a unique disadvantage because of two key factors – the high proportion of renewable electricity and the large agriculture sector, responsible for almost half our emissions. Both these factors combine to limit the mitigation potential New Zealand has, and conversely to make emissions reductions more expensive than for many other countries.
- Without an international market that has adequate and affordable supply of carbon units, we can't meet our target.

There are many others that go to make up the narrative, which is heavily defensive in the sense of being more about what New Zealand can't do rather than what it can do. One other example is the 'carbon leakage' argument, which is that if agriculture has to pay for its emissions, the sector will become uncompetitive; producers in other countries with more emissions-intensive production will take over so it will be worse for the planet. All these assumptions and assertions are questionable. If the task is seen as a transition to net zero, it is absurd for New Zealand to be penalised for being well ahead of the play on decarbonising electricity. Similarly, there seems no reason that New Zealand should be at a disadvantage for having a large food-producing sector. Seen from this perspective New Zealand's 2030 target could even be seen as *too* ambitious rather than the prevailing view that it is inadequate. Other developed countries have tabled a domestic-only target. No other country is forced to rely for up to 80% on international markets (according to the government's albeit questionable modelling) – essentially subsidising other countries' emissions reductions. Given a potential shortfall of the order of 200 million tonnes of CO₂ for the 2030 target, the bill for 2020-2030 could come to several billion dollars at expected carbon prices. \$14-20 billion is a mid-range estimate. This expenditure would contribute nothing to New Zealand's own transition – in fact it would impede it by drawing away resources. The impact on the economy is of a comparable scale to the Trans Pacific Partnership - whose benefits *with the US in* according to the Government would be \$2.7 billion annually by 2030.

One problem inherent to the UNFCCC system is that the ambition of a country's international contribution tends to be measured by the raw number of the economy-wide target which conflates the domestic and international components. This is a gross over-simplification that tends to understate national circumstances. It has even less validity now than it had in a Kyoto context. A better basis for the core burden-sharing discussion would be to start from the domestic target alone. Burden-sharing could thus be informed by sector by sector comparisons including how each sector stands up against world's best practice. This would also remove the need for New Zealand's assertion of 'unique' circumstances- which is in any case less valid and less useful now when many developing countries also have a large proportion of agriculture in their emissions, and/or a high proportion of renewable electricity. The domestic reductions would not exhaust international contributions, which can take many forms including aid for renewable energy projects in poorer countries, contributions to the Green Climate Fund, and research such as New Zealand is engaged in for agriculture.

Why does this matter to NZ?

Effective action and policies on climate change are important both for our own prosperity and our international reputation. Current policy settings are based on an outdated framing of the issues and will lead to inefficient resource allocation in the New Zealand economy with no benefit to the global common good. They leave New Zealand in an unnecessarily defensive position. They prevent New Zealand benefiting from its natural advantages especially its abundant supply and potential for renewable energy. The current position on international markets, inherited from Kyoto, creates no incentives for the fundamental domestic reductions and transition that are needed.

What should NZ do?

At home, work has already begun to fill data and modelling gaps. This should be completed, and a reassessment carried out sector by sector of New Zealand's mitigation potential and possible

decarbonisation pathways. The relatively emissions-intensive sectors of transport and stationary energy (industrial heat principally) should be given priority. Agriculture should be included in a manner that fully recognises its specific characteristics, including the issues relating to methane as a short-lived gas. The role of domestic and international carbon markets should be assessed from a perspective of how best to facilitate the long term transition. Forestry also has an important role which can be affected by carbon market settings. Transparency of information, public engagement and involvement of stakeholders from all sectors will assist in developing a national consensus.

Abroad, New Zealand should take advantage of the flexibilities in the Paris Agreement, to table future contributions that are best aligned with our needs and capacities. We should promote the recognition, consistent with the Agreement, of a country's transition pathway being the core of its contribution to the global mitigation effort. This would mean working on several fronts including science, the science-policy interface, and engaging in international diplomacy. It needs a long term strategy of progressive alignment of our international climate change contributions and our economy.

Conclusion

2017-2020 is the opportunity for New Zealand to undertake a thorough review of its international climate change stance. It requires work on two fronts. It must be anchored in domestic policy, where the review should begin. International engagement and diplomacy will be needed to gain acceptance of the environmental integrity and fairness of New Zealand's position.