Emissions Trading Scheme Review 2015/16: Other matters

Submission to the Minister for Climate Change Issues

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Introduction

Thank you for the opportunity to make a submission on the second phase of the review of the Emissions Trading Scheme (ETS).

In the first phase of this review, one of the 'priority issues' was the two-for-one surrender obligation – a temporary protective setting that effectively halved the price of carbon for all emitters. I am heartened by Hon. Paula Bennett's signalling that this will be removed. In a recent speech, the Minister was reported as saying;

"It was always a temporary measure. It is abundantly clear that if the ETS is going to work, carbon must cost more than it does right now." [1]

In my 'first phase' submission on the ETS in February, I stressed the importance of keeping our eyes on the long term goal of stopping emitting greenhouse gases altogether before the end of this century. The ETS alone will not get us there.

Accordingly, the first three sections in this submission are focused on the following aspects of climate change policy where action is required.

- Crunching numbers and identifying barriers
- Economic and financial risks associated with climate change
- The agricultural greenhouse gases

The last two sections are focused on two aspects of the ETS.

- Protecting some industries – free allocation
- International purchase of carbon credits

1. Crunching numbers and identifying barriers

The development of good policy for reducing greenhouse gas emissions requires a bedrock of analysis. Such analysis should be both transparent and independent to enable it to be scrutinised by others, and consequently trusted by the general public.

Two kinds of analysis are crucial. The first is quantitative analysis – number crunching. The second is a scan of all aspects of government laws, regulations, and policies to identify barriers to reducing greenhouse gas emissions.

Quantitative analysis is essential if we are to be sure that actions aimed at reducing emissions do actually reduce emissions. Moreover, some actions that reduce emissions will be more affordable than others.

For example, the European Union has a policy that requires 10% of all transport fuels to be made from renewable forms of energy by 2020 in every Member State. A number of reports have been done that show this policy has very likely been leading to increased carbon dioxide emissions. This is mainly because the policy incentivises the felling of forests to make way for biofuel crops.[2]

Closer to home, I recently called for New Zealanders to take heed of a report that showed while electric cars will really help reduce our emissions, solar panels will do little because they are least effective in winter when most of our 'fossil' electricity is generated. This counter-intuitive result has been met with some criticism. Because this issue is so important I have begun my own investigation into the effectiveness of solar panels in reducing carbon dioxide emissions in New Zealand.[3]

New Zealand's laws, regulations, and policies have been developed over many decades, but the conviction that, along with the rest of the world, we must reduce carbon dioxide emissions is relatively recent. It is inevitable that there will be long-standing inadvertent barriers to reducing emissions.

For example, some have begun to think about what might one day replace the much-amended Resource Management Act. The possibility of a separate urban development act has been raised. When the RMA was 'born' 25 years ago, the need to make our cities low-carbon (or to plan for rising sea levels) was on no one's horizon.

Reducing the carbon footprint of our cities will primarily require reducing our rapidly growing transport emissions. One barrier is the minimum parking spaces for apartments that are often required in city plans – these encourage car ownership and discourage the use of public transport, as well as increasing the cost of housing.[4] Is climate change considered when such rules are set?

Another barrier to reducing emissions is the 100% funding of state highways by central government. State highways are intended to be 'nationally strategic' links, yet the major motorways that run through some cities are heavily used by local traffic. 100% subsidies always distort incentives. If a council had to stump up as little as 5% of a state highway extension, it might think much more favourably about alternatives.

Turning from transport to electricity, the Government has set a goal of 90% of New Zealand's electricity to be generated from renewable sources by 2025. Yet the country's electricity regulator, the Electricity Authority has no mandate to consider climate change.[5]

The dispassionate crunching of numbers and the identification of barriers needs to be done by an agency that has both the capacity and independence.

Such an agency could be modelled on an existing agency, such as New Zealand's Productivity Commission or the United Kingdom's Committee on Climate Change.[6]

Another option would be to give the function to an existing agency such as the Ministry for the Environment. A unit within an existing agency could be given the ability to perform the function in a statutorily independent way, as has been done with the Environmental Reporting Act.

It is pleasing to see that the Minister is considering the formation of a task force that would look at how we make the transition toward a low-carbon economy.[7] Objective and transparent analysis provided by a statutorily independent agency or unit would be extremely useful, if not essential, for such a task force to be effective.

I recommend that the Minister for Climate Change Issues establish a new agency or unit within an existing agency with the function of producing independent and transparent analyses to inform both decision-makers and the people of New Zealand.

2. Economic and financial risks associated with climate change

In a speech last year Mark Carney, the Governor of the Bank of England, identified three ways in which climate change can affect financial stability – *physical* risks, *liability* risks, and *transition* risks.[8]

Physical risks are the impacts of events like floods and storms that are expected to become more frequent and more damaging as the climate changes. These will decrease the value of assets and make them more expensive and difficult to insure. One certain physical change is the rising level of the sea – around the New Zealand coast several billion dollars of buildings and infrastructure are less than 50 centimetres above the spring high tide mark.[9]

Liability risks are the impacts that could arise when those suffering loss or damage attributable to climate change seek compensation. In the future, large companies that extract or burn fossil fuels could find themselves sued by those hit hard by climate change. In New Zealand, people given consent to build on low-lying land close to the sea might seek compensation from councils.

Transition risks could arise if the adjustment to a lower carbon economy does not begin early enough and does not follow a predictable path. Abrupt changes in policy, for example, could trigger big changes in the values of assets. This is why the protective settings in New Zealand's ETS might begin to damage the very companies they protect and hence the New Zealand economy.

Carney concludes:

"The combination of weight of scientific evidence and the dynamics of the financial system suggest that, in the fullness of time, climate change will threaten financial resilience and longer term prosperity. While there is still time to act, the window of opportunity is finite and shrinking."

The financial risks associated with climate change are being considered at a high level internationally. At their meeting in Turkey last November, the leaders of the G20 countries asked the Financial Stability Board *"to continue to engage with public and private sector participants on how the financial sector can take account of climate change risks."*[10]

The following month, the Financial Stability Board established the Task Force on Climate-related Financial Disclosures. This industry group chaired by Michael Bloomberg released its first report in March this year, laying out a set of disclosure principles.[11]

Climate change is far from being just an environmental issue.[12] An area where the Government and the private sector need to begin working together is the economic and financial risk associated with climate change. To do this will not be easy.

I recommend that the Minister of Finance and the Minister for Climate Change Issues develop principles and guidelines for assessing the economic and financial risks associated with climate change for different sectors of the economy.

3. The fraught issue of the agricultural greenhouse gases

The discussion document does not raise the question of the exclusion of the agricultural greenhouse gases from the ETS.

These gases – methane and nitrous oxide – currently amount to about 48% of our emissions. The average for the OECD countries is about 11%, so this is a major challenge for New Zealand.

It will be very difficult to meet our Paris target if the agricultural sector does not begin to take some responsibility for methane and nitrous oxide. Other emitters and the taxpayer will become increasingly 'squeezed'.[13]

The policy debate is polarised. Some argue that that the agricultural greenhouse gases should be included in the ETS; others make the opposite case. This particular dispute, however, lies within a bigger question – what should we do about these emissions? It is a question we must begin to address.

Our efforts to answer this question will be more efficient and more constructive if we have a common understanding of the basic science. This is why I have begun work on a report aimed at developing such an understanding.

4. Protecting some industries - free allocation

Under the ETS, some industries are effectively subsidised by the taxpayer through 'free allocation'. These industries are given carbon credits by the Government.

Industries that qualify for free allocation are those classed as 'emissions-intensive' and 'trade-exposed', that is, they emit relatively large amounts of greenhouse gases and export much of what they produce.[14]

Under the current free allocation rates, the Government pays for 90% of the emissions of highly intensive trade-exposed industries, and for 60% of the emissions of moderately intensive trade-exposed industries.[15]

The cost of free allocation to the taxpayer varies with the carbon price. In 2014, ten companies were given more than three quarters of all the allocated units. At the current carbon price of about $13, these have a value of $50 million.[16,17]

When the ETS was established in 2008, all free allocation was to be phased out by 2030. A 2009 amendment to the law slowed down the phase-out rate.[18] In 2013, a further amendment suspended the phase-out entirely.[19]

One purpose for free allocation is to prevent 'carbon leakage'. The problem is that a company that must pay for its carbon emissions in New Zealand might relocate (or shift its production) to another country with laxer climate regulations. So while New Zealand's emissions would fall, global emissions could increase.

On the other hand, the problem with free allocation is that it blunts the carbon price signal – the very reason for the existence of the ETS. To quote the World Bank:

"Carbon pricing is supposed to increase the financial costs of emissions-intensive activities, as they inflict climate change damages on society, and promote low-emission activities that do not contribute to climate change".[20]

Without a clear phase-out path, companies may make poor long-term investment decisions and end up with carbon-intensive stranded assets and some associated job losses.

I recommend that the Minister for Climate Change Issues establish a schedule for phasing out free allocation.

5. International purchase of carbon credits

A recent report from the Morgan Foundation has again drawn attention to how the purchase of 'hot air' carbon units from Russia and Ukraine has undermined the integrity of the ETS. The economic commentator Pattrick Smellie has described this as our *"sullied ticket to looking busy while doing nothing"*, although he points out that some other Kyoto signatories do not have clean hands.[22]

That this happened while New Zealand complied with the requirements of the Kyoto Protocol highlights one of the risks of relying too much on buying units offshore. The other risk is that we indefinitely postpone making significant reductions in our own emissions, and, in particular, fail to play the strongest card we have in the short term – sequestering carbon in forests.

At its base, a unit of carbon is the right to emit a tonne of carbon dioxide. However, a confusing variety of carbon units exist – ERUs, AAUs, CERs, RMUs, and our own NZUs.

Most of the ERUs are 'hot air' – they do not represent real reductions in carbon dioxide.

The Government no longer holds any ERUs because it has used them to meet its 2012 Kyoto target.[23] But many of the ERUs have been 'laundered' into AAUs – the respectable carbon units issued by the United Nations when the Kyoto Protocol came into force. Again, this 'laundering' has been compliant with the Kyoto rules.

The Government has, however, stockpiled a lot of AAUs that are in essence 'laundered' ERUs. The same applies to many of the units banked by companies. But the AAUs that were 'born' as ERUs are indistinguishable from genuine AAUs. New Zealand will achieve its 2020 target not with 'hot air' units, but because it allowed the purchase of 'hot air' units.

How then can we restore the integrity of the ETS?

The past is the past. We have made a commitment at Paris that applies to the period 2020 to 2030. We should begin in 2020 with as clean a slate as possible. The Government should therefore resolve not to carry over any units beyond 2020.[24]

To prevent this situation arising again, it is critically important that the Government restricts future purchase of offshore carbon credits to those that represent real and verifiable emission reductions.

The ability to buy 'respectable' carbon credits offshore – paying for genuine emission reductions in other countries – can be a cost-effective way to reduce global emissions. But we also need to reduce the emissions within our borders.

New Zealand is the only country with an ETS that has put no limit on the purchase of offshore carbon credits. Other countries have set limits on the proportion of units that can be purchased offshore – typically around 10%.

That limit on offshore purchases may not need to be as tight as those of other countries.

One reason for this is the conundrum over what to do about the agricultural greenhouse gases of methane and nitrous oxide.

Another reason is that the carbon footprint of our electricity generation is already very small compared with other developed countries.

Another is that relatively little coal – the most carbon-intensive fossil fuel – is burned in New Zealand. The reductions in emissions by other developed countries have mostly been achieved by replacing coal with natural gas – the energy produced from burning coal has about twice the carbon footprint of the energy from burning gas.

We must keep our eyes on the long-term goal of stopping greenhouse gas emissions before the end of the century. We need to place a limit on the purchase of offshore units so we begin reducing our own emissions, and, in particular, begin to support forest planting. Forestry promised so much, but so little has been realised.

I recommend that the Minister for Climate Change Issues:

a. commit to not carrying over any carbon units held by the Government beyond 2020;

b. restrict the purchase of all carbon units to those that represent real and verifiable emission reductions; and

c. set a limit on the proportion of carbon credits that can be purchased offshore after 2020.

Notes

1. NZ Herald, 17 March 2016, *"Bennett signals end to 'two-for-one' emissions deal"*.
2. See, for instance: C. Bower et. al, *Anticipated indirect land use change associated with expanded use of biofuels in the EU – an analysis of the national renewable energy action plans*, Institute for European Environmental Policy, March 2011; and H. Valin et. al, *The land use change impact of biofuels consumed in the EU – quantification of area and greenhouse gas impacts*, Ecofys, IIASA and E4tech, August 2015.
3. Concept Consulting, 2016, *Electric cars, solar panels, and batteries – how will they affect New Zealand's greenhouse gas emissions?* Interestingly, the numbers work the other way in Australia where solar panels are most effective in summer because this is when electricity consumption driven by air conditioning peaks, but electric cars run mostly on electricity that has been generated by burning coal.
4. In a recent report, some developers were reported as estimating each car park in a CBD development added about $32,000 to the cost. Grimes & Mitchell, 2015, *Impacts of planning rules, regulations, uncertainty and delay on residential property development*, Motu Working Paper 15-02, p.35.
5. *"The objective of the Authority is to promote competition in, reliable supply by, and the efficient operation of, the electricity industry for the long-term benefit of consumers."* Electricity Industry Act 2010, s 15.
6. The purpose of the Productivity Commission is to *"provide advice to the Government on improving productivity in a way that is directed to supporting the overall well-being of New Zealanders…"*. The purpose of the UK Committee on Climate Change is to *"advise the UK Government…on emissions targets and report to Parliament on progress made in reducing greenhouse gas emissions and preparing for climate change"*.
7. Hansard, 12 April 2016.
8. *Breaking the tragedy of the horizon – climate change and financial stability*, speech to Lloyd's of London, 29 September 2015.
9. Parliamentary Commissioner for the Environment, 2015, *Preparing New Zealand for rising seas: Certainty and Uncertainty*. A background report commissioned from NIWA for this investigation found that the replacement cost of buildings less than 50 centimetres above the spring high tide mark is $3 billion (2011 dollars). This does not include the replacement cost of roads and other infrastructure.
10. G20 Leaders' Communique, Antayla Summit, 15-16 November 2015, p.11.
11. *Phase 1 Report of the Task Force on Climate-Related Financial Disclosures*, 31 March 2016.
12. For further analysis of economic and financial risks from climate change, see The Economist Intelligence Unit 2015, *The cost of inaction: Recognising the value at risk from climate change*.
13. Powerpoint presentation by Ministry for the Environment, *New Zealand Emissions Trading Scheme Review 2015/16*, Stakeholder Meetings, April 2016, slides 24 through 28.
14. Free allocation of carbon credits is a feature of most, if not all, carbon pricing systems. The equivalent of free allocation in a country with a carbon tax is a tax exemption.
15. Under the two-for-one surrender obligation (hopefully soon to be removed), these percentages become 95% and 80% respectively.
16. In 2014, one sixth of the emissions of greenhouse gases covered in the ETS were freely allocated. In that year, ten companies were given more than 100,000 carbon units, that is, they were allowed to emit over 100,000 tonnes of carbon dioxide without paying. https://www.climatechange.govt.nz/emissions-trading-scheme/participating/industry/allocation/decisions/index.html

	Units allocated in 2014
New Zealand Steel Development Limited	1,073,489
Methanex New Zealand Limited	777,432
New Zealand Aluminium Smelters Limited	755,987
Fletcher Concrete and Infrastructure Limited	322,430
Ballance Agri-Nutrients (Kapuni) Limited	198,469
Holcim (New Zealand) Limited	183,263
Carter Holt Harvey Pulp & Paper Limited (market pulp)	147,321
McDonald's Lime Limited	128,973
Carter Holt Harvey Pulp & Paper Limited (packaging)	124,614
Norske Skog Tasman Limited	124,989
Total	**3,836,967**

17. Note that if free allocation continues at the same levels, the number of units allocated is expected to more than double by 2030. (Powerpoint presentation by MfE staff.)
18. Note that the phase-out rate in this amendment is an annual decrease of 1% of the previous year's level. This means that the annual decrease will get smaller and smaller, and carbon credits will be freely allocated forever.
19. The Climate Change Response Act, 2002, s85A states that *"The purpose of this section is to suspend temporarily the phase-out rates for assistance… until the relevant participants face full surrender obligations"*. This means that when the two-for-one surrender obligation is removed (as expected), the phase-out of free allocation would begin. Question 11 in the Discussion Document (*"Under what conditions should free allocation rates start to be reduced after 2020?"*) appears to be relitigating this.
20. World Bank Group: Climate Change, 2015, *State and Trends of Carbon Pricing*, p.54.
21. Simmons, G. and Young, P., 2016, *Climate cheats: How New Zealand is cheating on our climate change commitments, and what we can do to set it right*.
22. *New Zealand's great carbon swindle*, 21 April 2016. *"Britain, for example, was hailed for achieving its carbon reduction targets when much of the improvement was a direct result of recession"*.
23. This statement is itself 'dodgy'. Some ERUs were actually purchased and surrendered to the Government after 2012, but have been used in 'truing up' the 2012 target at the end of 2015. But this is now history and I am most concerned with how we avoid such 'smoke and mirrors' accounting in the future.
24. There will still be companies holding AAUs in 2020 that were 'born' as 'hot air'. But which companies and how many do they hold? The AAUs held by companies, like those stockpiled by the Government, are an unknowable mix of some genuine AAUs and some that were 'born' as ERUs.
25. See Ranson, M. and Stavins, R. N., 2013, *Linkage of greenhouse gas emissions trading systems: Learning from experience*. Table 3 shows limits placed on the use of 'offset' credits by a number of countries during the First Commitment Period of Kyoto. 'Offset' credits in this report refers to credits purchased from onshore sectors outside the scheme as well as credits purchased offshore.