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Manatū Mō Te Taiao

Units of Trade in the New Zealand Emissions Trading Scheme

Briefing for the Climate Change Leadership Forum

Prepared by the Emissions Trading Group

New Zealand Government

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Overview

It is important to ensure that the New Zealand Emissions Trading Scheme (NZ ETS) is as open to international carbon markets as possible. The NZ ETS will be a small market by international standards and an implicit goal in ETS design is to ensure that New Zealand firms face the international price of emissions at the margin of their operations.

During the engagement process some stakeholders have expressed concerns that there may be insufficient liquidity in the New Zealand market, and that firms will be poorly placed in the international carbon market, thus forcing New Zealand firms up towards the top of the price scale. Concerns have also been raised from an environmental and reputational perspective on whether there should be greater constraints on the types of units allowed into the New Zealand scheme, such as "hot air" Assigned Amount Units (AAUs) and Certified Emission Reductions (CERs) from Clean Development Mechanism (CDM) projects involving HFC-23.

Section 1 of this paper presents an overview of the government's proposal for defining units of trade in NZ ETS, and summarises the range of stakeholders' views to date. To help frame discussion with the Climate Change Leadership Forum, the government presents analysis of alternative policy options with regard to restricting the use of imported AAUs (Section 2) and CERs (Section 3) to meet participant's unit obligations under the NZ ETS. Section 4 identifies potential areas where the government could clarify its policy to facilitate development of the NZ ETS.

The government seeks feedback on these issues from the Climate Change Leadership Forum prior to confirming the design of the NZ ETS for the purpose of legislation.

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1 Unit of Trade in the Government's Proposal for a New Zealand Emissions Trading Scheme

Context

Linking to either another country's trading regime and/or to the global market in Kyoto units is desirable for a number of reasons. An ETS in New Zealand would be a relatively small market with a limited number of participants with unit obligations. Linking internationally ensures much-needed liquidity in the domestic market. It also helps ensure that prices on the domestic market are aligned with international prices.

These factors help to ensure that the NZ ETS aligns with the objective of meeting our Kyoto Protocol and future international obligations *at least cost in the long term*. Linking also ensures that the NZ ETS is aligned with global actions to mitigate climate change.

One of the key design decisions for the NZ ETS is determining what the primary domestic unit of trade will be, and which international units will be accepted for compliance under the scheme. The different types of Kyoto units are defined in Box 1. If the NZ ETS were to link bilaterally with other domestic trading schemes, then the government would need to decide whether to directly recognise the domestic units from other schemes, or to trade them in the form of Kyoto-equivalent units.

Box 1: Definitions of Kyoto units

The Annex B (developed country) Parties to the Kyoto Protocol must retire Kyoto emission units to cover each tonne of their greenhouse gas emissions from 2008 to 2012. Some Kyoto emission units are allocated to Annex B countries for free, and others can be acquired by Annex B countries through the three Kyoto "flexibility mechanisms". Each Kyoto emission unit has a value of one metric tonne of CO_2 equivalent. Each of the Kyoto emission units is discussed below.

- **Assigned amount units (AAUs)** are the units freely allocated to Annex B countries to match the level of their emission reduction or limitation commitment. These units can be bought and sold by Annex B countries using the International Emissions Trading mechanism.
- **Certified Emission Reductions (CERs)** are generated by Clean Development Mechanism (CDM) projects that support sustainable development and reduce emissions or create forest carbon sinks in developing countries. Forestry CDM projects use special units reflecting the impermanence of forest sinks: **temporary CERs (tCERs)** and **long-term CERs (lCERs)**.

- **Emission Reduction Units (ERUs)** are generated by Joint Implementation (JI) projects that reduce emissions or create forest sinks in Annex B countries.
- **Removal Units (RMUs)** are awarded to Annex B countries on the basis of net removals by sinks in the land use, land-use change and forestry sector.

All of the Kyoto emission units can be used interchangeably by Annex B countries to meet their commitments from 2008 to 2012.

Government's in-principle decisions

The government has decided in principle that the primary unit of trade in the NZ ETS will be a New Zealand Unit (NZU) issued by the Crown. Any person/entity will be able to hold and trade NZUs. Participants will be able to carry over (ie, bank) NZUs for use in future compliance periods, but will not be able to borrow from future compliance periods.

For the first Kyoto commitment period, each NZU will be fully comparable to a Kyoto unit and will be backed by a Kyoto unit in the New Zealand Emission Unit Registry by the end of the true-up period. This enables participants in the NZ ETS to exchange NZUs for Kyoto units through the registry and sell them offshore.

NZUs will be allocated as the unit of trade for the forestry sector. Landowners liable for deforestation units will be able to surrender both NZUs and Kyoto units to fulfil their obligations. All NZUs issued into the NZ ETS for forestry activities will be backed by Kyoto units by the end of the true-up period for the first Kyoto commitment period.

The government agreed in principle, subject to engagement with stakeholders and Māori, to link the NZ ETS with international markets by allowing:

- NZUs to be converted to assigned amount units (AAUs) and sold internationally
- with some limited exceptions,[1] participants in the NZ ETS to surrender Kyoto compliant units (eg, AAUs, CERs, RMUs and ERUs) as well as NZUs for compliance purposes
- non-participants, including the government, to buy and sell units domestically and internationally, including when acting as an intermediary for NZ ETS participants.

This approach was intended to ensure that the price of emissions in the NZ ETS remained broadly in line with international prices.

[1] There are some proposed limited exceptions to this right, such as the exclusion of CERs generated by nuclear power projects, lCERs and tCERs. The NZ ETS framework document also made clear that the government had not yet determined whether to permit the use of CER units from HFC projects for compliance in the NZ ETS.

Stakeholder concerns on units of trade

During the engagement process some stakeholders have expressed concerns that there is likely to be insufficient liquidity in the New Zealand market (especially in the first few years of the transition), and that firms will be poorly placed in the international carbon market, thus forcing New Zealand firms up towards the top of the price scale.[2] The possible use of a price cap has been raised by some as a mechanism to address this particular concern about what future prices NZ participants will face in the market.

Stakeholders have raised a number of interrelated concerns about the limited proposed restrictions on the use of international Kyoto-compliant units in the NZ ETS. The key concerns expressed are that:

- no priority has been placed on domestic emission reductions as opposed to international
- the use of some types of units, such as "hot air" AAUs and CERs from HFC-23 projects, will undermine the environmental integrity of the NZ ETS
- international units may flood the New Zealand market, causing the price to collapse
- the reputation of the New Zealand scheme may be damaged
- any damage to the reputation and operation of the NZ ETS may limit the government's ability to link to other countries' schemes in future
- allowing 'hot air' AAUs into the NZ ETS may have a negative impact on the fungibility of the NZU (more specifically NZ AAUs)

This range of concerns also has been raised in officials' informal discussions with staff at the European Commission on the prospects for linking the NZ ETS to the EU ETS. The EU ETS has been designed expressly to block the importation of "hot air" AAUs, although Member States (including the Eastern European countries that have acceded to the EU) can still trade in AAUs outside of the EU ETS. The EU ETS also caps the overall use of CERs and ERUs for compliance, and blocks the importation of CERs from nuclear, forestry, and large hydroelectric projects. Additional discussion on units of trade and options for linking to the EU ETS is provided below.

Conversely, other domestic stakeholders have supported the broad inclusion of Kyoto units in the NZ ETS. They note that AAUs are fully accepted in the Kyoto Protocol, and believe that access to lower-cost units such as AAUs could help to moderate compliance costs under the NZ ETS. Some would prefer for the NZ ETS to allow trading in AAUs rather than to link to the EU ETS, since unit prices in the EU ETS will be higher than international prices (a reflection of EU ETS trading constraints). Some stakeholders participating in the carbon market have reported that it will in practice be difficult to identify the source of particular units (eg, from HFC projects) in the secondary CER market at the time of purchase. As the secondary CER market is likely to be an important source of units for New Zealand participants such a rule could seriously restrict their ability to access units through this market.

[2] Liquidity has technical definitions but it typically means having sufficient volumes and trades in the market so that any one transaction can relatively easily be carried out without an impact on the price in the market.

2 The Issues with AAUs

Environmental integrity

Stakeholder concerns around the unrestricted use of AAUs in the NZ ETS largely relate to the importation of "hot air" AAUs. The term "hot air" is generally used to describe Kyoto units that were allocated to certain Eastern European countries, Russia and Ukraine over and above their likely emissions. These units are legitimate under the Kyoto Protocol, and were allocated to these countries as a result of negotiation. These AAUs have been criticised from an environmental viewpoint as having resulted from economic collapse rather than investment in emission reducing activities that will have long-term benefits as these economies rebound. The cost of generating an AAU is subsequently very low (estimated to be around or less than 1 Euro per tonne of CO_2e) whereas the price at which they could trade on the market will be driven by their value as a compliance unit. They would be expected to trade at some discount to CER prices.

Some of these governments are developing Green Investment Schemes (GIS) to direct revenue from "hot air" AAUs into emission-reduction activities, enabling them to be marketed as "greened" AAUs. It is important to note that such schemes are still in an early stage of development. As an example, Bulgaria has emerged as a first mover in announcing its intention to set up a GIS, but has yet to operationalise it. Some stakeholders have suggested that greened AAUs could be acceptable in the NZ ETS. At the international level, the World Bank has suggested that greened AAUs could be seen as a legitimate price "safety valve" for Annex I countries.

There is potentially another concern around the environmental integrity of AAUs, but this concern has been raised more in the international context. The environmental integrity of AAUs depends on the originator country staying in the Kyoto Protocol for both commitment periods 1 and 2 (CP1 and CP2) and facing any non-compliance consequences in CP2. If New Zealand firms or the government buy AAUs, and the seller country then withdraws from the Kyoto Protocol or fails to comply during CP2, then those units lose their environmental integrity. This risk factor extends to AAUs from any country that chooses to withdraw or otherwise not honour the non-compliance penalties.

The difficulty with assessing the extent to which these concerns are valid is that there is no way of knowing the behaviour of different countries going forward, or even if there will be a second commitment period under the Kyoto Protocol. Some clues are available (eg, the public statements made by the Canadian government) but there is no way of being confident of different countries' behaviour going forward.

Risks of price shocks (collapse)

Another reason put forward by the European Commission and European Member States for excluding AAUs is that they are concerned about the effect AAUs would have on prices for EUAs and CERs, if they were to come onto the market in any great volumes. The potential supply of AAUs is enormous relative to global demand for Kyoto units.[3] While it is not expected that countries holding AAUs would sell them in a way that would collapse the price of carbon, the potential for downward price shocks exists. The European Commission maintains that its policy is partly aimed at isolating the EU ETS from the uncertainty that the large potential supply of AAUs presents.

AAUs as a safety valve

The major argument in favour of AAUs is they offer a potentially low-cost compliance unit for New Zealand participants and the New Zealand Government (in meeting the crown's Kyoto obligations). Estimating the value of this to the New Zealand economy is extremely problematic as there have been no publicised trades of AAUs with reported prices to date. In other words, it is not known to what extent AAUs will come onto the market or at what price. The economic argument in their favour is that if prices of EUAs and other Kyoto units were to rise significantly above current levels it is likely that AAUs will come onto the market. In other words, AAUs may operate as an important safety valve.

Linking issues

A 'real politik' argument is that if New Zealand lets AAUs into its ETS it may reduce options for linking to other ETS regimes in the future. The risk of this occurring is extremely difficult to predict. At present the only other region with an ETS up and running is the EU ETS and they have take a hard line approach to exclude 'hot air' AAUs. In informal discussion with Commission officials they have clearly indicated that any decision by New Zealand to allow in AAUs to the NZ ETS for compliance purposes would severely limit possibilities for linking the NZ ETS to the EU ETS for the foreseeable future. It is not possible at present to judge whether emerging trading schemes in Australia and California, for example, would follow the EU's approach to "hot air" AAUs, or the more liberal approach proposed by New Zealand.

[3] The World Bank (*State and Trends of the Carbon Market 2007*) estimates global demand for Kyoto units during 2008-2012 to be approximately 2 billion tonnes of CO_2-e if Canada is outside of the Kyoto Protocol, and 3.3 billion tonnes of CO_2-e if Canada is inside the Kyoto Protocol. The estimated potential supply of AAUs is estimated at 7.1 billion tonnes CO_2-e assuming that countries such as Russia and Ukraine fulfil their eligibility requirements and are able to sell.

3 Options for Restricting "Hot Air" AAUs

Option 1: Place no restrictions on the importation of AAUs into the NZ ETS (the government's proposal in the *Framework Document*)

In terms of the acceptability of allowing hot air AAUs into the NZ ETS, clear trade-offs emerge. Placing no restriction on the entry of AAUs into the NZ ETS could potentially reduce the cost of compliance for New Zealand. The open nature of the NZ ETS has also been welcomed by many domestic stakeholders.

However, such a move would come at some reputational risk as well as reducing the prospects of linking with other trading schemes (such as the EU ETS) in the future. Further, to the extent that there is the ability to "squeeze" the hot air out of the Kyoto system in the future, allowing those hot air credits into the NZ ETS would undermine the environmental integrity of the NZ ETS.

Although it is difficult to predict, a very large inflow of AAUs (with a resultant significant decrease in the price) appears unlikely at this stage.

Option 2: Restrict the importation of AAUs into the NZ ETS to those from specified countries

This option would limit direct private-sector purchases of AAUs to selected areas such as the European Union (or more specifically the EU ETS in order to exclude "hot air" AAUs), Norway, Iceland, Liechtenstein, Switzerland, and Japan.[4] This list potentially could be expanded to include transitional economies with Green Investment Schemes.[5] This would significantly enhance the international reputation of the NZ ETS and may leave open an option value to link to other schemes in the future.

Only allowing direct purchases by the private sector of AAUs from certain countries would be a policy change from that previously discussed. Some domestic stakeholders would welcome such a move while others may express concern. In reality, given the current position of Russia not to sell to private-sector players, such a decision may have less of an impact on the NZ ETS than it appears on the surface.

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[4] Note that the EU ETS has recently completed linking agreements with Norway, Iceland and Liechtenstein. It would be wise to adjust these settings if different country's position vis-à-vis the Kyoto Protocol were to change.

[5] However, note that "greened" AAUs are not accepted into the EU ETS, and therefore their inclusion in the NZ ETS could potentially affect linkage opportunities.

This approach would require the development of criteria to determine which sources of AAUs would be acceptable for surrender in New Zealand and on what basis. This could have diplomatic implications for New Zealand. Some commentators have argued, for example, that there is perceived "hot air" in the greenhouse gas inventories of other countries, including some in the European Union (eg, Germany).

Pursuing this option further would require analysis of potential World Trade Organisation issues. It could entail frequent amendments as countries changed their international policy positions on emissions trading. To avoid market uncertainty, any changes in the eligibility of AAUs from these countries would need to be applied to future trades only and not retrospectively.

Option 3: Exclude AAUs from being imported in the NZ ETS

This option would completely exclude AAUs from being surrendered for compliance under the NZ ETS. (To permit trading opportunities, it could be possible for firms to hold and trade AAUs, but not to surrender them.) The government could always reserve the option to change this policy in the future, depending on the evolution of the international market and future international agreements.

Option 4: Develop different trading rules for government and the private sector

Related to options 3 and 4 above is the issue of whether the government's ability to purchase AAUs from different countries should differ from the private sector's ability to purchase AAUs. This is the case in the European Union, where Member State governments can trade in AAUs but private-sector participants in the EU ETS cannot. Initial indications are that trades in AAUs may more likely be conducted at the government-to-government level than among private-sector firms.

On the one hand, having different rules for government and the private sector could be seen as introducing some inequities into the system. On the other hand, government transactions in AAUs potentially could be subject to more stringent criteria than private-sector trades and therefore could be viewed differently. An important consideration would be whether the New Zealand government could then introduce such units into the NZ ETS (such as through resale as NZUs at auction). The government could retain this option, but choose not to exercise it as a general rule. The option for such units to enter into the NZ ETS could constrain linkages to the EU ETS and other schemes.

4 Options for Restricting CERs

Context: Environmental integrity

CDM projects were designed to support sustainable development in the host countries as well as emission reductions that could be traded internationally. CDM projects undergo lengthy review processes, including public comment, prior to their approval and registration by the CDM Executive Board operating under the UNFCCC. CDM projects also go through lengthy verification processes before CERs are verified and issued.

Some stakeholders have objected to the inclusion of some sources of CERS from HFC-23 projects.[6] One of the concerns of HFC-23 projects is that they can create perverse incentives to increase HFC-22 production (an ozone depleting substance regulated under the Montreal Protocol). Another concern is that HFC-23 projects reap disproportional profits, because the costs of projects are relatively low and volumes of CERs generated very large. Concerns about perverse incentives are being addressed by the UNFCCC and in the Montreal Protocol process. In relation to the second point, the government has reviewed advice that these types of opportunities will soon be exhausted and the market is now already focusing on other opportunities. Nevertheless, substantial numbers of CERs generated by these projects are likely to be in the market.[7]

Concerns have been raised domestically and internationally about the use of tCERs and lCERs issued for emission removals from afforestation and reforestation CDM projects. Both tCERS and lCERS carry a risk of future liability to the Crown, which does not exist with other units, and their use has therefore been restricted by the government. Under the Climate Change Response Act, the government does not to allow either tCERs or lCERS to be surrendered for purposes of compliance, and the government has proposed that this exclusion would automatically apply to the NZ ETS. Likewise, under the Climate Change Response Act, the government has prohibited CERs from nuclear CDM projects.

Policy options

In its proposed approach, the government has definitively excluded tCERs, lCERs, and nuclear CERs from the NZ ETS, and has reserved the option to exclude other sources of CERs (and ERUs) in the future. If this option were exercised, exclusions would be forward looking and would not apply retrospectively.

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6 HFC-23 is a very potent greenhouse gas with a global warming potential of 11,700.

7 Units from HFC-23 destruction projects peaked in 2005 when they accounted for 67% of CDM market share. In 2006 they accounted for 34% of CDM market share.

An alternative option would be to exclude CERs from HFC-23 projects. However, given their prevalence in the secondary CER market and the difficulty of excluding them from sales of "bundled" CERs, the government feels that this option would constrain trading. A better option could be to allow the future supply of CERs from HFC-23 projects to be addressed at the international level. The government is interested in exploring this issue further with the Climate Change Leadership Forum.

5 Options for Clarifying Trading Policy

The government has identified several areas where clarification of policy could help to facilitate development of the NZ ETS. For example, the government could consider clarifying that:

- there is no volumetric limits on Kyoto units entering the NZ ETS (to reduce risks of price spikes in the NZ ETS and reduce the cost of compliance generally)
- the government has no liability for any Kyoto units that are banked and subsequently become non-valid for Kyoto (or future international agreement) compliance purposes
- any changes to the rules on what units can be used for compliance purposes will not apply retrospectively
- the government's intent is for New Zealand firms to operate effectively within the international carbon market and the government will act to facilitate this intent.

The government welcomes input from the Climate Change Leadership Group on these options.