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### **NZ ETS Brings A New Era Of Trading**



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#### **Introduction and Background to the New Zealand Emissions Trading Scheme**

1. In December 2008 the New Zealand Government introduced legislation to implement a greenhouse gas emissions trading scheme (*NZ ETS*) to assist in meeting its Kyoto Protocol obligation to reduce emissions to 1990 levels during the period 2008 to 2012 (the first commitment period for Kyoto).
2. The proposed NZ ETS provisions are encapsulated in the Climate Change (Emissions Trading and Renewable Preference) Bill (*the Bill*), which has been shepherded rapidly through the Parliamentary processes. Following a public consultation period earlier this year, the Bill has now been reported back to the House by the Finance and Expenditure Select Committee, with several changes being recommended as outlined below. The passing of the Bill at the time of writing was a 'hot' political issue and whether it is passed before the general election later this year remains to be seen.
3. The Bill proposes substantial amendments to the Climate Change Response Act 2002 and the Electricity Act 1992. The broad objectives of the Bill are supported by provisions of the Government's New Zealand Energy Strategy to 2050. Specifically, Part 2 of the Bill gives preference to renewable electricity generation and provides that new fossil fuel generation is only an available option if security

of supply is threatened (and supplemental or standby generation is required in addition to the renewables).

4. The Government has stated that New Zealand's clean, green image is part of its international brand, which underpins important sectors of the economy. In fact the Prime Minister has stated she wants "*New Zealand to be in the vanguard of making it happen – for our own sakes, and for the sake of our planet.*"<sup>78</sup> A failure to act sustainably and responsibly could reduce New Zealand's international credibility and influence internationally.
5. While major international sources of greenhouse gases do not have binding greenhouse gas targets under Kyoto (i.e. China, India (and the USA being a non-Kyoto party)), Europe has an established trading scheme, and recent Australian announcements confirm that our trans-Tasman neighbours will also be pursuing a sectoral-wide emissions trading scheme in coming years.
6. In terms achieving our international treaty target, the latest Treasury estimate (May 2008) for New Zealand's binding emissions obligations under the Kyoto Protocol is \$NZ480 million (based on a carbon value of \$NZ22.13 per tonne of CO<sub>2</sub> equivalent). Our increasing deficit position with respect to target emissions levels under Kyoto is of course a key driver for the NZ ETS.
7. Beyond Kyoto's first commitment period (ending December 2012), it is clear that Europe at least is in strong pursuit of further international binding treaty commitments – so establishing a pathway towards emissions reductions seems central to New Zealand's long term economic survival, and its trading relationships with Australia and the EU. It is also a global reality that business will be forced to operate in an increasingly carbon-constrained world moving forward.
8. Ultimately the New Zealand Government considers that an ETS will be more flexible, and allow lowest cost abatement for greenhouse gas emissions across the economy.

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<sup>78</sup> <http://www.climatechange.govt.nz/sustainable-nz/sustainable-nz.shtml>

## **New Zealand's Unique Emissions Profile**

9. New Zealand has a unique emissions profile compared with most other developed nations, as over 50% of its emissions come from the agricultural sector. Undoubtedly that sector that faces the greatest challenges in reducing net emissions, and there are presently very limited technological solutions. In addition to agriculture, New Zealand's maturing plantation forests will contribute significantly to New Zealand's overall future emissions profile when those sinks are 'removed' upon harvest in years to come. Indeed it is these two sectors that have given rise to a high proportion of New Zealand's greenhouse gas emissions increase since 1990.
10. In terms of the electricity sector, New Zealand's electricity profile is currently highly focused (indeed dependent) on renewable energy as is clear from this winter's expected power shortages. In fact, New Zealand's renewable energy sources comprise approximately 69% of the country's electricity generating potential. Accordingly, the potential gains in this sector are somewhat limited compared with other countries that are heavily reliant on fossil fuel generated electricity and may accordingly have greater potential to adapt and diversify.

## **Basics of the New Zealand Emissions Trading Scheme**

### ***Obligations***

11. The NZ ETS will require those participants with emissions obligations to surrender one emissions unit for each tonne of carbon dioxide equivalent of greenhouse gas emitted (or associated with products or services). Self monitoring is required under the scheme, with audits also being undertaken by officials (not unlike the tax system requirements for income returns in New Zealand). In recognising the inherent difficulties in monitoring and reporting requirements proposed by the NZ ETS, the Select Committee recommends both voluntary and mandatory reporting requirements be imposed on some sectors in years prior to actual binding emissions unit obligations coming into effect.

***Absolute emission approach preferred***

12. The Select Committee has also confirmed that the NZ ETS be based on an 'absolute'/'net' emissions approach, as opposed to an intensity-based approach (which would relate more to emissions efficiency). The recommendation is not particularly surprising given that earlier Government announcements (prior to release of the Bill) indicated an 'absolute' based scheme was undoubtedly preferred. From an administrator's perspective, an absolute emissions approach is significantly easier to implement, and can provide a greater degree of certainty as to achievement of the absolute emissions allowance permitted under Kyoto, and the likelihood of industry sectors assisting in meeting New Zealand's obligations.
13. An intensity-based scheme was sought by a large number of industrial submitters on the Bill, who had concerns about grandfathering of plants, and the inability of the scheme to recognise achievements of early action by some businesses.

***Coverage***

14. The NZ ETS proposes to phase in compliance obligations over the next six years, with all major sectors of the economy being captured by January 2013. Agriculture will enter last, given the difficulties outlined above with respect to the present limitations on abatement options. In comparison, the Government recognises that deforestation of existing plantation forests could have dire effects on New Zealand's emissions profile, given the critical sequestration potential such forests represent, and the NZ ETS will accordingly apply to post-1989 forests retrospectively from January 2008. The Bill also now proposes to introduce the liquid fossil fuels sector two years later than initially proposed. In light of the current economic climate and rising international fuel cost, entry of that sector in January 2009, could prove too burdensome. Entry dates in accordance with the Select Committee recommendations for the various sectors are as follows:

- Forestry *January 2008*
- Stationary energy (coal, gas, geothermal) and Industrial process emissions *January 2010 (with earlier mandatory reporting)*
- Liquid fossil fuels (mainly transport) *January 2011 (with earlier mandatory reporting)*
- Agriculture; Waste; and All other emissions *January 2013 (with earlier mandatory reporting)*

### **Participants**

15. Most New Zealand companies will not become participants under the NZ ETS. However, they will feel its impact through increases in energy costs, transportation and distribution, and raw inputs. Those increases are unlikely to amount to merely the cost of emissions unit purchases by the suppliers with NZ ETS compliance obligations. The costs that will be actually passed through will include the costs associated with verification, administration, compliance and trading requirements including managing trading risks.

### **Registry Information**

16. New Zealand has its own Emissions Unit Register (*EUR*), which records types of units, where they are held and links them to individual Kyoto accounts to allow all transactions (domestic and international) between participants to be recorded. New Zealand's EUR is already operational and compliant with Kyoto. The first international transfers of Kyoto units were traded early in 2008.
17. In our view, the Select Committee's recommendations in terms of public access to information in individual Registry accounts is important. It is now anticipated that access to information on unit holdings in the Emissions Unit Register will only be available in aggregate form, one year after the end of the relevant NZ ETS compliance period.

18. Industry participants initially were concerned about the public availability of a participant's unit holding information, given it may reveal trading positions to competitors, and potential buyers or sellers in the market for any given compliance period. The nature of trading, and price setting under emissions purchase contracts means that availability and knowledge of a participant's trading/compliance position with respect to its emissions obligations, could potentially influence relative power (volume and pricing terms) in parties' contractual negotiations.

### ***Impact of Bill on the Personal Property Securities Act 1999***

19. The Bill seeks to amend the Personal Property Securities Act (*PPSA*) in order to allow securities investments over emissions units to be registered in the personal property securities register.
20. A new subsection 18(1A) is to be inserted into the *PPSA* by the Bill to provide specific methods through which possession of emissions units gain be gained. As a point of distinction, unlike other forms of investment securities covered by the *PPSA*, emissions units by their nature cannot be gained through physical possession of a security certificate or by using records maintained by the issuer. However, specific to emissions units, it is possible to gain possession through the use of the EUR established by the Climate Change Response Act 2002.

### ***Acceptable Unit Types***

21. The primary unit of trade in the NZ ETS will be the New Zealand Unit (*NZU*), which is 1 tonne of CO<sub>2</sub> equivalent. At least initially, the bulk of the *NZUs* traded in the NZ ETS are likely to be sourced from New Zealand forestry or free allocation. Certain other Kyoto compliant units may also be traded, some with restrictions.

### ***Certified Emissions Reductions***

22. The Bill specifically excludes certain Kyoto Protocol units (such as Certified Emission Reduction units (*CERs*) from nuclear projects) - such prohibition being

based on this country's nuclear-free stance, and resulting political reluctance to condone support for nuclear project units in the international arena.

*Assigned Amount Units*

23. A further unit type, Assigned Amount Units (AAUs) are units allocated to Kyoto ratifying countries, based on their binding country allocation (or 'cap') under that international treaty. AAUs are sometimes referred to as 'hot air', as many originate from the Eastern Soviet Bloc countries that have excess AAUs - following post-1990 economic collapse and subsequent industrial downturn of those countries, rather than actual and deliberate environmental efforts to reduce emissions. Accordingly, concern has been expressed by environmental policy advocates about such units entering the NZ ETS, given their questionable origins. In particular, 'non-GIS' AAUs (*non-Green Investment Scheme* project units) are perceived to have reputational risks in their use for meeting compliance obligations under the NZ ETS. This is despite their legitimacy under the Kyoto Protocol for use by ratified parties to meet their individual country targets during the first commitment period of Kyoto (2008-2012).
24. Some consider acceptance of AAUs into the NZ ETS will curtail New Zealand's ability and prospects to link to other countries' schemes in the future – particularly given that the EU ETS does not allow use of AAUs for meeting participants' compliance obligations.
25. While there are presently no entry restrictions on the volume of AAUs that can enter the NZ ETS, these units may be somewhat restricted as the Select Committee Report on the Bill, recommends prohibitions being placed on foreign country AAUs from the Kyoto first commitment period, being used for compliance with unit obligations beyond 2012. Such restriction on use of imported AAUs beyond the first commitment period is intended to overcome perceived future linking difficulties with other international schemes - in the event that AAUs prove to be a hurdle in future international negotiations.

26. Notably, similar provisions do not extend to the other Kyoto units – New Zealand based AAUs, CERs, Emission Reduction Units (*ERUs*), and Removal Units (*RMUs*). However, the Minister retains the ability to regulate future changes to unit entry.

### **Forestry**

27. As noted above, the Bill proposes that the forestry sector (exotic forestry) enters the NZ ETS with retrospective effect from 1 January 2008.
28. Essentially, deforestation liabilities have been devolved to pre-1990 forestry owners, who must account for losses in sequestration of carbon dioxide if their forest is felled. Pre-1990 forestry therefore compulsorily enters the NZ ETS early, in an attempt to discourage further deforestation. Deforestation has increased significantly in New Zealand over past years with much forestry land being cleared for dairy farms supported by high dairy commodity prices. To this end, deforestation is seen as one of the lower cost abatement options in the domestic economy during the first commitment period for Kyoto.
29. Pre-1990 forestry owners will be offered some free allocation of NZUs for deforestation. This is presently set at 55 million tonnes.<sup>79</sup> While there were early indications that this will be allocated on a pro-rata basis of forestry hectarage, the actual allocation regime will be determined at a later date by way of delegated legislation processes. This has caused concern within the sector and lobbying is already occurring with some owners seeking to gain allocations based on the ultimate end use of the land - where other viable higher value land uses exist. However, the Government and Select Committee still appear to support pro-rata allocation.
30. The Select Committee recommended that greater assistance be provided to two groups within this sector. This is because the Select Committee believed the initial levels of allocation were insufficient to assist those facing the greatest costs

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<sup>79</sup> New section 69, clause 43.

under the NZ ETS, as well as not encouraging the introduction of alternative land uses.

31. The first group to receive greater assistance is owners of pre-1990 forests purchased before late 2002 from 39 NZUs per hectare to an estimated 60 NZUs per hectare. A new formula to calculate the exact amount of allocation for this group is recommended by the Select Committee.
32. The second group is any Treaty of Waitangi claimants who receive Crown Forest Land (CFL) under a settlement at any time after 21 December 2007. This allocation will increase from zero to 18 NZUs per hectare.
33. In general, any settled Treaty of Waitangi claim involving the transfer of CFL before the NZ ETS came into force would receive the same level of allocation as purchasers of land at the same time. However, some exceptions have been acknowledged as potentially warranting different allocation.
34. Post-1989 forestry owners can also opt-in to the NZ ETS to gain free NZUs. However, any future deforestation liabilities associated with a participant's forest will also accrue. That means when harvesting occurs, carbon credits must be held if the land is not to be replanted.
35. Early entry to the NZ ETS has also been driven by optimism that forestry units (NZUs) accrued from post-1989 plantings, will be sold by forestry owners and provide early liquidity to the New Zealand domestic trading market. Many existing foresters seem reluctant to take on the trading risks associated with the requirement to hold credits at harvest time, to the extent that they would rather retain a proportion of free NZUs accrued now, to protect themselves against potential future liabilities.

### ***Liquid Fossil Fuels***

36. As recommended by the Select Committee, the liquid fossil fuels sector will now enter the NZ ETS from January 2011, with voluntary reporting from 2009 and mandatory emissions reporting from 2010. As noted above, the five main oil

companies will be the point of obligation under the NZ ETS. Essentially, this will result in a cost pass-through to end users of petrol and diesel, with price rises obviously significant for large transport users. In addition, the concern of a number of consumers is that the ultimate cost pass-through is likely to reflect not only the cost of emissions units purchased, but the administrative costs of establishing commercial trading teams and the price risks inherent in contracts for delivery.

37. In this way, some argue that emissions from the fossil fuels sector would have been better dealt with by way of a carbon tax. Unlike an ETS, a tax could provide greater transparency (and a separate line item), for the increased costs attributable to GHG emissions, rather than the perception at least of an arbitrary value merely being added by fuel companies at the pump.
38. Significantly, the EU ETS does not address emissions associated with the transport sector (only industrial processes) and New Zealand oil companies will be required to purchase vastly greater quantities of emissions units compared with their counterparts in the EU. Given the necessary emissions volumes, New Zealand oil companies will need to establish and implement their trading strategies as soon as possible.

### ***Stationary Energy***

39. The stationary energy sector captures fossil fuel electricity generators and enters the NZ ETS in 2010. For coal and gas generators, costs attributable to emissions unit purchases can be passed through as increased electricity costs, so no transitory assistance will be provided by the Government in the form of free NZU allocations.
40. Similar to the operation of the fossil fuels sector outlined above, costs associated with administration and trading risk may also be factored into that electricity price increase, which many consumers argue is a major pitfall and non-transparent aspect of the NZ ETS.

41. In addition, because of the way the NZ electricity market is structured, thermal generation will ultimately set the marginal cost of electricity in the open market. Renewable generators that are not exposed to the cost of carbon will essentially receive a windfall profit for emissions-free generation. Similar to what was experienced in the EU ETS, hydro and wind generators will on that basis realise increased profits for existing infrastructure output, and for which no additional upgrading or effort has had to be expended. This type of pricing ability may actually erode the open and transparent market regime upon which the New Zealand electricity system is presently based. In any case, given the renewable generation already exists, the windfall is gained with no net environmental benefit to New Zealand.

### **Industry**

42. Industrial process operators may be either compulsory or voluntary participants, depending on their specific activities, and in particular, the volumes of primary fuels used.
43. For example, large scale emitters that consume huge volumes of coal, gas or jet fuel may choose to opt in to the NZ ETS,<sup>80</sup> purchase such raw materials without any carbon charge being applied, and then trade their way out of emissions associated with the fuels' consumption by surrendering the appropriate volume of emissions units. An entity does not have to purchase all of the threshold level of coal or gas from one participant to opt-in. A company would likely opt to do this in order to minimise its own exposure to emissions charges pass-through from a supplier, and particularly in cases where the company already has an established trading strategy.
44. Under the Bill, it is intended that special free allocation be provided by the Government to assist those industrial firms that meet the statutory test of being "trade-exposed" due to the NZ ETS. Briefly, a company may be trade-exposed if

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<sup>80</sup> Parts 3 and 4, Schedule 4, clause 43 of the Bill.

it is likely to face increased costs due to the implementation of the NZ ETS, face direct foreign competition that is not subject to a price on carbon, and is unable to pass on those costs to consumers.

45. Initially, an emissions threshold of 50,000 tonnes of carbon dioxide equivalent emissions per annum had to be met before a firm could receive any free allocation. However, the Select Committee has now recommended the threshold be removed or significantly lowered.
46. The initial level of assistance to eligible trade-exposed industrial firms has been set in the Bill at 90% of 2005 emissions from direct use of coal, natural gas or geothermal steam; direct consumption of electricity; and non-energy industrial processes. Allocation is now to reflect direct emissions and units sufficient to offset cost increases associated with electricity use in the stationary energy and industrial sectors. The purpose of such free allocation is to provide some protection to trade-exposed companies from predatory pricing by international competitors that are not burdened by an equivalent, or any, price on carbon. In effect, without such support, many companies may be forced to shut down operations or move offshore where production is cheaper (relative to New Zealand) and competition effects are not as strong.
47. Many New Zealand based companies operating at their profit margins argued that the free allocation to industry did not go far enough to assist the sector. They argued increased costs and loss of competitiveness could lead to 'long term regrets' if the NZ ETS resulted in reduced output or closures of firms. Further concerns would arise if large or concentrated job losses resulted, or New Zealand's reputation as a good place to do business relative to its neighbours and trading was damaged.
48. Significantly, the Select Committee recommended that the linear phase-out of free allocation (initially to commence in 2013), be delayed five years - commencing in 2019 through to 2030.

49. Industry expressed concern that the linear phase-out assumes businesses can continually improve their emissions inventory – which is not always the case, particularly for those with existing high emissions efficiency. It also assumes that companies can compete with the increasingly full price of carbon – something that may not be commercially achievable.
50. As noted above, there is concern regarding the possibility of ‘carbon leakage’. Leakage could result if New Zealand businesses are displaced to countries where industrial and environmental standards are less stringent, and production therefore significantly cheaper. Such an outcome would mean there are in fact no global environmental benefits – which would be directly contradictory to the primary drivers of the Government’s current climate change policy decisions and the Bill.
51. The basis for allocation (on a ‘net’ rather than ‘efficiency’ basis) has been attacked by some – claiming that grandparenting is distortionary, penalises responsible early movers that have proactively lowered their emissions, rewards firms that have refused or failed to reduce emissions, and perversely fails in the primary objective of the Bill to reduce emissions at ‘least cost’. Accordingly, some stakeholders suggest the best approach for addressing competitiveness and leakage concerns would be to adopt an intensity-based approach for key sectors, including agriculture. Under this approach, participants would only be responsible for meeting their emissions over and above a ‘best practice’ benchmark level of emissions per unit of output.
52. As noted above, such an intensity-based approach has been dismissed by the Government and the Select Committee, which considers that in addition to being administratively difficult, intensity approaches provide an incentive inconsistent with New Zealand’s Kyoto Protocol obligations – which are expressed in absolute terms.

## **Agriculture**

53. The NZ ETS is also unique in that there is no international experience in including agriculture in an emissions trading scheme. However, exempting such a large sector from the NZ ETS would undoubtedly limit the effectiveness of the scheme because, as noted earlier, the majority of New Zealand's GHG emissions profile is attributable to this sector. In this way, New Zealand's profile is more akin to that of a developing than a developed nation. To exclude agriculture would certainly place a disproportionate burden on the transport and industrial sectors to account for New Zealand's significant Kyoto Protocol deficit position.
54. As agriculture is not such a significant emissions contributor in other developed countries, which are focused on reducing industrial process emissions, there is presently limited new technology and investment in this area. In the short term, major emission reductions are not expected from the agricultural sector as current opportunities for abatement are limited, particularly with respect to methane which represents about two-thirds of agriculture's emissions. However, some early opportunities exist around nitrogen inhibitors. For this reason agriculture's entry into the NZ ETS is delayed to 2013. The sector will have a two year lead-in period, with voluntary reporting for one year commencing 2011, followed by one year of mandatory emissions reporting in 2012.
55. The significance of agricultural emissions in New Zealand means that technological gains must be developed in New Zealand, and the Government has aspirations for leading the world in this regard.
56. The Government has signalled its preference for a processor/company level point of obligation, rather than at the farm gate. Administratively, and from a monitoring and compliance perspective, this is the more appropriate obligation point. However, the price signals reaching farmers will be weak or distorted and may ultimately result in less abatement. The Bill provides a deadline of 30 June 2010 for deciding, by Order-in-Council, whether the obligation point be set at the processor level or farm level.

57. The initial level of assistance to agricultural firms under the Bill is 90% of 2005 emissions of methane and nitrous oxide from eligible activities. This is in addition to the high level of funding that will be provided for agricultural research and development projects.

### **Other Climate Change Initiatives**

#### ***Permanent Forest Sink Initiative (PFSI)***

58. The Permanent Forest Sink Initiative (*PFSI*) was quietly promulgated in early December 2007. It allows landowners to realise the economic value of removing carbon dioxide from the atmosphere and sequestering it in new forests established after 31 December 1989 (and directly human-induced through planting and active management). Landowners can gain tradable Kyoto Protocol compliant emission units from the Government equivalent to their forests' sequestration potential. Those units may then be sold on the international and domestic trading markets.
59. Agreements between landowners and the Crown will be registered as covenants against the land titles, binding all future landowners and significant penalties will accrue if deforestation occurs.
60. Limited harvesting of the forests is allowed on a continuous canopy basis, but clear-fell plantation forests are excluded. Landowners are responsible for all costs and risks associated with the initiative, and must replace any units should the stored carbon be depleted through accidental or weather events, for example fire or wind throw.

### **Evaluation of the Proposed NZ ETS**

#### ***Emissions Reducing Incentives***

61. Overall the NZ ETS provides few incentives for developing emissions reducing technology or for those who are already emissions conscious. Certainly, companies that have already invested in reducing emissions consider they have been treated unfairly, particularly if they will receive a smaller free allocation than

companies that have not. The consequences of not incentivising carbon abatement projects early are serious. At present the Government seeks to rely on the embedded cost of carbon to get new projects started. However, it is likely that further incentives similar to the Projects to Reduce Emissions (*PRE*) tenders will be required to target new developments in the tough areas, such as agricultural emissions.

### ***Risks of Early Implementation***

62. Despite the Government's belief that early introduction of an ETS would bring benefits for New Zealand, others believe that any achieved reduction will be eclipsed by increased emissions in countries without any regulations over carbon emissions. This issue is most stark in the industrial sector. While most countries do not yet have emissions trading schemes, trade-exposed industries in New Zealand may eventually have to shift their operations to countries with no such controls and thus significantly cheaper production costs. Carbon leakage is a very real threat for trade-exposed companies already a long way from export markets. It is also a problem for the global environment because generally those New Zealand companies will have been operating to very high environmental standards in New Zealand, whereas their competitors not facing a carbon cost often also have significantly lower environmental standards to meet.

### ***Interaction with the Voluntary Carbon Markets***

63. Currently the Bill fails to provide any specific guidance as to how the purchase and use of Voluntary Emissions Reductions (*VERs*) is intended to interact with the regulated NZ ETS. Given that an active voluntary market already exists in New Zealand, and indeed several Government Departments have been charged with securing carbon neutrality, including via voluntary credits, this is an area needing clarification. At present there are no mechanisms for the EUR to deal with project proponents wishing to obtain voluntary credits rather than NZUs.

64. At the time of writing this paper officials had begun working on policies for the voluntary market. More impetus for this came in early July with the announcement that the Voluntary Carbon Standard (one of the most widely recognised voluntary standards) had awarded four registries worldwide, one of these to New Zealand.
65. The Bill undoubtedly poses huge challenges for New Zealand. While its intent is generally supported, a number of specific aspects of the Bill do need clarification and careful consideration if equitable and achievable outcomes are to result. In many respects the Bill is ambitious, and has received criticism for the short implementation timeframes - when compared with the EU scheme for example. Its far-reaching sectoral coverage, while novel internationally, is necessary due to New Zealand's forestry and agricultural sectors having key roles to play, and its unique methane emissions profile.
66. Liquidity issues in the early stages of the NZ ETS will make trading challenging for those with compliance obligations. International unit fungibility and future international linking will be key to ensuring the NZ ETS is sustainable in the longer term and beyond Kyoto's first commitment period.

**July 2008**