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NEW ZEALAND CLIMATE CHANGE LAWS

by

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Introduction

1. Having signed the Kyoto Protocol and with every intention of ratifying it, in 2002 the New Zealand Government signaled the introduction of two domestic climate change policies – a broad-based carbon tax, and as an incentive for early action, the Projects to Reduce Emissions (*PRE*) tender. Unfortunately, the carbon tax was not politically sustainable and was formally abandoned in 2005. Two pilot awards of emissions units, and two rounds of tenders for the *PRE* were completed. A number of those projects have now been constructed and the emissions units have been sold forward both in New Zealand and into the European Emissions Trading Scheme (*EU ETS*).
2. Recently, the New Zealand Government introduced legislation to implement a carbon 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). Concurrently it has released the New Zealand Energy Strategy to 2050, which requires that all new electricity generation be from renewable sources. Thermal generation is only an available option if security of supply is threatened. The Climate Change (Emissions Trading and Renewable Preference) Bill (*the Bill*) is being shepherded rapidly through the Parliamentary processes given the impending general election later this year. The Bill proposes substantial amendments

to the Climate Change Response Act 2002 and the Electricity Act 1992. At present the Bill has the support of both major parties.

3. The Government has stated that New Zealand's clean, green image is part of its international brand, which underpins important sectors of the economy. A failure to act sustainably and responsibly could reduce New Zealand's international credibility and influence internationally. Aside from the reputational drivers for emissions abatement, in terms of New Zealand's binding Kyoto Protocol obligation, the New Zealand Treasury estimated the obligation at the end of 2007 to be \$NZ962 million (based on a carbon value of NZ\$15.90 per tonne of CO₂ equivalent).

New Zealand's Emissions Profile

4. The New Zealand economy presents some peculiar challenges in terms of emissions reductions. A disproportionately large percentage of New Zealand's emissions come from agriculture: over 50%, compared to an average of 12% in most other developed nations. It has a relatively small proportion of emissions from energy: 43% - relative to 63% internationally. Transport is responsible for a further 19% of emissions. As forests planted in the 1990s are harvested (through the mid to late 2020s to 2030s), New Zealand's overall emissions (including forest sinks) will spike significantly.
5. For New Zealand to achieve the required reductions in greenhouse gases (GHGs), the composition of the reduction will be quite different to most OECD countries. New Zealand's electricity generation profile is already highly focused (69%) on renewable energy (such as hydro, geothermal, wind, solar, biogas and wood). In the transport sector New Zealand has always suffered from poor population density and future planning and lacks integrated public transport networks for travelers to easily switch to. However, the sector that faces the greatest challenges needs to tackle its agricultural emissions, and at present there are not well developed solutions and technologies for that.

The New Zealand Emissions Trading Scheme

Background

6. The New Zealand Government considers that an ETS will be more flexible, allow lowest cost abatement, opportunities for linking with international schemes and markets, and given its emerging popularity amongst developed countries, early adoption would bring significant benefits. The Government intends the NZ ETS to operate alongside other policies and measures to reduce domestic emissions and achieve New Zealand's broader sustainability objectives. One of these complementary initiatives was promulgated in December 2007, the Permanent Forests Sinks Initiative (*PFSI*), which is discussed later in this paper.
7. The desired impact of the NZ ETS is to change investment and consumption behaviours within New Zealand by integrating a price for emissions into decision-making by producers and consumers. The result will be a progressive shift in NZ's economy and lifestyle towards consuming, using and investing in goods and services with lower GHG emissions. The NZ ETS comes at a high cost and business has been quick to react to that, particularly the ambitious and somewhat unique 'all sectors, all gases' coverage.
8. The core obligation of participants under the NZ ETS is to surrender one emission unit for each tonne of GHG emissions that the participant is responsible for. Participants must monitor their activities and calculate any emissions that arise from their activities. These self assessment obligations are absolute, rather than an intensity-based. This means a large proportion of industrial sector participants (some of whom may have taken early action) are very concerned that their new ETS obligations effectively constrain future growth, and fail to recognise their efforts to date. The Government favours the absolute approach because it provides certainty over the total national GHG inventory, is relatively simple to implement, and reduces risk in term of New Zealand meeting its Kyoto obligations.

9. It is intended that the NZ ETS will allow both sales to, and purchases from, international trading markets (with some exceptions on acceptable unit types). This is essential for small, isolated markets like New Zealand and Australia, since it aids liquidity and can act as a safety valve on price. As outlined below, specific design features of the NZ ETS may not provide for direct linking with existing or future schemes, but in its September 2007 announcements, the Government foreshadowed that linking with any future Australian scheme was worthy of close investigation.

Coverage

10. The NZ ETS will, by January 2013, include all major sectors of the economy and all six gases within the scope of the Kyoto Protocol, rather than just industrial processes as the EU ETS does.
11. Significantly, the Bill allows for a staged entry of the different sectors as follows:
- January 2008: Forestry;
 - January 2009: Liquid fossil fuels (mainly transport);
 - January 2010: Stationary energy (coal, gas, geothermal) and industrial process emissions; and
 - January 2013: Agriculture, waste and all other emissions.
12. The timing of entry of the sectors into the NZ ETS will strongly influence market liquidity at any point in time. It is for this reason that forestry enters the NZ ETS early – to immediately discourage further deforestation, and so any credits associated with permanent post-1989 (non-Kyoto forests) can enter the market for purchase by participants with early emissions obligations.
13. The wide coverage of the NZ ETS and the first two years of entry dates are ambitious when compared with the development of the EU ETS. In the EU ETS the participants are large industrial installations generally experienced in commodities and electricity trading markets, only trading at the margin, with many initially granted 100% free

allocation of units to trade. However, as noted above, New Zealand has binding international Kyoto obligations to meet by 2012, so policies must be imposed to reverse its growing Kyoto deficit position - hence the priority attributed to the NZ ETS since the initial September 2007 framework announcements.

Participants

14. Under the NZ ETS there will be three types of participants:
 - those obliged to surrender units to cover their direct emissions or emissions associated with their products;
 - those who receive free allocation of units, are eligible for afforestation credits, or hold other tradable emissions units; and
 - those that partake in trading for market opportunities.

15. Participants can be either compulsory or voluntary, and the Bill¹ specifies activities that require compulsory participation in the NZ ETS, including:
 - pre-1990 forest land;
 - liquid fossil fuels (transport);
 - stationary energy;
 - industrial processes;
 - agriculture; and
 - waste.

16. Schedule 4 lists those activities under which people may become voluntary participants:
 - post-1989 forest land;
 - industrial processes (removal activities);
 - transport (major jet fuel purchasers); and
 - stationary energy (major coal and natural gas purchasers).

¹ Schedule 3, clause 44 of the Bill.

17. Generally the design of the NZ ETS means that compliance obligations for the various sectors is placed as high as possible in order to minimise the total number of compulsory participants and therefore administration costs. For example, it is proposed that fuel suppliers (the five main fuel companies) in New Zealand will be responsible for accounting for emissions in the fossil fuel sector rather than expecting individual vehicle users to purchase emissions units to offset the CO₂ discharges associated with the petrol they consume. On this basis, it is estimated that there are likely to be less than 200 participants in the NZ ETS not including those in the forestry sector. The number of forestry participants could range from 2000 to 9000, depending on the number of post-1989 forest owners or forestry rights/lease holders who decide to become participants in the scheme.

Unit Types

18. The Bill provides for a range of units within the NZ ETS. This is appropriate as the larger the range of tradable instruments, the more likely there will be a greater reduction in compliance costs.
19. New Zealand Units (*NZUs*) are created by the Bill, issued by the Government, and will form the primary domestic unit of trade. Each NZU issued by the Government will be backed by a Kyoto unit, which is held in a Crown holding account in the New Zealand Emissions Unit Registry (*EUR*) and can be used to meet NZ ETS obligations (subject to some restrictions). Kyoto units can be acquired domestically or via overseas trading mechanisms for surrender within the NZ ETS to meet compliance obligations. Unlike the 'supplementarity' requirements for Member States in the EU ETS (based on Marrakesh Accords' provisions), the Bill itself does not contain a specific limit on the volume of Kyoto units that can enter the NZ ETS. The Bill does however, provide the responsible Minister with the ability to place restrictions on classes or subclasses of Kyoto units that may enter the NZ ETS and what transactions may or may not be registered in respect of those units.

20. The Bill specifically excludes certain units (such as Certified Emission Reduction units (*CERs*) from nuclear projects). While there is no entry restrictions on the introduction of Assigned Amounts Units (*AAUs*), which is often referred to as 'hot air', some concern has been expressed about such units entering the NZ ETS. This concern is based on the perceived reputational risks arising from use of *AAUs* (particularly non-GIS units that originate from the former Soviet Union) to meet Kyoto Protocol and NZ ETS emissions compliance obligations. 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.
21. On the other hand, inclusion of *AAUs* may provide some guarantee against the risk that the EU ETS will be the dominant influence on price in the New Zealand carbon market. In this way the opportunity to trade in *AAUs* may assist participants in the NZ ETS by controlling compliance costs.
22. Without the ability to trade *AAUs*, and the likely competition for other types of Kyoto credits on the international market such as *CERs*, the NZ ETS would probably have had insufficient liquidity, and prices would have risen.

Sectors

Forestry

23. As noted above, the Bill proposes that the forestry sector (exotic forestry) enters the NZ ETS with retrospective effect from 1 January 2008.
24. 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.

25. Pre-1990 forestry owners will be offered some free allocation of NZUs for deforestation. This is presently set at 55 million tonnes.² While there were early indications that this will be allocated on a pro-rata basis of forestry hectareage, 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.
26. 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.
27. 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

28. The Bill proposes that the liquid fossil fuels sector will enter the NZ ETS from January 2009, and 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

² Section 69, clause 43.

costs of establishing commercial trading teams and the price risks inherent in contracts for delivery.

29. 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 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.
30. 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 counterparties 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

31. 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.
32. 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.
33. 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

34. Industrial process operators may be either compulsory or voluntary participants, depending on their specific activities, and in particular the volumes of primary fuels used.
35. For example, large scale emitters that consume huge volumes of coal, gas or jet fuel may choose to opt in to the NZ ETS,³ 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 units. 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.
36. 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 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.⁴
37. 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. The

³ Parts 3 and 4, Schedule 4, clause 43 of the Bill.

⁴ Each firm must also meet a specified emissions threshold (new section 70(4)), which is yet to be set by an Order in Council.

purpose of such free allocation is to provide some protection to trade-exposed companies from predatory pricing by 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 not as strong.

38. Many New Zealand based companies operating at their profit margins argue that the free allocation to industry, with a proposed linear phase out from 2013,⁵ does not go far enough to assist industry. It is argued that increased costs and loss of competitiveness could lead to 'long term regrets' if the NZ ETS resulted in reduced output or closures of firms. There would be further concern if particularly 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.
39. Industry is also concerned that the linear phase-out assumes that 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.
40. There is also concern about the possibility of carbon leakage. This could result if New Zealand businesses were 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 are the primary drivers of the Government's current climate change policy decisions and the Bill.
41. 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

⁵ New Section 70(2)(c)), clause 43 of the Bill.

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, such as 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.

42. Such an intensity-based approach has been dismissed by the Government, which considers that in addition to being administratively difficult, intensity approaches provide an incentive inconsistent with New Zealand’s economic signal received under the Kyoto Protocol (expressed in absolute terms).

Agriculture

43. 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 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.
44. 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. For this reason agriculture’s entry into the NZ ETS is delayed to 2013. However, some early opportunities exist around nitrogen inhibitors. 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.

45. The Government has signaled 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 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)

46. 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. 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.
47. Land eligible for the PFSI must have been free from forest at 31 December 1989 and the new forest must be directly human-induced through planting, seeding or the human-induced promotion of natural seed sources. Therefore, active management is required in establishing the forest. Kyoto-compliant exotic forests established after 17 October 2002 (when the policy was first announced) and Kyoto-compliant indigenous forests established from 31 December 1989 will be eligible to enter the PFSI. However, mature indigenous forests are not covered.

48. 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.
49. 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.

Carbon Neutral Public Service

50. Last year the Government announced its aspirations for a carbon neutral public service, led by the Ministries of Health, Economic Development, and Environment, Inland Revenue, the Department of Conservation, and the Treasury, all of which aimed to have carbon neutral plans in place by early 2008, and achieve carbon neutrality by 2012. The move was designed to confirm New Zealand's dedication to promoting sustainability, and to confirm and demonstrate the ability of large organisations to become carbon neutral without hindering performance and quality of service.
51. The programme aims for the six agencies to achieve carbon neutrality by 2012. The emissions connected with energy use, domestic and international work-related travel, and waste will be measured, reduced as far as possible, and the remainder offset. The Government has announced that it prefers to offset emissions via New Zealand forestry-based projects, to take place on Crown land, as it considers that such projects offer the best additional social, environmental, and economic benefits. However, it has also been noted that other types of projects may be considered if they are deemed to offer similar carbon absorption capabilities and environmental benefits.

Biofuels

52. The Government also introduced legislation in October 2007 to give effect to its plan for mandatory use of bio-fuels. The Biofuel Bill⁶ currently before Parliament implements a Biofuels Sales Obligation (*BSO*) policy and provisions for the regulation of engine fuels, including biofuels and blends. That Bill will amend the Energy (Fuels, Levies, and References) Act 1989 by introducing the BSO policy, which requires petrol suppliers to supply a proportion of biofuels, commencing at 0.53% in 2008 and rising to 3.4% by 2012. The Bill provides some flexibility – a supplier may apply for deferral from the policy in the first two years; may choose how to use surpluses and shortfalls of biofuels; and may enter into entitlement agreements to allow suppliers to count biofuels of others toward its BSO.

Evaluation of the Proposed NZ ETS

Emissions Reducing Incentives

53. Overall the NZ ETS provides little 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 PRE tenders will be required to target new developments in the tough areas, such as agricultural emissions.

Risks of Early Implementation

54. 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

⁶ Private Members Bill 148-1.

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.

Non-Transparent Costs

55. 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.

Interaction with the Voluntary Carbon Markets

56. 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.

Concluding Remarks

57. 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 the unique methane emissions profile.
58. In our view, liquidity 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.

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