

Emissions Trading Tax Issues

*An officials' issues paper on tax matters arising
from the New Zealand Emissions Trading Scheme*

September 2007

*Prepared by the Policy Advice Division of Inland Revenue and by the Treasury and
the Emissions Trading Group*

First published in September 2007 by the Policy Advice Division of Inland Revenue,
PO Box 2198, Wellington, New Zealand.

Emissions Trading Tax Issues; an officials' issues paper on matters arising from the proposed
New Zealand Emissions Trading Scheme.
ISBN 978-0-478-27155-3

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Chapter 1

INTRODUCTION

- 1.1 The government has agreed in principle to adopt an emissions trading scheme as its core, price-based measure for mitigating climate change. It will operate alongside other policies and measures to reduce overall domestic emissions.
- 1.2 The introduction of the New Zealand Emissions Trading Scheme will have taxation consequences. The purpose of this paper is to consider some of the possible income tax and GST implications of the scheme and initiate discussion with stakeholders. It discusses the treatment of income and expenditure under the scheme generally and then deals with the forestry sector, which is proposed to be the first entrant.
- 1.3 On 20 September 2007 the government released *The Framework for a New Zealand Emissions Trading Scheme* and the companion document, *Forestry in a New Zealand Emissions Trading Scheme*.¹ They set out the core design features of an emissions trading scheme as well as details of how the scheme might apply to the forestry sector.
- 1.4 Public engagement on the detailed design and implementation of the scheme will be a long-term process. The proposal is for all sectors and all greenhouse gases to be covered by the scheme by 2013. The first stage of the engagement process focuses on the core design features of the scheme and detailed design for the forestry sector, for which the proposed entry date is 1 January 2008, and the liquid fossil fuels sector, for which the proposed entry date is 1 January 2009.
- 1.5 A number of tax issues arise as a result of the proposed scheme. Core tax issues include the treatment of emissions obligations, the consequences of free allocation of emission units, and the timing of recognition of income and expenditure. The forestry issues are more specific to that sector.
- 1.6 This issues paper has been prepared by officials from the Policy Advice Division of Inland Revenue and from the Treasury and the Emissions Trading Group as part of the consultative process. Feedback on the paper will be taken into account in determining whether a legislative response is required to deal with tax issues arising from the emissions trading scheme for the forestry sector, and other sectors as staged implementation of the scheme proceeds.
- 1.7 There are various ways we can approach tax issues arising from the scheme. They range from developing a comprehensive code to relying totally on the application of general taxation principles. Somewhere in between is an approach that relies primarily on current law, clarifying it where necessary.

¹ These documents are available electronically at www.climatechange.govt.nz.

- 1.8 Our initial preference is to focus on areas where clarification of the law might be required, contemporaneously with the staged implementation of the emissions trading scheme. This recognises that there are principles and models within the current tax system that should be appropriate to this new regulatory instrument, while maintaining the flexibility to clarify legislation where the outcomes are highly uncertain or the treatment under current law could undermine the policy objectives of the scheme.
- 1.9 This paper is a starting point for discussion. It is based on what we know about the likely design of the emissions trading scheme as at September 2007. Development of an appropriate approach to the taxation of income and expenditure arising from the scheme will be a progressive process. The paper presents some preliminary views on which to start the consultative process with participants in the scheme and the financial and tax accounting community. It is not intended to be a comprehensive discussion of all the implications of the emissions trading scheme for tax purposes, but rather a consideration of several key areas.

SUMMARY OF SUGGESTED TAX TREATMENT

Income and expenditure (sectors other than forestry)

Expenditure associated with a participant meeting obligations under the New Zealand Emissions Trading Scheme should be a deductible expense and recognised on an accruals or emerging basis over time.

Income from the allocation of free emission units (NZUs) should be recognised as taxable income on an emerging basis over time. This means the income is recognised on a systematic basis in the same periods as the expenditures for which the NZUs are intended to compensate the recipient.

Market values should be used to determine the value of the accrued income or expenditure at balance dates.

The forestry sector – forests planted before 1990

For pre-1990 forests, free emissions units (NZUs) will be allocated to recognise that the scheme will have an impact on land values, since there will be a potential liability if land use changes, for example, from forestry to dairy. Free allocation of units in this case should generally be treated as capital and remain outside the tax base.

Equally, liabilities arising if land use does change will generally be an expense associated with preparing the land for a new use, capital in nature and non-deductible.

Forestry sector – forests planted after 1989

For post-1989 forests, income in the form of emissions units (NZUs) will be earned when there is a net increase in carbon stocks stored in forests. This will provide a new income stream to forest owners. It should be treated as being of a revenue account nature and therefore taxable.

Obligations under the scheme will arise when there is a net decline in carbon stocks stored in a forest, primarily as a result of harvest. The costs of meeting emissions obligations are an expense that should be tax-deductible.

There are problems, however, in relation to the timing of recognition of accruing obligations for harvesting post-1989 forests. Several options are suggested to ameliorate this. They include:

- recognising income from NZUs as it is received and allowing a deduction for expenditure on an emerging basis provided there is an intention to harvest;
- deferring recognition of income from, and deductions for expenditure on, NZUs until an NZU is used to settle an obligation arising from the scheme or is sold.

Goods and services tax

In relation to GST, we suggest that, in line with the one-rate, minimal exceptions structure of the GST base, NZUs be treated in the same way as any other goods or services supplied by a registered person.

- 1.10 Submissions on the forestry issues arising from the introduction of the proposed scheme should be made by 28 October 2007. Submissions on the general tax issues should be made by 30 November 2007. Submissions should be addressed to:

Emissions Trading Scheme – Tax Issues
C/- Deputy Commissioner
Policy Advice Division
Inland Revenue Department
PO Box 2198
WELLINGTON

Or email: policy.webmaster@ird.govt.nz with “ETS Tax” in the subject line.

- 1.11 Submissions should include a brief summary of major points and recommendations. They should also indicate whether it would be acceptable for officials to contact those making submissions to discuss their submission, if required.

- 1.12 Submissions may be the subject of a request under the Official Information Act 1982, which may result in their publication. The withholding of particular submissions on the grounds of privacy, or for any other reason, will be determined in accordance with that Act. Those who consider there is any part of their submission that should properly be withheld under the Act should indicate this clearly.

Chapter 2

THE NEW ZEALAND EMISSIONS TRADING SCHEME

- 2.1 This chapter sets out some of the core policy objectives and features of the proposed New Zealand Emissions Trading Scheme.
- 2.2 The scheme will introduce into the economy a price for greenhouse gas emissions. The desired outcome is a change in investment and consumption behaviours as a result of changes in the relative prices of high-emission and low-emission goods and services.
- 2.3 Integrating the price of emissions into the economy happens by placing an obligation on some entities that emit greenhouse gases, or supply products that create emissions when used by consumers, to monitor, report and pay (in emissions units) for actual emissions, or emission equivalents. These entities are referred to as “points of obligation”.
- 2.4 Points of obligation will not always be entities that emit greenhouse gases.² That is not necessary because the price signal created by an emissions trading scheme will flow through the market supply chain. The increase in costs associated with the introduction of a scheme of this nature will be reflected in increased prices for high emission goods and services. The cost increases will be passed on to consumers further down the supply chain, influencing production and consumption decisions.
- 2.5 Conversely, the introduction of a price for emissions will reduce the relative prices of low-emissions goods and services and increase the relative returns of investment in low-emission technologies.
- 2.6 Implementation of the proposed scheme will be through a transitional pathway that provides for gradual adjustment to emissions pricing across the economy. Transitional assistance will vary by sector and may include delayed entry and free allocation of emissions units. The proposed entry dates for different sectors are:³

Sectors	Monitoring and reporting begin	End of initial compliance period
Forestry (includes deforestation of pre-1990 forest land and afforestation post-1989)	1 January 2008	31 December 2009 (first compliance period is 2 years)
Liquid fossil fuels (mainly transport)	1 January 2009	31 December 2009
Stationary energy (includes coal, gas and geothermal)	1 January 2010	31 December 2010

² Decisions regarding participants with obligations will be based on other criteria, such as minimising compliance costs and the feasibility of monitoring and verifying emissions.

³ From *The Framework for a New Zealand Emissions Trading Scheme*, Ministry for the Environment and the Treasury, September 2007.

Sectors	Monitoring and reporting begin	End of initial compliance period
Industrial process (non-energy) emissions	1 January 2010	31 December 2010
Agriculture (includes pastoral and arable farming and horticulture)	1 January 2013	31 December 2013
Waste	1 January 2013	31 December 2013

Core features of the scheme

- 2.7 The New Zealand Emissions Trading Scheme will follow a “cap and trade” model that operates within the cap on emissions set by the Kyoto Protocol for the first commitment period (2008 to 2012).
- 2.8 It will include three main types of participants: those with obligations to surrender emissions units to cover their direct emissions or the emissions associated with their products; those that receive freely allocated emissions units or receive them from afforestation; and those that engage in trading activities to take advantage of market opportunities.
- 2.9 A New Zealand Unit (NZU) will be the primary domestic unit of trade. Participants will have an obligation to surrender to the government one emissions unit to cover each metric tonne of carbon dioxide equivalent (CO₂-e)⁴ emissions.
- 2.10 The scheme will generally operate for an annual period called the compliance period (1 January to 31 December). Participants will be required to calculate emissions, retain sufficient records to allow verification of emissions calculations, and report emissions on an annual basis at the end of the compliance period.
- 2.11 At some point during the compliance period, the Crown will allocate NZUs to participants in the scheme, either free of charge or by selling them by auction. The first forestry-related NZUs will most likely be issued in 2009. NZUs can also be purchased on the secondary market.
- 2.12 Once they obtain NZUs, participants will be able to:
- hold them to meet the expected level of future emissions obligations, which will minimise any risk associated with adverse price movements between the date acquired and settlement; or
 - sell some or all of them in the expectation of later buying NZUs equal to the quantity of emissions in the compliance period or, if not a participant with obligations, sell NZUs to offset increased input costs.

⁴ The quantity of a given greenhouse gas multiplied by its global warming potential, which equates its global warming impact relative to carbon dioxide (CO₂). This is the standard unit for comparing the degree of warming that can be caused by emissions of different greenhouse gases.

- 2.13 The emissions trading scheme will be designed for both sales to, and purchases from, international trading markets.
- 2.14 An active market for emissions units is important as it will establish clear price signals. Market prices will be the source of information for valuing assets and liabilities arising from the scheme for tax and presumably accounting purposes. The market in New Zealand will be small initially but will be expected to grow as other sectors enter the scheme over time. Linking the scheme to international markets should ensure access to a carbon price developed in active, open and deeper markets, with willing buyers and sellers.
- 2.15 At the end of the compliance period a participant with obligations must surrender NZUs equal to its reported emissions.
- 2.16 Non-compliance with obligations under the scheme will attract penalties.
- 2.17 Further details of the two forestry emissions trading scheme mechanisms are discussed in Chapter 4, which also deals with the forestry-specific tax issues.

Chapter 3

CORE TAX ISSUES – SECTORS OTHER THAN FORESTRY

- 3.1 This chapter outlines our preliminary views on the deductibility of expenditure arising from emissions obligations and derivation of income associated with free allocation of emissions units (NZUs) for sectors other than forestry. It also discusses timing issues.
- 3.2 In many areas, taxation policies are linked to accounting practices and generally accepted accounting principles. However, there is currently no authoritative guidance on accounting for emissions trading, and a number of different practices have emerged.⁵
- 3.3 Our approach, therefore, is to look at the underlying nature of the transactions involved and their economic consequences and consider how these outcomes could fit within the structure of current tax law.

Recognition of income and expenditure

Emissions obligations

- 3.4 Once the emissions trading scheme is up and running, companies will be affected either directly, through the obligation to account for their own emissions or emissions embedded in products they sell, or indirectly. An indirect consequence arises when a company downstream from a firm with obligations faces higher prices as a result of emissions pricing. For example, businesses will face increased fuel or electricity charges because a large proportion of the cost of emissions obligations imposed on fuel companies or electricity generators is expected to be passed on to consumers in these sectors.
- 3.5 Under current tax law, persons carrying on a business can claim a deduction against their taxable income for expenditure incurred in carrying on that business. Deductions are not available for expenditure that is of a capital nature.
- 3.6 When the consequences of the emissions trading scheme are indirect the costs will typically be deductible under standard income tax rules. Deductions will be for items of a revenue account nature, such as increased input costs, incurred in the course of carrying on a business.

⁵ The International Financial Reporting Interpretations Committee issued IFRIC 3 Emissions Rights in December 2004. It was subsequently withdrawn in June 2005. A survey of accounting practices conducted by PricewaterhouseCoopers and the International Emissions Trading Association, “Trouble Entry Accounting”, discusses accounting approaches adopted by companies participating in the EU ETS.

- 3.7 When the consequences of the scheme are direct, as they will be for oil companies in the liquid fossil fuels sector, for example, the cost is also an incident or consequence of doing business. The obligation under the scheme will arise because emissions are released in the process of production or because of the embedded emissions content of products is emitted on use by downstream consumers. Frequently, but not always, this cost will be reflected in increased income. It is an annual cost associated with the production process, from which income arises in a particular year. Our view, therefore, is that the costs of meeting emissions obligations are an expense that should be deductible under current tax law.
- 3.8 Treating the additional costs associated with the scheme on the same basis for both direct and indirect costs (expenses deductible for increased costs and/or emissions obligations) is an equitable approach. It ensures that one firm does not face harsher after-tax consequences than another as a result of emissions pricing, since costs for emissions units are not tax-deductible.

Treatment of free NZUs

- 3.9 New Zealand businesses will face increased costs of production under the proposed scheme as a result of higher energy and fuel prices and/or the requirement to surrender NZUs to cover their emissions. Many businesses will be able to pass a portion of these costs on to consumers, reducing the impact on their profitability. Some, however, will not be able to pass the bulk of their increased costs on, resulting in profit impacts and, potentially, a loss of competitiveness. The government has agreed in principle to smooth the transition for some businesses in sectors that are disproportionately affected by the introduction of the scheme and has established principles to guide the level and duration of allocation.
- 3.10 The government is proposing free allocation of NZUs to some industrial producers. They would be producers that have direct obligations or who are affected indirectly and who may face declines in profitability from increased electricity costs and/or obligations arising from direct stationary energy and industrial process emissions.⁶
- 3.11 The effect of free allocation is to reduce the impact on these producers of the emissions trading scheme during the transition to full internalisation of emission pricing.
- 3.12 The number of units given to each business is likely to be determined with regard to its share of the relevant industry's overall emissions in a recent year. No adjustment is intended over time to reflect changes in emissions or output levels. Allocation will take place on an annual basis, for each compliance year, and will begin in 2010.

⁶ Owners of forests planted before 1990 will also receive compensation for the negative impacts of the emissions trading scheme on land values. See the discussion on the forestry sector.

- 3.13 The free allocation, or “gift”, of NZUs is, in effect, compensation for revenue account expenses that are associated with emissions obligations or other costs arising from the scheme that will result in a reduction in business profitability. On the face of it, therefore, the allocation of free units should be either taxable income or represent a reduction in deductible expenditure.
- 3.14 The value of the income received is likely to be clear as NZUs will have a market value. Determining reductions in deductible expenditure is less certain as those facing increased indirect costs might not be able to quantify the proportion of those costs associated with emissions pricing in the context of price movements generally.
- 3.15 The interaction between the allocation of free units and the possible tax treatment is important, given that the tax system generally provides, through deductions for increased expenses, a means of ameliorating some of the impacts of an emissions trading scheme on business profitability. This is limited to items within the tax base (with capital losses, in many cases, remaining outside the tax base). Inappropriate tax treatment could result in firms receiving less financial assistance from the government than intended or receiving additional compensation. Either way, this could undermine in part the objectives of free allocation of units. Example 1 illustrates the problem.

Example 1: Trade-exposed company receiving a free allocation of NZUs

Company A creates its own emissions from production processes. It also faces increased costs as a result of purchases of electricity, which have an embedded carbon content. The company exports all its products. Its competitors do not face carbon costs. None of the increased costs can be passed on. Increased costs are estimated to be \$100 before tax. They are deductible expenses. 10 NZUs, valued at \$10 each, are allocated to ameliorate the impacts of the scheme. The allocation is calculated on a pre-tax basis.

	<i>No tax on free NZUs</i>	<i>Tax on free NZUs</i>
Initial value of NZUs to firm	+\$100	+\$100
After-tax value	+\$100	+\$70
Deductible expenditure	-\$100	-\$100
Tax effect deductible expenditure	+\$30	+\$30
Benefit to the firm	+130	+100

When free allocation is exempt from tax, over-compensation results. The firm is better off by \$30 as a result of the combined effect of the pre-tax calculation of the compensation payment and tax effect of deductible expenditure.

When the allocation is taxable, the intended outcome – the firm being compensated by \$100 – is achieved.

- 3.16 Given these considerations, we suggest that the best approach, from a policy perspective, is to treat free allocation of NZUs as taxable income.

Timing issues

Emissions obligations

- 3.17 Having suggested that obligations arising under the emissions trading scheme are deductible expenditure, we now turn to the question of timing of the deduction.
- 3.18 Companies will be required to surrender obligations equal to reported emissions annually, after the end of each compliance year (1 January to 31 December). Those with direct obligations will be obliged to calculate their level of emissions using approved methods, retain records to allow verification and report levels of emissions at the end of each compliance period.
- 3.19 A company's income year and the end of the compliance year in many instances will not coincide, however. The settlement of obligations will therefore, at least partially, relate to a financial and tax reporting period earlier than the time of surrender of NZUs.
- 3.20 Presumably, however, given the intention for there to be approved methods for measuring emissions, those with obligations should, at an interim date, be able to calculate the level of emissions resulting from production processes and/or throughput of emission-intensive products. If market values for NZUs or the international equivalent are available the deferred liability can be valued. It will be the balance date market price of the number of NZUs needed to cover measured emissions up until the balance date. A market valuation assumes that there is an active, open and deep market in an instrument with willing buyers and sellers. This may not be the case initially for NZUs, but is likely to develop over time.
- 3.21 Under standard tax analysis, it would seem that a deduction for an expense of this nature should be available on an accrual basis when incurred. Under current tax law, expenditure or loss is incurred at the point at which the taxpayer is "definitively committed" to the outgoing or when the taxpayer actually becomes liable to pay it. It is not necessary that there should have been an actual disbursement of funds.
- 3.22 This is what will occur with accruing obligations to surrender NZUs to satisfy an obligation under the emissions trading scheme. Given that the obligation to surrender emissions units is statutory and therefore unavoidable, and that it should be possible to ascertain accrued obligations with a high degree of certainty at an intervening balance date, we suggest that current law provides a suitable basis for deducting emissions costs on an emerging basis.

- 3.23 As noted in the previous section, companies who indirectly bear the costs of emissions but have no obligations under the scheme will seemingly automatically receive tax deductions for increased costs on an emerging basis as they use products and services that have an embedded emissions component. Enabling a deduction for those with obligations as that obligation accrues ensures similar treatment between business taxpayers, whether they face the consequences of the emissions trading scheme directly or indirectly.

Free allocation of emissions units

- 3.24 Participants in the scheme at balance date may hold NZUs issued for no consideration, or purchased at a market price from other participants in the scheme or the government at auction. There is no obligation, however, to hold units. Some participants with obligations may not hold any at a balance date.
- 3.25 As suggested earlier, the costs for which free NZUs will be issued (obligations under the scheme or increased expenditure as a result of it) should be deductible on an emerging basis.
- 3.26 At first sight, the free supply of NZUs will be an asset of a company as soon as there is confirmation of the quantity to be issued and, for tax purposes, may well be recognised as income on receipt. However, it would seem sensible, given the proposed approach to expenditure associated with NZUs, to recognise the annual supply of free credits on an emerging basis over the period to which the allocation relates. This means the income associated with free allocations would be recognised on a systematic basis in the same periods as the expenditures for which they are intended to compensate the recipient.
- 3.27 The recognition of income from free allocations of NZUs should, in theory, relate to the company's emerging expenditure. The method could be pro rata up to balance date or in proportion to the measured emissions if the recipient is a point of obligation, or can otherwise measure them. This may require an annual estimation of the costs arising from the scheme to enable pro rata allocation of income over the relevant period.
- 3.28 Valuation of income at balance date would be the market value of NZUs that have been recognised in that period.
- 3.29 Examples 2 and 3 illustrate the suggested tax treatment of expenditure arising from emissions obligations and income associated with the free allocation of NZUs.

Example 2: Company with emissions obligations/no free allocation of NZUs

Company A is a participant in the New Zealand Emissions Trading Scheme. The compliance period is from 1 January to 31 December. This example deals with the tax implications that arise in respect of this period.

Company A has an annual balance date of 30 June. In the six months to 30 June it has emitted 600 tonnes of CO₂-e. The market price for NZUs is \$11 at 30 June.

At the end of the year company A formally measures its emissions for the compliance period. It has emitted 1050 tonnes of CO₂-e. The market price for NZUs at the end of the year is \$12. Company A buys its 1050 NZUs at this price.

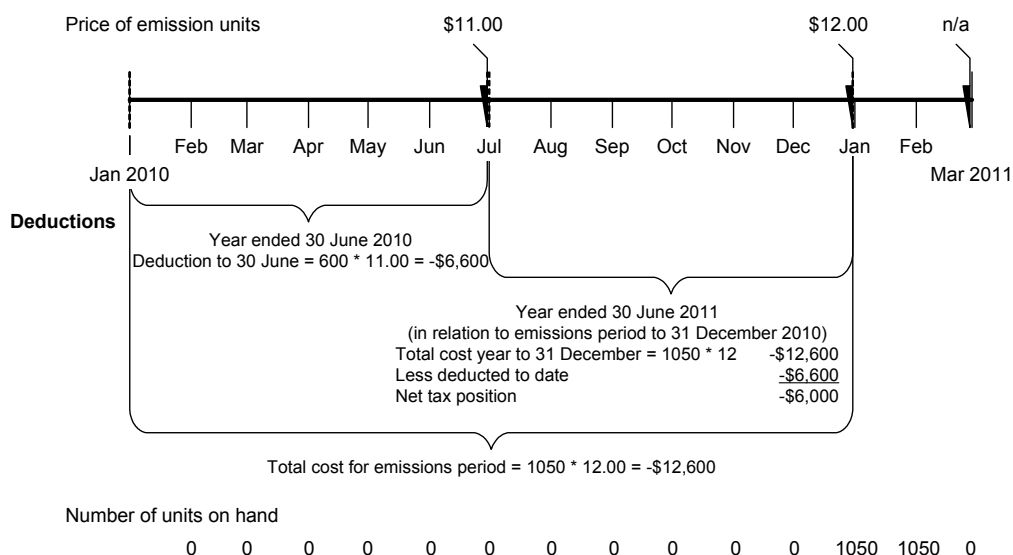
Amounts to be included in the company's tax accounts for the six months to 30 June

Deduction as at 30 June -\$ 6,600 (600 * \$11)

Amounts to be included in the company's tax accounts in the following income year (calculated on measured emissions to 31 December)

Deduction year to 31 December -\$12,600 (1050*\$12)
 Less deducted at 30 June -\$ 6,600
 Deduction as at 31 December -\$ 6,000

This outcome can also be illustrated as follows:



Note that the wash-up deduction at 31 December incorporates the price adjustment from the 30 June balance date value of \$11/NZU to the actual value of \$12/NZU. We do not believe that any tax law change is necessary to achieve these outcomes.

Example 3: Company with emissions obligations and free allocation of NZUs

Assume company A has obligations as in Example 2 and on the first day of the compliance period receives free 1000 NZUs for the year equivalent to 1000 tonnes of CO₂-e emissions. At 30 June it estimates its emissions for the year to 31 December will be 1100 tonnes. Actual emissions for the year are 1050 CO₂-e.

The company would calculate its expenditure for the relevant income years in the same manner as set out in example 1.

Treatment of the free allocation of NZUs

The free allocation of NZUs is accrued over the period to which the allocation relates – the compliance year to 31 December. This allocation could be pro-rata over time or pro-rata to the annual estimate of emissions. In this example the income is accrued pro-rata to the estimated emissions for the year to 31 December.

At 30 June, the end of Company A's income year, the market price for NZUs is \$11. The amount of income is calculated pro rata to estimated emissions for the year – $600/1100 * 1000 * \$11 = \6000 .

For the period 1 January to 31 December 1000 NZUs are recognised. The market price for NZUs at 31 December is \$12. The additional 50 NZUs required to settle are purchased at this price.

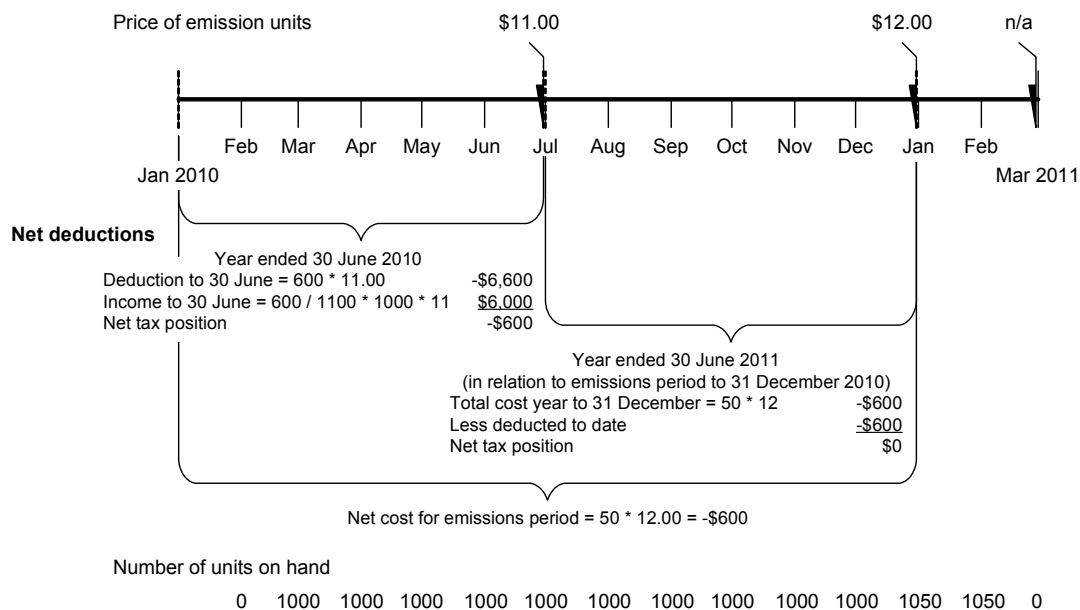
Amounts to be included in the company's tax accounts for the six months to 30 June

Income from free NZUs	\$ 6,000	
Less deduction as at 30 June	<u>-\$ 6,600</u>	(600 * \$11)
Net gain (loss)	<u>-\$ 600</u>	

Amounts to included in the company's tax accounts in the following income year (calculated on measured emissions to 31 December)

Income from free NZUs	\$12,000	(1000 * \$12)
Less income to 30 June	<u>-\$ 6,000</u>	
	<u>\$ 6,000</u>	
Deduction year to 31 December	-\$12,600	(1050 * \$12)
Less deducted at 30 June	<u>-\$ 6,600</u>	
	<u>-\$ 6,000</u>	
Net tax position for the six months to 31 December	\$ 0	

This outcome can also be illustrated as follows:



The net cost of \$600 for the year equals the actual cost of purchasing 50 NZUs at \$12/NZU.

To achieve this result, tax law changes seem to be necessary, to confirm that the free allocation of units is income, and to spread the income over the period to which the allocation relates.

Emissions units held at balance date

3.30 Some firms might hold NZUs in excess of the emerging obligation. Consistent with an accrual treatment, these NZUs should also be revalued to the market price.

Submission points

Deductions

Do you consider that the costs associated with meeting emission obligations are deductible expenses under standard tax analysis?

Income from free allocation

Does it seem reasonable to tax the income from free allocations of NZUs? If so, is a law change necessary to achieve this?

Timing

Do you think that using an accrual based method of matching income from free allocations and direct expenses to meet obligations on an emerging basis over time is appropriate?

How do you envisage these measurement issues might be handled from a financial accounting perspective?

Is our analysis of the timing of the deduction under current tax law correct?

Should the tax laws be amended to confirm timing of recognition of income from free allocation of NZUs?

Chapter 4

CORE TAX ISSUES – FORESTRY SECTOR

- 4.1 This chapter outlines tax issues for the forestry sector that will arise from the introduction of the proposed emissions trading scheme.⁷ It starts by setting out the distinguishing features of this sector and then deals with tax issues.

Features of the scheme for forestry

- 4.2 For purposes of the emissions trading scheme, there are two quite distinct elements of the forestry industry: afforestation and deforestation. Government proposals include both afforestation and deforestation in the scheme.
- 4.3 From 1 January 2008, the government will allocate NZUs for increases in carbon stored in post-1989 forests. Owners will also be responsible for future liabilities when this carbon is released (for example, when the trees are harvested). Owners of these forests will be given the choice to opt into the scheme and receive their share of the relevant sink credits and assume future emission liabilities. This will provide an incentive for new forest planting and an additional income stream for owners of forests already planted.
- 4.4 Owners of pre-1990 forests will face obligations under the scheme if they deforest. Deforestation means converting pre-1990 forest land to non-forest land. It does not include forest harvesting and replanting or allowing the forest to regenerate. The policy objective of placing liabilities on pre-1990 forest owners is to limit deforestation by making landowners face the full cost of emissions. Placing obligations on the owners of forest land to surrender an NZU for every tonne of emissions from deforestation is likely to affect land values. A free allocation of units to this group is proposed in recognition of the impact of the scheme.
- 4.5 The main difference between the forestry sector and other participants in the scheme is that the forestry sector both sequesters carbon (and for post-1989 forests can be rewarded for this with emissions units) and is an emitter of carbon upon harvest or deforestation, at which time a liability may arise. For non-forestry participants the focus is on expenditure associated with meeting an obligation – participants are emitters or dealing in products that release emissions on use by a downstream consumer.
- 4.6 Further, obligations under the scheme will arise in two different situations. A deforestation liability will arise for pre-1990 forests when land use changes. The liability is associated with the land. A harvest liability for post-1989 forests, on the other hand, arises only when the trees are felled. This is associated with a forestry activity – the growing of trees.

⁷ It does not cover tax matters that might arise as a result of other initiatives such as the Permanent Forest Sink Initiative or Afforestation Grant Scheme.

- 4.7 This paper is limited to commercial exotic forests. The framework document has suggested indigenous forests could also be included within the emissions trading scheme framework. If that proposal proceeds, the tax implications will need to be considered.

Tax issues for forests planted before 1990

Deforestation expenditure

- 4.8 The core obligation for people deforesting land will be to report annually, to an administering agency, any area that has been deforested; calculate (using formulas provided for the purpose) the emissions associated with this deforestation; and surrender a number of NZUs or other acceptable units equal to the calculated emissions.
- 4.9 The obligation is associated with a change in land use, from forestry to some other activity. At first sight, change in land use is generally a matter of capital for taxation purposes, although concessions in tax law might make some of that capital expenditure deductible.
- 4.10 In our view, therefore, expenditure to satisfy any obligation arising from deforestation of pre-1990 forests should generally be a non-deductible expense.

Income from receipt of credits

- 4.11 The government has proposed that all participants in this group receive compensation in the form of free allocations of NZUs using an agreed mechanism (possibly pro rata to hectares of qualifying pre-1990 forest land owned). It is intended that the NZUs be issued for both commitment period 1 (CP1 2008 to 2012) and CP2, most likely as a one-off transfer. CP2 NZUs will not be able to be used to meet obligations under the scheme before the beginning of CP2 in 2013.
- 4.12 The policy objective behind issue of free emissions units for pre-1990 forests is to recognise that the scheme will have an impact on land values and to meet the government's commitment to absorb some of the cost of deforestation in CP1. This liability for deforestation, unlike changes in carbon stocks based on forestry growth and felling cycles, is a liability associated with a decision to change the use of the land from forestry.
- 4.13 Change in land use is typically an affair of capital under current taxation rules. Consistent with our view that the taxation of NZUs should fit, where possible, within the current structure of tax law, the receipt of credits should also generally be treated as a receipt of a capital nature and remain outside the tax base.
- 4.14 A problem in relation to the time-value of money may arise if post-dated NZUs that relate to CP2 are issued in CP1, as may happen. This will need careful consideration.

Tax issues for forests planted after 1989

- 4.15 Owners of post-1989 forests will have the opportunity to elect to participate in the emissions trading scheme and to receive NZUs for increases in carbon stored in their forests, while also accepting the associated liabilities should the carbon stored in their forests reduce. If a forest owner elects to stay out of the scheme there are no emissions trading consequences.
- 4.16 At least for the first commitment period, those who join the scheme will have the following core obligations:
- Report to the administering agency, at a minimum at the end of each accounting period (five years maximum for CP1), any carbon stock changes in those post-1989 forest areas.
 - Calculate, using guidelines provided for the purpose, the removals (increased carbon stocks) and/or emissions (reduced carbon stocks) associated with this forest. Reduced carbon stock could arise from harvesting and/or deforestation.
 - Receive a quantity of units equal to the calculated removals or surrender an amount of NZUs or other acceptable units equal to the calculated emissions (limited to the amount of NZUs allocated previously for carbon sequestration on the same land).
- 4.17 Carbon stock assessments are required, at a minimum, at the end of each commitment period, although participants could report on an annual basis, if they wished to receive NZUs annually. Carbon stock assessments report a net change in carbon – gains from growth minus losses from, for example, harvest or fire. Owners of post-1989 forests will therefore receive income in the form of credits as their forest grows to maturity (carbon stock increase) and incur expenditure when the forest is progressively harvested (carbon stock decline).
- 4.18 The net carbon stock profile of a forest over time will vary from forest to forest. For example, converting pasture to forest that is permanently managed by way of rotational harvesting and replanting will result in a lasting increase in net carbon stocks, and therefore a net gain in units to the participant. On the other hand, carbon stocks in an existing forest that enters the scheme could fall below their initial level, at which point the participant would be liable for the net decline in carbon stock. A forest estate of one age class will face a large reduction in carbon stocks on harvest, while an estate with a mix of age classes will face more-moderate changes, with carbon stock decreases balanced by the growth of younger trees.⁸ These various profiles complicate the tax analysis.

⁸ See *Forestry in a New Zealand Emissions Trading Scheme*, Ministry of Agriculture and Forestry, September 2007, pages 35–37, for examples of different profiles.

Income from receipt of credits

- 4.19 There will be no free allocations of NZUs for owners of post-1989 forests. Allocations are in consideration for the sequestration of carbon in forests.
- 4.20 The receipt of NZUs would appear to be an incident of growing trees. Growing trees for harvest is deemed, for tax purposes, to be a revenue account activity. Given this, the periodic entitlement to credits based on changes in carbon stocks is a revenue account matter.
- 4.21 In theory, this appears to be a sensible approach – credits are earned as the carbon sequestered in a forest increases. The allocation of NZUs enables a monetary value to be placed on this embedded carbon as it emerges over time.

Expenditure from harvesting or deforestation

- 4.22 A participant with obligations will either hold emissions units received to offset a future liability upon harvest or purchase NZUs in a market to settle the liability.
- 4.23 As will occur for other sectors, the obligation will arise because of the business activities of the forest owner. A deduction should be available as a revenue account matter. The more difficult question is one of the appropriate timing for tax purposes.

Timing issues

- 4.24 We have noted that the income, received as a forest matures, from carbon sequestration should be recognised on an emerging basis – in other words, when there is a net increase in carbon based on the carbon stock assessment – and could be taxable on receipt. Applying the approach suggested for non-forestry participants in the scheme, the expectation would be that a deduction should be available for an emerging liability in relation to the future obligation to surrender NZUs for declines in carbon stocks on harvest (but only when harvest is planned or intended). A deduction of this nature would offset income arising from the allocation of credits and give an appropriate economic result.
- 4.25 In the case of a forest, however, the timing of the expense is much more uncertain. This is because the obligation, unlike one based on annual product throughput or actual emissions associated with production processes in a year, is a harvest obligation, and there is generally some flexibility around the harvest decision and its timing. Before harvest, the obligation may be contingent. In effect, to allow a deduction on an emerging basis is closer to allowing a deduction for a provision, rather than a near certainty.

4.26 Options for dealing with this include:

- recognising income from NZUs as it is received and allowing a deduction for expenditure on an emerging basis provided there is an intention to harvest; or
- deferring recognition of income from, and deductions for expenditure on, NZUs until an NZU is used to settle an obligation arising from the NZ ETS or is sold.

4.27 We do not have a strong views on a preferred option, and there may well be others. We are interested in engaging with the industry on this matter and, in particular, discussing how assets resulting from periodic receipt of NZUs and liabilities associated with future obligations will be measured for financial reporting purposes.

Submission points

Pre-1990 forests

Do you consider that income from free allocation of NZUs to owners of pre-1990 forest land is a matter of capital and should be outside the tax base?

Conversely, do you consider that liabilities under the scheme arising from deforestation are associated with change of land use and should also be a matter of capital?

In your view, does the law need to be amended to clarify this?

Post-1989 forests

Is characterising the receipt of NZUs for increases in net carbon stocks as income associated with a forestry business reasonable?

Do you think obligations under the scheme, on the other hand, are incurred when the trees are harvested?

Can this future obligation be estimated with any degree of certainty?

How do you think the income and expenditure resulting from the scheme will be accounted for financial reporting purposes?

Is an accounting method whereby income from and expenditure on NZUs is recognised on sale or surrender a viable approach?

Chapter 5

GOODS AND SERVICES TAX

- 5.1 This chapter summarises our preliminary views on the treatment of NZUs under the Goods and Services Tax Act 1985.
- 5.2 In New Zealand, GST is applied at a single rate, with minimal exemptions. Our view, from a policy perspective, is that NZUs should also fall within the GST base if supplied by GST-registered persons.
- 5.3 The following comments regarding the likely GST implications arising from the emissions trading scheme (as with possible income tax consequences) are based on the information currently available. The actual outcome will be a consequence of the legal framework that is eventually established. For the purposes of this paper, we have assumed that NZUs will be issued by a public authority (as lawfully delegated agent of the Crown). Public authorities are registered for GST and have an obligation to charge GST on the supply of goods and services.
- 5.4 The broad consequences of including NZUs in the GST base are:
- NZUs will be treated as a supply of services – being a chose in action – rather than personal or real property and will be subject to GST when traded by a registered person in a secondary market.
 - NZUs that are gifted by a registered person will be treated as a supply for no consideration.
 - NZUs that are sold, through auction, by the Crown through a public authority will be subject to GST.
 - Registered persons that acquire taxable NZUs for the principal purpose of making taxable supplies will be entitled to claim input tax deductions under ordinary principles.
 - NZUs sold by registered persons to non-residents will generally be zero-rated. From the information available the units do not appear to be directly connected with land or movable property.
 - NZUs acquired from non-resident businesses and foreign governments by persons in New Zealand will be treated, for GST purposes, as an imported service. Such imports may give rise to a GST liability on the importer under the reverse charge rules.
- 5.5 Over time, it is anticipated that traders in the NZUs will become active to take advantage of market opportunities. There could potentially be some concerns around the impact of the GST treatment proposed for traders who normally deal in financial services, such as shares or certain futures contracts, which are generally exempt for GST purposes. Submissions on this point are welcome.

Submission point

Do you envisage any problems with treating NZUs as a supply of services that is subject to GST when supplied by a registered person?