



## Emissions Trading Scheme Legislative Review: Allocation to Industry

<b>Date:</b>	13 February 2009	<b>MfE Priority:</b>	NON-URGENT
<b>Security Level:</b>		<b>Number of Attachments:</b>	Nil
		<b>MfE Ref No:</b>	09-B-00391

### Action Sought

	Action Sought	Deadline
Minister of Finance Minister for Infrastructure  Hon Bill English	Note.	None.
Minister of Energy and Resources  Hon Gerry Brownlee	Note.	None.
Minister for Climate Change Issues  Hon Dr Nick Smith	<b>Discuss</b> with your Ministerial colleagues and <b>Indicate</b> which industrial allocation methodology officials should provide more detailed advice on.	Thursday 19 February.
Minister of Agriculture Minister of Forestry  Hon David Carter	Note.	None.
Associate Minister for Climate Change Issues (International Negotiations) Minister of Trade  Hon Tim Groser	Note.	None.
Minister of Transport  Hon Steven Joyce	Note.	None.

### Ministry for the Environment Contacts

Name	Position	Telephone		1st Contact
		(cell)	(work)	
[withheld]	Senior Adviser, Emissions Trading Group	[withheld]	[withheld]	✓
John Scott	Acting Senior Manager, Emissions Trading Group	[withheld]	04 439 7573	
Stuart Calman	Acting General Manager, Emissions Trading Group	[withheld]	04 439 7571	

## Executive Summary

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The cost impacts of the ETS and Kyoto Protocol fall into three groups: wealth transfers; competitiveness impacts; and direct costs to reduce emissions. Wealth transfers occur when New Zealand is in deficit under the Protocol (or its successors) and is required to purchase units internationally. Competitiveness impacts occur when domestic firms are put at an unsustainable disadvantage relative to producers in countries that do not face a price on their emissions. Lastly, firms will face costs when making changes to reduce emissions. Overall, these costs are expected to be relatively small relative to our GDP, and broadly comparable with other countries.

Competitiveness impacts tend to receive particular attention. Competitiveness concerns are greatest for firms that are both emissions-intensive (make products whose manufacture leads to significant levels of emissions) and trade-exposed (compete against goods produced in other countries that do not face similar emissions costs).

International evidence suggests that only a relatively small number of sectors are likely to suffer significant competitiveness impacts. Steel, aluminium, paper, chemicals, cement, and livestock production stand out. In this small number of sectors competitiveness impacts could potentially be relatively significant.

We recommend that you begin the process of choosing your preferred allocation methodology by clarifying your overarching objective for providing for free allocation. Note that your objective may vary from sector to sector. The key choice facing you is what balance the Government wants to strike between the conflicting objectives of:

- protecting the competitiveness of firms covered by the ETS (especially those that are emissions intensive and trade exposed); and
- ensuring that participants face the full price of carbon under the ETS (in turn ensuring that New Zealand's transition towards a less carbon-intensive economy occurs as quickly as possible).

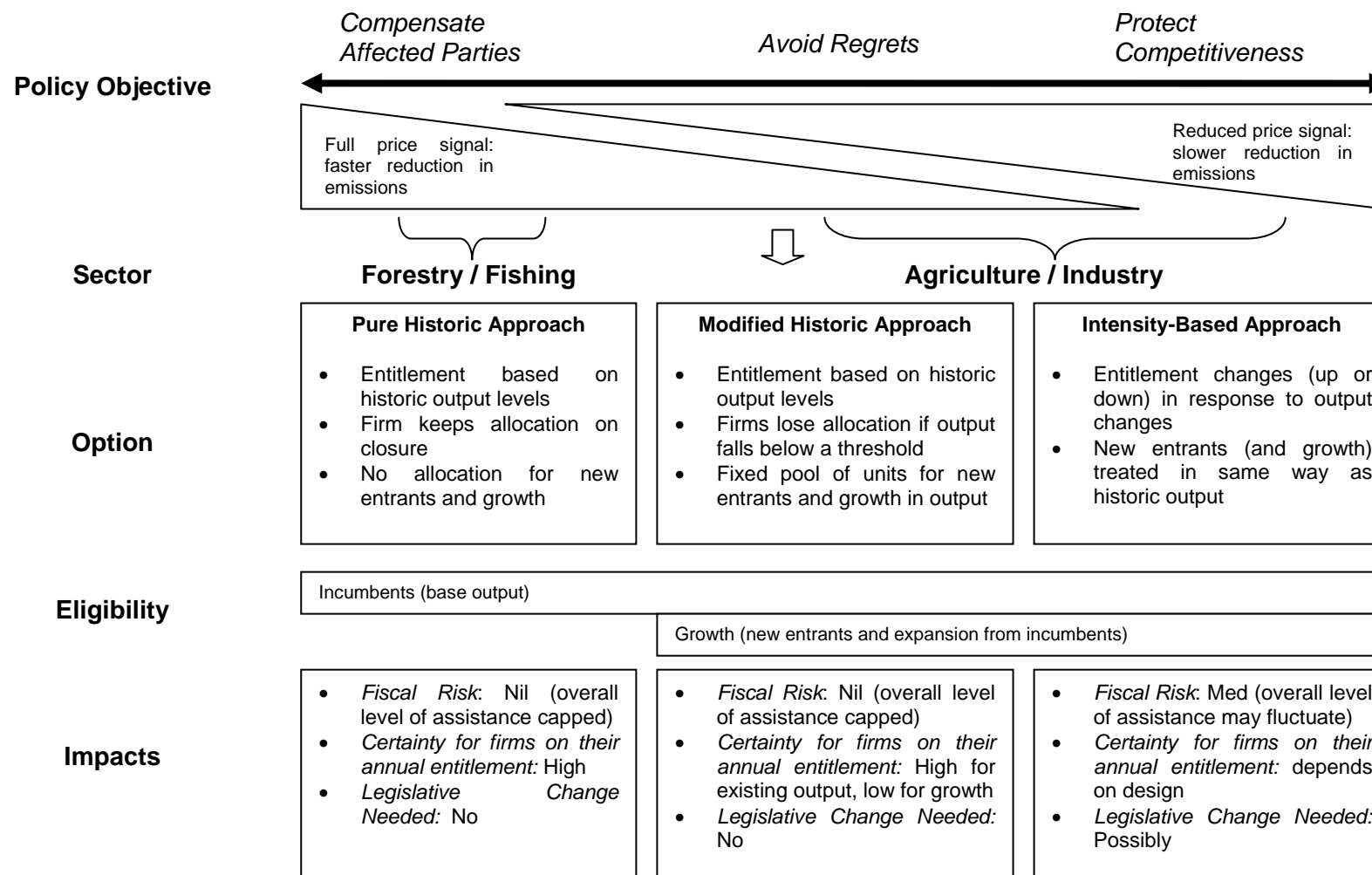
This is a fundamental choice. The only practical way to protect the competitiveness of firms under the current Kyoto rules is to partially shelter them from the cost of carbon. However, this comes at the cost of firms adapting more slowly.

Given this fundamental choice, officials see three possible objectives for the Government in providing a free allocation of units:

- protect the competitiveness of firms by reducing the price of carbon they face;
- avoid substantial reductions in firm output and employment, while accepting more modest reductions and lower levels of growth in output ('avoidance of regrets');
- compensate firms that have been heavily affected by the ETS, without attempting to weaken the impact of the scheme on their behaviour.

Depending on your choice of objective, a different allocation methodology will be appropriate. The relationship between these three objectives and the different allocation approaches available is summarised in figure 1 on the following page.

**Figure 1: Summary of Allocation Objectives and Design Options**



## Recommended Action

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### We recommend that you:

- (a) **Indicate** which industrial sector allocation methodology (or methodologies) you have a preliminary preference for, and that officials should provide more detailed advice on:
- (i) intensity-based methodology (appropriate where your objective is to protect NZ firms' competitiveness); or **Yes / No**
  - (ii) historic output-based methodology (appropriate for an objective of providing compensation to affected parties without reducing the impact of the ETS); or **Yes / No**
  - (iii) modified historic output methodology (appropriate for an objective of 'minimising economic regrets'). **Yes / No**
- (b) **Indicate** your interest in pursuing one or both of the following possible changes to the phase out of allocation:
- (i) adopting an earlier, but more gradual, phase out path; and/or **Yes / No**
  - (ii) greater ability to adjust the phase out path in response to changes in the international environment. **Yes / No**
- (c) **Note** that changes in allocation methodology and/or the phase out of assistance may have relatively significant fiscal impacts (depending on the detail of the approach taken).
- (d) **Note** that a separate paper on allocation to the agriculture sector is currently being prepared by Ministry of Agriculture and Forestry Officials, in conjunction with the Emissions Trading Group, and will be submitted next week.

Stuart Calman, Acting General Manager  
**Emissions Trading Group**

**Date**

Hon Dr Nick Smith  
**Minister for Climate Change Issues**

**Date**

## **Purpose of Report**

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1. This paper is one of a series of briefing notes on possible amendments to the New Zealand Emissions Trading Scheme (NZ ETS). This note seeks guidance on the range of industry allocation models that officials should provide further advice on. The issues and argument discussed are also relevant for agriculture sector allocation. A separate briefing on agricultural allocation, based on the framework set out in this paper, is being prepared by the Ministry of Agriculture and Forestry, in conjunction with the Emissions Trading Group, and will be submitted next week.

## **Analysis**

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2. When creating an allocation policy there are three main questions that need to be answered:
  - I. What types of firm or activity to provide assistance to (scheme scope);
  - II. The total amount of assistance to provide (both initially, and over time); and
  - III. What methodology to use to determine the allocation entitlement of individual firms (which will be influenced heavily by the Government's objective for providing assistance).
3. The Climate Change Response Act (CCRA) currently specifies a broad approach to the first two of these questions. However, the Act is silent on the key third question of what methodology to use to determine the allocation entitlement of individual firms.
4. This paper focuses primarily on that third question of what allocation methodology to use. It then also discusses the overall level of assistance that should initially be provided, and different possible approaches to the phase out of assistance. Once you have provided feedback on these key issues we will provide further, more detailed advice on the detailed design of possible allocation methodologies, and possible modifications to the existing scope of free allocation policies.

## **Context**

5. The cost impacts of the Kyoto Protocol and NZ ETS on New Zealand firms fall into three groups: wealth transfers; competitiveness impacts; and direct costs to reduce emissions. Wealth transfers occur when New Zealand is in deficit under the Protocol (or its successors) and is required to purchase units from another country. Competitiveness impacts occur when domestic firms are put at an unsustainable disadvantage relative to producers in countries that do not face a price on their emissions. Lastly, New Zealand firms will respond to the price signal created by the ETS by making changes to their investment decisions and operational practices. In many instances they will incur costs to make those changes.
6. Overall, these costs are expected to be relatively small relative to our GDP, and broadly comparable with other countries.
7. Competitiveness costs tend to receive particular attention. Competitiveness concerns are greatest for firms that are both emissions-intensive (make products

whose manufacture leads to significant levels of emissions) and trade-exposed (compete against goods produced in other countries that do not face similar emissions costs). Such firms are particularly at risk from seeing their competitiveness undermined if brought into the NZ ETS without receiving some form of assistance. The concern is that those domestic industries would be put at an unsustainable disadvantage relative to producers in countries that do not face a price on their emissions.

8. International evidence suggests that only a relatively small number of sectors are sufficiently emissions-intensive to have their competitiveness seriously threatened if brought into an ETS in the current international environment. Steel, aluminium, paper, chemicals, cement, and sheep, beef and dairy livestock production stand out as particularly vulnerable. In this small number of sectors competitiveness impacts could potentially be relatively significant.
9. The Ministry of Economic Development is currently undertaking work at a disaggregated sectoral level to more accurately estimate the first round impacts of the ETS. This will assist in estimating the magnitude and distribution of potential competitiveness issues within the manufacturing industry. Once completed, that work should provide useful context when the Government determines how it wishes to target any assistance provided. In doing so, Ministers will need to consider whether a threshold level of emissions-intensity should be used to limit eligibility for assistance. For example, the Australian White Paper proposes an eligibility threshold of 1,000 tonnes of emissions per million dollars of revenue. Out of the 115 sectors considered, their analysis suggests that around 20 sectors are likely to exceed this eligibility threshold.
10. While competitiveness concerns are real, and potentially significant in a small number of sectors, it should be noted that arguments can be made against attempting to address them through the provision of assistance.
11. To understand those arguments it is necessary to note that New Zealand has no tools available to it to *avoid* these competitiveness costs. They can only be comprehensively and sustainably addressed through coordinated international action. In practice all allocation policy can do is *shift* those costs from the firms or sectors that are considered to be particularly at risk, to other parts of the economy (including taxpayers). Doing so may not necessarily be in the broader economic interest. The arguments here are similar to those made in relation to trade liberalisation:
  - New Zealand would benefit if our trading partners further reduced their domestic tariffs (or in this instance worked with us to improve the international climate change framework to address competitiveness concerns).
  - However, where those countries choose not to reduce their tariffs, it is not necessarily in New Zealand's interests to follow suit (or in this instance shield particular firms from the full price of carbon).
12. The intuition behind these arguments is that it is in New Zealand's interests to optimise its economic structure for the international environment it faces at any given time, regardless of whether that environment is 'fair'.
13. The key exception to this argument is where distortions in the international environment are likely to be only temporary. In such instances it may be in New Zealand's interests to put temporary measures in place. This exception is

relevant in the climate change context, as the international agreements that follow the Kyoto Protocol are likely to evolve for some time. A degree of judgement is therefore required when determining the extent that the Government should address competitiveness concerns through its allocation policies.

### **Possible Allocation Methodologies**

14. Ultimately it is the level of allocation that each individual firm receives over time, and in response to changing circumstances, that will determine the effect that the government's allocation policies have. The methodology used to determine the allocation entitlement of each firm, both initially and over time, is therefore the most important facet of allocation policy design. As noted, the Act is currently silent on the methodology that should be used. Instead it sets out principles the Minister must consider when deciding on an allocation methodology, and the process he must follow to propose, and consult on, that proposed approach.
15. The sections below discuss different possible overarching objectives for providing a free allocation, and set out three broad possible allocation models. Note that further design options exist within each of these three broad options. Note also, that in developing your preferred methodology it will also be important to consider New Zealand's international trade obligations and objectives. In developing your preferred methodology there are likely to be approaches that mitigate the risk of challenge by trading partners. We will advise further on these issues in subsequent papers once you have indicated your preferred overall allocation approach.

### ***Objectives for Providing a Free Allocation, and Relationship to Choice of Methodology***

16. We recommend that you begin the process of choosing your preferred methodology by clarifying your overarching objective for providing a free allocation. Once that objective has been clarified it will be easier for you to choose between the small number of allocation models available, and then in turn take final decisions on the more detailed design elements.
17. With regard to your overarching objective, the key choice facing you is what balance the Government wants to strike between the conflicting objectives of:
  - protecting the competitiveness of those New Zealand firms covered by the ETS (especially those that are emissions intensive and potentially at risk from competition with companies from countries without equivalent emissions controls); and
  - ensuring that participants face the full price of carbon under the ETS (in turn ensuring that New Zealand's transition towards a less carbon-intensive economy occurs as quickly as possible).
18. This is a fundamental choice facing the government. The only practical way to protect the competitiveness of New Zealand firms (at least under the current Kyoto rules) is to partially shelter them from the cost of carbon. However, this comes at a cost; if firms are sheltered from the impact of the ETS they will adjust less quickly to it. Your approach to this fundamental choice will also have fiscal implications, as policies that protect firms' competitiveness will inevitably see the Government facing increased costs, and most likely increased fiscal uncertainty.

19. Given this fundamental choice, officials see three possible objectives for the Government to pursue when developing its allocation policies. At one end of the spectrum the Government's objective could be to compensate parties that have been heavily affected by the introduction of the ETS, without attempting to weaken the impact of the scheme on their commercial decisions (in other words, encouraging firms to take carbon costs into account in the same way they would for any other input cost). At the other end of the spectrum, the Government's objective could be to protect the competitiveness of New Zealand firms by reducing the effective price of carbon that they face.
20. Lastly, in between these two options the Government's objective could be to attempt to avoid firms substantially reducing their levels of production and employment, or closing entirely, during the transition to a more comprehensive international regime. Note that under this objective the Government would not attempt to avoid more modest reductions in output, or lower levels of new investment or growth in output. Officials have previously referred to this middle objective as the 'avoidance of economic regrets', as its aim would be to ensure that New Zealand's core levels of labour force capability and economic activity were maintained, but that otherwise the full carbon price signal was retained.
21. The optimal design of allocation policies for the industrial and agriculture sectors will differ depending on which of these objectives the Government wishes to pursue. If you wish to initially protect key sectors against the competitiveness disadvantage created by the current international environment, we would recommend an intensity-based approach where each firm's entitlement is updated each year as their levels of output change, and new entrants are treated identically to incumbent firms. This option would allow New Zealand to preserve its competitive advantage over the short term while the design of the international regime is being improved, and its coverage of countries gradually increased.
22. In turn if you wish to primarily compensate firms for the impact of the ETS, but not affect their response to it, the best allocation model would be one where firms' entitlements are determined on the basis of their levels of output at a date before the scheme's introduction, and left unchanged thereafter (including if that firm ceases operation entirely). Lastly, if you want to avoid large reductions in output and unemployment, but otherwise leave firms facing the full cost of carbon, we recommend that a modified historic approach be adopted. Under this approach firms' levels of entitlement would remain unchanged unless they fell below a threshold level, or ceased operation altogether.
23. Note that your objective may differ from sector to sector. In particular, a different approach is likely to be appropriate for pre-1990 forestry and fishing where competitiveness concerns are less relevant.
24. These three broad approaches, and their relationship to the government's choice of overarching objective, are illustrated in figure 1 below.



- Firms that improved (reduced) their level of emissions per unit of output would *not* see their allocation reduced<sup>2</sup>.
  - Eligibility to receive a free allocation, and the rate of assistance provided, could be varied on the basis of each sector or activity's emissions intensity.
  - The rates of assistance for each activity or sector would be reduced over time at a pre-agreed rate, and could also be reviewed at pre-agreed intervals.
29. Under this option firms would face an incentive to develop and use more emissions-efficient technologies. However, they would not be strongly incentivised to consider the cost of carbon when deciding whether to grow their output (or enter a new market). This option would therefore see a slower adjustment in the make up of the New Zealand economy. This would avoid adjustment costs in the short term. However, it could also potentially see New Zealand delay its adjustment towards a lower-carbon economy, retaining emissions-intensive industry longer than is economically desirable and crowding out new possible areas of competitive advantage.
30. Note that options exist under the intensity based approach around the degree of certainty that firms are given about the number of units they will receive per unit of output. The Australian White Paper proposes a high degree of certainty for firms. While the allocation policy is subject to review, the paper proposes that the initial rates of assistance of 60% and 90% will be reduced by 1.3% per annum indefinitely. (This reduction rate is referred to as the 'carbon productivity contribution' in recognition of the fact that emissions-intensity tends to decline over time as firms become more efficient). An annual reduction in the overall level of allocation to industry of 1.74% is also proposed under the European ETS.
31. However, in their earlier Green Paper, the Australian Government proposed to only specify rates of assistance five years in advance. This approach would have allowed the Government to keep the overall level of assistance within a target band by adjusting assistance rates over time. It would also be possible to adopt an intensity based approach with a fixed pool of units. If this were done the rate of assistance that firms receive would be adjusted from year to year to ensure that the cap on the total number of units was not exceeded.
32. Depending on how it was designed, this option could therefore impose greater fiscal risk on the government. It could also require legislative change to remove the fixed allocation envelope (initially set at 90% of 2005 emissions).

### ***Historic Output Methodology – Compensation of Affected Parties***

33. Under this historic output option:
- Allocations would be based on each firm's level of production in a historic, but recent, year or years (such as 2005, or average from 2005-2007).
  - The number of units provided to each firm would remain unchanged in response to changes in their output or emissions intensity (firms could therefore be given a single, up front, allocation).
  - Firms would also retain their free allocation if they ceased operation entirely.
  - Thresholds could be used to determine eligibility to receive a free allocation, and the rate of assistance provided.

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<sup>2</sup> The rate of assistance for each sector or activity would be multiplied by the firm's output and an agreed sector wide emissions factor, not the actual emissions factor of each firm.

34. This option ensures that the full price signals of the ETS are maintained, and would therefore see the fastest adjustment in the economy. Significant reductions in output, or closure, by some firms or industries would therefore be possible. This approach would clearly impose some economic costs in the short run. Over the longer term the degree of cost or benefit under this option would depend on the extent to which the international climate change regime continues to change. If it continues to adjust relatively substantially over the next 10-20 years, this option could see NZ firms continually re-adjusting to a changing international environment, leading to unnecessary adjustment costs. However, if that environment stabilises relatively quickly, this option would have the benefit of seeing the New Zealand economy adjust to its new state more quickly than if assistance was provided.
35. As this option is explicitly designed *not* to slow firms' adjustment to the price of carbon, this option is not recommended for the agriculture or industry sectors. However, it is in effect the approach that has already been taken for pre-1990 forests. Officials consider that it is also appropriate for the fishing sector, which is considerably less emissions intensive and therefore less vulnerable (further advice on allocation to the fishing sector is being provided in a separate paper).
36. This option could be introduced under existing provisions in the CCRA. It would also provide high levels of certainty to firms (over their allocation entitlement) and the Government (over the cost of its allocation policies).

#### ***Modified Historic Approach – Avoidance of Economic Regrets***

37. The third, modified historic option attempts to strike a balance between the previous two. It is designed to encourage relatively quick adjustments in firm output levels so long as they remain modest, but discourage firm closure (and possibly more significant reductions in firms' production levels). Under this option:
- Allocations would again be based on each firm's level of production in a historic, but recent, year.
  - The number of units provided to each firm would remain unchanged in response to modest changes in their output or emissions intensity.
  - However, firms' eligibility to receive an allocation would cease if they closed (or possibly if reduction in output fell below an agreed threshold or some other criteria).
  - A fixed pool of units could also be set aside to allow for an allocation to new firms entering the market, or existing firms wanting to increase their output levels (such as by investing in new plant and machinery).
38. The logic underpinning this option is that modest reductions in output can be reversed relatively easily if international circumstances change. However, significant reductions in output, or complete closure, are likely to be less able to be reversed as they are likely to be accompanied by a loss in workforce capability or decline in the quality of supporting plant and infrastructure. Large economic adjustments are therefore more likely to be 'regretted' than smaller ones if NZ firms become uncompetitive in the short term, but can be expected to become competitive again in the future.

39. Under this option the Government would face choices over how to allocate units from a new entrant reserve if provided. They could be distributed on a simple pro rata basis, or targeted towards particular types of firm or activity.
40. A key challenge under this option will be what process or criteria to use to decide how to determine when firms' allocation entitlements should cease. Note also that a number of options exist around the detail of this approach, including a possible level to set the output reduction threshold at (below which assistance will be removed), how large to make a possible new entrant reserve, and how to allocate units from that reserve.

### **Starting total level of free allocation**

41. The total initial quantum of free allocation to industry and agriculture is set in the CCRA at 90% of 2005 emissions (of those firms that are eligible to receive a free allocation).
42. There is no clear "right or wrong" initial level of allocation. The current level of 90% of 2005 emissions reflects a judgement to some degree, as well as practical constraints around the total number of units available. Note also that any assistance involves a redistribution of costs from industry to taxpayers. If NZUs are not allocated for free, the government could either use its assigned amount units (AAUs) to meet New Zealand's Kyoto obligation and/or sell any surplus units and use the proceeds to reduce taxes or fund government expenditure.
43. On balance officials remain of the view that this proposed level of free allocation is broadly appropriate. Importantly, our preliminary analysis suggests that this level is slightly more than would be needed to match the levels of assistance currently proposed in Australia (a free allocation of 90% of emissions for activities with a high emissions intensity<sup>3</sup>, 60% for activities with a medium emissions intensity<sup>4</sup>, and 0% for activities with a low emissions intensity<sup>5</sup>). Further, case studies previously commissioned by the Emissions Trading Group indicated that the proposed level of assistance should be sufficient to avoid substantial impacts on levels of output and employment (but could see a reduction in levels of new investment).
44. Officials recommend that no changes be made to this broad quantum of assistance. However, we note that changes to the detail of the provisions in the Act may ultimately be required. For example, if the Government opted for the 'protection of competitiveness' option (broadly mirroring the approach proposed in Australia) it may be necessary to remove the current fixed allocation envelope from the legislation entirely. We will address any necessary detailed changes in our subsequent advice.

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<sup>3</sup> Defined as firms with emissions of more than 2000tCO<sub>2</sub>-e per million dollars of revenue (or 6000tCO<sub>2</sub>-e per million dollars of value added).

<sup>4</sup> Firms with emissions of more than 1000tCO<sub>2</sub>-e per million dollars of revenue (or 3000tCO<sub>2</sub>-e per million dollars of value added) and less than 1999tCO<sub>2</sub>-e per million dollars (or 5999tCO<sub>2</sub>-e per million dollars of value added).

<sup>5</sup> Firms with emissions of less than 1000tCO<sub>2</sub>-e per million dollars of revenue (or 3000tCO<sub>2</sub>-e per million dollars of value added).

## Phase out of assistance over time

45. It should be emphasised that competitiveness problems under the Kyoto Protocol and its successors are likely to be temporary. They stem from weaknesses in the design and coverage of the Protocol, and should reduce as the international environment improves. Equally importantly, even if some of the weaknesses in the international environment remain indefinitely, the arguments in favour of protecting firms against their impact are weakened. If we expect such distortions to remain indefinitely it is in New Zealand's interests to adapt to them as quickly as possible.
46. It is therefore appropriate to gradually reduce the level of assistance provided over time, and potentially remove it from certain sectors altogether if New Zealand firms find that their competitors all face equivalent carbon controls.
47. Under the Act, the *total* level of assistance for industry and agriculture is fixed until 2018. Over the next 12 years – between 2019 and 2029 – this assistance decreases on a linear basis reaching zero on 1 January 2030.
48. This approach differs significantly to that proposed in Australia, where the *rate* of assistance (of either 60% or 90%) will be reduced earlier (from the second year of the scheme's operation) but more slowly (at the fixed rate of 1.3% per year).
49. Note that the Australian approach is expected to see the total number of units allocated *increase* over time, as on average output growth is expected to more than offset the proposed decline in the rate of assistance of 1.3% per annum. Their Government is comfortable that they will have a sufficient number of units to meet that increase because emissions from EITE activities make up a relatively small proportion of Australia's total emissions. At the start of the scheme it is estimated that the EITE industries will be allocated around 25% of the total number of permits issued (35% if agricultural emissions were included). This is expected to increase to around 45% by 2020. If New Zealand adopted the same approach we would need to allocate a significantly greater proportion of the total number of units available. Depending on our emissions reduction targets in future commitment periods, the Government here could find itself in deficit, having to purchase units internationally in order to be able to meet its free allocation obligations.
50. The Australian Government has also proposed to review its EITE assistance programme at regular intervals, and has retained the right to cease EITE assistance in the event that there is a significant increase in the coverage of the successor to the Kyoto Protocol, or all key competitor countries adopt comparable carbon constraints.
51. If Ministers wish to consider changing the phase-out path of allocation there are two key areas where change could be considered:
  - adopting an earlier, but more gradual, phase out path; and/or
  - adding a provision in the Act allowing the rate of phase out to be sped up, or even removed entirely, if the international factors causing the competitiveness concerns are reduced or resolved altogether.

## Scope

52. The New Zealand and Australian schemes differ in terms of the scope of activities that are eligible to receive a free allocation, and the range of cost impacts that are taken into account. Overall, the scope under the New Zealand scheme is moderately more generous (at least until 2019 when the phase out begins).
53. We will provide more detailed advice on these scope questions once you have indicated your preferred broad allocation methodology.

## **Implications for Agriculture**

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54. The conceptual framework set out in this paper applies equally to the choice of allocation methodology for both the agricultural and industrial sectors. However, it is possible that differences in the operational features of each sector will ultimately lead Ministers to want to adopt a different approach for agriculture. For example, the proportion of New Zealand's agricultural competitors that are based in countries without equivalent climate change controls is likely to differ between the two sectors.
55. Note that the current provisions in the CCRA take the same broad approach for both agricultural and industrial allocation. The Australian government is also proposing to use the same allocation methodology for both sectors.
56. Officials from the Ministry of Agriculture and Forestry, in conjunction with the Emissions Trading Group, are in the process of preparing a paper on agricultural allocation, which is based on the framework set out in this paper. That paper is scheduled to be submitted next week, and will seek a decision on your preferred allocation methodology for agriculture.
57. When considering both papers it will be important to consider issues of inter-sector equity. A decision to take a different approach for the two sectors may give rise to stakeholder criticism, especially if one option is perceived to be more generous than the other.

## **Alignment with Australia**

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58. It is not necessary for New Zealand to adopt the same EITE allocation methodology as Australia in order for our two schemes to be formally linked (i.e. for units from both schemes to be able to be surrendered in both jurisdictions). We therefore recommend that you determine your preferred allocation approach first and foremost on the basis of domestic considerations.
59. That said, due to the high existing level of economic integration between our two countries, issues of competitiveness are particularly relevant with respect to Australia. Further, differences in allocation policy between the two countries are highly visible. As a result we would expect the Government to come under pressure to revise its allocation policies wherever they are clearly less generous than in Australia.
60. Accordingly, where Australia's allocation methodologies are consistent with New Zealand's domestic objectives, we see benefit from New Zealand choosing to adopt a broadly similar approach.
61. Adopting a similar approach to allocation to that currently proposed in the Australian White Paper could also reduce the administrative effort required here,

as officials would be able to borrow from the considerable empirical work that has been carried out. However, doing so may also prove a 'hostage to fortune', as there is a risk that the Australian Government might further modify its current proposals after New Zealand had included them in the CCRA.

## **Legislative implications**

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62. If you wish to adopt an intensity based allocation methodology for either agriculture or industry it may be necessary to amend the CCRA (section 73 and/or section 76).

## **Fiscal implications**

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63. Depending on the detail of its design, under an intensity-based allocation methodology the total number of units allocated to each sector could fluctuate over time in response to changes in total output. This would introduce a degree of fiscal risk.

64. It is not possible to quantify that risk with any accuracy at this stage given the lack of design detail. We are in the process of preparing a separate briefing on the fiscal impacts of possible changes to the NZ ETS [09-B-0166 refers] which will be provided next week. In that brief we conclude that at the generous end of the spectrum, an intensity-based allocation methodology could impose additional costs of more than \$200m for the industrial sector, and more than \$150m for the agriculture sector.

65. However, it should be emphasised that these costs represent the upper end of the likely fiscal impact. Both the size and volatility of that impact can be managed when designing the detail of the intensity-based methodology. If it wished, the Government could avoid any additional cost or risk by retaining a fixed pool of units, and letting the rate of assistance provided to firms adjust from year to year.

66. Any changes to the phase out of assistance would also be likely to have fiscal implications. In particular, a shift towards an earlier, but more gradual, phase out would lead to modest savings until around 2019, and growing costs thereafter.

67. If you indicate an interest in pursuing either of these approaches we will provide more detailed advice on possible design options, and provide an updated assessment of the likely fiscal implications.