



Ministry for the
Environment
Manatū Mō Te Taiao

Allocation in the New Zealand Emissions Trading Scheme

Briefing for the Climate Change Leadership Forum

Prepared by the Emissions Trading Group

Published in December 2007 by the
Ministry for the Environment
Manatū Mō Te Taiao
PO Box 10 362, Wellington, New Zealand

ISBN: 978-0-478-30199-1 (electronic)

Publication number: 853

This document is available on the Ministry for the Environment's website:
www.mfe.govt.nz



Ministry for the
Environment
Manatū Mō Te Taiao

Overview

In the proposed New Zealand Emissions Trading Scheme (NZ ETS), the government agreed in principle to cap the total amount of free allocation and to phase out free allocation by 2025, starting from 2013. This decision reflected a series of principles guiding the design of an allocation strategy as well as consideration of overall economic efficiency, administrative ease, and equity. The government also provided for a broad review of the NZ ETS prior to the start of the next commitment period.

Stakeholders from both emissions-intensive industry and agriculture have expressed concern about aspects of this proposal. Their underlying concern is that if they face a price of carbon while many of their international competitors do not, their international competitiveness will be eroded. Many appear to accept that the proposed levels of allocation in CP1 will address competitive issues in the short term, but are concerned that their loss of competitiveness will become unmanageable once the phase-out of free allocation is complete (or close to complete). However, some have expressed concern about how the eligibility criteria for free allocation, including the consideration of trade exposure and the use of an emissions threshold, will affect the distribution of freely allocated units within the industrial sector. Note that the issue of how an overall pool of free units will be distributed among individual firms within the industrial and agriculture sectors will be decided after primary legislation has been introduced and the government has engaged further with stakeholders and Māori.

Section 1 of this paper presents an overview of the government's approach to allocation in its proposal for a NZ ETS, and summarises the range of stakeholders' views to date. To help frame discussion with the Climate Change Leadership Forum, the government presents analysis of alternative policy options with regard to the following topic areas:

- the phase-out of free allocation to business (Section 2)
- treatment of growth in emissions (Section 3)
- scope of assistance – liquid fossil fuels and wood waste (Section 4).

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

Contents

| | |
|---|-----------|
| Overview | iii |
| 1 Allocation in the Government’s Proposal for a NZ ETS | 1 |
| Context | 1 |
| Government’s in-principle decisions | 2 |
| Stakeholder response to date | 4 |
| 2 Options for the Phase-out of Free Allocation to Business | 6 |
| Option 1: No change from the <i>Framework Document</i> proposal | 7 |
| Option 2: More moderate phase-out | 7 |
| Option 3: Gentle phase-out | 7 |
| Conclusion on the phase-out of free allocation | 9 |
| 3 Treatment of Growth in Emissions | 10 |
| Option: Benchmarking approach to intra-sectoral allocation | 11 |
| Conclusion on the treatment of growth in emissions | 12 |
| 4 Scope of Assistance – Liquid Fossil Fuels and Wood Waste | 13 |
| Liquid fossil fuels | 13 |
| Wood waste | 14 |
| Conclusion | 14 |

1 Allocation in the Government's Proposal for a NZ ETS

Context

Each year the total number of emission units the government makes available must be allocated to the ETS market. The method used to make that allocation is an important factor in ensuring that the market works efficiently, that the cost burden of the ETS is shared fairly across the different parties (taxpayers, consumers, firms and industry sectors), and that the ETS is kept as administratively simple as possible.

The simplest method of allocation is to offer the units for sale. However, this would entail a significant financial shock to those ETS participants that were emissions intensive and could not readily pass on the cost of those units to their customers. For this reason, assistance (often in the form of free allocation)¹ is typically provided to vulnerable participants to make the adjustment to an emissions trading scheme.

The arguments for continuing free allocation beyond a transition period are less strong. Free allocation involves sometimes difficult value judgements (such as whether to gift units to new start-up businesses as well as to established businesses). In addition, auctioning units generates revenue for the government, which can then be used to offset taxpayer liabilities under international agreements, to support households in making the shift to lower-emission lifestyles or otherwise assist the economy. For these reasons, auctioning is generally the favoured long-term allocation method.

One of the key principles underlying the ETS is that emitters face the full cost of their emissions. When this is achieved, it creates incentives to identify the widest range of emission reductions and to undertake all emission reductions that can be achieved for less than the price of emission units. Firms face this full cost through the obligation to surrender allowances, regardless of whether they buy them or receive a level of free allocation. Allocation methods can be used to reduce some of the impacts of the introduction of the ETS, without changing the fundamental incentives to limit emissions across all opportunities.

Deciding on how to allocate units is important for ensuring that the cost burden of an ETS is shared fairly across the different parties involved. At a conceptual level, allocation decisions ensure that an equitable burden is shared between taxpayers, consumers, firms and sectors.

¹ Assistance can be provided to firms through a variety of ways, including the provision of free allocation or a progressive obligation. Unless specified otherwise, this paper is drafted assuming that assistance is provided in the form of free allocation. However, the government has not taken final decisions on the potential use of progressive obligations.

There are two stages to decisions on free allocation: determining the overall amount and timing of free allocation to each sector, and determining the mechanism for distributing units within the total free allocation pool for each sector. **This paper focuses on the first stage of decisions.** Government decisions on the intra-sectoral allocation of free units in the industry and agriculture sectors will be taken after primary legislation has been introduced and the government has engaged further with stakeholders and Māori.

Government's in-principle decisions

As part of the long-term core design of the NZ ETS, the government has decided in principle that it will allocate NZUs into the market through a combination of sale (ie, auction) and free allocation (gifting). The government has also agreed in principle that the level and duration of free allocation will be considered against the following underlying principles, which also apply more broadly to other forms of transitional assistance.

- i. The government will attempt to maintain broad equity of treatment between and within sectors.
- ii. The government will seek to avoid long-term regrets in designing and implementing short-run policies.
- iii. The government will make the transition more manageable by being relatively generous in the first commitment period (CP1), from 2008 to 2012.
- iv. The government will not provide assistance to firms whose profits will be largely unaffected by the introduction of an ETS.
- v. The government will favour assistance via gifting units (“free allocation”) as opposed to a progressive obligation, but will leave open the possibility of using a progressive obligation in some sectors.
- vi. The government will move to zero assistance over time for overall economic efficiency, equity and administrative reasons.

The government has also made a number of in-principle decisions regarding the total level of free allocation of emission units as a form of assistance to business.

- In the forestry sector, free allocation will be provided such that the Crown assumes a total liability (taking the cost of the provision of the *de minimus* thresholds into account) for deforestation emissions as follows:
 - from 2008 to 2012, 21 Mt CO₂-e for plantation forest, plus a relatively small allocation associated with weed control
 - from 2013, an additional 34 Mt CO₂-e for plantation forest.
- The agriculture sector will be provided with a free allocation pool equal to 90 per cent of 2005 emissions² when it is brought into the ETS.

² The assistance package for agriculture includes nitrous oxide and methane emissions from agricultural activities included within the NZ ETS.

- The pool of units for eligible industrial producers will be based on 90 per cent of 2005 emissions³ from those eligible industrial producers.
- Indirect emissions associated with the consumption of electricity, as well as direct emissions from stationary energy and direct emissions from non-energy industrial processes will be included in the concept of emissions from industrial producers.⁴
- Starting from 2013, when agriculture is brought into the ETS, the free allocation pools for industrial producers and agriculture will decrease on a linear basis so as to phase out assistance completely in 2025.⁵
- New sources that begin emitting during the period of the free allocation will not have any access to the pool of free allocations.
- Firms that cease trading will not retain any free allocation.
- Zero free allocation will be provided to the upstream points of obligation in the liquid fossil fuel and stationary energy sectors, electricity generators, or landfill operators.

Allocation of units within the NZ ETS will be an important area for stakeholder engagement, both before and after the introduction of legislation. These discussions will need to find a balance between the competing objectives of efficiency, equity and administrative ease. It is a complex area of design and all approaches pose challenges.

The proposed allocation package is relatively simple at the high level. It has a strong focus on inter-sector equity and is generous (for firms that cannot pass through costs) at first, both for equity reasons and to reduce the chance of long-term regrets. While generous at first, it ensures that some contribution is made by all sectors, reflecting the importance of equity between producers and consumers.

A key element of the allocation package is to put in place robust price signals to reduce emissions. For that reason, over time, the government will ensure a (well-signalled) phase-out of free allocation in the interests of economic efficiency and administrative ease. This should help to provide the kind of certainty that business needs to support investment decisions.

³ The assistance package for industry covers direct use of coal, gas and geothermal energy; electricity price rises; and industrial process emissions.

⁴ The basis for allocation for electricity consumption will be one that compensates firms for the cost impact. It therefore needs to be based on the emissions from marginal generation rather than average generation.

⁵ For industry, this would mean receiving the same level of assistance in the years 2010, 2011, 2012 and 2013. Following this, the level of assistance provided would decline every year. The planned review of the ETS provides an opportunity to adjust this decision somewhat once the “shape” of future international agreements becomes clear.

Stakeholder response to date

Stakeholders from both energy-intensive industry and agriculture have expressed concern around aspects of the proposed phase-out of free allocation. The underlying concern being expressed by these stakeholders, especially those in energy-intensive industry, is that the government would erode the competitiveness of New Zealand firms by making them face the price of emissions while many of their international competitors are not covered by controls of a similar stringency. Many of these stakeholders appear to accept that the proposed levels of allocation in CP1 will address this problem in the short term, but are concerned that their loss of competitiveness will increasingly become unmanageable after the phase-out of allocation begins. In addition, some have expressed concern about how the eligibility criteria for free allocation, including the consideration of trade exposure and the use of an emissions threshold, will affect the distribution of freely allocated units within the industrial sector.⁶ Further, stakeholders see the loss of economic activity that they expect to result as being pointless, as the emissions will simply be shifted offshore, rather than reduced.

Feedback suggests that as a result, a decision taken now to phase out assistance from 2013 will affect investment decisions going forward. There are two aspects to this concern. The affected stakeholders have indicated that investment activity will shift to countries with less stringent climate change controls and/or there will be reduced levels of investment in New Zealand. Further, they argue that the lack of investment could reduce New Zealand's flexibility to adapt to future international agreements, and that the loss of business activity will fail to provide any environmental gain, as it will lead to 'carbon leakage' – the situation where reductions in emissions in New Zealand cause commensurate increases in emissions elsewhere.⁷

The international literature suggests that competitiveness at risk concerns can often be exaggerated.⁸ There is an obvious self-interest in securing assistance, and some rent-seeking behaviour can be expected. There are a range of factors at play which influence whether firms relocate their operations, including:

- the importance of location to market access
- access to natural resources
- the role of sunk capital in location decisions
- the role of a skilled and stable workforce in location decisions
- local advantages (eg, low energy costs)
- loyalty to a country (or region) and tradition.

⁶ As noted earlier, the issue of how an overall pool of free units will be distributed among individual firms within the industrial and agriculture sectors will be decided after primary legislation has been introduced and the government has engaged further with stakeholders and Māori.

⁷ The NZ ETS is not designed to avoid the possibility of some carbon leakage occurring. Any leakage occurring from New Zealand would be small on a global scale. Designing the NZ ETS to avoid carbon leakage from New Zealand would increase the overall cost to the New Zealand economy. Ultimately, the solution to carbon leakage concerns comes through improving international climate change agreements.

⁸ There is a significant body of literature in this area although it tends to be focussed on the industrial sector. One source, the Stern Review, noted that “the empirical evidence on trade and location decisions, however, suggests that only a small number of the worst affected sectors have internationally mobile plant and processes”. Stern N, 2006, *Stern Review: The Economics of Climate Change*, Cabinet Office, HM Treasury. http://www.hm-treasury.gov.uk/independent_reviews/stern_review_economics_climate_change/sternreview_index.cfm.

In contrast, others, especially those in the NGO community, have expressed a concern that the proposed assistance to industry is too generous, the phase-out of assistance is too slow, and households are carrying too much of the cost of the ETS relative to businesses.

2 Options for the Phase-out of Free Allocation to Business

The signals set around future levels of allocation will affect investment decisions, even for those with an existing presence in the New Zealand market. This possibility has been raised by several players from industry, most notably New Zealand Steel and Carter Holt Harvey, in the public engagement. They argued that without a clearly stated intention to maintain high levels of assistance for at least the foreseeable future, there is a realistic prospect of them running down their existing capital stock through a lack of investment and renewal – thus increasing the chances of plant closure in the wood processing and steel manufacture areas.

Support for one business / sector comes at a cost for the rest of the economy. It is in New Zealand's interests to ensure that our business environment encourages growth in areas of the economy that maximise New Zealand's economic advantages and take into account the carbon-footprint of specific activities. As such, putting in place a framework that attempts to avoid the possibility of firm closure is not appropriate.

More generally, it is not in New Zealand's long-term interests to attempt to shield domestic firms from the impact of ongoing imperfections in the international regimes used to manage emissions. This is similar to trade arguments; New Zealand attempts to maximise its economic performance, regardless of the behaviour of trading partners. It is clearly in New Zealand's interests to work with other countries to attempt to improve the international agreement that follows the Kyoto Protocol, and encourage coverage of a greater number of countries. However, to the extent that subsequent international agreements remain imperfect, it is not in New Zealand's interest to attempt to shield domestic firms from the impact of those weaknesses in the longer term. Replicating the sub-optimal policy settings of trading partners merely stifles innovation and entrenches structural inefficiencies. Temporary assistance would, however, be justified to protect New Zealand firms during a transition phase if there was a clear expectation that the companies they compete against will face GHG controls of a similar magnitude to those in New Zealand in the foreseeable future.

The response of trade-exposed producers in New Zealand to the phase-out of free allocation over time will be influenced in part by the rate at which their international competitors face comparable emissions pricing regimes. At present, there is a high level of uncertainty regarding the terms of any international agreement that would succeed the Kyoto Protocol post-2012.

Countries that are proceeding to develop domestic trading schemes take different approaches to the issue of long-term free allocation. While the general trend in trading schemes is progressive movement toward greater auctioning, other governments have not yet sent strong policy signals about when domestic free allocation will cease altogether.

If the New Zealand government wished to moderate the phase-out of free allocation, several policy mechanisms are available within the proposed framework for the NZ ETS. These include:

1. extending the end date of free allocation beyond 2025
2. changing the rate of decline in free allocation post-2012
3. reviewing the level of free allocation as part of the broader NZ ETS review prior to the end of the first commitment period and subsequent commitment periods.

To frame discussion with the Climate Change Leadership Forum on the phase-out of free allocation, the government has developed the following options. These are conceptual, and many variations are possible.

Option 1: No change from the *Framework Document* proposal

- a. The government will legislate to move to zero free allocation by 2025; and
- b. The government will signal *outside legislation* that the NZ ETS review could include an assessment of the extent to which New Zealand firms' international competitors are exposed to the price of carbon.

Option 2: More moderate phase-out

- a. The government will legislate to move to zero free allocation by a later date (such as 2030); and
- b. The government will legislate that levels of free allocation will not decline significantly (ie, there will be a very slow or zero decline) through 2020 within the level of allocation received by the government in international negotiations; and
- c. The government will signal *inside legislation* that the NZ ETS review could include an assessment of the extent to which New Zealand firms' international competitors are exposed to the price of carbon.

Option 3: Gentle phase-out

- a. The government will legislate to move to zero free allocation by an even later date (such as 2035); and
- b. The government will provide free allocation at levels of 50% of 2005 emissions by 2030 for agriculture and eligible industry; and
- c. The government will signal *inside legislation* that the NZ ETS review will include an assessment of the extent to which New Zealand firms' international competitors are exposed to the price of carbon.

Options 2 and 3 could usefully be augmented by the following additional conditions:

- making clear in legislation that government will never freely allocate more units than it is allocated in subsequent international negotiations;⁹ and
- making clear in legislation that no sector's allocation will ever rise above the starting level regardless of the nature of future international obligations.

⁹ Such a statement would not apply to CP1.

The approach to allocation agreed in principle by the government effectively places a cap on the total level of assistance to be provided to firms by firstly identifying the initial level of assistance to be provided, and secondly, by defining the way forward. Although there has been relatively little comment in terms of the initial level of assistance provided (90% of 2005 emissions for agriculture and emissions-intensive industry),¹⁰ any move away from a clearly signalled path going forward will remove the concept of a cap on total free allocation to be provided for firms. For this reason, all of the options above have a specified time of moving to zero free allocation.

The administrative challenge in maintaining free allocation indefinitely should not be underestimated. There are two obvious elements to this. Firstly, the case for a firm to receive assistance because it happened to be operating when assistance was first allocated will wane over time.¹¹ Secondly, it is likely that the rate at which international competitors of different sectors or sub-sectors are exposed to the price of carbon will vary. Assessing this extent will be difficult. Further, the important principle of inter-sector equity may be difficult to maintain if different sectors receive different levels of assistance.

Although policy considerations are important – and these considerations do suggest a complete phase-out of free allocation – stakeholder feedback and perception are also important. Both options 2 and 3 would have the benefit of providing stakeholders with a more generous level of assistance through 2020 (option 2) or 2030 (option 3), with ongoing assistance at lower levels after that. This would cover at least the bulk of the investment cycle for many incumbent businesses. The possibility of ensuring certainty on levels of free allocation in ten-year windows could be explored further within any of the options – this is a feature of the proposed Australian plans for allocation.¹² (The interaction of such a feature with the review of the ETS would be important.)

Another option – phasing out free allocation in line with trading partners/competitors – has been raised as a possibility by some stakeholders in engagement.¹³ This is not recommended for a range of reasons, including:

- The objective of the NZ ETS can be paraphrased as maximising our economic performance within an overall carbon constraint.¹⁴ It is not clear that replicating the behaviour of our trading partners will achieve this purpose.¹⁵

¹⁰ There has been some confusion around the possible use of an emissions threshold and its impact on the total level of free allocation to eligible firms. Some have also expressed concerns around the use of criteria for trade exposure by industrial firms.

¹¹ The alternative of adjusting the group of firms receiving assistance over time is also problematic as it creates incentives to increase emissions in order to gain assistance in the future.

¹² If desirable, levels of free allocation could reflect a range of factors such as economic priorities and/or the extent to which various sectors are exposed to international competition that faces the price of carbon.

¹³ This is the closest of the options to the approach for trade-exposed firms in the proposed Australian ETS.

¹⁴ The cost to the economy of climate change – in addition to the effects of climate change itself – is driven by the stringency of future international agreements. To the extent that there are economic risks associated with moving out of step with the rest of the world on climate change, these risks are (primarily) associated with the nature of international agreements New Zealand is part of rather than our domestic policy settings.

¹⁵ We do not subsidise agricultural production even though many of our international competitors subsidise their agricultural production. Similarly, just because other countries choose to behave in one way regarding levels of free allocation does not mean it is optimal for New Zealand to operate in such a manner.

- Assessing the extent to which trading partners / competitors are exposed to the price of carbon would lead to a difficult administration challenge.
- This would create considerable uncertainty for investors regarding free allocation levels over time.

However, even if the government did not explicitly tie the phase-out of free allocation to the actions of trading partners/competitors, the government could still give regard to this issue when reviewing the NZ ETS prior to the start of subsequent commitment periods. By signalling this either outside or inside legislation, the government could provide some level of comfort to stakeholders that its national allocation plans would not evolve out of step with international developments.

Conclusion on the phase-out of free allocation

There is a strong case for moving to zero free allocation although the best speed at which to shift is less certain. The current proposal of moving to zero free allocation by 2025 has been criticised as being both too soft and too hard.

Ensuring that some bounds exist around the process for determining future allocations is important and a number of options exist. The government has identified some options for discussion with the Climate Change Leadership Forum that would extend the duration and the rate of the phase-out of free allocation.

3 Treatment of Growth in Emissions

A concern has been raised in the engagement process to date that the focus on absolute obligations and allocation in the NZ ETS will stifle economic growth as (particularly) emissions-intensive investment will occur elsewhere. International competitors either do not face a price of carbon, or in some cases, may face an intensity-based approach (such an approach would not require emitters to face any carbon-related costs for growth in emissions so long as it is within an efficiency benchmark).

In contrast, the government has agreed in-principle that any business which has an increase in emissions – regardless of whether it is from a new entrant to the market or from an incumbent – does not receive any assistance for that increase in emissions.

An intensity-based approach has not been favoured by the government for the following reasons:¹⁶

- Intensity-based approaches, in addition to being administratively difficult, provide an incentive inconsistent with New Zealand’s economic signal received under the Kyoto Protocol (the Kyoto Protocol is expressed in absolute terms). Environmental pressures suggest that successors to the Kyoto Protocol may well be quantitative in nature and more stringent than the Kyoto Protocol.¹⁷ In order to reduce the costs of meeting future international agreements, New Zealand should seek to reduce its emissions profile (where cost effective). A key element of this is to ensure that new economic growth is able to support an emissions price.
- Requiring all new emissions growth (from both incumbents and new market entrants) to fully pay the cost of carbon may well come at the cost of some new investment in New Zealand but there is no evidence that this will come at a major economic cost to the nation.
- If circumstances change and investment that was not pursued does become viable, there is no reason why it should not occur in the future.
- Given the ETS objective of meeting international obligations at least cost in long run, if international agreements were to include elements of intensity-based arguments then it would be appropriate to reflect this in domestic policy settings.

After the stakeholder engagement to date, the government remains of the view that growth in emissions should face the full cost of carbon, given the quantitative nature of the international climate change agreement (and given the possibility of more stringent international climate change agreements in the future).

¹⁶ It is possible to develop intensity (or benchmarked) based approaches to operate within an overall limit of allocation. This possibility is flagged within the Framework Document (page 92).

¹⁷ An alternative way of expressing this is that it is the total amount of emissions that is important – both from an environmental viewpoint and in the Kyoto Protocol – and not the efficiency with which we produce those emissions.

Some stakeholders have suggested that intensity-based approaches should be used for a short period of time, or alternatively that certain parts of the economy should receive an intensity-based approach. (The variant of this is that certain parts of the economy should be permitted to grow without paying the carbon cost associated with that growth). The government does not accept these arguments as:

- adjusting from an intensity-based approach to a quantitatively-based agreement (if that quantitative approach is to be equitable with other parts of the economy) will be very difficult in the future
- identifying (and agreeing) which firms should receive preferential treatment would be highly problematic – and would very likely result in a very significant proportion of New Zealand’s trade-exposed firms claiming the right to being managed on an intensity-basis¹⁸
- it is not at all clear that allowing emissions growth in certain emissions-intensive sectors (without that growth facing the full cost of carbon) will increase net economic welfare.

Option: Benchmarking approach to intra-sectoral allocation

Although the government does not support intensity-based approaches to defining firms’ obligations to surrender units, the government has identified the potential to use intensity-based (ie, benchmarking) approaches for the purpose of distribution of units within an overall cap on free allocation defined for a sector. This possibility was signalled in the *Framework* document.

If a benchmarking approach were adopted for distribution of units within an overall sectoral allocation pool, it would be possible to adjust free allocation to accommodate growth in emissions by incumbents or new market entrants without changing the overall size of the allocation pool. To the extent that this occurred, this would come at the cost of other players within the industrial or agricultural sectors. Such an approach would see the accommodation of benchmark approaches, or some growth in emissions at a firm level, within the overall package of allocation.

If the government were to extend free allocation assistance to new entrants, this would constitute a change in policy from that agreed by the government in principle. This could be a useful area for discussion with the Climate Change Leadership Forum.

¹⁸ If a firm (or sector) is deemed to be at world’s best practice then all of the cost of growth in emissions from that sector would be borne by other parts of the economy. If that firm or sector were to be large in terms of emissions growth then the effect would be highly distortionary.

Conclusion on the treatment of growth in emissions

The government continues to support the policy position outlined in the *Framework Document* – ie, that obligations be on an absolute basis as opposed to an intensity basis and that growth in emissions at a sector level face the full cost of emissions. The government maintains the position that the overall ceiling on total assistance to agriculture and industry remain unchanged at 90% of 2005 emissions.

However, the government is open to considering how benchmarking approaches to free allocation within a sector could be used to accommodate some growth in emissions by incumbents or new market entrants without changing the overall allocation pool. This option may be particularly relevant if the time period for the phase-out of free allocation were to be extended beyond 2025.

4 Scope of Assistance – Liquid Fossil Fuels and Wood Waste

A concern has been raised by those who are exposed to price increases in liquid fossil fuels (or other inputs in costs such as wood waste used in boilers) that the assistance package does not equitably reflect cost increases throughout the economy.¹⁹ This has been raised by sectors with a particular exposure to price increases in liquid fossil fuels (such as the tourism, fishing and mining industries).²⁰

Determining the appropriate boundaries for any assistance package is problematic. Having said this, it should not be the intent of government to fully compensate for all price rises. The very point of introducing a price of emissions is to change relative prices and thus to influence behaviour.

Liquid fossil fuels

In terms of liquid fossil fuel cost increases, there is no doubt that some sectors will be affected more than others. In its analysis of policy options, the government has contextualised emission-related price rises within the level of variation there has been recently in liquid fossil fuel prices.

The price of petrol and diesel is projected to increase by between 4 and 7 cents per litre if the price of emissions is between \$15 and \$25 per tonne of CO₂-e. The price of petrol fluctuates due to changes in the price of oil and exchange rates. Fluctuations tend to take place at least weekly. Since October 2005, the lowest weekly average price of petrol in New Zealand occurred in December 2005 at 131.9 cents per litre. The highest price over the past two years occurred in August 2006 of 176.9 cents per litre. This is a change of 45 cents per litre.²¹ Similar changes would be applicable to all other liquid fossil fuels.

The ETS will result in a one-off increase in the price of liquid fossil fuels, and then ongoing additional fluctuations depending on the price of emission units. While this change will not be reflected in the cost structures of firms in countries without emissions pricing on liquid fossils, it is clearly within the fluctuations that already occur in the market.

¹⁹ The assistance package for industry covers direct use of coal, gas and geothermal energy; electricity price rises; and industrial process emissions.

²⁰ Discussions with the fishing industry have suggested that the industry is under financial strain currently for a number of reasons, most prominently the exchange rate and fuel price rises. Although the ETS would add to these pressures, it would not be anywhere near as significant as these pressures on the fishing sector. Some restructuring of the fishing sector may well occur, regardless of the introduction of the ETS. (An ancillary issue under investigation is the extent to which the ETS is vulnerable to operations outside New Zealand's economic zone.)

²¹ Data were obtained from http://www.med.govt.nz/templates/ContentTopicSummary____20094.aspx.

Within this context, the cost increases associated with the ETS are relatively small. Further to this, the administrative challenge of introducing an ETS would increase significantly if assistance were to be provided for increases in costs of liquid fossil fuels. For these reasons, the government has not included assistance for liquid fossil fuel price rises in the overall assistance package.²²

One issue that has been raised is that liquid fossil fuels are used in electricity generation, especially as a dry-year reserve, and there is no assistance for firms that face electricity price increases in 2009. It is not recommended that any assistance be provided for this possibility as the effect is likely to be relatively small.

Wood waste

A small number of firms in the forest products area are (potentially significantly) exposed to changes in the costs of wood waste and related products. Wood waste could rise in price because it is a substitute for coal, and coal will rise in price. Estimating the extent of this exposure would be extremely difficult indeed. Given the possible exposure of a small number of firms, it is to be expected that these issues will continue to be raised.

In the proposed NZ ETS, the government has not included assistance for any indirect or second-order price rises that could be passed through to businesses other than those from the purchase of electricity. In theory, it would be appropriate to consider adjusting the assistance package for items such as wood waste if it could be shown that firms faced significant cost increases as a result of the introduction of an ETS.

In practice, however, it is not feasible to provide compensation for all price rises. Furthermore, opening up the assistance package to second-order price increases would increase the administrative challenges in running the ETS significantly. It is not recommended that further assistance be provided to industry beyond the scope defined in the *Framework Document* (ie, direct emissions from coal, natural gas and geothermal energy; direct emissions from industrial processes; and electricity price rises).

Conclusion

From the government's view, the balance of analysis does not support changing the policy position outlined in the *Framework Document* that no allocation assistance should be provided to firms for cost increases associated with liquid fossil fuels or other input items such as wood waste. The government is interested in discussing this issue further with the Climate Change Leadership Forum.

²² The inclusion of assistance for liquid fossil fuel price rises complicated the NGA processes significantly.